MINISTRY OF HEALTH OF THE REPUBLIC OF MOLDOVA

NICOLAE TESTEMITANU STATE UNIVERSITY OF MEDICINE AND PHARMACY OF THE REPUBLIC OF MOLDOVA

ASSOCIATION OF MEDICAL STUDENTS AND RESIDENTS

MedEspera

ABSTRACT BOOK

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9th International Medical Congress for Students and Young Doctors

Chisinau, Republic of Moldova

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Abstract Book

MedEspera 2022

The 9th International Medical Congress for Students and Young Doctors

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Chisinau

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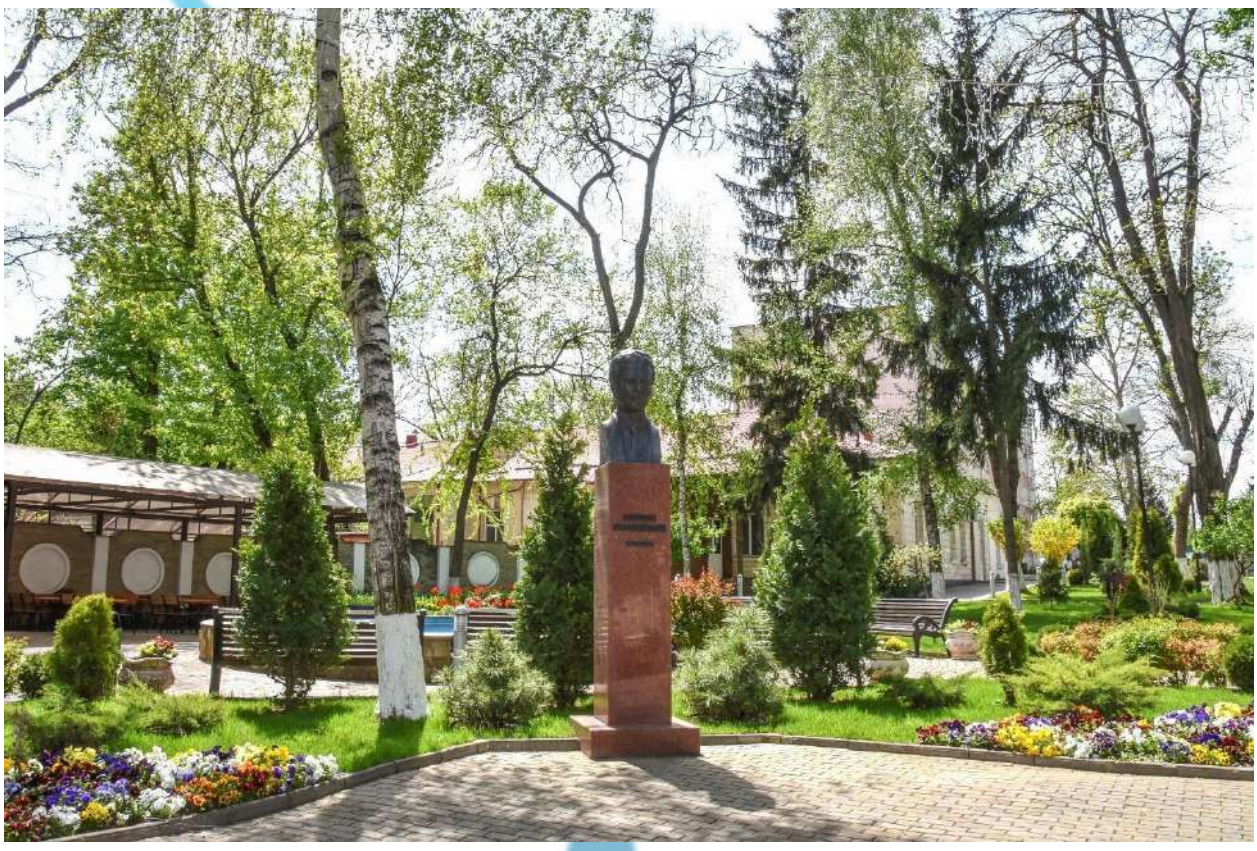

NICOLAE TESTEMITANU – Rector, Minister of Health, Academician, Professor and Statesman

Nicolae Testemitanu was born on August 1, 1927 in Ochiul Alb village, Balti district. He had graduated from gymnasium in Baraboi village, then he pursued his studies at the Secondary School No. 1 in Balti.

In 1951 he graduated from Chisinau State Institute of Medicine (CSIM). In the same year he was admitted to fellowship training at the General Surgery Chair of Institute, in parallel carrying out his activity as a physician at the Surgery Department of Riscani District Hospital. In 1954 he was employed as Assistant Professor, then as Associate Professor, Professor and later on as Head of this Chair. He also held the position of Head Physician of the Republican Clinical Hospital and founded the *Healthcare* Journal.

In 1958 Nicolae Testemitanu defended his doctoral thesis in medical sciences. A year later, at the age of only 32, he was appointed Rector of Chisinau State Institute of

Medicine. The young rector managed to establish the Faculties of Dentistry (1959), Continuing Education in Medicine (1962), Preventive Medicine (1963) and Pharmacy (1964). Due to this fact, the number of students doubled, the staffing shortage being solved in the country. He strengthened the academic staff and technical-material basis, provided equipment and teaching materials for the training process, and improved the living conditions for staff and students.

In 1963 Nicolae Testemitanu was appointed Minister of Health, continuing at the same time his activity at the Chair of Traumatology, Orthopedics and Surgery. As Minister, he developed strategies aimed at upgrading the healthcare system patrimony, ensuring a sufficient number of healthcare specialists, improving the forms and methods of rendering healthcare services to people.

Professor Testemitanu encouraged a sufficient supply of healthcare professionals, mostly local, and the introduction of Romanian language in the medical training process, an initiative for which he was dismissed from the position of Minister in 1968. Later on, he was appointed Associate Professor at the Chair of Social Medicine and Organization of Healthcare.

In 1973 he defended the thesis of Habilitated Doctor of Medical Sciences. After he had received the scientific-academic title of Professor, he was appointed Head of Social Medicine Chair, which he led until his last breath.

Nicolae Testemitanu was an experienced educator, always devoted to the cause and ideals of young generations. He published over 220 scientific papers, including 15 monographs, methodical works dedicated to public health management and the history of medicine. Under his guidance, the concept of delivering specialized medical services to the rural population had been developed, for which the State Prize in the field of Science and Technology was awarded. Also, the Chair headed by Professor Testemitanu was recognized in the USSR as a rural healthcare coordination scientific center.

Professor Testemitanu was a leading authority of the medical community in the Republic of Moldova, a brilliant scientist and Statesman who brought an essential contribution to the reformation and development of higher medical education and the enhancement of the national healthcare system. A modern primary healthcare system, functionally integrated with the specialized medicine, has been created due to his efforts.

Nicolae Testemitanu passed away on September 20, 1986. He was conferred the title of Academician of Academy of Sciences of Moldova post-mortem.

Starting from 1990 the State University of Medicine and Pharmacy of the Republic of Moldova bears the name of the brilliant scientist.

This year marks the 95th anniversary of the birth of the illustrious scientist and professor.

MESSAGE OF THE RECTOR

Dear students and young doctors,

You are welcome to *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova: we always encourage youth in their initiatives. It is our responsibility to inspire them to create, to develop and surpass their own limits. *MedEspera* International Congress for Students and Young Doctors serves as proof of our commitment in this regard. The Association of Students and Residents in Medicine organizes it biannually. We appreciate them for their inexhaustible energy and desire to do their best.

This year, *Nicolae Testemitanu* University will host the 9th edition of the Congress. The congress is dedicated to the 95th anniversary since the birth of Professor Nicolae Testemitanu, former rector of *Nicolae Testemitanu* University, Minister of Health, illustrious scientist and statesman, post-mortem academician.

It is worth mentioning that our university holds the logo of *Human Resources Excellence in Research.*

We hope this will be a great opportunity for students and young doctors to exchange ideas in the research and academic performance area. The number of foreign *MedEspera* participants highlights the fact that medicine has no boundaries. We hope this year won't be an exception and our foreign colleagues will attend the Congress and will be fully satisfied with the obtained results and experience.

We wish you all good luck! Don't forget to follow your dreams and work hard to achieve your goals. Take full advantage of this event and feel free to share your experience and learn best practices from famous teachers and your colleagues.

I wholeheartedly hope your impressions of *Nicolae Testemitanu* University and Moldova will be unforgettable!

Rector

Emil Ceban,
MD, PhD, Professor

WELCOME MESSAGE

OF THE ORGANIZING COMMITTEE

Dear colleagues and friends,

We are delighted to welcome you to the 9th edition of the *MedEspera* International Congress for Students and Young Doctors that takes place in Chisinau, Moldova, at *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova! The purpose of *MedEspera* is to contribute and maintain the development of young brilliant minds by bringing the latest information at keynotes and workshops we've prepared. The Congress' program includes all possibilities to develop new abilities, discover different medical fields and spend unforgettable time in Chisinau.

The idea of organizing this Congress sparked among a group of our senior colleagues several years ago. Since the very 1st edition, *MedEspera* became popular among medical students and young doctors from the Republic of Moldova and abroad.

We invested all our effort in organizing this congress, in order to offer you the most valuable experience, because our aim is the best Congress for medical students, residents and young doctors. We sincerely wish you to take the best of *MedEspera* 2022!

President of Honour

Emil CEBAN, Rector of *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova, MD, PhD, Professor

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SUMMARY

I. Cardiology Section

1. ASSESSMENT OF THE IMPACT OF LATE MYOCARDIAL REVASCULARIZATION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION WITH ST-SEGMENT ELEVATION

Author: Cristina Vreme

Co-author: Andrei Eșanu

Scientific adviser: Marcel Abras, MD, Associate Professor, Department of Internal Medicine, Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Early reperfusion therapy is considered a percutaneous coronary intervention (PCI) performed within the first 12h from symptoms onset in acute myocardial infarction with ST segment elevation (STEMI). There is a tendency to extend the "therapeutic window" for STEMI stable patients: the European's Society of Cardiology (ESC) guideline on myocardial revascularization from 2012 and 2015 emphasized an extension of PCI to 24h and in 2017's edition to 48h. Delayed revascularization procedure remains a dilemma for hemodynamically stable patients who missed the reperfusion window.

Aim of study. Assessment of the impact of late myocardial revascularization on left ventricular systolic function, reinfarction rate, and major cardiovascular events (MACE) referring to PCI in different periods of time from symptoms onset.

Methods and materials. Our clinical research represents a retrospective study based on data from 40 patients treated with PCI within the Institute of Cardiology from 2020 to 2022. All subjects were divided into 3 groups: I group - includes 15 patients with PCI performed within the first 12h from symptoms onset, II group - includes 12 patients with PCI performed within 12-24h and III group - includes 13 patients with PCI performed after 48h. All participants were examined after 30 days and 6 months from the PCI.

Results. None of the subjects developed reinfarction or MACE during all follow-up stages. Only one subject was reexamined via PCI after 6 months due to the recurrence of angina, but there hasn't been any progressive residual lesion and the drug-eluting stent has been completely permeable. Improvement of left ventricle systolic function (initial baseline >40 %) was associated with early revascularization: in group I, the mean of EF (ejection fraction) increased from 40,2 to 46,1%, $P < 0,001$, followed by group III, where the mean of EF increased from 37,07 to 39,53%, $P< 0,001$, and followed by patients from the group II, where the mean of EF increased from 44,3 to 45,1%. According to NYHA classes of heart failure, patients who have undergone a reperfusion within the first 12h have a lower rate to develop heart failure than latecomers (group II and III). Most of the subjects were assigned NYHA class II: 10 subjects (73,3 %) from group I, 11 subjects (91,6 %) from group II and 6 subjects (46,1 %) from group III.

Conclusion. Early reperfusion therapy is associated with low reinfarction rate as well as few major cardiovascular events. However, late reperfusion therapy hasn't been associated with high reinfarction rate or major cardiovascular events.

2. CARDIAC REHABILITATION OF PATIENTS FOLLOWING MYOCARDIAL INFARCTION.

Author: Badan Maxim

Co-author: Lucia Mazur-Nicorici

Scientific adviser: Lucia Mazur-Nicorici, PhD, Professor, Department of Internal Medicine, Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. IM is responsible for almost 1.8 million deaths annually or 20% of all deaths in Europe and 15% of all deaths globally. The problem of increasing the effectiveness of treatment and rehabilitation of patients with myocardial infarction is one of the central ones in modern cardiology and have great medical and social importance, as it predominantly affects people fit for work, mostly men (aged 40 to 50 years, and are about 5 times more affected than women).

Aim of study. Studying the influence of therapeutic exercise complexes used in patients rehabilitation with myocardial infarction to assess the beneficial effects on health.

Methods and materials. A bibliographic study of scientific literature specialised at cardiac rehabilitation following myocardial infarction.

Results. Literature data suggest the importance of medical rehabilitation treatment for post-infarction patients in combination with pharmacological treatment. Each session should include 3 phases: a warm-up period, the prescribed aerobic phase and a cool-down phase (relaxation). The program is individualised, so it is necessary to select precisely the type, intensity, duration and frequency for maximum therapeutic effect. Ordinary prescribed frequency of exercise sessions is 3 to 5 times per week. The recommended training duration is 20 to 60 minutes. Criteria for dosing exercise are heart contraction frequency. The intensity should increase gradually. Exercise intensity of 50 to 85% of VO2max seems necessary to improve VO2max (maximal oxygen consumption during the gradual increase of physical exertion).

Conclusion. Exercise-based cardiac rehabilitation is a supplement to drug therapy and post-infarction interventional surgery, because it improves cardio-pulmonary function, optimises drug therapy, decreases cardiac risk factors, increases exercise tolerance, improves mental status, reduces the risk of heart attack and mortality.

3. CARDIAC RESYNCHRONIZATION THERAPY – A MODERN HEART FAILURE SOLUTION. CHALLENGING CLINICAL CASE

Author: Gobjila Ion

Co-author: Syed Abdulrazak, Darciuc Radu, Samohvalov Elena

Scientific adviser: Alexandra Grejdieru, PhD, MD, Associate Professor, Discipline of Cardiology, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Heart failure is known as the impossibility of the heart to execute its contractile function, in the way to supply the vital systems with oxygenated blood. Nowadays, there are 64.3 million people living with heart failure (ESC 2020). The patients with left bundle branch block have class I level A indication for Cardiac Resynchronization Therapy (CRT). CRT implantation is a challenging procedure, most difficult part being left ventricle (LV) lead implantation.

Case presentation. We present a case of a 55 years-old male patient with a dilative cardiomyopathy with ejection fraction 30%, LBBB, class III NYHA heart failure, C stage AHA/ACC. The patient has the right upper limb amputated and he asked to implant the CRT-D device on that side. After informed consent, the procedure was fitted to the patient but created some difficulties. The patient had an unsuccessful LV lead implantation during the first procedure due to the dissection and perforation of coronary sinus. The second and third unsuccessful attempts were performed after one month and two months. The Heart Team decision was to implant epicardial LV lead but just before cardiac surgery to perform a fourth attempt to implant the LV lead via transvenous approach.

Discussion. The 4th attempt was also difficult. After several attempts to cannulate the CS using both contrast agent and deflectable ablation catheter, we performed coronary angiography in venous phase to locate the CS ostium. Using the images as reference, we finally cannulated the CS ostium with a deflectable ablation catheter and implanted the LV lead without any complications in the postero-lateral branch. The patient was discharged the next day with satisfying state of health. Along with the multiple sources recommendation degrees, an individual approach to the patient and a well-trained multidisciplinary team are the key to a less-traumatic therapy and a high rate of intervention's success. Brignole et al. (2013) affirm that the CRT improves the ventricular ejection fraction, left ventricular contractility, on the other hand reduces the ventricular remodelling. Most of the studies have shown that the implantation of CRT-D or CRT-P essentially reduces the mortality and the hospitalisation rate in patients with NYHA III-IV class.

Conclusion. The CRT remains one of the golden choices in HF treatment, based on the studied literature. The clinical case provided the tough way to achieve the goal and treat a patient in a special physical state.

4. CARDIAC RESYNCHRONIZATION THERAPY FOR PATIENTS WITH LEFT BUNDLE BRANCH BLOCK

Author: Siric-Martiniuc Vlada

Scientific adviser: Tcaciuc Angela, MD, Ph.D., Associate Professor, Department of Internal Medicine, Cardiology, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction. Left bundle branch block (LBBB) is an electrocardiographic abnormality detected in patients whose conduction through the left fascicle of the His-Purkinje system is either delayed or blocked. Even though in otherwise healthy people, LBBB doesn't cause significant concern, in patients presenting with acute chest pain, reduced ejection fraction or heart failure, LBBB has a great impact, affecting prognosis and life expectancy. Currently, there are no guidelines for the treatment of LBBB, with the exception of those who have developed heart failure, severe systolic dysfunction of the left ventricle and need cardiac resynchronization therapy (CRT). CRT has been proven to reduce hospitalization and all-cause mortality in such patients.

Aim of the study. This study aims to determine the necessity of CRT throughout the patients with LBBB and heart failure with reduced left ventricular ejection fraction and to highlight the criteria for CRT selection.

Methods and materials. The retrospective cross-sectional study was based on 105 case histories analysis of patients admitted between 2019-2021 with complete LBBB in the Department of Cardiology, of the Sfânta Treime Municipal Hospital during the years 2019-2021.

Results. Out of the 105 patients with LBBB, 74 of them have been subjected to an echocardiogram. All of them had either a sinus rhythm (86.486%) or atrial fibrillation (13.513%). 52.69% had been diagnosed with class III and IV (NYHA) heart failure and 13.513% had a reduced left ventricular ejection fraction (LVEF) below 35%. Respectively 13.513% out of the patients with LBBB, LVEF below 35%, class III and IV heart failure (NYHA) and sinus rhythm or atrial fibrillation would have been eligible and would have benefited from CRT.

Conclusion. CRT reduces hospitalization and all-cause mortality, improving long-term survival of patients with LBBB who also match the other eligibility criteria.

5 CARDIAC RESYNCHRONIZATION THERAPY IN PATIENT WITH HFREF

Author: Marwa Sleman

Co-author: Snejana Vetrila, Ivanes Anastasia

Scientific adviser: Snejana Vetrila, PhD, MD, Associate Professor, Department of Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

Introduction. Heart failure (HF) is a global pandemic clinical syndrome at least affecting 26 million people around the world and is still increasing dramatically in prevalence especially among the aging population despite the significant advances in therapies and preventions. The prevalence increases with age: from around 1% for those aged <55 years to >10% in those aged 70 years or over. It is generally believed that of those with HF, about 50% have heart failure with reduced ejection fraction (HFrEF). Pharmacotherapy is the cornerstone of treatment for HFrEF and should be implemented before considering device therapy, and alongside non-pharmacological interventions. In appropriately selected individuals, cardiac resynchronization therapy (CRT) reduces morbidity, mortality, improves cardiac function and enhances QOL.

Case presentation. An 81-year-old female came to the hospital by herself with complains of dyspnea, progressive decreasing in tolerance to physical activity, palpitation, fatigue, ankle swelling and tender hepatomegaly, headache. She has a history of 25 years of Hypertension, max value of BP was 210/110 mmHg, and was not adherent with her drug therapy, two episodes of syncope and diabetes mellitus. Physical examination on admission revealed pale skin, acrocyanosis, leg edema, HR 66 bm, BP -180/80 mmHg, SO2 -94%. Rest ECG shows sinusal rhythm (SR), large QRS -169 mc, LBBB, and premature extrasystole. Echocardiography shows EF -29%, enlargement of diameter in all cardiac chambers, mitral IV, tricuspid III and pulmonary II regurgitation and diastolic dysfunction. NT-proBNP–5749ng/ml. The diagnosis of Hypertension grade III, high risk. HF IV class (NYHA), stage D was confirmed and treatment with torsemide, spironolactone, hydrochlorothiazide, lisinopril, bisoprolol was started.

Discussion. After continuous pharmacological treatment alongside the non-pharmacological, this patient still present with dyspnea at rest and signs of liquid retention, which make us to revised the particularities of case: symptomatic patients with HF in SR with a QRS duration 150 ms and LBBB QRS morphology and with LVEF less or equal to 35% despite OMT). According ESC guideline was established class A indications to CRT and patient was referred to interventional department for device implantation.

Conclusion. Therapeutic management of patients with heart failure is multidimensional and depends on the ECG, EcoCG particularities and comorbidities. CRT plays an important role in special cases of HF and it is expected to improve EF, symptoms of HF, the quality of life and reduce the chance of death or the development of any fatal cardiac event all along with cardiac rehabilitation program and pharmacological treatment.

6. CLINICAL CHARACTERISTICS OF PATIENTS WITH HEART FAILURE WITH MILDLY REDUCED LEFT VENTRICULAR EJECTION FRACTION AFTER CARDIAC SURGERY

Author: Cazacu Janna

Scientific adviser: Vataman Eleonora, MD, University Professor, Department of Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

Introduction. Heart failure (HF) with mildly reduced left ventricular ejection fraction (LVEF) remains a grey area among chronic HF phenotypes with a substantial overlap of clinical characteristics, risk factors, patterns of cardiac remodelling and outcomes. Moreover, the peculiarities of the evolution of these patients after heart surgery remain little known.

Aim of study. Our purpose was to study the features of the evolution of patients with HF with mildly reduced LVEF after heart surgery.

Methods and materials. Our research included 126 consecutive patients with chronic HF who underwent cardiac surgery (62.2±8.5 years, 67.5%- men, duration of monitoring in hospital- 20.4±5.8 days). Subjects were divided into 3 groups according to the HF phenotype assessed at the preoperative stage: HFrEF - patients with HF with reduced LVEF, HFmrEF- HF with mildly reduced LVEF, HFpEF- HF with preserved LVEF. All patients were investigated by transthoracic echocardiography (EchoCG) and serum level of N-terminal pro-B type natriuretic peptide (NT-proBNP) was assessed. For statistical analysis we used the parameters: arithmetic mean with standard deviation, t-Student test for paired samples, ANOVA procedure.

Results. Before heart surgery patients with HFmrEF constituted 24.8%, while 23.9% of subjects had HFrEF and 51.3%- HFpEF. Patients with HFmr EF presented with old myocardial infarction (46.4%), LV aneurysm (7.4%), atrial fibrillation (46.4%), severe mitral and tricuspid valve regurgitation (50.0% and 40.7%), EchoCG signs of pulmonary hypertension (PH) (57.2%). In HFmrEF group isolated valvular correction (35.7%) and combined surgery (coronary artery bypass grafting+valvular correction- 39.3%) predominated, in contrast to HFrEF group, where 70 % underwent combined surgery, while 80% of patients with HFpEF had isolated valvular correction or coronary bypass grafting, $p<0.001$. In the early stage after heart surgery, 31.5% of patients had HFmrEF, 45.9%- HFpEF and 22.5%- HFrEF. After surgery, in the HFmrEF group LVEF exceeded 50% in only 22.2% of patients and in others 22.2% LVEF became below 40%, $p<0.001$. At the same time, in 37% of patients with HFrEF LVEF became within the range of 40-50%, although none reached the level >50%, while in 24.5% of patients with HFpEF LVEF decreased below 50%. The elevation of NT-proBNP level was appreciated in 87.5% of patients with HFmrEF with a mean value of 5183.1±1627ng/ml that was significantly higher than in the other groups, $p <0.05$ (HFrEF-4134.9±1389ng/ml, HFpEF-2855.2±1305ng/ml). PH suggestive EchoCG signs were found more frequently in patients with HFmrEF (40%, $p<0.01$, PSAP-35.7±11.1mmHg), compared to those with HFrEF (29.2%, PSAP-33.9±7.5mmHg) or HFpEF (7.2%, PSAP-28.8±7.36mmHg).

Conclusion. Early after heart surgery, patients with HFmrEF appear to have a less favourable evolution than those with HFrEF and HFpEF, with a lower rate of subjects with improved LVEF, higher NTproBNP values and more commonly detected EchoCG signs of PH.

7. CORONARY ANGIOGRAPHY FINDINGS IN PATIENTS WITH LEFT BUNDLE BRANCH BLOCK

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Introduction. Left bundle branch block (LBBB) frequently serves as an indicator of underlying heart disease, prompting further diagnostic procedures. According to the Framingham study, the prevalence of coronary artery disease (CAD) in LBBB patients equals 45%. The association of LBBB and CAD is considered to be a poor prognostic factor, leading to a 3- to 4-fold increase in cumulative cardiovascular mortality.

Aim of the study. This study aims to assess the association of LBBB and CAD in patients undergoing coronary angiography and to bring out the differences between men and women with LBBB and CAD.

Methods and materials. The retrospective cross-sectional study was based on 105 case histories and 32 coronary angiography reports of patients admitted between 2019-2021 with complete LBBB in the Department of Cardiology, of the Sfânta Treime Municipal Hospital.

Results. Out of 105 patients with LBBB, 32 underwent coronary angiography. Among them, 18 patients were male (56.25%) and 14 – female (43.75%). The angiographic study revealed that most of the patients had triple vessel disease - 40,62%; most of them were male – 21.87%. Double vessel disease was found in 18.75% of patients, with an equal distribution between men and women – 9.37%. Single vessel disease was determined in 28.12% of cases. Out of them, 18.75% were men, double the number of women - 9.37%. Only 12.5% of the patients had normal vessels, half of them were male.

Conclusion. Coronary angiography findings reveal that there is a strong association between LBBB and CAD, as most of the investigated patients have various degrees of angiographic abnormalities. Male patients with LBBB have proven to be more likely to develop severe CAD, as their angiographic reports reveal poorer results compared to those of women.

8. DRUG-DRUG INTERACTIONS IN CARDIAC PATIENTS

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Introduction. A drug interaction is a reaction between two (or more) drugs or between a drug and a portion of food, beverage, or supplement. Taking the drug while having certain medical conditions can also cause a drug interaction. Also, taking a nasal decongestant if you have high blood pressure may cause an unwanted reaction.

Aim of study. To analyze the interaction of drugs in patients with cardiovascular disease and the prevalence and types of interactions to avoid the associated risks of drug-drug interaction.

Methods and materials. The search engines for the scientific articles related to the keywords, selected 40 scientific articles out of which only 34 met the inclusion criteria in the research topic.

Results. Scientific evidence has shown that about 26% of patients with cardiovascular disease who administer at least 3 drugs reported side effects. Of these, 56.4% of patients suffered the consequences of the negative interaction of drugs in cardiology, 77.5% of patients suffered serious consequences (rhythm disorders 41.07%, hemorrhages, and blood pressure disorders (12.86%), and only 26.7% moderate consequences. Also, males are more likely to be exposed than females. Sources warn of the serious consequences of using non-steroidal anti-inflammatory drugs (acetylsalicylic acid) with antihypertensive drugs and recommend the use of low and short-term doses of treatment and their replacement with clopidogrel for long-term treatment. Concomitant use of proton pump inhibitors, clopidogrel, and grapefruit juice is also not recommended, as it inactivates the effect of clopidogrel as it blocks cytochrome 2C19. Concomitant use of beta-blockers and calcium channel blockers (verapamil) may induce sinus bradycardia and AV block.

Conclusion. The present review identified the potential drug-drug interaction and documented interactions in cardiovascular patients. Although, the potential drug-drug interaction increases as the number of concomitant medications increases. Patients with cardiovascular disorders are at high risk for drug-drug interactions because of the types and number of drugs they receive. The severity and likelihood of a given drug-drug interaction varies and depends on the pharmacokinetic and pharmacodynamic properties of the object drug and the precipitant drug.

9. ELECTROCARDIOGRAPHIC CHANGES IN PATIENTS WITH DILATED CARDIOMYOPATHY

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Introduction. Dilated cardiomyopathy (DCM) is the most common cardiomyopathy, affecting people of all ages, and to date remains the leading reason for heart transplantation and the third leading cause of chronic heart failure. It is quite difficult to diagnose this disease because it does not provide a clear clinical picture until the heart is severely damaged.

Aim of study. To assess ECG changes in patients with dilated cardiomyopathy.

Methods and materials. In the study were analyzed 30 clinical observation sheets of patients (5 women and 25 men), hospitalized in cardiology and therapy departments during 2016-2019, diagnosed with DCM. The average age of the patients was 58.73 ± 9.73 years. Data were selected according to a survey that included personal data, duration of hospitalization, hereditary predisposition, harmful behaviors, clinical manifestations and results of paraclinical investigations. The obtained results were subjected to statistical analysis using the t-Student criteria.

Results. The ECG changes most often recorded in patients with DCM were: atrial fibrillation (93.3%), left bundle branch block (70%), pathological Q wave (43.3%), negative T wave (53.3%), atrial fibrillation being the most common ECG manifestation. Comparing ECG changes depending on the functional class (FC) of heart failure (HF) according to NYHA classification, in the group of patients with FC II (n= 3) the incidence of atrial fibrillation was found in 67%, left bundle branch block - in 66.7%, pathological Q wave - in 33.3%, negative T wave - in 33.3% of patients. In the group of patients with FC III (n=16) the incidence of atrial fibrillation was found in 93.75%, left bundle branch block - in 62.5%, pathological Q wave - in 43.75%, negative T wave - in 56.25% of patients. In the group of patients with FC IV (n= 11) the incidence of atrial fibrillation was found in 100%, left bundle branch block - in 81.8%, pathological Q wave - in 54.5%, negative T wave - in 72.7% of patients.

Conclusion. The ECG changes in patients with DCM are most commonly presented by atrial fibrillation, left bundle branch block, pathological Q wave, negative T wave and their incidence increases constantly and progressively with increasing degree of heart failure.

10. FUNGAL INFECTIVE ENDOCARDITIS

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Introduction. Fungal endocarditis (FE) is considered much more dangerous due to specific etiology and predisposing factors. Although treatment is available, the comorbidities, pathogen resistance, and severe disease predisposal lead to higher mortality in patients with FE. These circumstances occurring less frequently creates an impediment in diagnosis and treatment [1,2].

Aim of study. This review aims to present particularities of Fungal Infective Endocarditis.

Methods and materials. The article is based on international publication data and on-line materials.

Results. FE is the most severe form of IE being usually diagnosed postmortem. Several clinical studies have identified Candida and Aspergillus as the most common pathogens involved in the disease. The highest frequency is attributed to the Candida species 50-80% of which Candida albicans lead with 30-40% of cases of FE, Aspergillus spp follows with 20-25%, Aspergillus fumigatus being the main pathogenic agent [1,2]. The risk factors that lead to the condition of FE are related to invasive intervention like valve prosthesis, intravenous drug use, central venous catheter, cardiovascular surgery, etc. Clinical manifestations of FE are common to all forms of IE and include fever, dyspnea, cough, changing or new heart murmur and embolic phenomena [1]. The diagnosis of FE is difficult due to the similarity of the clinical manifestations with IE but being much more severe to which is added the negative blood culture. This is why the FE frequently is misdiagnosed. Echocardiography detected the affected endocardium by the presence of vegetations, ring abscesses, newly developed dehiscences occurring on valve prostheses. About 81.4% of patients present vegetations as per retrospective clinical studies. According to the Duke's criteria the defined FE needs the presence of 2 major criteria or 1 major criterion and 3 minor criteria or 5 minor criteria. However, the diagnosis is most often defined postmortem [1]. Successful treatment of FE requires combined antifungal therapy with valve replacement surgery. At the present time voriconazole, amphotericin B, itraconazole, caspofungin are the most used antifungals and even so refractory fungal infection comes with pathogen resistance. FE death rates reach 41-72%, despite aggressive treatment [2].

Conclusion. FE develops more frequently in patients with predisposing cardiac factors and comorbidities, affecting predominantly the aortic valve, evolving with severe complications and high mortality. Early diagnosed, adequate therapy and emergency surgery facilities are having a favorable prognosis. Other members of the family have some necessary and relevant aspects in order to treat the problem.

11. HYPERTENSIVE DISORDERS IN PREGNANCY

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Introduction. High blood pressure (HBP) is a clinical syndrome, defined by the persistent increase of systolic pressure ≥140 mmHg or/and diastolic pressure ≥90 mmHg. It can affect pregnant women causing hypertensive disorders in pregnancy (HDP) which is a major problem, being a serious threat to both maternal and fetal health. It affects up to 10% of all pregnancies and causes about 15% of maternal deaths globally [1,2].

Aim of study. The aim of this study is to emphasize the role of HDP in maternal and fetal morbidity and mortality, a risk factor for future maternal cardiovascular disease.

Methods and materials. This review comprehends the latest data on this topic, published in AHA/ASA Journals and Google Scholar.

Results. This review concluded that the incidence of HDP in 2019 constituted 18.08 million globally. The risk factors for HDP are family history, previous hypertensive pregnancies, obesity, diabetes, developing countries habitating [2]. Women with HDP may present: visual disturbances, headache, gastrointestinal complaints as well as edemas, which can be a sign of evolving preeclampsia. There is a 5 fold risk of perinatal death for women with HDP by contrast to those with normotensive pregnancies. The effect of HBP values during pregnancy also reflects on the fetus and may cause intrauterine fetal growth restriction, prematurity and stillbirth [3]. More than that, women with HDP are more likely to develop cardiovascular events such as Myocardial Infarction, Heart Failure and Cerebrovascular Complications. Women of the advanced maternal age are expected to have an increased rate of HDP because of risk factors such as obesity and diabetes and are more likely to develop atherosclerosis, which affects the small arteries, leading to hypertension [3]. The number of deaths due to HDP was approximately 27.83 thousand in 2019, representing a 30.05 % decrease from 1990 [2].

Conclusion. Hypertensive disorders in pregnancy is a serious problem, especially in developing countries. The connection between HDP and future cardiovascular events may be sharing common risk factors, like obesity, diabetes, dyslipidemia. Using these risk factors as targets for prevention would probably bring an improvement to the morbidity and mortality rates of both HDP and cardiovascular disease.

12. HYPERTROPHIC CARDIOMYOPATHY WITH INVOLVING OF THE RIGHT VENTRICLE

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Introduction. Hypertrophic cardiomyopathy (HCM) is defined by the presence of increased left ventricular (LV) wall thickness that isn't solely explained by abnormal loading conditions. Most previous studies include the LV for definition of HCM, neglecting the right ventricle (RV), but recently the RV involvement in HCM was reported. Cardiac magnetic resonance (CMR) is useful in characterizing the phenotypes of RV and LV in HCM. RV involvement is associated with increased risk of arrhythmias, dyspnea, pulmonary thromboembolism, heart failure and sudden death.

Case presentation. The 32y.o. man was admitted at Institute of Cardiology in December, 2021 with complaints: intermittent chest pain on physical endeavor, low tolerance to exertion. Family history revealed the father`s death in middle age of unknown cause. In childhood was suspected of rheumatic fever followed by tonsillectomy at the age 18y.o. without improvement of symptoms due to which wasn't admitted to compulsory military service. In March 2020 suffered an episode of fainting. ECG performed at that time showed sinus rhythm with repolarization abnormalities, manifested by T-wave inversion in precordial leads. Patient was referred to the emergency department with suspicion of acute coronary syndrome. Subsequently diagnosis was not confirmed either clinically or laboratory. Physical examination at admission revealed regular rhythm without extracardiac sounds, HR-75b/min, BP-110/75mmHg,SpO2-98%. On ECG deep negative T wave in V1-V4. NT-proBNP-253ng/ml, ESR-14mm/h. EcoCG: normal-sized heart chambers, normal systolic function (EF 62%), IVS medio-apical thickness-20mm, apical segment of RV-17mm, obstructed outflow tract of RV. Holter ECG: pronounce respiratory arrhythmia, negative T wave in V1-V5. CMR: Accentuated LV trabeculae type `non-compact spectrum`. Fibrotic intramural lesion in hypertrophic LV, late gadolinium enhancement. Hypertrophic RV myocardium. Two septal interventricular defects. Non-obstructive HCM, asymmetric form. Regardless of the patient's complaints and instrumental findings the diagnosis of Non-obstructive hypertrophic cardiomyopathy was confirmed. The treatment with b-blockers was initiated.

Discussion. This case represents clinical interest because of detection of RV myocardial hypertrophy, less described in the literature. It's certain that the patient suffers from a genetically determined cardiomyopathy, however a more accurate diagnosis requires a comprehensive genetic evaluation, including storage disease which have similar features. Unfortunately, HCM is delayed diagnosis as in the patient's case. Thus making a differential diagnosis for chest pain and syncope in the young population is an important heart assessment by CMR. This patient is supervised by a cardiologist and will continue treatment with b-blockers. The thromboembolic risk assessment and the decision of anticoagulants are required.

Conclusion. The case emphasized that assessment of young patients with chest pain and fainting is multidimensional and can hide life-threatening conditions.

13. IMPRESSIVE RECOVERY OF HIBERNATING MYOCARDIUM FOLLOWING CORONARY REVASCULARIZATION (CASE REPORT)

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Introduction. Myocardial hibernation describes a state of persistently impaired contractility of the myocardium following steady or repetitive ischemia that can be partially or completely reversible.

Case presentation. We report the case of a 56-year-old man with a history of grade 2 arterial hypertension, dyslipidemia, and grade 2 obesity. At age 45, he presented a large anterior myocardial infarction for which he underwent coronary angioplasty with bare metal stent implantation of the left anterior descending artery (LAD). At discharge, the patient was completely asymptomatic. Echocardiography revealed normal left ventricular (LV) function, and the patient was started on dual antiplatelet, beta-blocker, angiotensin converting enzyme inhibitor, and statin therapy. After 8 years, the patient was readmitted for chest pain and heart failure symptoms. He admitted having abandoned his treatment 6 years earlier. Echocardiography revealed hypertrophied and slightly dilated LV, with 50% ejection fraction, and hypokinesia of the LV apex and of the middle third of the interventricular septum. Coronary angiography showed severe stenosis of the circumflex artery (Cx), for which a bare-metal stent was implanted. Three years later, the patient was readmitted to hospital for dyspnea and fatigue at mild exertion, and admitted having again abandoned his treatment for the past year. Echocardiography showed 27% LV ejection fraction, and the presence of an apical LV thrombus, for which the patient was started on oral anticoagulation. Coronary angiography revealed three 90% stenosis of the first diagonal, of the Cx, proximal to the stent, and of the right coronary artery (RCA).

Discussion. Coronary angioplasty with primary stent implantation of the Cx and RCA was performed, with successful procedural outcome. Three days after the procedure, the patient's symptoms were improved, and echocardiography showed significant recovery of the LV systolic function, with >60% basal and 45% global LV ejection fraction. Six months later, the patient remained asymptomatic, with 45% LV ejection fraction and no intra-ventricular thrombus on echocardiography.

Conclusion. In patients with long history of ischemic heart disease, distinguishing between hibernating myocardium and myocardial infarction sequels, although challenging, is of critical importance, since hibernating myocardium represents a target for revascularization, whereas revascularization of infarcted myocardial areas does not lead to any improvement of cardiac function. In addition, this case emphasizes the importance of patient adherence to medical therapy and of regular cardiologic follow-ups, particularly in high-risk patients, to avoid coronary artery disease progression and consequent impairment in LV myocardial function.

14. INFECTIVE ENDOCARDITIS OF PROSTHESIS, STAPHYLOCOCCAL ETIOLOGY, ON THE BACKGROUND OF DIABETES MELLITUS. CLINICAL CASE.

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Introduction. Infective Endocarditis (IE) is a serious pathology with severe complications and high mortality (20-25%). A considerable number of patients develop IE on the background of comorbidities: diabetes mellitus (DM), viral hepatitis, cirrhosis, cancer. The predominant pathogens in patients with IE are staphylococci, streptococci and enterococci. The prevalence of DM is increasing worldwide, and the proportion of DM among those with IE is high, caused by bacteremia, immunodeficiency and endothelial dysfunction.

Case presentation. Patient C., 64 years old, with diagnosis: Nosocomial Infective Endocarditis of the prosthetic valve, Staphylococcus Aureus etiology, with damage to the prosthesis of the aortic valve. Regurgitation of the aortic valve 3rd degree. Valvular abscess. Sinus tachycardia. HF III NYHA. Diabetes mellitus type 2. Dyslipidemia. Toxic anemia. The patient presents fever 38ºC, chills, sweats, inspiratory dyspnea, palpitations, fatigability, weight loss. Objective data: pronounced edema in the calves, rhythmic heart sounds, FCC 120 b/min, BP 110/40mmHg, the sound of the prosthesis, diastolic murmur in the auscultation of the aortic valve. Anemia (Hb 70g/l), leukocytosis, lymphopenia, thrombocytosis, increased ESR. Blood biochemistry: hyperglycemia. Hemoculture: Staphylococcus aureus. ECG: Sinus tachycardia with FCC 120b/min. EAH left deviation. LV hypertrophy. EcoCG: medium vegetation (15 mm) on mechanical aortic prosthesis. Regurgitation of the AoV 3-rd degree. Treatment:triple antibiotic therapy, antimycotics, diuretics, without positive dynamics. Required emergency valvular surgery due to suspicion of valvular abscess, with postoperative positive dynamics. But the patient's prognosis was unfavourable with death after 2 weeks postoperatively.

Discussion. According to the literature, DM is associated with an increased risk of infection and the development of IE. Patients with DM have an increased severity of IE and a high in-hospital mortality rate. Medium and long-term clinical outcomes, especially in patients with heart valvular surgery, reveal that in DM the diagnosis is established late, often progresses to embolic complications and recurrent infections and ends with an unfavourable prognosis.

Conclusion. Nosocomial IE of prosthesis in patients with DM leads to severe complications and increases the death rate and the recurrences of IE. The peculiarity of this case is that the patient with DM after 11 after the AoV prosthesis develops a recurrence of IE complicated by valvular abscess and despite proper treatment dies.

15. ISCHEMIC CARDIOMYOPATHY MANAGEMENT

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Introduction. Ischemic cardiomyopathy is a significant impairment of left ventricular function (LVEF ≤35%) resulting from coronary artery disease. It can be due to prior myocardial infarction or from reversible loss of contractility due to chronically ischemic but still viable myocardium (stunned or hibernating).

Case presentation. A 68 years old male presented at the emergency department complaining of mild exertion shortness of breath (SOB) and angina - several episodes per day lasting about 10-15min which worsened 3 days before. ECG: symmetrical, deep, inverted "T" waves consistent with type 2 "Wellens Syndrome". Troponin I – negative on serial testing. Echocardiography: severe LV enlargement (LVDD – 69mm), moderately impaired LVEF – 34%, anteroseptal and anterior wall hypokinesis, grade III mitral valve (MV) regurgitation (vena contracta 9mm). Optimal medical therapy (OMT): β-blockers, nitrates, trimetazidine, lisinopril and spironolactone have been initiated and titrated to maximum tolerable doses. Second day coronarography: severe (75%) stenosis in distal LM and critical stenosis in proximal LAD. Diagnosis: Ischemic cardiomyopathy, crescendo angina pectoris. Heart failure III NYHA class. The heart team didn't achieve a sole decision in terms of the revascularization intervention: surgeons advising for CABG and MV repair, interventional cardiologists - for single stent PCI assuming the possibility for MV regurgitation improvement considering ischemic etiology. The decision has been made by the patient. Being afraid of surgery, he underwent PCI with a second generation DES- 3.5-28mm, on LM-LAD, with POT on LM with a 4.5 NC balloon. Ticagrelor 90 mg bid for 12 months and long-life high dose statin were added. At 6 months: Significant symptom improvement: no angina, SOB only on strenuous activity. Normalisation of the "T" waves on ECG. Improvement of LV dimensions (LVDD – 60mm) and function: mild reduction of the LVEF - 48% (Simpson), GLS -9.6/-11.4 %, II-nd degree MV regurgitation.

Discussion. Ischemic cardiomyopathy and myocardial revascularization.

Conclusion. The patient's choice should be always taken into account. The decision in favour of PCI appeared to be correct. However, viability testing should be done before either revascularisation intervention.

16. OZONETHERAPY IN HYPERTENSION AND ISCHEMIC DISEASES

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Introduction. Cardiovascular pathologies are the leading cause of death worldwide. These diseases can be either the main cause of death or an underlying condition that aggravates the patient's prognosis. About 17.9 million people die per year from cardiovascular disease, of which 85% come from low- to middle-income countries, in whose classification The Republic of Moldova takes part of. Furthermore, atherosclerosis is an underlying condition in about 50% of all fatal cases that take place in western countries. There are multiple ways of treating cardiovascular diseases, of which an underused but effective method is ozonetherapy which is useful for its vasodilatory, anti-aggregative, anti-inflammatory properties, and for its role in the oxidation of tissues.

Aim of study. As the background, we have identified pathologies that are a leading cause for death or a chronic physical ailment that could change the patient's way of living life, after which we have identified statistically significant studies that have used Ozonetherapy be it to study the effects of Ozonetherapy in the body, as a treatment option to enhance the prognosis of patients suffering from atherosclerosis or its efficacy in the rehabilitation of patients that have already suffered from a heart attack or other cardiological diseases.

Methods and materials. For the purpose of the study, we have accessed literature from relevant sources that is found in books or in databases, such as NihGov, PubMed, NCBI, and ScienceDirect. With the usage of keywords such as "Ozonetherapy", "Atherosclerosis", "Ischemic heart disease", "Hypertension", "Heart attack", "oxidative stress".

Results. After reviewing the relevant sources and verifying their legitimacy, we have found statistically significant improvements in parameters that are relevant for hypertension where the endothelin-1, Renin, and Nitric Oxide levels of subjects that had Hypertension induced and had subsequently undergone Ozonetherapy presented levels similar to the control group with $p<0.05$, paradoxical anti-oxidative proprieties where shown to be present as well. After 5 and 15 sessions of Ozone therapy, Cholesterol levels dropped by 5.5% and 9.7% respectively, LDL levels were found to be significantly reduced by 15.4% and 19.8% respectively, while no significant modification was found in HDL levels, these molecules being Major contributors or inhibitors of Atherosclerosis pathogenesis. Ozonetherapy has shown its efficacy in enhancing the odds of a favorable prognosis in patients with peripheral atherosclerosis and in the rehabilitation of post-stroke patients as well.

Conclusion. Ozonetherapy is an underused but effective minimally invasive method in the treatment of patients with heart disease, in controlled dosages using methods such as abdominal insufflation, Ozone-treated NaCl solutions ("Physiological solution"), Minor and or Major Auto-Hemotherapy, Ozonetherapy improves the prognosis of patients suffering from ischemic heart disease by increasing the adaptability of the body to oxidative stress, as well as by transforming cholesterol into oxysterol that is later taken up by Lipoprotein molecules and processed in the hepatocytes. The importance of which is highlighted by the fact that Oxidative stress and cholesterol are major causes of ischemic heart disease. Thus concluding that Ozonetherapy is worthy of more studies and subsequently enhancing the frequency of its usage in a clinical environment.

17. SOCIO ECONOMIC BURDEN ON PATIENT WITH HYPERTENSION

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Introduction. The relationship between socioeconomic status (SES) and hypertension has been studied in a lot of studies. So, the impact of SES on hypertension has been reported with conflicting results.

Aim of study. Estimate analysis studies of socioeconomic status and measurement types in patients with hypertension.

Methods and materials. Were used scientific publications and articles from the PubMed, Medscape databases published during 2016-2021. For a more effective study of the articles, the keywords used in the research were: arterial hypertension, socio-economic status. At the same time, I used English and Romanian in the electronic databases.

Results. The search results estimated over 2000 studies, but according to our criteria we noted 178, which, based on the research highlights, emphasize that high blood pressure predominates in young people, fit to work, regardless of gender, level of education, society status, and their income. Therefore, the overall results provided evidence of an increased risk of hypertension among the lowest socioeconomic categories. It has been shown that men tend to develop hypertension around the age of 45, while women later. People from low-income countries also have low SES, based on education and low-income levels, but also a lack of jobs, less risk factors but higher mortality in people with low SES.

Conclusion. Patients with hypertension indicate an increased prevalence among the lowest socioeconomic levels. Education, an important indicator of socio-economic status, has the strongest association with the prevalence of high blood pressure. Many studies have shown that the prevalence of hypertension increases as the level of education decreases.

18. THE EFFECT OF MUSIC THERAPY ON PATIENTS FOLLOWING HEART SURGERY

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Introduction. Over time, music therapy is increasingly used to reduce or stabilise medical symptoms or complications, whether it is chronic pathology in psychiatry, neuropsychiatry, neurology, cardiology, oncology, or palliative care, or temporary symptoms, such as preoperative stress and anxiety or postoperative pain. The therapeutic potential of music is suggested by its effects on the body. It acts on the cortical, limbic and paralimbic levels, leads to the release of dopamine, serotonin, oxytocin, influences the immune system, as well as the social attitude of the patient.

Background. Up-to-date information on methods for quantifying stress, pain and anxiety levels in patients after heart surgery were analysed in order to demonstrate the influence of music therapy on the patient's pre- and postoperative condition.

Methods and materials. Research motors PubMed and Google Scholar submitted 80 results, 10 of which met the research criteria.

Results. All studies used the Visual Analogue Scale, Numerical Calibrated Scale, or McGuill Pain Questionnaire to quantify the patient's postoperative pain level after heart surgery. 3 studies performed by researchers in Turkey, Iran, and China showed a significant decrease in the need for painkillers, while another 7, mainly in Europe, did not show an improvement in the patient's vital signs after music therapy. 5 studies conducted in Europe quantified the level of anxiety, using the Analog Visual Scale, 2 of them showing a significant improvement, while another 3 do not confirm the importance of therapy. The heterogeneity of the results obtained is probably due to the small number of participants in the study, the subjective perception of pain, anxiety, types of music, the part of the day in which the music therapy was performed, but also the surgeries previously performed.

Conclusion. The analysed studies prove the therapeutic potential of music in cardiac patients in the postoperative period. Due to the significant heterogeneity of the study results, there is no evidence to support the use of music therapy in postoperative pain management. This underscores the importance of developing a standard protocol for music therapy, identifying a cohort group, establishing the optimal duration and frequency of therapy.

19. THE IMPACT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE ON EVOLUTION OF CHRONIC HEART FAILURE

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Introduction. According to the latest data, chronic heart failure (CHF) is a significant disease that affects about 26 million people worldwide. It was found that the prevalence of chronic obstructive pulmonary disease (COPD) is about 20% in these patients, especially in smoking people. Sometimes the differentiation of these two conditions is difficult due to the common pulmonary symptoms that patients present and consequently to this, the COPD is often undiagnosed in patients with CHF. Therefore, it is necessary to study and understand what is the interplay between COPD and CHF in order to correctly manage the patient's condition when these diseases coexist.

Aim of study. The main aim of this review is to establish the correlation between COPD and CHF and the evolution of CHF in patients with this comorbidity.

Methods and materials. This review is based on articles that were published during the last 5 years from the Journal of the American College of Cardiology, Journal of Cardiology, Medscape, NCBI and PubMed database.

Results. Recent clinical trials reported that COPD represents a significant predictor for patients with CHF, because both diseases present a high risk of mortality and the hospitalisation rate of patients with CHF and COPD increases by 20-30% compared to those who do not have this comorbidity. As COPD progresses to severe stages, pulmonary hypertension occurs due to hypoxic vasoconstriction and elevation of pulmonary vascular resistance. Therefore, the right ventricle becomes hypertrophied and later dilated, which will eventually lead to systolic and diastolic dysfunction. It is obvious that in such conditions the patient's symptoms worsens and the prognosis becomes more reserved. An interesting fact, that was observed in some studies, is that the pathophysiological mechanisms in patients with CHF and moderate COPD (GOLD stage II) differ from patients with severe COPD (GOLD stage III-IV) described above. It is considered that systemic inflammation from COPD may be responsible for increased risk of cardiac injury in these patients, playing a key role in progression of CHF. This includes a high level of certain biomarkers such as: C-reactive protein, fibrinogen, vascular endothelial growth factor, surfactant protein D, brain-type natriuretic peptide (BNP) and N-terminal proBNP. Finally, this chronic inflammation accelerates coronary atherosclerosis that will lead to left ventricle remodelling and dysfunction.

Conclusion. Analysing data from medical literature, I can conclude that there are a significant correlation between COPD and CHF, because COPD facilitates cardiac dysfunction, clinical condition of these patients becomes more severe, increases the rate and duration of hospitalisation and at the same time it is more complicated to manage these two diseases, especially in decompensated patients.

20. THE INFLUENCE OF MUSIC ON CARDIAC FUNCTION IN HYPERTENSIVE PATIENTS

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Introduction. It is estimated that approximately 26% of the global population (972 million people) suffer from high blood pressure (HBP). Due to the increase in living standards, and other risk factors, morbidity is expected to increase to 29% by 2025. In the fight against this disease, one of the potential weapons is considered to be music therapy. Music therapy has its origins in ancient Greece, when Pythagoras used music in the treatment of physical and mental illness. Around 400 BC, Hippocrates, the father of medicine, used to play music to the mentally ill patients to relieve their pain.

Aim of study. This meta-analysis is to investigate the effect of music on blood pressure and heart rate, as well as objectively assess the effects of music therapy in patients with hypertension.

Methods and materials. Using the keywords ``music therapy, hypertension, heart rate", we identified 2075 studies on the following platforms: Research Gate, National Library of Medicine, Deutsch Aerteblatt International, Science Direct. Out of all the articles, we excluded duplicates and studies published prior to 2010. Of the remaining 484, 320 were excluded on the basis of title and abstract, 13 were excluded due to the age of the participants, 8 due to insufficient results, 2 studies were done on non-human subjects, 19 were meta-analyzes, 97 were excluded due to other reasons detected during editing. In the study we included 3 articles.

Results. Researchers Imtiyaz and Moniruddin conducted a study on 30 pre-hypertensive people, 15 of whom were in the experimental group. He observed that Systolic Blood Pressure (SBP) decreased by 8.73 mmHg and Heart Rate (HR) by 6.42. Diastolic Blood Pressure (DBP) decreased by only 1,44. The control group had insignificant changes. Supap Im-Oun conducted the study on 120 people, of which 60 in the experimental group, all being diagnosed with grade 2 hypertension. He observed a decrease in SBP by 11.43 mmHg and DBP by 8.58. Another study was conducted by Trappe and Voit. They had 120 participants, 60 of whom were in the control group, and the other 60 were divided into 3 groups, each group listening to different songs. There was a significant decrease in BP of people who listened to classical music, but those who listened to pop music had insignificant results.

Conclusion. Instrumental music does have an influence on blood pressure and heart rate in hypertensive patients.

21. THE ROLE OF COMORBIDITIES IN HEART FAILURE FRAIL PATIENTS

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Introduction. Heart failure (HF) is a clinical syndrome consisting of cardinal symptoms accompanied by signs (elevated jugular venous pressure, pulmonary crackles, and peripheral oedema), due to a structural and/or functional abnormality of the heart. HF is one of the most important and rapidly growing diseases due to its high prevalence worldwide and the significant impact on morbidity and mortality. Frailty is a syndrome characterized by a state of increased vulnerability to endogenous and exogenous stressors, patients with HF are 6 times more likely to get fragile. Fragility is closely related with comorbidity, because one worsens the other, creating a vicious circle. Comorbidity is the presence of one or more additional conditions often co-occurring with a primary condition, which is often presented by HF.

Aim of study. To assess the importance of comorbidities in heart failure frail patients.

Methods and materials. Evaluation of fragility by Edmond score and relationship with comorbidity evaluated by Charlson score. Include 70 patients in the Republican Cardiology Center in the Acquired Heart Disease Department. Patients have been divided in two groups: non – fragile, and fragile.

Results. The study group include 70 patients. The average age of the study group was 58,5 (42-83) years, including 36 (51,4%) male and 34 (48,5%) female; 24 (34,2%) – from the urban area, 46 (65,6%) – rural; employees - 14 (20,0%), disabled - 16 (22.8%), retired - 36 (51,4%), unemployed – 4 (5,7%). Admission diagnosis been presented by Arterial hypertension 14 (20,0%), ischemic cardiomyopathy 28 (40,0%), valvulopathy 8 (11,4%), cardiomyopathy 10 (14,2%), other conditions 10 (14,2%). Echocardiography showed reduced ejection fraction (EF) in 10 (14,28%) patients, middle range EF - 20 (28,5%) and normal EF – 40 (57,1%) patients. Fragility was confirmed in 36 patients (51,4%), in which mild comorbidities 2 (5,5%), moderate comorbidities 10 (27,0%), severe 24 (66,6%). Comorbidities has been presented by congestive HF 40 (57,1%), atrial fibrillation/flutter 29 (40,0%), acute myocardial infarction in anamnesis 26 (37,1%), diabetes 23 (31,4%), liver chronic disease 11(14,2%), chronic kidneys disease 7 (10,0%), stroke 6 (8,5%).

Conclusion. Almost half of patients with HF present with frailty syndrome. The most prevalent comorbidities are presented by congestive HF, atrial fibrillation/flutter, acute myocardial infarction in anamnesis.

22. URIC ACID – AS A MODERN CARDIOVASCULAR RISK FACTOR

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Introduction. Uric acid (UA) is the end product of purine metabolism in higher animals, such as humans and great apes UA synthesis and excretion in the body are balanced under physiological conditions. Hyperuricemia occurs when this balance is disrupted. Male UA levels greater than 7 mg/dL and female UA levels greater than 6 mg/dL are considered hyperuricemia in most cases. Hyperuricemia is frequently associated with diseases caused by an unhealthy lifestyle. Concomitant hyperuricemia affects approximately 25–40% of untreated hypertensive patients and an association between elevated serum uric acid (SUA) and hypertension (HT) has been described in adults in several large epidemiological studies. A number of recent small clinical trials have demonstrated that SUA-lowering agents such as allopurinol and probenecid can lower blood pressure (BP) in adolescents, indicating that UA is an independent risk factor for the development of high blood pressure

Aim of study. Hypertension is strongly associated with elevated serum uric acid (sUA), but the exact reason for this is not known. Hyperinsulinemia caused by insulin resistance increases sodium reabsorption in the kidneys, which may result in high blood pressure. Additionally, endothelial dysfunction caused by oxidative stress is a significant contributor to the development of hypertension. According to research, UA significantly increased the production of reactive oxygen species (ROS) and angiotensin II in human endothelial cells. Many studies have been conducted in recent years that have demonstrated a link between sUA and hypertension. A 10-year follow-up of a prospective randomized study of 5748 healthy adolescents revealed that elevated sUA was closely associated with hypertension and the metabolic syndrome, according to the findings. According to a large-scale meta-analysis of 55,607 subjects from 18 prospective cohort studies, the incidence of hypertension increased by 13 percent for every 1 mg/dl increase in serum uric acid (sUA). The two main classes of ULT (urate lowering treatments) drugs are currently in use in clinical practice are those that inhibit UA synthesis (XO inhibitors, such as allopurinol, febuxostat, and others) and those that increase UA excretion (ULT drugs that act on the kidneys) (e.g., benzbromarone, probenecid, etc.). Current research confirms that ULT has a positive effect on hypertensive patients under the age of 40. A notable example is the use of sodium glucose cotransporter 2 inhibitors (SGLT-2; dapagliflozin, empagliflozin, canagliflozin, and others) to effectively lower sUA levels by increasing the rate of UA excretion thus helps in lowering hypertension.

Methods and materials. In this article, the literature review was analyzed from PubMed, Google Scholar and NCBI sites.

Results. The relationship between hyperuricemia and cardiovascular disease is becoming increasingly clear, which can be attributed to the advancement of research in the field of UA. The mechanism by which uric acid is causing hypertension is becoming clear and by blocking this mechanism we can lower the level of hyperuricemia. Some drugs such as Allopurinol can help in reducing hypertension.

Conclusion. The study clarifies the treatment associated with hypertension caused by hyperuricemia is effective in decreasing the level of UA levels.

II. COVID-19 Section

1. ACUTE PULMONARY EMBOLISM, A CASE OF PATIENT AFTER COVID-19 INFECTION

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Introduction. Pulmonary artery thromboembolism is a medical emergency caused by acute obstruction of the pulmonary artery which in the absence of prompt treatment presents a high risk of death. It is the third most acute cardiovascular syndrome in the world. It is often associated with deep vein thrombosis of the lower limbs, with various coagulopathies. Once with the onset of Covid-19 infection, an equally close link was observed between these two pathologies and a higher incidence of PET in patients suffering from this infection.

Case presentation. We present the case of a patient who has recently suffered from Covid-19 infection, medium form of severity, that was treated in ambulatory conditions. The patient's condition is obviously worsening 10 day after discharge. The sudden installation of marked dyspnea, chest pain that doesn't pass away in rest and worsens in activity, cough, dizziness and intense asthenia. Hemodynamic state: sinus tachycardia (FCC 90-100 c/min) with mild hypotension (100/70 mmHg) and decreased oxygen saturation (SO2-89%). The results of laboratory tests are determined: D-Dimers> 10.00 mg /l. Angio-CT reported thrombus in the bifurcation of both pulmonary arteries with dimensions of 5.8 cm and 5.5 cm, respectively. Anticoagulant treatment with AVK was instituted very quickly, maintaining the INR 2-3 target values. When establishing a rapid diagnosis and a treatment as soon as possible, the improvement of the health condition and the complete resorption of the thrombus in 1 month of anticoagulant treatment are presented.

Discussion. Covid-19 infection has led to a number of cases of PET, the course of the disease often making differential diagnosis difficult, but it is essential for proper treatment.

Conclusion. Patients who have recently had Covid-19 infection and are presented to the emergency department with a sudden deterioration in their health are advised to assess the probability of pulmonary artery thromboembolism, especially at patients with high thromboembolism risk.

2. ACUTE RESPIRATORY FAILURE

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Introduction. Respiratory failure is a decrease in the ability of the lung system to achieve optimal respiratory gas exchange for oxygen and carbon dioxide. It is manifested by insufficient oxygenation, named - hypoxemia. (decrease the partial pressure of oxygen <60 mmHg) and ventilatory failure - hypercapnia - increasing the partial pressure of carbon dioxide 50 mmHg. Breathing difficulties may be terrible and disturbing. Respiratory function is the first affected by the new Coronavirus. In many cases, the disease is not definitively treated. The actuality of this subject is accentuated in the context of the increased risk of spreading the infection caused by the Sars-Cov-2 virus.

Aim of study. In order to ensure an adequate degree of preparation and response to Covid-19 infection, regarding to the actualized recommendations of World Health Organization, it is mandatory to implement or adjust the public health measures in context of Covid-19 as well as good European and International practices.

Methods and materials. The study of specialized medical literature, study protocol, study group, selection of medical data and ethical issues, laboratory tests and tested biological samples, techniques used in lung imaging,statistical analysis of data.

Results. People who had Covid-19 ,showed symptoms like flu, as well as respiratory tract infection with fever (89%) cough (68%) fatigue (38%), 19% breathing difficulties. The severity of the disease varies from an asymptomatic infection, the easy disease of the upper respiratory tract, severe viral pneumonia with respiratory failure or even death. Current reports estimate that 80% of cases are asymptomatic or mild, 15% cases are severe (the patient needs an oxygen mask) and 5% are in critical condition and require ventilation and connection to breathing appliances.

Conclusion. In conclusion, after a serious case of COVID-19, a patient's lungs can recover, but not overnight. "Recovery from lung damage takes time,", "There's the initial injury to the lungs, followed by scarring. Over time, the tissue heals, but it can take three months to a year or more for a person's lung function to return to pre-COVID-19 levels. After treatment, patients need to monitor their health - using scales such: Borg scale of effort perception, scales of dyspnea, fatigue scales, as well as clinical signs such as: respiratory rate, heart rate, blood pressure, oxygen saturation of peripheral blood.

3. CASE REPORT OF SEVERE COVID-19 PNEUMONIA IN A TERM NEWBORN

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Introduction. Coronavirus disease (COVID-19) has been shown to affect all age groups. The data in the literature usually admit a milder form of disease in newborns than adults. According to case reports in Europe, some reported newborns had fever and dyspnoea and had mechanical ventilation for several days. Their average age at diagnosis was 5 days. Because of these reports, we should carefully and rapidly diagnose newborn cases for the prognosis of the disease.

Case presentation. Patient X, female, age 4 days, weight 3500 g. She is hospitalized on the 5th day of illness. COVID-19 PCR test was positive on the second day of life. He received antibiotic therapy for 3 days. Child born from pregnancy II, birth II, at 39 weeks, weighing 4000 g, natural birth, Apgar score 8/9p. Physical examination revealed hoarseness, rare dry cough, rhinorrhea, jaundiced skin, fever up to 37.20C, periodically restless, capricious child. Bilateral shortness breath, obstruction, absent rales. Cardiovascular examination revealed no pathology. The baby was transferred to our neonatal intensive care unit and pre-diagnosed as having respiratory distress, pneumonia. The baby was isolated. Blood gas parameters were pH= 7.45, pCO2= 38.0 mmHg, pO2= 34.1 mmHg, HCO3 = 25.9 mEq/l, BE= 0.9 mmol/l, lactate: 6.6 mmol/l. Complete blood count, WBC= 9.5/µL, lymphocytes ratio = 67%, Hg= 19.2 g/l, HCT= 58.1%, PLT= 163 × 109/l and biochemical parameters (liver and renal function tests) total bilirubin was 224 mcmol/l, more in normal ranges in accordance with the age of the baby. Bacteriological investigation of sputum - Klebsiella pneumoniae. Chest X-ray revealed bilateral pneumonia. Scor brixia-5. Lung damage-25%. We started to treat the baby according to the guidelines, on the first day of hospitalization. On the 10th day of hospitalization, D-dimers are raised, the blood is thick, a clot forms immediately, anticoagulant treatment is initiated. COVID-19 PCR test was positive. Hb 192 g/l, WBC 12,0/µL. Chest X-ray-Pneumonia on the left. Obstructive syndrome. Brixia-3 score. Lung damage-15%. We discharged the baby on postnatal Day 20 with positive dynamic.

Discussion. Previously reported cases of COVID-19-infected newborns were especially about non-symptomatic or mildly symptomatic babies who never received strict respiratory support. We aimed to present this report because this case was one of the most interesting cases reported in newborns, this case having early symptoms that began in the perinatal period of life and progressed to severe pneumonia.

Conclusion. Our case of severe COVID-19 pneumonia was a rare presentation of infection in a neonate. Most of the neonatal COVID infections are widely reported to be asymptomatic or mild in presentation. It has been reported that the clinical course is more severe in preterm babies. The available data on newborn outcomes, and the postnatal care practices used in the context of these outcomes, suggest that a reframing of the perceived neonatal risk imposed by SARS-CoV-2 is necessary. Neonatologists should bear in mind the possibility of a term neonate presenting with severe COVID-19 infection.

4. CLINICAL AND DEMOGRAPHIC FEATURES OF COVID-19 POSITIVE CASES IN NEUROLOGICAL REHABILITATION FACILITY

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Introduction. The Covid-19 pandemics require rethinking the rehabilitation plan for people who suffer from neurological conditions. Despite prophylactic measures, some sporadic cases can also occur in rehabilitation facilities, which makes patients with neurological disabilities more vulnerable.

Aim of study. The aim of our study is to observe the main clinical characteristics of Covid-19 positive patients that underwent rehabilitation for neurological conditions.

Methods and materials. A number of 9 Covid-19 positive cases were registered in the database of the neurorehabilitation department from Institute of Neurology and Neurosurgery. An analysis of demographic data, and clinical features was performed in order to determine neurological deficits and comorbidities of patients admitted for rehabilitation.

Results. Among the studied cases 5 were males and 6 females with a mean age of 56,44 (from 18 to 79) years. The mean period of hospitalization of 7,8 days, with further transfer to Covid-19 specialize. The main cause of hospitalization was stroke in 5 cases (3 hemorrhagic and 2 ischemic), 2 cases of traumatic brain injury, 1 case of brain arteriovenous malformation, and 1 case of cerebral tumor. The most common neurological deficits were hemi or tetra-paresis, and cognitive disorders. Among the comorbidities that were present in positive Covid-19 tested patients were hypertension, diabetics and urinary infections.

Conclusion. Isolated positive Covid-19 cases among people can occur in spite of measures of prevention of infection in neurorehabilitation services. Co-occurrence of Covid-19 infection in patients with neurological disabilities makes patients more complex and vulnerable and requires strengthening the rehabilitation services along with adequate clinical management.

5. COVID-19 AND DIABETES MELLITUS: IMPACT ON THE EVOLUTION OF EACH OTHER'S DISEASES

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Introduction. Coronavirus disease (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). One of the most common comorbidities present in patients with COVID-19, approximately in 9% to 35% is diabetes mellitus (DM). The reason is that chronic hyperglycemia can alter both innate and humoral immunity. This state of the immune system allows the virus to spread more in the body and then leads to a longer recovery period.

Aim of study. To explore the interaction between COVID- 19 and diabetes mellitus, and their influence on each other.

Methods and materials. Were analyzed 32 literature sources using The Lancet, Medline, PubMed, Google Scholar databases over 2 years. Search keywords: “diabetes mellitus”, “covid 19”, “cytokine storm”, “ACE2 receptors”.

Results. Based on the information, there are several mechanisms of interaction between diabetes and the Covid 19 virus, the main of which are ACE2 receptors and cytokine storm. ACE2 is a receptor through which SARS-CoV-2 enters the cell, it is expressed in the lungs, in the pancreas, and many other organs. ACE2 divides Ang 2 into Ang 1-7 when interacting with it. ACE2, Ang 1-7 are vasoprotective parts of the RAAS, leading to vasodilation, an increase in insulin release, low insulin resistance, anti-inflammatory, and antifibrotic reactions. Preventing degradation of Ang II to Ang(1-7) contributes to lung injury and fibrosis associated with COVID-19 and impaired glycemic control in diabetes. SARS-Cov-2 tropism for β-cells leads to acute impairment of insulin secretion or destruction of β-cells, leading to the development of de novo diabetes, the treatment of which was immediately started with insulin. Diabetes and Obesity lead to abnormal secretion of cytokines and a decrease of adiponectin. Adiponectin inhibits the factor NF-κB, reducing the expression of VCAM, ICAM-1, and E-selectin, anti-atherogenic effect, reducing insulin resistance and inflammation. In turn, SARS-CoV-2 infects circulating immune cells (CD3, CD4, CD8 T cells), causing lymphocytopenia, which reduces control of the innate immune system and increases the secretion of cytokines. Overproduction leads to cytokine storms (IL-6, IL-1β, TNFα), which leads to a high risk of vascular hyperpermeability, multiple organ failure, and death. These cytokines inhibit insulin signaling, phosphorylate its receptors and lead to insulin resistance.

Conclusion. DM and COVID-19 can impact each other's progression, which leads to faster complications. Knowing their interaction mechanism, it became possible to use targeted therapy.

6. COVID-19 IN A PATIENT WITH INSULIN-DEPENDENT DIABETES MELLITUS

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Introduction. Throughout the COVID-19 pandemic, multiple studies have shown that certain patients are at especially high risk of developing severe illness or dying from coronavirus infection. Therefore, researchers had pointed out a connection between diabetes mellitus (DM) and COVID-19. Furthermore, DM may be a potential risk factor for the severity of COVID-19 infection.

Case presentation. A 67-year-old man with a medical history of HTA gr.III for 5 years (treated with acetylsalicylic acid 75 mg, lercanidipine 20 mg, losartan 100 mg, indapamide 1.5mg and bisoprolol 10 mg) and Insulin-Dependent type I Diabetes Mellitus for 10 years (Actrapid: 8.00 - 18 UN, 12.00 - 8 UN, 18.00 - 8 UN; Protofan: 8.00 - 10 UN, 20.00 - 10 UN) came to the family doctor with suspected COVID-19, following a 3 day history of dry cough, fevers 38C and severe dyspnea. After the diagnosis of COVID-19 infection was confirmed by PCR test, the doctor prescribed the following treatment: 2nd generation cephalosporin, Xarelto 10mg, Famotidine, vit C, D, Zn, gr B which the patient followed for 8 days. On the 8th day due to worsening dyspnea and fever 38C, the patient requested the AMU service and was brought to the emergency department. He was hypoxaemic, with an SpO2 of 90% without ventilator support and with an SpO2 of 94% on 5 L / min oxygen, FR - 20 / min, FC - 64 / min.

Discussion. Our purpose with this case report was to present how DM may lead to rapid deterioration of health due to COVID19 infection as DM patients already suffer from organ damage or decreased organ functionality.

Conclusion. According to the literature, diabetic patients have a weaker immune system, less viral clearance rate, malfunctions of metabolic activity due to their high blood glucose level, and other associated problems. This does not increase the risk of patients to become infected with COVID-19. However, the severity of COVID-19 can increase due to the comorbidity of DM.

7. COVID-19 INFECTION AND THE ONSET OF SYSTEMIC SCLERODERMA

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Introduction. Covid-19 disease is a respiratory tract infection caused by the new SARS-CoV-2 virus, which in the last 2 years has affected almost 500 million people globally. The danger of infection consists of the virus's target which is systems and organs already involved in chronic diseases. COVID-19 has also been demonstrated to induce autoantibody production in genetically predisposed patients and may cause the onset or exacerbation of autoimmune diseases.

Case presentation. A 55-year-old patient presented to the "Timofei Moşneaga" Republican Clinical Hospital with dyspnea, dysphagia, headache, arthralgia, and myalgia. From her medical history, she was presented in January 2021 with Raynaud syndrome and a month later suffered from SARS-CoV-2, which was the trigger for the activation of anti-Scl 70 Ac, thus establishing the diagnosis of Systemic Skin Scleroderma (SSc). At the physical examination were observed the areas of edema and induration in the upper and lower limbs, microtomy, telangiectasia on the anterior part of the thorax, Raynaud syndrome, areas of hypo-/hyperpigmentation of the hands, feet, and chest, hematological and autoimmune changes. Chest CT scan detected interstitial pneumonia with pronounced pericardial effusion. In November 2021, the pericardial cavity was drained due to cardiovascular complications, from which 900 ml of sero-hemorrhagic fluid was aspirated.

Discussion. This case report describes the onset of clinical symptoms of SSc with anti-Scl 70 positive Ac after Covid-19 in a patient with a history of Raynaud syndrome. Covid-19 and SSc are known to have some similarities, such as elevated levels of IL-6, IL-10, and MCP-1, endothelial damage, and interstitial pulmonary fibrosis. However, in the case of the patient, the presence of anti-Scl70 Ac confirms the diagnosis of SSc. We can also assume that the patient has a genetic predisposition to autoimmune diseases, and Covid-19 infection triggered the activation of anti-Scl 70 Ac.

Conclusion. In conclusion, we want to specify the need to perform the immunological examination, in the detection of autoantibodies in patients with unclear symptoms, who underwent Covid-19.

8. COVID-19-ASSOCIATED PULMONARY MYCOSIS: A DIAGNOSTIC DILEMMA

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Introduction. Diabetes mellitus (DM) and corticosteroid treatment are independent risk factors for both: severe COVID-19 and lung mycosis. An uncontrolled DM and the use of corticosteroid in a background of COVID-19 appeared to increase the risk of mucormycosis in immunocompromised hosts. Because the diagnosis of fungal infections can be challenging, the empirical appropriate antifungal is critical to provide a successful outcome that was demonstrated in the presented case.

Case presentation. A 40-year-old male, non-smoker, without any known chronic lung diseases, was referred to our clinic due to an episode of hemoptysis (30 ml). He was discharged from a hospital two weeks previously due to a severe form of COVID-19. A hyperglycemia was primarily diagnosed during the SARS-CoV-2 infection, but no hypoglycemic treatment was initiated. High doses of corticosteroids were administered during the hospitalization for COVID-19 and a regimen of 12 mg/day of methylprednisolone has been started after discharge. At the admission to our hospital, he presented with hyperglycemia (22.8 mmol/l) and with HbA1C 9.4%. HRCT of the chest showed an area of consolidation in the right upper lobe close to the right hilum accompanied by lymphadenopathy. Bronchoscopy showed purulent, cheesy secretions, extensive necrosis of the right upper lobe segments. Histopathological examination of the lung and bronchial wall tissue obtained by transbronchial biopsy identified hyphae with invasion in the vessels and muscular tissue of the bronchial wall, highly suggestive for mucormycosis. Serological tests for Aspergillus fumigatus were negative. Antifungal treatment with itraconazole (the onliest available antifungal drug in the Republic of Moldova) was initiated, and no other episodes of hemoptysis and with an improvement of the bronchial and infectious clinical syndromes. HRCT of the thorax after two months of antifungal treatment demonstrated a resolution of the consolidation area and no lymph nodes enlargement.

Discussion. Reports of COVID-19-associated mycosis have been increasing in frequency since early 2021, particularly among patients with uncontrolled diabetes. In the absence of serum antigenic biomarkers and because the availability of PCR testing is low, particularly in low-income countries, COVID-19-associated mycosis diagnosis is challenging, with conventional culture and histopathological demonstration of fungi being the mainstay of diagnosis, albeit with low sensitivity.

Conclusion. COVID-19-associated mucormycosis can be a serious complication of severe COVID-19, particularly in patients with uncontrolled diabetes. This case highlights the diagnostic and treatment challenges in a case of pulmonary mycosis associated with COVID-19.

9. COVID-19 ASSOCIATED GUILLAIN-BARRÉ SYNDROME

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Introduction. In this review, we will summarize a few reviews and try to show possible connections between COVID19 and GBS.

Aim of study. Guillain-Barré syndrome [GBS] is an autoimmune disorder causing nerve damage, muscle weakness and paralysis. Antibodies formed may be against myelin or against axons. GBS ranges from a mild case with brief weakness to deadly paralysis, and symptoms last for a few weeks to several years. Usually, patients recover fully. The typical causes of GBS are C. jejuni, flu, CMV, EBV, Zika virus and lately, raised concerns about connection between Covid19 and GBS.

Methods and materials. This systematic review aimed to summarize and meta-analyze the salient features and prognosis of SARS-CoV-2-associated GBS. We searched the PubMed (Medline), Web of Science and Cochrane databases using SARS-CoV-2 and GBS-related keywords.

Results. Through the process of analyzing the symptoms of GBS in COVID-19, some patients developed hyperreflexia instead of hyporeflexia, especially with the AMAN subtype so hyperreflexia must be included in the future diagnostic criteria of GBS.

Conclusion. The association between COVID-19 and GBS is unclear, but there is one mechanism strongly associated with COVID-19 and immune-mediated neurological complications, which is the molecular mimicry between SARS-coV-2 and human autoantigens.

10. DEPRESSION ASSOCIATED WITH COVID-19 INFECTION

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Scientific adviser: Jana Chihai, MD, Associate Professor, Department of Psychiatry, Narcology and Medical Psychology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova; Senior Mental Health Advisor for MENSANA Project.

Introduction. Before 2020, mental disorders were leading causes of the global health-related burden, especially depressive disorders lead to this burden. The sudden emergence of the COVID-19 pandemic in December, 2019, has created an environment where many contributing factors of poor mental health are exacerbated. The need for up-to-date information on the mental health impacts of COVID-19 is imperative. According to World Statistics, it has been demonstrated that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) affected more than 360 million people worldwide (417,369 cases in Moldova) and more than 5 millions of people have died from COVID-19 disease. In patients with COVID-19, most depression symptoms can be clearly seen during the illness and after a partial recovery. The most important reasons for developing depression in COVID-19 infected patients can be divided into social and pathological factors.

Aim of study. The purpose of the research is to identify the depressive disorders in people with COVID-19 infection hospitalized in IMSP CIE Moldexpo, Republic of Moldova, as well as to elaborate recommendations for post-covid depression based on the protocol data.

Methods and materials. - Historical analyses of illnesses and care - Interview - Study and analysis of the scientific literature - Collecting data from patient questionnaires - Quantitative and qualitative processing of results

Results. The management of post-covid depression depends on the form and evolution. In this context, treatment could mean: -For patients with mild symptoms, psychological interventions are suggested, which include breathing exercises, relaxation techniques and mindfulness training. -For patients in moderate or severe condition, the recommended intervention and treatment consist of a combination of medication and psychotherapy. New generation antidepressants may be prescribed for mood disorder. -Therapy for patients with severe and critical forms consists in reducing the difficulties of breathing, relief of symptoms, reduction of depression and reduction of complications. -For elderly patients who have other associated diseases such as high blood pressure and diabetes, the administration of psychotropic medication should be done with caution, taking into account drug interactions and their effects on respiration. Establishing an early diagnosis of post-covid depressive disorder, correct treatment methods, and highlighting the risk factors could help to significantly improve patients' quality of life and fasten their social reintegration.

Conclusion. COVID-19 infection is a current, live issue affecting people worldwide. Post-covid affective disorders have a high incidence and prevalence. During the COVID-19 pandemic, people around the world faced long and difficult quarantine periods, lack of social interaction, many have lost their jobs, which has caused a lot of suffering, anxiety, depression and sleep disorders. Depression induced by COVID-19 infection can worsen the prognosis of the disease and have a negative effect on the immune system. Recovery requires great efforts, supportive care, a multidisciplinary and holistic approach.

11. EVOLVING EPIDEMIOLOGICAL CHARACTERISTICS OF SARS-COV-2 OF THE PATIENTS OF A COVID-19 WARD

Author: Colnic Diana

Scientific adviser: Aliona Nastas, MD, Department of Preventive Medicine, Discipline of Epidemiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Since late 2019, the coronavirus disease (COVID-19) outbreak, caused by SARS-CoV-2, has rapidly evolved to become a global pandemic. Every country was affected but with a varying number of infected cases and mortality rates. Accurate projections of healthcare needs can help plan the pressure on the healthcare system, try to prevent them from reaching capacity and ensure they are well equipped to deal with increasing demand.

Aim of study. COVID-19 has plagued the globe, with multiple SARS-CoV-2 clusters and its evolving epidemiology. The aim of the study was to describe the epidemiological characteristics of SARS-CoV-2 of the patients of a COVID-19 ward.

Methods and materials. For this retrospective study we enrolled all the COVID-19 patients diagnosed at a COVID-19 ward within the Public Health Care Setting of the Timofei Mosneaga Republican Clinical Hospital, where patients arrive from across the country. Epidemiological data was collected from patients' medical records from September 2020 to May 2021.

Results. The demographic characteristics: The 2203 patients were aged 18 to 92 years old with 51,56% of the sample being male ($t=1,46$; $p>0,05$). Most cases (778, 35,31%) were 58-67 years. The epidemiologic characteristics: The districts of recorded cases were divided into seven regions: Chisinau municipality (56,55%), Centre (23,19%), North (11,16%), South (7,03%), Transnistria (0,72%), ATU Gagauzia (1,04%), other countries (0,27%). A total of 758 were self-employed (34,40%), 703 retired (31,91%), 441 employed (20,01%), 182 unemployed (8,26%), 99 disabled persons (4,49%), 12 students (0,54%), 8 on maternity leave (0,36%). Patients with at least one coexisting underlying condition were 52,60% male and 47,39% female ($t=1,41$; $p>0,05$). Patients with multiple comorbidities were 51,05% male and 48,94% female ($t=0,81$; $p>0,05$).

Conclusion. All people are susceptible to COVID-19, and older males and those from districts other than Chisinau aged 58-67 years are more likely to become severe cases. Even though COVID-19 is highly contagious, control measures have proven to be very effective, which could prevent most infections.

12. EYE DISORDERS IN COVID-19 INFECTION

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Scientific adviser: Maria Iacubitchii, Department of Ophthalmology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The COVID-19 pandemia caused by SARS-CoV-2 had led to various lesions of internal organs and systems. SARS-CoV-2 is tropic to the ACE-2 receptor, located on epithelial cells of the mucous membranes of the respiratory tract, vascular endothelial cells, neurons, cornea, limbus, and conjunctiva, etc. The eyes are not the main route of transmission of the virus, however, the presence of the ACE2 protein and communication through the nasolacrimal duct with the nasal cavity increases the risk of ophthalmic manifestations of COVID-19.

Aim of study. Literature analysis to highlight the most common clinical ocular manifestations in COVID-19 infection.

Methods and materials. In the Pubmed and Google Scholar databases, we selected and analyzed 40 articles with embedded keywords: "Eye disorders in COVID-19 infection", "Ocular Symptoms in Coronavirus Disease", etc.

Results. Ophthalmic manifestations of Coronavirus infection occur in approximately 6-12% of patients. The most common manifestation of damage to the anterior segment of the eye is conjunctivitis (86.4% of cases). This disease is accompanied by the following clinical picture: dry eyes, hyperemia, chemosis, epiphora, etc. Microvascular retinal disorders increase 8.8-fold in SARS-CoV-2, referring to posterior segment involvement. Venous thromboembolism develops in 19-25% of patients with COVID-19 . It is characterized by retinal hemorrhages, microinfarcts in the internal plexus, cotton spots, occlusion of the central retinal vein, etc. One of the rare manifestations, less than 1% of cases, is damage to the cranial nerves, including the optic nerve. This manifestation may develop as a result of hypoxia, ischemia, inflammation, or immunological response to the optic nerve, causing demyelination. The deadly combination of diabetes mellitus and a positive SARS-CoV-2 test is increasingly common in the long-forgotten disease.

Conclusion. At the moment, much attention is paid to the treatment of respiratory diseases, thromboembolic complications and neurological symptoms of Coronavirus infection, while ocular complications in patients infected with SARS-CoV-2 are usually not reported or relegated to the background . This leads to the fact that many ophthalmic manifestations and complications of this disease remain unpublished. The combination of these factors leads to the fact that ophthalmic treatment is complicated by an incomplete picture of the data or even occurs without contacting specialists.

13. HEADACHE – THE CONSEQUENCE OF COVID-19

Author: Ursu Anastasia

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Introduction. Headache is one of the most common neurological symptoms seen in patients with COVID-19, which drastically decreases the quality of life. It can be installed de novo, with a worsening of the pre-existing primary or secondary headache.

Aim of study. Description of clinical features of headache in patients with COVID-19, reveal of the typical clinical pattern.

Methods and materials. For this review, various sources (5 cross-sectional, 1 retrospective, 1 case-control, 1 descriptive survey study, and 2 meta-analysis), published in the last two years, were selected from PubMed, Google Scholar, Elsevier scientific databases. Data were analysed according to the following criteria: gender; pain location, character, severity, progression; associated symptoms and history of pre-existing headache.

Results. A review of several studies found that women are more likely to develop COVID-19 headaches, although men are more likely to be infected. The most typical headache location has been shown to be holocranial or bilateral frontal. The main character of the headaches was the oppressive one. Most of the patients had mild to moderate pain severity, with VAS data ranging from 6 to 7.5 points. It is noteworthy that men present more severe pain attacks than women. This may be due to the higher number of comorbidities among male patients. According to the studies, headache mainly resolved in the first month after COVID-19, and in 8-15% - in the first 6 months after infection, indicating a tendency towards chronicity. Typical associated symptoms accompanying headache in COVID-19 are nausea, vomiting, photo- and phonophobia, the most common being nausea and photophobia. Patients with a history of tension-type headache or migraine showed a greater tendency to develop headache in COVID-19. These patients also often experience a change in the clinical pattern of headache, with headache becoming more severe, with longer, more frequent attacks and a tendency towards chronicity. However, the absence of headache in the history does not exclude the possibility of developing chronic headache post-COVID-19.

Conclusion. 1. Headache intensity in most of the described cases ranged from mild to moderate, frontal or holocranial with pressure sensation, without nausea, vomiting, phono- or photophobia. These features might suggest a phenotypic classification of tension-type headache according to ICHD-3. 2. Two studies with mostly female participants showed that the typical clinical headache pattern following COVID-19 was the migraine with pulsatile pain character and association of photo- and phonophobia. These data can be explained by the fact that migraine is a predominant type of primary headache among female patients. Further investigation of the gender-dependent influence of COVID-19 is needed for clarification.

14. NEPHRITIC SYNDROME IN POST-COVID-19 INFECTION. A CASE REPORT.

Author: Eleonora Afanasiuc

Scientific adviser: Cepoi Daniela, Assistant Professor, Department of Internal Medicine Rheumatology and Nephrology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The SARS-Cov-2 virus has gradually become a major health concern affecting numerous human organs. Although SARS- Cov-19 affects mostly the respiratory system, another important target is the function of the kidney, which can manifest with nephritic syndrome especially in patients with comorbidities such as rheumatic diseases.

Case presentation. We selected a 71-year-old woman with a clinical history of rheumatoid arthritis with the goal to present a case of onset nephritic syndrome after suffering from SARS-Cov-2 infection. The patient was diagnosed with rheumatoid arthritis in 2007 and was treated with methotrexate from 2008 to 2012. In 2009 she received treatment with tocilizumab intravenous 8 mg per kg once a month for 6 months. Leflunomide 10 mg per day periodically with metipred 4-8 mg per day during the exacerbation. In 2019 the patient was diagnosed with septic arthritis of the left knee joint and leflunomide 10 mg per day without corticosteroids was administered. The first time she was diagnosed with SARS-Cov-2 infection in October 2021, had oligo-anuria for 3 days, but the diuresis has normalized after she took drugs with diuretic effects and phytotherapy. In february 2022 she was diagnosed the second time with SARS-Cov-2 infection. On 20th of february she described periorbital edema with oliguria and excretion of brown urine. Oliguria was present every day during the period of 40 days. Blood biochemical analysis indicates creatinine levels 148.12 µmol/L. On 1st of march in her urine analysis have been detected next alterations: erythrocyte count >100, leukocyte count 20-25, flat epithelium 5-6, positive for nitrite, presence of mucus and bacteria.

Discussion. The clinical manifestations such as periorbital edema, brown color of urine and the results of the para-clinical investigations with oliguria, macrohematuria, increased levels of serum creatinine demonstrates the presence of the nephrotic syndrome post-SARS-CoV-2 in a 71-year-old woman with a clinical history of rheumatoid arthritis. Based on these evidences we can suspect IgA nephropathy, also known as Berger's disease.

Conclusion. While some studies demonstrate that the incidence of post-SARS-Cov-2 nephritic syndrome is low, the subject still remains insufficiently studied. It is important to take into consideration that patients who suffered SARS-Cov-2 can present with nephritic syndrome for improvement in the management of SARS-CoV-2 patients.

15. PATHOPHYSIOLOGICAL MECHANISMS OF KIDNEY INVOLVEMENT IN COVID-19

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Introduction. Coronavirus disease 2019 (COVID-19) is a pandemic infection caused by the novel severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Although the respiratory system is the major target, multiple organs, including the kidneys, can be affected. Kidney involvement is frequent, with clinical presentation ranging from abnormal proteinuria at hospital admission to progressive acute kidney injury (AKI). AKI is one of the most important complications in critically ill patients with COVID-19. The estimated incidence of acute kidney injury in patients with COVID-19 varies from 0.5% up to 45% depending on the severity of the disease. Mortality among hospitalised patients with acute kidney injury associated-COVID-19 is significantly higher than for those without kidney involvement.

Aim of study. Acute kidney injury is considered a marker of disease severity and negative prognostic factor for survival. In this context, we explored the potential pathways and pathophysiology of COVID-19 associated with AKI.

Methods and materials. The articles published during the years 2020-2022, were selected, using PubMed and Google Scholar database according to keywords: „COVID-19", „SARS-CoV-2", „Acute kidney injury", „Pathophysiology". 308 publications were found. Research includes data from 28 publications, analysed according to selection criteria.

Results. The etiology of renal impairment in patients with COVID-19 is multifactorial. Various mechanisms have been proposed for kidney injury in SARS-CoV-2 infection, both COVID-19-specific mechanisms, including direct invasion of the renal parenchyma with SARS-CoV-2 virus, the new coronavirus can exert direct cytopathic effects on kidney tissue and also non-specific mechanisms, such as: hemodynamic instability (hypovolemia or fluid overload), local and systemic immune and inflammatory responses, with macrophage activation and release of circulating proinflammatory cytokines (cytokine storm), hypoxia, sepsis, rhabdomyolysis, release of tissue factors and activation of coagulation pathways with the formation of microthrombi and alteration of the microcirculation. Other potential mechanisms are altered Renin-Angiotensin-Aldosterone regulation, organ interactions between lung, heart, and kidney and also therapeutic consequences (use of antibiotics and antiviral drugs with nephrotoxic potential, invasive mechanical ventilation). The most common histopathological findings are: acute tubular injury, thrombotic microangiopathy, endothelial injury and collapsing glomerulopathy.

Conclusion. This review highlights the importance of understanding the potential mechanisms of renal involvement in SARS-CoV-2 infection, for the early detection of renal injury and the avoidance of factors that contribute to progression of kidney injury, including adequate hemodynamic support and avoidance of nephrotoxic drugs, which will improve vital prognosis of COVID-19.

16. RENAL AFFECTATION IN SARS-COV-19.

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Introduction. SARS-Cov-2 infection can be associated with kidney dysfunction or be the cause of kidney dysfunction through different mechanisms. Numerous observational studies have mostly described the interrelation between SARS-Cov-2 and the manifestations of acute kidney injury, nephritic and nephrotic syndrome, isolated proteinuria and hematuria. The goal of the study was to determine the correlation between SARS-COV-19 infection and renal function affectation.

Aim of study. In people who develop clinical illness in response to SARS-CoV-2, the most commonly affected is the respiratory system, but the virus can affect any organ in the body including the kidneys. Acute kidney injury (AKI) is the second most common organ damage in COVID-19 patients reported by different studies. The pathogenesis of AKI is likely multifactorial that involves not only direct viral invasion but also dysregulated immune response in the form of cytokine storm, ischemia to kidneys, hypercoagulable state, and rhabdomyolysis. Also, SARS-Cov-2 infection is associated with new-onset nephrotic syndrome.

Methods and materials. The information was collected and analyzed by performing a research in the database of the Department of Internal Medicine Rheumatology and Nephrology of the State University of Medicine and Pharmacy *Nicolae Testemitanu*, within the Republican Clinical Hospital Timofei Moşneaga, on a batch of 118 patients diagnosed with SARS-Cov-2 infection in 2021. We defined AKI based on the Improving Global Outcomes (KDIGO) guidelines that suggest a SCr computed from the Modification of Diet in Renal Disease (MDRD) formula, assuming an estimated glomerular filtration rate (eGFR) of 75 ml/min/1.73 m2.

Results. The study group was represented by 118 patients aged between 24 years-old and 84 years-old with the average age of 59,07, 64 patients were female (54,24%) and 54 (45,76%) were males SARS-Cov-2 infection. Based on our criteria we found that AKI developed in 48 (40,6%) patients during their stay. Also we determined that 17,8 % of patients had nephritic syndrome with increased proteinuria and presence of hematuria. Older people and those with comorbidities were more predisposed to have evidence of AKI or nephritic syndrome.

Conclusion. Using Improving Global Outcomes (KDIGO) guidelines and the Modification of Diet in Renal Disease (MDRD) formula we found that in our study group of patients hospitalised for SARS-Cov-2 infection the most common manifestation of kidney damage is Acute kidney injury (AKI. Nephritis syndrome was also often present, but with a lower incidence than AKI.

17. SARS COV-2 INFECTION IN PREGNANCY

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Scientific adviser: Zinaida Sârbu, MD, Associate Professor, Discipline of Obstetrics and Gynecology, Department of Obstetrics and Gynecology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Due to the rapid spread of the SARS-CoV-2 virus and the increased incidence of COVID-19, certain categories of people, such as pregnant women, become vulnerable to infection. The risks of exposing pregnant women to this new type of infection are not entirely known, and many data are being updated. Based on published studies, pregnant women don't have a higher risk of contracting SARS-CoV-2 virus than the general population, and there is no evidence to suggest an increased risk of miscarriage compared to other viral infections. What we do know is that pregnancy, in a small percentage, can change the way the body responds to severe viral infections.

Aim of study. Assessment of the method of termination of pregnancy and the impact of COVID-19 on newborns.

Methods and materials. The study included 80 COVID-positive pregnant women hospitalised at the Mother and Child Institute. The investigation of the patients included the anamnesis and the history of the disease, the clinical manifestations, the results of the paraclinical examinations, the way of completing the pregnancy and the condition of the newborns.

Results. During 2021, a total of 80 COVID-positive pregnant women with a severe and moderate form of the disease were hospitalised in the Maternal and Child Institute clinic, in the intensive care unit. The age of the patients included in the study was between 18-25 years -7 patients (8.7%), 21-25 years -5 patients (6.2%), 26-30 years -26 patients (32.5%), 31-35 years -25 patients (31.2%) and over 36 years -17 patients (21, 2%). The term of pregnancy varied between: less than 27 weeks -26 cases (32.5%), 28-32 weeks -24 cases (30%), 33-36 weeks -19 cases (23.7%) and greater than 36 weeks -10 cases (12.5%). Patients were hospitalised mostly from 11-20 days in the intensive care unit - 44 cases (55%). Pregnancy was completed per vias naturales in 7 cases (8.7%), of which 2 births with antenatal death of the fetus and 39 cases (48.7%) were completed by cesarean section, of which 34 - urgent and 5 - planned. Cesarean section was performed on maternal indications in 27 cases (69%) and in 9 cases (23%) on fetal indications.

Conclusion. 1. SARS CoV-2 infection is most commonly found at the term of pregnancy up to 27 weeks. 2. In pregnant women with severe forms of infection, the pregnancy was completed by urgent cesarean section, at maternal indications. 3. As a result of the severe complications associated with prematurity, 8 newborns died in the early neonatal period and 39 children were discharged at home in a satisfactory condition.

18. THE ANALYSIS OF THE MENTAL HEALTH OF THE POPULATION DURING THE PANDEMIC COVID-19

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Introduction. Benzodiazepines are medicines with an anxiolytic effect and a wide therapeutic index; they are used in treatment of anxiety, sleep disturbance, different neurotic, psychasthenic, anxiety neurotic states. Benzodiazepines interact with GABAA-receptors; increase the affinity of gamma-aminobutyric acid on these receptors, which intensifies the inflow of the chloride ions and reduces the excitability of neurons.

Aim of study. The purpose of the present study is to analyse the scale of the sales of popular benzodiazepine medical supplies, prescribed in Moldova, and also to compare the total quantity of them, sold through the pharmacy chains before and after the beginning of the pandemic COVID-19.

Methods and materials. The present study covers the period of time from 2018 till 2021, and it is divided into two periods - 2018-2019 (before the pandemic COVID-19) and 2020-2021 (after the beginning of the pandemic COVID-19). The statistics include the quantities sold through the pharmacy chains, and the medicines for the medical institutions in the Republic of Moldova within the framework of the state project were not taken into consideration. The analysis includes the benzodiazepines, often prescribed, such as alprazolam, clonazepam, diazepam, phenazepam, oxazepam, chlordiazepoxide and lorazepam, which appeared on the Moldovan market only in 2021. The statistics considered the active substance and the number of packages, not taking into consideration the name of the manufacturer, the dosage form or their number in a package.

Results. During the study it was observed that in the period from 2018 to 2019 the sales of the above-mentioned benzodiazepine medicines within each group increased insignificant, and 2018, in total, practically did not differ from 2019, 327806 packages VS 326514 packages respectively. Absolutely different picture can be observed after the beginning of the pandemic COVID-19, when we can see positive sales dynamics within each group, and sharply increase the total number of the prescribed benzodiazepine medical supplies. Thus, in 2020 the total number was 364056 of packages, which is 37542 (11,5%) more than in the previous year. The total sales in 2021 was 414639 packages, which is 50583 (14%) more than in 2020, and compared to 2019, the growth was 88125 (27%) of packages.

Conclusion. Based on the analysis, it can be argued that the pandemic COVID-19 had a negative effect on the mental health of the population of the Republic of Moldova. Perhaps, this is related to the declared state emergency in the area of healthcare, whose purpose was to minimise the infection rate. Such measures, such as quarantine and isolation are the best solution in limiting the spread of viral infection, but at the same time they cause many psychological consequences.

19. THE EFFICIENCY OF ANTIVIRAL THERAPY IN COVID-19 INFECTION

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Introduction. The SARS-CoV-2 pandemic infection dominates every aspect of healthcare around the world, overshadowing other public health issues in the longer term. Antiviral therapy in COVID-19 is based on clinical practice, experimental data and study results.

Aim of study. This study is centered on the assessment of the degree of morbidity and antiviral treatment of patients with Covid-19 infection between September 2021 and February 2022.

Methods and materials. The working methodology consisted in the registration of 107 cases of Covid-19 that were treated by the family doctor in the period 2021-2022. The data obtained were statistically processed and interpreted taking into account age, sex, disease progression, concomitant diseases and performed treatment.

Results. 107 patients were diagnosed with Covid-19, of whom 60 were women and 47 - men; 25% were between 18 and 49 years old and 75% were between 50 and 74 years old. Following the study we found that the clinical picture of Covid-19 is in most cases of moderate severity (58%) and is mostly manifested by intoxication syndrome and catarrhal inflammation of the upper respiratory tract. Uncomplicated viral infection can be treated at home, the most common situation. For the treatment and prevention of COVID-19 the most frequently antiviral drugs (Umifenovir, Kagocel, Isoprinosine) are recommended. When used up to 48 hours after the onset of the disease, they have a pronounced therapeutic effect in uncomplicated viral infection, which manifests itself by reducing the febrile period, shortening and attenuating the symptoms of intoxication in almost 90% of patients. Umifenovir reduces the febrile period in 48% of cases, Kagocel in 37% and Isoprinosine in 15%, and the attenuation of intoxication symptoms was in Umifenovir - in 35% of cases, Kagocel - 35% and Isoprinosine - 30%. Umifenovir resulted in a higher cure rate after 7 days of treatment in moderate cases of COVID-19 (71.4% in the Umifenovir group compared to 55.9% in the Kagocel group). The listed antiviral drugs produce side effects, usually transient, the most common being: nausea (26%), epigastric discomfort (19%), increased transaminases (34%), urea nitrogen (9%), headache, vertigo (23%). itching, rash (7%)..

Conclusion. Umifenovir therapy resulted in an increase in the percentage of patients with negative PCR tests on days 7-8; when using Kagocel and Isoprinosine - on days 8-9. The efficacy and safety of antivirals against SARS-CoV-2 still require clinical investigation. Moderate forms of COVID-19 could be effectively treated with antivirals, but severe forms of COVID-19, characterized by pulmonary immunopathology, require different approaches to treatment.

20. THE LEVEL OF HEALTH EDUCATION REGARDING THE ACUTE VIRAL RESPIRATORY INFECTIONS (AVRI) AND COVID-19 AMONG POPULATION

Author: Țurcan Victoria

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Introduction. With the outbreak of the COVID-19 pandemic, which has affected the entire globe and caused more than 230 million infections and around 5 million deaths, the medical system and the general population are becoming more and more concerned about targeting acute viral respiratory infections.As the situation worsened, it was a real challenge for medical workers to deal with the situation and there was a lot of speculation and false information, which did nothing but misinform people and cause mass panic.

Aim of study. It is to assess the level of knowledge, attitudes and perception (KAP) towards the acute viral respiratory infections (AVRI) and COVID-19 among the population.

Methods and materials. Cross-sectional study-based online surveys were performed. A web-survey was used due to the COVID-19 health crisis and the need to ensure contact distancing. The questionnaires were developed using the Google Forms Platform (Google LLC., Mountain View, CA, USA) to facilitate the completion and collection of data. Invitations were sent to people to participate in the study using social media.

Results. A total of 414 participants from 42 districts of the Republic of Moldova completed the survey within the study period. Most representation was from the urban areas, 234 (56,52%) followed by the rural areas, 180 (43,48%). Of the respondents, 317 (76,57%) were female, 95 (22,95%) were male and 2 (0,48%) were unspecified. The majority of respondents were 25-34 years old (42,00%). In total, 237 (57,25%) had an undergraduate degree, 61 (14,73%) graduate degree, 102 (24,63%) high school and middle school, 14 (3,38) college and bellow. Channels of information or updates on COVID-19 reported by respondents were majorly from medical staff (16,64%), mass media (12,99%),social media (11,74%), websites (10,85%), Ministry of Health (9,88%), scientific resources (9,52%), World Health Organization (5,6%), official press institutions (5,6%), friends (5,16%), relatives (4,72%), medical webinars (4,36%), from other sources (2,94%). Of all respondents, 56,71% were not vaccinated against influenza, 0,24% were vaccinated in 2015, 0,24% in 2018, 5,88% in 2020, 26,35% in 2021, 10,58% are undecided. Unvaccinated against COVID-19 are 35,99%, 8,21% are vaccinated with a single dose, 46,14% with both doses, 3,38% with booster dose, 6,04% are undecided and 0,24% will soon be vaccinated. When asked who is the source of infection with AVRI, 40,57% said carriers of viruses, 23,88% - the person with various clinical forms, 14,65% - medical workers, 11,94% - do not know, 4,75% - animals, 3,26% - birds, 0,81% -fish and 0,14% - none. When asked who is more likely to develop COVID-19: 26,94% said the elderly, 20,69% people with comorbidities, 20,58% - anyone, 18,75% medical staff, 5,39% - pregnant women, 3,88% - children, 2,16% - veterinarians, 1,08% pet owners, 0,22% - nonsense, 0,1% politicians, 0,1% - journalists, 0,11% nobody. Another proposed topic was about treatments for COVID-19: 52,18% answered the one offered by the family doctor, 18,6% with vitamins, 10,39% with antibiotics, 9,9% with antivirals, 2,66% with medicinal plants, 3,86% - none, 1,45% - according to the people who had the disease, 0,48% - strengthening the immunity, 0,24% with antimalarials, 0,24% - do not know. 64,25% agree that COVID-19 will be controlled successfully, 6,76% disagree, 28,51% do not know and 0,48% hope.

Conclusion. The study highlights the need for maximal utilisation of both social media and mass-media with participation of medical workers in disseminating health education evidence-based AVRI and COVID-19 information, correcting fake news and misconceptions. Also, health promotion strategies should be organised for all populations, especially among those who have had no previous education in the health and allied courses.

21. THE NEED TO CHANGE TREATMENT IN COVID-19 PATIENTS AND BLOOD PRESSURE

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Introduction. Hypertension is the most common comorbid disease in patients who have died of CoV-2 SARS infection. Multiple tests trace the relationship between high blood pressure and its treatment to COVID-19 infection. There is much controversy about the effect of angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin II receptor blockers (ARBs) in patients with COVID-19, the relationship between RAAS inhibitors, and increased lethality in these patients is discussed.

Aim of study. According to epidemiological statistics worldwide, the mortality of SARS CoV-2 virus is about 4%, in this study, it was proposed to determine the role of HA in increasing the fatality of this virus, and specify the need for a new antihypertensive treatment to reduce the percentage COVID-19 lethality.

Methods and materials. This is a synthesis of 25 medical articles and national protocols published during the years 2019-2022, found by the search engines PubMed, NCBI, and Sciencedirect.

Results. Epidemiological data from China indicate that hypertension, cardiovascular disease, diabetes, and chronic obstructive pulmonary disease are the most common concomitant diseases in patients with COVID-19. Most studies have reported a high prevalence of cardiovascular disease in patients with COVID-19, but have not classified it, making it difficult to estimate the individual effect of high blood pressure on the severity of COVID-19. However, the increase in mortality in patients with HA seems to be significant, and the need for a new treatment, in exchange for RAAS inhibitors (e.g. Captopril), is welcome. The problem with RAAS inhibitors was expected to rise in Europe and the United States, where patients are taking antihypertensive drugs, and especially RAAS inhibitors, a significantly higher percentage than in China. However, studies have shown no association between RAAS inhibitors and COVID-19 susceptibility, worsening, or lethality due to COVID-19.

Conclusion. Switching from RAAS inhibitors to another antihypertensive therapy would lead to insufficient blood pressure control, which could lead to more complications in patients with COVID-19. New data show that RAAS inhibitors are even better after hypertensive patients with COVID-19. The use of recombinant ACE2 could be a new therapeutic approach in COVID-19 to reduce the viral load by binding circulating SARS-CoV-2 viral particles and reducing their potential attachment to ACE2 tissue.

22. THE ROLE OF COMPUTED TOMOGRAPHY IN THE EVALUATION OF PATIENTS WITH COVID-19

Author: Dang Kanishk

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Introduction. The coronavirus disease 2019 (COVID-19) is effectively controlled but the number of confirmed cases and deaths remains high globally. At present, computed tomography (CT) is widely used to examine lung diseases, which can provide intuitive image data for clinical diagnosis.

Aim of study. To perform an analysis of the literature for the imaging findings and the role of computed tomography in the evaluation of patients with COVID-19.

Methods and materials. A literature review of the imaging findings on computed tomography in COVID-19 using a search of full-text articles on PubMed (MEDLINE), using the relevant keywords.

Results. According to the literature, CT characteristic images are different in different stages of COVID-19. The early stage of COVID-19 is usually 1 to 3 days after clinical manifestations. CT shows that the lesions are single, double, or scattered with limited ground-glass opacity, bronchial wall thickening, air bronchus sign, or honeycomb-like or grid-like thickening of the interlobular septa, resembling a fine grid-like shadow or crazy paving sign. The clinical manifestations advance after 3 to 7 days. CT images show that the lesions increase and expand in scope, and the direction is often parallel to the direction of the pleura. Consolidation of different sizes and degrees occurs in the lesions, and some air bronchograms are visible. The CT manifestations of new lesions in this period were similar to those of early lesions. In the severe outbreak period, clinical symptoms typically appear for 7 to 14 days, with diffuse lesions or consolidation in both lungs, and most of the lungs are involved in the appearance of the white lung. In the absorption period of the outcome, after 2 to 3 weeks of treatment, the number and scope of the lesions were reduced, and the density was reduced. Some lesions had manifested as patchy shadows or fibrotic irregular cord-like shadows, and the thickening of the bronchial and vascular bundles was reduced.

Conclusion. Computed tomography (CT) is widely used in the evaluation of patients with COVID-19 and provides important imaging data for the clinical and differential diagnosis, staging, and later help in the effective treatment of COVID-19.

23. THE SIGNIFICANCE OF SARS-COV-2 S GLYCOPROTEIN FOR MEMBRANE FUSION

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Introduction. The emergence of severe acute respiratory syndrome coronavirus (SARS-CoV-2) presents significant social, economic and political challenges worldwide. The severity of coronavirus infections depends on virus-mediated tissue damage as well as the antiviral immune inflammation, which are influenced by viral tropism, infectivity, virus spread, and specificity of host responses, all of which are majorly regulated by the SARS-CoV-2 glycoproteins, especially Spike (S) glycoprotein.

Aim of study. Glycoproteins are ubiquitously distributed and play a major role in various biological processes such as cell-cell interaction, immune recognition, cell signaling, cell proliferation and differentiation.

Methods and materials. In obtaining the main results, several researches published from 2019 until 2022 have been reviewed, using 15 bibliographic sources, which include virtual libraries, like PubMed, HINARI and Medscape.

Results. Coronaviruses have a simple protein composition. While there is some variation among different members, a basic set of four protein species universally occurs: the nucleocapsid protein (N), the spike glycoprotein (S), a small membrane protein (SM), and the membrane glycoprotein (M). The pathogenic SARS-CoV-2 enters human target cells via its viral transmembrane S glycoprotein, which is synthesized as a single 1273 amino acid polypeptide chain on the rough ER, and consequently has been trimming to monomers. In result, are obtained three main topological domains, parts of the structure of S glycoprotein, namely the head, stalk, and cytoplasmic tail-playing key roles in membrane fusion of the virus. In the trans-Golgi, the SARS-CoV-2 S glycoprotein is proteolytically cleaved by cellular furin or furin-like proteases at the S1/S2 cleavage, yielding a surface subunit S1 and S2. The S1 subunit facilitates attachment of the virus while the S2 subunit facilitates fusion of the viral and human cellular membranes. Like in other coronaviruses, S glycoprotein mediates attachment to the host receptors, using angiotensin-converting enzyme 2 (ACE2) receptor and/or dendritic cell-specific intercellular adhesion molecule-3-grabbing non-integrin 1 (DC-SIGNR) as the dominant mechanism of cell entry. The hemagglutinin-esterase (HE) is the fifth additional structural protein, which is present in a subset of β-coronaviruses, acting as the classical glycan-binding lectin and receptor-degrading enzyme.

Conclusion. It is widely accepted that the S protein of SARS-CoV-2 is a most promising immunogen for producing protective immunity, becoming a therapeutic target in treatment of SARS-CoV-2. However, it is likely that the S protein has evolved to perform its functions while evading host neutralizing antibody responses and thus should be engineered to ensure an optimal immune response. The immunogen design strategies described are based on the wealth of the SARS-CoV-2 S glycoprotein research related to its biosynthesis, structure, function, antigenicity as well as immunogenicity will likely contribute to the ultimate success of safe and efficacious vaccines against SARS-CoV-2/COVID-19.

24. TREATMENT PATIENTS COVID-19 WITH STEM CELLS

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Introduction. COVID-19 is a disease that has spread worldwide and was first detected in Wuhan-China in December 2019. The virus has spread rapidly across different geographical areas. SARS-CoV-2 affects many systems and organs, but it mainly affects the respiratory system causing pulmonary distress, severe respiratory failure.

Aim of study. To study the effect of cell therapy on the treatment of COVID-19 patients with severe respiratory failure.

Methods and materials. The study was performed based on literature review: Cells therapy in patients with COVID-19 using different sources of stem cells.

Results. According to the studies analyzed for the treatment of patients with covid-19, stem cells were used from: bone marrow, dental pulp, amniotic membrane, umbilical cord, human embryonic stem cells, fat stem cells and stromal fraction. Methods of administration: by inhalations and intravenous. Human amniotic epithelial cells and human mesenchymal stromal cells are found in the amniotic membrane of the placenta. Amniotic cells have an immunoregulatory, regenerative and anti-inflammatory role with a regenerating effect on pulmonary architecture in vivo. Stromal amniotic cells facilitate the adhesion of the key transcription factor Nrf2 to the antioxidant protein in HAMSCs. They were administered by inhalation, by nebulizer, facilitating the administration and amplifying the degree of pulmonary spread. Patients' recovery was only 6 days compared to standard-treated patients, who recovered within 22 days. Human amniotic epithelial stem cells in clinical trials were administered intravenously at a dose of 1 million cells kg; they improved the inflammatory and fibrotic response by removing lung damage. Allogeneic human umbilical cord mesenchymal stem cells were used to treat SARS-CoV-2 positive patients by introducing them in different doses: 5x107 3-day dose, 3 intravenous doses, 1x106 MSC/kg, single intravenous infusion;3x107/dose, intravenous infusion in 3 doses.

Conclusion. Stem cells in the treatment of Covid-19 patients are used in the acute phase and in the recovery period. They have the ability to inhibit cytokine storms, neoangiogenesis, increase vascular permeability and an immunomodulatory effect for better protection of alveolar tissue. Very important is the antiviral and antibacterial role that facilitates the recovery of lung function. Thus, stem cell covid-19 therapy offers the possibility of treating acute processes and facilitates post-COVID-19 recovery.

III. Ethics, Deontology, Nursing and Public Health Section

1. ADVERSE EVENTS FOLLOWING IMMUNISATION IN THE REPUBLIC OF MOLDOVA

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Introduction. Vaccination is often considered the most economical and effective strategy for preventing and controlling most infectious diseases. However, any vaccine as well as any medicine may, in some circumstances, induce adverse reactions.

Aim of study. Analysis of the frequency of post-vaccine adverse reactions according to the type of vaccine, their distribution over the study years.

Methods and materials. Statistical reports on vaccines included in the vaccination schedule and frequency of adverse events following immunisation (AEFI) following their administration were used. The data for the years 2010-2020, obtained from the National Agency for Public Health, were analysed.

Results. Analysing the data on vaccinations and AEFI for the years 2010-2020, we established that throughout the period, the most frequent AEFI appeared after the administration of BCG vaccine. The number of AEFIs following BCG administration ranged from 0,12% to 0,35% of the total dose, especially at the first dose, from a total of 40-80.000 doses annually. The most common AEFIs were regional lymphadenitis, followed by cold abscesses at the vaccine site, keloid scars, and ulcers at the vaccine site. In second place as a frequency of AEFI was the pentavalent vaccine DTP-HHVB-Hib, the share of AEFI ranging from 0,001% to 0,01%, with a declining trend in recent years. The number of doses administered annually ranged from 84.728 to 125.909 doses. Following the administration of the DTP vaccine, AEFIs were recorded quite rarely, with an average frequency of 0,002% of an average total of 43777 doses. AEFI after administration of DTP and DTP-HVB-Hib vaccines were manifested by hyperpyrexia, uninterrupted crying, seizures due to fever, local reactions, all ending with recovery after appropriate treatment during 2 days of hospitalisation. AEFI also occurs after the administration of the MMR vaccine, with a frequency of 0,004% to 0,025% of a number of annual doses ranging from 101.043 to 133.350. All cases of AEFI after vaccination with MMR occurred late, in the range of 14-24 days after administration of the vaccine and manifested by moderate fever and swelling of the salivary glands, ending in recovery for 2 days. Following administration of vaccines against polio, HBV, pneumococcal and rotavirus infection, practically no AEFIs have been reported.

Conclusion. All AEFIs have been reported after administration of different vaccine series, with no legality. No cases of severe AEFI were observed and no cases of unsafe handling of the vaccine were observed.

2. BEHAVIOURAL RISK FACTORS OF CAR DRIVERS ASSOCIATED TO ROAD TRAFFIC INJURIES IN THE REPUBLIC OF MOLDOVA

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Introduction. With the economic and technological development of society, people have gained the opportunity to purchase various means of transport. Road accidents are on the second place in population mortality due to the type of injury and poisoning in the Republic of Moldova, for these reasons the government of the country has assumed the goal of reducing by 50% by 2030 deaths and traumas caused by road traffic.

Aim of study. To explore the behavioural risk factors among car drivers and to investigate the relationship within these factors to road injury related data.

Methods and materials. A prospective cross-sectional study using a questionnaire was performed during January- February 2022, among car drivers, regarding their behaviours and attitudes of road safety issues. The questionnaire was applied online through a Google Form document and distributed through social networks. The following variables were analysed: demographic (gender, age, individual's life situation and living conditions, occupation, personal situation, education, place of living), driving experience and case history of road accidents and collisions among car drivers.

Results. The questionnaire was completed by 257 drivers, aged between 18-65 years old, 61,9% females and 38,1% males; mostly from urban (87,5%); the vast majority holding a driver license of category B (73.5%). In the last 12 months, 55.6% respondents drove daily, while 20.2% drove 1-4 times a week. 30% of respondents have an experience of more than 10 years of driving, 19.8%- 1-3 years old and 17,1%-less than 1 year. Are very concerned about road accidents (71,2%) and traffic jams (56,8%). Most consider that the speed limit is most often violated on national roads 70,04% and main roads in cities 21%, and in the opinion of participants this is due to the fact that in a regular trip the probability of being checked for speed is rarely (57,2%). The respondents consider that in order to drive a car it is necessary to get behind the wheel with 0 zero alcohol consumed (75,1%) and 21,8% with 1-unit alcohol; likewise, 78, 6%- support the idea of no alcohol behind the wheel. In the last 12 months, 84.05% have never been tested for alcohol while driving; have never been involved in a road accident-87.9%, 1 time-11.3% and 2 or more times-0.8%. Only 2.7% said that they get once involved as a driver in road accidents with medical care assistance, the respondents state that they were never involved, while 97,3%-never so far.

Conclusion. Road injuries in the Republic of Moldova is an obvious problem for the public health system, which is a strong scientific argument that needs to be studied in detail and established prevention interventions. It is an urgent need to work together to prevent road injuries and to make drivers more vigilant and not to violate road traffic regulations.

3. BIOETHICAL PROBLEMS IN VITRO FERTILISATION TECHNIQUES

Author: Braga Irina

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Introduction. With the complex interaction between rapid scientific development and social values changing, the essential goal of bioethics is to analyse the facts in relation to the changing values in contemporary society. In vitro fertilisation (IVF) is an illustrative case of this dynamic process, involving a number of new ethical challenges. The effects and safety of IVF subtly transcend into more complex questions about what it means for society to bear and give birth to children such as: age limits, "ownership" of gametes and embryos, IVF in single women and same-sex couples, preimplantation genetic testing, freezing, commercialization of embryos, public funding of IVF, etc.

Aim of study. The aim of the research is to illustrate the bioethical and moral complexity invoked by IVF and the social values changes in the Republic of Moldova.

Methods and materials. International and national scientific literature which studies the medical, bioethical, moral, social and legal aspects of IVF. The methods were applied: bioethical principles, methods of applied ethics, analysis, synthesis, etc

Results. About 20-25% of couples in the Republic of Moldova face the impossibility of conceiving a child. Infertility is a problem with many and varied causes. IVF has become one of the leading technologies for advanced human reproduction, and the happiness of having a baby is closer than ever. Currently, couples in our country suffering from infertility have the opportunity to resort to all variants of the in vitro fertilisation process, and more and more medical institutions offer a full range of reproductive services, including freezing of eggs and embryos. However, there are probably the most problematic and controversial topics in bioethics when it comes to unnatural methods that lead to the formation of a pregnancy with the intervention of a doctor.

Conclusion. The many questions and uncertainties that may arise from the decision to use assisted reproduction techniques, including IVF, need to focus on the consequences for future generations. At the current stage there is no consensus, neither scientifically, nor legally, nor religiously. Medically assisted methods of reproduction have become an integral part of bioethics, which in turn cannot ignore the values and fundamental elements of our condition: life, family, kinship, availability of one's own body, etc.

4. BIOETHICAL APPROACH TO LOCAL SOCIAL INDICATIONS IN THE CONTEXT OF VOLUNTARY TERMINATION OF PREGNANCY

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Introduction. Abortion is, and remains to be one of the great bioethical issues of contemporary society. The harmful effects of abortion affect bio-psycho-socially both the life of the woman and the whole society. The social indications stipulated in the local legislation raise a series of ethical and/or bioethical questions, which concern the quality of the woman's life, but also the moral status of the embryo. These topics involve a thorough approach not only from a medical, social and legal perspective, but also from a moral one.

Aim of study. Evaluation of the bioethical aspects of voluntary termination of pregnancy in the context of local social determinants.

Methods and materials. Both local and international monographic, scientific publications, research in the field of bioethics, medical sources and textbooks, standardised protocols as well as legal documents were analysed. In this study, the bioethical, comparative, hermeneutic methods were applied.

Results. In the context of the research it was found that the doctor has the duty to ensure the life of the mother and the birth of the child. Human life has an intrinsic value and transcends any temporal good and any economic consideration, social status, etc. Moreover, the reasons behind the motivations of social indications must be taken into account by the public authority and the community in the sense that they must be adapted to the person and not vice versa to sacrifice life in favour of a temporary situation. The ethical and/or bioethical obligation of society, science and everyone is to engage in the prevention by legitimate and permitted means of situations of risk and deterioration of the health of pregnant women, in order to guarantee the best hospital and technological assistance to those who are going to give birth, for guiding health policy in support of life and not to it’s easily suppress. Science is for life, society is for the person: this is the fundamental bioethical commitment.

Conclusion. 1. The interdependence between the pregnant woman and her fetus is a special relationship that in some situations involves bioethical dilemmas. 2. Bioethics, as an interdisciplinary field, analyses the doctor-mother-fetus relationship by implementing the moral principles of bioethics. 3. In order to solve the problem of abortion, the doctor has the knowledge of the bioethical landmarks and the communication skills for the qualitative information of the woman and the moral decision making.

5. BIOETHICAL APPROACH OF THE HEPATIC PATIENTS QUALITY OF LIFE

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Introduction. The quality of life is an interdisciplinary subject, it involves a series of dimensions which determine an integral evaluation. A general overview about the quality of life of a hepatic patient requires an approach involving physical, mental and spiritual-moral components. Bioethical indicators engaged in approached subjects need to be reported on life's protection, suffering's decrease and life's quality improvement of a hepatic patient.

Aim of study. Highlighting bio-ethical elements of a hepatic patients' life quality.

Methods and materials. The establishment of the study was based on the synthesis of 33 identified works in the HINARI database. The work's criteria of selection are: forms of assessment of psycho-somatic vulnerability of hepatic patients, particularities of psycho-moral feelings, causes of a non-compliance treatment, interdisciplinary dimensions of caring for a hepatic patient. The search was focused on ethical, medical and psychological fields. The approached content was systematised through analysis, comparative and hermeneutic methods.

Results. In result it was determined that hepatic patients become physically, cognitive and emotionally sensible once the disease progressed. It's proved that once fibrosis rank in hepatic pathology, patients could develop some personality changes with anxiety, indisposition, irritability, fear, etc outcome, which determines a multidisciplinary care. More, an emotionally unstable patient could lead to decreased treatment compliance, and develop an unexpected physical and social decline. This fact determines a necessity for psychological and moral attention from family and an appropriate medical care.

Conclusion. 1. Within hepatic patients exists a strong link between vulnerability and quality of life. 2. To reduce vulnerability is necessary to apply some optimal therapeutic solutions. 3. Implementing the principles of bioethics is an important criteria for reducing vulnerability and improving the quality of life.

6. BIOETHICS AND THERAPEUTIC INTEGRITY IN MEDICAL EMERGENCIES

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Introduction. The specificity of emergency medicine requires rapid actions, with decision-making in exceptional situations. In such circumstances it is necessary to ensure a beneficial medical approach to the whole body and emphasize the importance of observance of the principle of therapeutic integrity.

Aim of study. Highlighting the bioethical components to consolidate the value of bioethical principle - therapeutic integrity - that is essential in emergency medicine.

Methods and materials. There were used clinical protocols, guidelines, regulations, scientific publications, national and international bioethics publications. The methods applied: sociological, structuralist, analytical-descriptive and bioethical methods.

Results. A satisfactory state of body and psycho-somatic balance can be achieved based on the following ways: appropriate curative tactic, correlation of curative actions by working with the multidisciplinary team, and a good doctor-patient relationship. At the same time, it is necessary to respect the principle of therapeutic integrity. But in emergency medicine there is a tendency to focus only on the underlying condition, minimizing or even neglecting the therapy of other comorbidities. Urgent medical actions are becoming more and more "mechanized", the individual, "soulful" contact with the patient is diminished, and the doctors in the emergency departments rarely consult each other regarding the patients' condition and don't pay required attention to what can be expected in parallel with the underlying condition. In such situations, therapeutic integrity must be monitored by the application of fundamental bioethical principles.

Conclusion. 1. The urgent medical care may affect the integrity of the body due to trends in medicine, including focusing only on the underlying condition. 2. Compliance to the principle of therapeutic integrity is of utter importance in this context. 3. The identification and application of bioethical standards related to therapeutic integrity in the practice of emergency medicine ensures the efficiency of the medical act.

7. CHARACTERISTICS OF THE USE OF INFORMATION TECHNOLOGIES BY YOUNG PEOPLE AND THEIR IMPACT ON HEALTH

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Introduction. In the 21st century, the world is very passionate about information technology: social networks, computers and television have become a part of our lives. An increasing number of people use these means for hours at work or to relax. But many do not realize the negative effects that information technology can have on them. They have a negative effect on vision, bone and nervous system. As the development of technologies is unstoppable, the primary task of the population is to know the negative effects of the use of information technologies.

Aim of study. Recent research has shown that viewing the small screen is detrimental to the development and functioning of the human brain. Watching is an important factor in generating passive behavior. In proportion to the time spent watching, there may be a decrease in general alertness. There is a noticeable decrease in perseverance and willingness to actively pursue a problem. 60 million people suffer from eye diseases caused by the long time spent in front of the computer. The first symptoms of computer overuse are stinging eye pain and blurred vision. Computer users may experience tremors, itching, stinging in the fingers. At the age of adolescence, the bone system also changes. There are few studies in the Republic of Moldova on this issue.

Methods and materials. The research is a literature review on the impact of information technology on human health. We evaluated 24 bibliographic references published in the last 10 years, in the Republic of Moldova, Romania, Russia, USA, etc. The qualitative study was by applying a questionnaire developed by the author. The questionnaire consisted of the following sections: general data, characteristics of use, influence on health, addiction, knowledge about the activity with Information Technologies, containing 31 questions. The sample included 71 randomly selected young people aged 16-29. The survey was confidential and was researched with the consent of each respondent.

Results. The study showed that a large part of the respondents suffer from addiction to information technology (63.4%), surfing the Internet for more than 5 hours (66.2%). The consequences of addiction are the following: eye pain (93%), dry eyes (73.2%), back pain (87.3%), headache (73.2%) and sleep disturbance (64.8%). In young people there is a decrease in concentration and attention (73.2%), they have become more anxious and irritated (33.8%).

Conclusion. A large number of young people in the 21st century are addicted to the internet, which is an alarm for doctors and parents. The time spent on the internet must be well controlled so that no negative effects appear in the future. Research conducted in recent years does not doubt that information technology, in addition to the many positive effects, harms the development and functioning of the brain, affects the eyes, bone and muscle system. The most vulnerable in this case are the young people, so we must act as soon as possible.

8. COLIFORM BACTERIA IN MILK AND DAIRY PRODUCTS SOLD IN CHISINAU

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Introduction. Milk and dairy products are a very important food group in the human diet. Despite the fact that milk is sterile in the mammary glands of healthy animals, it later becomes colonised by microorganisms from a variety of sources, including during milking, from equipment, air, water, feed, grass, soil and other media. In the later stages of the production of drinking milk and dairy products, contamination with various microorganisms takes place as a result of non-compliance with both production hygiene and personal hygiene requirements. In this regard, the contamination of this food group with coliforms, including E.coli, is of interest. The elucidation of the situation regarding the mentioned contamination can be considered current also due to the fact that in the assessment of the safety of this food group the number of coliform bacteria, including E.coli are hygienic indicators determined obligatorily during the microbiological examination.

Aim of study. Hygienic analysis and evaluation of the results of laboratory investigations of samples of milk and dairy products regarding the number of coliform bacteria, including E.coli performed in the Public Health Center in Chisinau.

Methods and materials. The study is a longitudinal retrospective, the data for a period of 7 years (2014-2020) being collected from the Public Health Center in Chisinau. The laboratory examination of the samples was carried out according to the methods in force.

Results. During the study period, 1482 samples were investigated, of which 96 samples of coliform bacteria were detected. The share of their detection was in 2014-2.7%, 2015- 4.2%, 2016- 8.8%, 2017- 7.7%, 2018-1.7%, 2019-17.5%, 2020-21.1%, with an average of 6.48%. The seasonal variation index (IVS) for January was 80%, for the month II- 35%, III- 65%, IV- 50%, V- 210%, VI- 35%, VII- 45%, VIII- 200% , IX- 150%, X- 200%, XI- 150%, XII- 0%. Seasonal coefficient 74.3%. Seasonal growth rate 70.7%. The incidence of coliform bacteria was higher in Plombir ice cream, the share of non-compliant samples being 19.2%, on the second place is placed kefir 5.2%, on the third place the ice cream samples from Eskimo cream 4.2%, and on the second place IV with a weight of 3% au- milk, lactolux, fresh cow's cheese, Mozzarella Bacon soft cheese, Burrata soft cheese, strawberry milkshake.

Conclusion. The average share of samples of milk and dairy products, which did not meet the requirements in force according to the indicators of total coliform and E.coli was 6.47%. Among the unsatisfactory tests, the ice cream samples were placed in the first place, followed by the samples of kefir, milk, cow's cheese and so on.

9. CORRELATIONS BETWEEN STUDENT'S EXPECTATIONS AND THE UNIVERSITY'S OFFER

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Introduction. A qualified and skilled medical graduate is required for a healthy nation. A medical graduate is expected to have the knowledge and clinical abilities to treat a patient in the community after years of education and a year of internship. The expectations of undergraduate students at universities may have an impact on how they learn, as well as their performance and contentment in higher education. Searching, reading, and critically evaluating literature abilities must be taught early in undergraduate education in order to offer high-quality health care.

Aim of study. The purpose of the study is to make a detailed analysis concerning the Indian medical students' expectations they had when they first joined *Nicolae Testemitanu* SUMPh and now what they get from *Nicolae Testemitanu* SUMPh using a self-prepared questionnaire.

Methods and materials. A cross-sectional study with was performed. A questionnaire was sent to Indian students at *Nicolae Testemitanu* SUMPh, and the findings were gathered. The survey was completed by 105 students.

Results. Mean age of 105 students participating in the survey was found to be 20 (21%), year of study is second (18.1%) and third (15%). Among 105 students 44% students responded at a level of 3 out of 5, and 10% responded 5 out of 5 for research opportunities expectations correspond to USMF. 74% and 70% students are expecting tutoring and mentoring type of support services and Psychological counseling respectively.as the same time 64% and 55% responded that tutoring and mentoring and Psychological counselling respectively. According to financial guidance 88% of students are expecting scholarships and 60% are expecting assistance to financial planning. But 50% responded none to the financial guidance provided by the university and 35% responded to scholarships. About teaching aids 53% are expecting interactive teaching methods 16% expecting case studies discussions. But 57% responded that presentations are the teaching methods provided by the university and 21% responded interactive teaching methods. Considering learning methods, 86% prefer practical training ,73% students responded to individual work on projects provided by university. Over all expectation meets by students is 3 out of 5 from *Nicolae Testemitanu* SUMPh.

Conclusion. According to the study result, an overall expectation from the majority of Indian students is three out of five.

10. DIETS FOR PEOPLE DIAGNOSED WITH TYPE 2 DIABETES

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Introduction. Diabete type 2 is one of the most important problems in the world. According to the data provided to the International Diabetes Federation (IDF), we can mention that every 10 people suffer from type 2 diabetes, attacking any age of the population.

Aim of the study. Collecting information on how to feed people with type 2 diabetes mellitus and their habits.

Materials and methods. A retrospective study with 70 patients from the endocrinology department: 44 women 62,9% and 26 men 37,1% over a period of 2 months.

Results. After the study we have the following results: 36 persons include 53.7% with age 55-64 years, 14 persons include 20.9% with age 45-54 years, 9 (13.4%) with age over 64 years, 8 (11.9%) with age under 45. Thus, 37 (52.9%) live in rural areas and 33 (47.1%) rural areas. The patients used a wide range of diets. So, 22(31.4%) used the Dukan diet, 23(32.9%)-the Indian diet, 22(31.4%)-the Mediterranean diet, 22(31.4%)-the Paleo diet, 20(28.6%)-the Young diet, 20(28.6%)-the Rina diet, 17(24.3%) –the Ketogenic diet, 12(21.4%)-the Lightning diet. In this way, 48 (68.6%) followed these diets and 22 (31.4) did not comply. Taking into account this, 37 (52,9%) consumed pig, duck, beef, mutton, and 33 (47,1%) consumed chicken, rabbit meat. At the same time, 46 (65.7%) consumed mayonnaise from trade and house, and 24 (34,3%) quail chicken eggs, ostrich, hard boiled eggs. Vegetables were consumed in a proportion of 42 (60%) – sweet potatoes, potatoes and 28 (40%) – cabbage, carrot, beans, onions, etc. The fruits consumed by the patients constitute 41 (58,6%) - plums, plums, apricots, dates and 29(41,4%)- grapefruit, avocado, papaya. The sweets consumed constitute 37 (52,9%)- biscuit, chocolate, halva, crème and 33 (47,1%) - stevia, aspartame, saccharin, dark chocolate.

Conclusions: Of the total group of patients we can say that 56.3% do not follow the diet, 39.8% have obesity calculated by BMI. Thus we can conclude that 63.6%, they should correct and follow a balanced and correct diet.

11. EPIDEMIOLOGICAL PECULIARITIES OF SEASONAL FLU MORBIDITY IN THE REPUBLIC OF MOLDOVA

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Introduction. Influenza affects 5-10% of the human population each year and spreads to all geographical areas. The loss of life and economic costs become considerable during the annual flu epidemics and can be enormous during pandemics with new strains.

Aim of study. Analysis of multiannual morbidity due to seasonal flu and determination of the causes of the increase and decrease of the incidence in certain periods.

Methods and materials. This research is a descriptive observational epidemiological study, in which the data on influenza morbidity were analyzed. The following were used as information sources: Form 2, Epidemiological Bulletin of Infectious Diseases for the years 2004-2021. The following epidemiological indicators were analyzed: the incidence of cases in the republic and in the municipality of Chisinau, the incidence according to the living environment and age groups.

Results. Analyzing the multiannual flu morbidity in the Republic of Moldova and Chisinau municipality during the years 2004 - 2021, we found that during the 2004-2008 years, both in Chisinau municipality and in the Republic, the level of influenza morbidity had close values. During this period, in the municipality of Chisinau, the epidemic years were 2005 and 2007, the recorded morbidity was 185,38 ‰ and 201,99 ‰, respectively. Both in Chisinau and in the republic, the year with the highest morbidity was 2009. During the 2012-2021 years, the influenza morbidity in Chisinau municipality was higher compared to that at the republic level. The highest incidence in this period was recorded in 2020 - 250.82 ‰. The lowest morbidity, similar to that of the republic, was recorded in 2021 – 5,04 ‰. Depending on the area of residence, urban and rural, during the years 2004-2021, the influenza morbidity was higher in urban areas compared to rural areas. The years with the highest incidence were 2013, 2015 and 2020, both in urban areas – 86,54 ‰, 71,86 ‰, 117,08 ‰, and in rural areas – 34,50 ‰, 20,56 ‰ and 26,55‰. Depending on the age groups, children 0-17 years and adults, we found a higher incidence of diseases among children with an average over the entire period of 262,69 ‰, compared to adults – 98,66 ‰. Among the children, the most affected by the flu were those aged 7-17 years - 2.63, followed by those aged 3-6 years - 2.60 and 0-2 years - 1.86.

Conclusion. The highest flu morbidity in the analyzed period was recorded in urban areas and in children. Due to the COVID-19 pandemic and anti-pandemic restrictions, in 2021 there was a sharp decline in influenza morbidity in all age groups and living environments.

12. EPIDEMIOLOGICAL PECULIARITIES OF TUBERCULOSIS MORBIDITY IN THE REPUBLIC OF MOLDOVA

Author: Ipatii Olga

Scientific adviser: Ion Berdeu, MD, Associate Professor, Department of Preventive Medicine, Discipline of Epidemiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Tuberculosis is the second most common disease among infectious diseases, leading to adult mortality, causing approximately 2 million deaths worldwide each year. The World Health Organisation has declared tuberculosis a global emergency.

Aim of study. Analysis of multiannual tuberculosis morbidity and determination of the causes of the increase and decrease of the incidence in certain periods.

Methods and materials. This research is a descriptive observational epidemiological study, in which morbidity data of tuberculosis infection were analysed. The following were used as information sources: Form 2 of registration and evidence of diseases for the years 2004-2020. The indicators that were evaluated: morbidity level, morbidity dynamics over time, distribution of tuberculosis cases by territories, age groups.

Results. Analysing the dynamics of multiannual tuberculosis morbidity in the Republic of Moldova and Chisinau municipality during the years 2004-2020, we found that the incidence is decreasing. During the 2004-2005 years, the morbidity increased from 86,88 ‰ to 102,06 ‰. From a morbidity of 98,83 ‰ in 2006, the morbidity through tuberculosis reached the level of 91,93 ‰ in 2012. If in 2013 the morbidity due to tuberculosis was 88,21 ‰, then in 2019 it was 56,59 ‰, to be only 34,32 ‰ in 2020. Multiannual tuberculosis morbidity in Chisinau and Moldova during the years 2004-2020 has also been declining. The average level of morbidity for the entire period in Chisinau was 71,45 ‰ compared to 80,34 ‰ at the republic level, being 1,12 times lower compared to that recorded at the republic level. Depending on residence place, urban or rural, during the years 2004 - 2020, the morbidity through tuberculosis had a decreasing trend. The average level of morbidity in urban and rural areas was 69,26 ‰ and 79,05 ‰, respectively. Depending on the age groups, children and adults, tuberculosis morbidity in adults – 112,17 ‰ was much higher compared to that in children – 21,77 ‰. Among the children, the most affected by tuberculosis was the age group 3-6 years – 0,20 ‰ and 7-17 years – 0,22 ‰. The average tuberculosis morbidity among children in urban areas was higher compared to those in rural areas, being 0,24 ‰ and 0,17 ‰, respectively.

Conclusion. During the last years the morbidity through tuberculosis is decreasing, which is a favourable indicator for the Republic of Moldova. This decrease is due to specific prophylaxis of tuberculosis and appropriate treatment.

13. EVALUATION OF LIQUIDS CONSUMPTION BY YOUNG PEOPLE

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Introduction. Water is the most important constituent of all living organisms. Normally, the human body needs a daily intake of 1.5-2 L of water (recommended intake), but sometimes this need can increase. The individual need for water varies depending on the climate, physical exertion, age, health, etc. If water requirements are not met, then changes in water balance occur. Drinking water covers up to 10% of the daily requirement in microelements, such as: iodine, iron, zinc, magnesium, molybdenum, cobalt, and for fluoride and strontium water is the main source of supply in the body.

Aim of study. Assessment of fluid intake by young people and highlighting deficiencies related to proper hydration of the body.

Methods and materials. A descriptive epidemiological study was designed. The study was attended by students from the University of Medicine and Pharmacy "Carol Davila", Bucharest (Romania) and the State University of Medicine and Pharmacy "*Nicolae Testemitanu*", Chisinau (Republic of Moldova). The study population included 119 young people, aged between 18 and 25 years. A standardised questionnaire "The hydration status questionnaire for adolescent-young population (HSQ-AY)" was applied online. Study period: September 2021 - January 2022.

Results. Of the total number of participants, 81.5% were women, and 84.9% were young people from urban areas. Only 51.3% of people usually have a bottle of water with them when they leave the house, of which 68.1% have a bottle of water when they go to university. It is important to note that 92.4% of students reported drinking water between meals and about the same number of students (91.6%) reported drinking water during physical activity. Only 5.9% of students reported consuming isotonic and / or energy drinks during physical activity. The feeling of thirst is quenched with drinking water vs. other liquids in 82.3% of cases, however about 5% of young people mentioned that they do not like drinking water. The most common liquids consumed by young people are juices, teas, sweetened carbonated water, coffee. It is worth mentioning that most young people (95.8%) know what the recommended daily intake of drinking water is. Thus, 37% of young people consume an average of 1-1.5 L of water per day, 35.3% - 1.5-2 L, 8.4% - 2-2.5 L. 12.6% of young people consume less than one litre of drinking water a day. Knowing what the health consequences are if the body is not sufficiently hydrated, young people mentioned that they have headaches (52.9%), lack of concentration (51.3%), dizziness (27.7%), asthenia (26.1%), dry mouth (16.8%), constipation (10.1%), chills (1.7%), cramps (10.1%), tachycardia (10%).

Conclusion. Getting enough water is essential for health and fitness. Young people, for the most part, know the benefits of proper hydration of the body and follow all the recommendations.

14. HOME RELATED INJURIES AMONG CHILDREN UNDER 5 YEARS OLD IN THE REPUBLIC OF MOLDOVA

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Introduction: Childhood is certainly the most precious period of life. It is very tragic and painful, when childhood is shaken by suffering caused by injuries and accidents. According to the World Report on Child Injury Prevention, worldwide, more than 2,000 children die every day from unintentional and most of the risk factors are preventable. Children aged 0-5 years old are more likely to get injured at home. In the Republic of Moldova, injuries and accidents represent the 3rd cause of mortality of children under 5 years of age.

Aim of study. To assess the knowledge, attitudes and practices of parents with children aged under 5 years old regarding unintentional injuries among home environment.

Methods and materials. A questionnaire was developed and applied among parents with children aged under 5, during October-December 2021, distributed online through social networks. Questionnaire included 43 questions, including general data, level of supervision, falls, poisoning, burns and injury with household objects. Data analysis was performed using Excel.

Results. The questionnaire was completed by 300 parents with children up to 5 years old, mostly aged between 26-35 years old (72%), with high education (79,3%), of them 96% females, majority form urban areas (79,7%), with medium socio-economic status. Almost 75% respondents consider their child could be injured within the home environment, namely through injury (42,7%), followed by swallowing of foreign objects (22%). Most sharp objects, drugs, and dangerous solutions are hard to be reached by children in 62,3% and easy in 14,3%. The most common accidents the child has suffered in the last year have been caused by falls (60%), these being rare (54,7%) and occasionally (22,0%). Most of the time (54,7%) parents say they can see and hear it all the time, but it happens to leave children alone for a certain period of time. In case of home related injury, 33,3% addressed to a medical physician and 30% treated their child at home with disinfectants. The child's condition following an accident was placed at 85,3% as good and 13% as acceptable. Parents follow the doctor's recommendations (48,7%), doctor’s prescription and previous experience (17,7%), doctor's prescription and pharmacist’s recommendation (15,7%).

Conclusion: The result of this study will allow focus more on the safety of the house environment for children under 5 years old. By identifying and highlighting the knowledge, attitudes and practices of parents with children aged 0-5 years we will be able to notify the relevant bodies and propose concrete measures to prevent home environmental injuries. This study will emphasize the severity of the problem and the need for safety measures by the responsible authorities, but also among parents, grandparents and other people caring for children to reduce the impact of road trauma in our society.

15. HOME-RELATED INJURIES AMONG CHILDREN UNDER 18 YEARS OLD: KNOWLEDGE, ATTITUDES AND PRACTICE IN THE REPUBLIC OF MOLDOVA

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Introduction. Home-related injuries today represent a major medical and social problem, and are constantly growing. According to the WHO 2004, an estimated 424 000 people of all ages died from falls worldwide, approximately 1500 children each year and is the leading cause of death among children aged 5 to 9 years old and 15 to 19 years old. Most injuries among young children occur in the home environment and more than 95% of these deaths occur in low and middle income countries. Every year in the Republic of Moldova more than 40,000 children arrive at the hospital as a result of domestic accidents.

Aim of study. To assess the knowledge, attitudes and practices of parents with children aged under 18 years old regarding home related injuries and elaboration of preventive measures.

Methods and materials. A cross-sectional study was conducted among parents, grandparents and other caregivers with children aged 0-18 years, during October-December 2021. It was applied a KAP questionnaire (knowledge, attitudes and practices) developed on the basis of a review of the literature, applied and distributed online on social networks. The following variables were analysed: demographics data, level of supervision, perception of the accident risks and risk factors in the household; risk awareness and knowledge of first aid measures in these situations among children.

Results. The questionnaire was completed by 423 respondents mostly by parents (77,3%), close relatives (21,7%) and grandparents (1%), mostly aged between 25- 45 years old (82,6%), of which 94,3% female and 5,7% male, mostly from urban (81%). About 45% of respondents mentioned that never left alone their children or without supervision, in 20,5% less than 5 min, 16,7% for 5-30 min, 14,4% for more than 30 min. The most common house-related injuries among children is falling (57,4%), followed by stings with sharp objects (6,8%), burns (4,2%), fractures (2,4%), drowning (1,2%), suffocation (0,2%) and other (27, 6%).The majority consider home a risky environment in which a child could be injured (68,3%), while 15,4% don't know, and 16,3% not risky at all. First aid measures are known in approx. 70%. The general state of health of children after injury is considered mostly as good (79,9%) and acceptable (14,9%). One third of the children (31,4%) who suffered a home-related injury was examined and discharged without treatment, 14,4%- with further observation, while only 4%- hospitalized and treated in hospital only.

Conclusion. This study underlines the knowledge and attitude of parents to home-related injury among children in the last year in Moldova. The first step in preventing home-related injuries among children is by raising awareness among parents and caregivers in regard to risks of injuries among children in the home environment, and it is important to implement safety measures for the most in risk group ages.

16. HYGIENIC ASSESSMENT OF AIR QUALITY IN CHISINAU

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Introduction. Atmospheric air is an important component of life on Earth. The pollution of the air appeared with the development of the industry, the increase in the number of land and air transport, the excessive burning of fuel. Air pollution is a global problem that most countries in the world are struggling with. Pollution causes an increase in the incidence and prevalence of pathologies of the respiratory and cardiovascular systems, oncological diseases. About 7 million deaths are reported annually due to exposure of the population to polluted air.

Aim of study. The purpose of the study is to research and analyze the atmospheric air quality in Chişinău.

Methods and materials. A hygienic analytical study was conducted by researching the Monthly Bulletins generated by the Hydrometeorological Service of Chisinau from 2019-2021. By the historical method was analyzed the scientific works of local and foreign authors on atmospheric air quality.

Results. Research results show that the main pollutants in Chisinau are: nitrogen dioxide, nitrogen monoxide, phenol, formic aldehyde and solid suspensions. The amount of nitrogen dioxide is almost constant in these years, in 2019- 31.6% of the total amount for 3 years, in 2020-35% and in 2021 -33.2%. There was a 20% decrease in the amount of carbon monoxide emissions, in 2019 41.5% of the total amount of pollutant is attributed. At the same time, there is a considerable increase in phenol emissions by 30% in 2021 (51.2%) compared to previous years, 2019 (24.9%) and 2020 (23.8%). Gradually the amount of formic aldehyde is decreasing, in 2019 it will account for 42.9% of the total amount, in 2020-29.9% and in 2021-28.2%. The data show that in 2019 there were several days of exceeding the maximum concentration, 23 days of nitrogen dioxide and 22 days of nitrogen monoxide compared to 2020-20 days and 15 days, respectively. In 2021, there were 14 days of formic aldehyde exceedances compared to 16 days in 2019, but the number of days with phenol exceedances increased in 2021 (12 days) than in 2019 (9 days). During the week it is observed that Tuesday is the day with the highest values exceeding the maximal concentration, and Sunday is the day with the lowest emissions.

Conclusion. Air pollution in Chisinau is an important problem. The year 2019 is marked by a more intense degree of pollution than the years 2020-2021. The year 2020 compared to 2021 is marked by lower indices of nitrogen dioxide and nitrogen monoxide, but the amount of phenol has increased considerably. Tuesday is considered the most polluted day of the week.

17. KNOWLEDGE AND ATTITUDES AMONG MEDICAL STUDENTS REGARDING THE PHENOMENON OF ANTIBIOTIC RESISTANCE

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Introduction. Antimicrobial resistance occurs when bacteria respond to the use of antibiotics and the range of antimicrobial drugs available to treat a particular condition is declining. Excessive and unmotivated use of antibacterial preparations has increased antimicrobial resistance and as a result of the increase in morbidity, mortality and price per case-treaty. Health education has been emphasised as part of reforms to strengthen the establishment of an efficient service system.

Aim of study. Assessment of knowledge and practices about antibiotic resistance among medical students from *Nicolae Testemitanu* SUMPh.

Methods and materials. A descriptive cross-sectional survey was conducted.A standardised questionnaire was used to collect data about knowledge and attitudes related to RAM. Excel and MedCalc statistical programs were used to process the statistical data.

Results. The research group included 485 students. One third of the group already had experience working in clinics as nurses. Mean AMR knowledge score in the environment 6.78 ± 2.56 (II: 95% = 6.25-6.78). More than half (56.4%) of the survey participants answered correctly to the questions regarding the antimicrobial practice. The knowledge score in students was correlated with accumulated experience in university clinics. The students mentioned the needs in practical / theoretical applications: 1) during class hours - 56.1% of cases; 2) applications in medical practice - 47.6% of cases; 3) subjects at the graduation exam - 35.9% of cases.

Conclusion. A lack of knowledge about AMR was determined among students. This gap is associated with attitudes towards the RAM phenomenon. At the same time, this phenomenon influences the use of antimicrobial devices. Additional curriculum measures are needed, including specific additional clinical practices.

18. MEDICAL REHABILITATION OF CHILDREN WITH TYPE 1 DIABETES: MEDICAL-BIOETHICAL AND PSYCHOSOCIAL ASPECTS

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Introduction. Type 1 diabetes in children is an important medical and social problem in relation to the progressive annual increase in its prevalence and the high level of early disability. The rehabilitation of this contingent of patients can reach a high level of therapeutic efficacy and the well-being of the population by applying various innovative actions. For the analysis of physical, psycho-emotional and social conditions, various methods are currently used to assess the quality of life of children with type 1 diabetes. An important role in the development and monitoring of the rehabilitation process is attributed to the application of bioethical values and principles.

Aim of study. Highlighting the medical bioethical and psychosocial aspects within the complex actions of medical rehabilitation, in order to enhance the therapy and increase the quality of life.

Methods and materials. A literary review was conducted from PubMed, NCBI, MeSH, etc. databases. The methods were applied: sociological, structuralist, phenomenological, bioethical.

Results. The analysis of published scientific sources highlights one of the most important factors influencing the quality of life of children with type 1 diabetes - psychosocial status. The psychological factor is an important link in helping young patients who are constantly addicted to insulin and who need constant self-monitoring of metabolic parameters. Psychological problems in patients with diabetes can be a cause of decompensation of carbohydrate metabolism. In order to optimize the therapeutic efficacy and improve the psychosocial condition, new combined methods of educating children and their parents with the inclusion of psychological performance are currently being used. At the same time, the use of a modern tactic to rehabilitate the growing organism is very important for minimizing the possible complications at adulthood. Therapeutic efficacy, increasing and maintaining the optimal quality of life of children with DM 1, largely depends on the consistent application of bioethical principles.

Conclusion. 1. Children with type 1 diabetes are a vulnerable social group with various and serious problems. 2. Simultaneously with high-performance curative tactics, the consistent application of bioethical principles and psychological counseling integrates and enhances the process of medical rehabilitation. 3. The streamlining of medical rehabilitation methods provides effective opportunities to improve the quality of life.

19. MEDICATION ADHERENCE AMONG PATIENTS WITH COMMUNITY ACQUIRED PNEUMONIA IN PRIMARY CARE IN THE REPUBLIC OF MOLDOVA

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Introduction. Low therapy adherence is a major cause of the therapeutic objective's failure, in chronic and acute disease. Although community acquired pneumonia (CAP) is considered the most common infectious disease encountered in clinical practice, the level of adherence to treatment and the factors associated with low adherence remain unclear.

Aim of study. The study aimed to determine the factors related to adherence to the treatment of patients with community acquired pneumonia in primary care, from the patient perspective.

Methods and materials. We performed a cross-sectional study in which data were gathered from 45 interviews of patients with CAP treated in primary health care facilities, from 21 family physicians' practices. There were reviewed medical records for the last episode of CAP to evaluate demographics dates, clinical manifestations, the results of investigations and treatment outcomes. At the end of the treatment of the current episode of CAP the adherence was assessed by Medication Adherence Report Scale (MARS). The dates were analyzed using the Excel program.

Results. There were 45 patients included in the study, 30 females (66,6 %), the mean age was 52,8 ± 2,62 (range 24- 73) years. The predominant symptom of CAP was fever, cough the mean disease duration 14,3± 1,46 (range 7- 30) days. The average number of comorbidities in one patient was 1,7 ± 0,21(range 1-5). In the 38 (84%) cases the CAP was caused by COVID 19. The patients took different schemes of treatment, in 85% of cases it was oral intake, the mean number of daily drugs was 4±1,2 per day. The medication adherence is considered as a medium in 23 (51,1%) and poor compliance in 19 (42%) patients. It was found that the higher number of drugs and the frequent daily use of the medications negatively affected the adherence, and the higher level of education determines a better compliance to treatment.

Conclusion. The level of adherence in study patients was medium in 51.1% cases, we identified a set of factors that negatively influence the adherence to treatment of patients with community acquired pneumonia. Taking into account the most important factors that have a high potential for low compliance may be helpful in the improvement of the patient's outcomes.

20. METHODS FOR STIMULATING THE COGNITIVE ABILITIES USED BY STUDENTS IN THE LEARNING ACTIVITY

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Introduction. Cognitive skills are a very important part in the students' learning activity. Students use different methods to stimulate their cognitive abilities, it can be either healthy methods like physical exercise, meditation, yoga etc. and unhealthy methods like smoking, use of psychoactive drugs(MDMA, Codeine etc.) without doctor prescription etc.

Aim of study. To conduct a survey and to analyze the methods for stimulating the cognitive abilities used by students in the learning activity in *Nicolae Testemitanu* SUMPh.

Methods and materials. A self-prepared questionnaire of 12 questions related to methods for stimulating the cognitive abilities used by students in the learning activity was used to collect data. 105 students from *Nicolae Testemitanu* SUMPh participated in the survey.

Results. 91.4% of students are between 19 to 24 years old, 6.7% of students are greater than 25 years old and the rest of them are less than 18. 46.7% of students spend 3-4hrs learning and 19% of them spend more than 4 hrs. 45% of students prefer walking as their physical activity, 15.2% prefer meditation, 17.1% prefer workout and the rest of them do other physical activities like swimming, dancing etc. Another important factor is sleep and among these students 53.3% sleep less than 7hrs and rest of them have sleep for 7-9hrs. 38% of students drink caffeinated drinks and others prefer sometimes or occasionally. Among 105 students, 84% students never smoked, the rest of the students used cigarettes either occasionally or used when stressed and a very few are chain smokers. When asked about the alcohol consumption. 65.7% responded that they never drink, 14.3% drink at least once a month, the other 14.3% at least once a year and the rest of them every day. Students use energy drinks 30.5% occasionally, 11.4% seldom and 58.1% never used. The results when it comes to the use of drugs like Ritalin, Adderall without the doctor prescription 100% of students said never used but 4% of students declared using psychoactive drugs (marijuana, crack, MDMA) occasionally and most 96% never used.

Conclusion. Majority of students prefer healthy methods (physical exercise, walking, meditation etc.) for stimulating their cognitive ability. Some students prefer both combined methods as they prefer healthy method at the same time they may prefer unhealthy methods like smoking, use of psychoactive drugs which is not prescribed by a doctor and only very few of them chooses complete unhealthy method to stimulate there cognitive abilities in learning activity.

21. MORTALITY UNDER FIVE YEARS: ONE OF THE MAIN PUBLIC HEALTH ISSUES IN SOUTH-EAST ASIA

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Introduction. This literature review was conducted in order to gain a deeper understanding of the levels & trends of mortality rates in South-East Asia. This in turn allows for conclusions to be drawn regarding ways in which regional mortality rates can be improved. Under-five mortality is a crucial indicator representing the level of child health as well as a country's overall development. Thus, a high child mortality rate generally indicates unmet needs in sanitation, medical care, nutrition, and education. It also presents multiple burdens at different levels such as societal, economical, familial, which create a long-lasting unfavourable effect on a society. Therefore, along with exploring the main causes and factors responsible for the levels of child mortality rates, this thesis studies the different burdens faced by Southeast Asian countries associated with this issue.

Aim of study. To synthesize the available information on under-five mortality in Southeast Asian countries.

Methods and materials. The data collected in this study was obtained from articles published by experts in public health, as well as reports from organisations based in the UN such as WHO, UNICEF, and local ministries of health. Both quantitative and qualitative data have been analysed in order to gain a deeper understanding of the levels and trends of under-five mortality in South-East Asia.

Results. Through this study, I have found that although the under-five mortality rates both globally and in South-East Asia have decreased significantly over the last two decades, there appears to be a reduced decline of under-five mortality rate in the last decade. Not all countries in the region are affected similarly by this issue, as a gap is clearly seen between Singapore which has the lowest under-five mortality in the region and Myanmar which currently has the highest rate in the region. Furthermore, although these countries are at extremes in terms of under-five mortality rates, they share the same predominant causes.

Conclusion. Under-five mortality rate in South-East Asia remains high due to the level of development of the countries located in this region. The high under-five mortality rate in South-East Asia however, is not a true representation of the issue in all countries in the region. Ultimately, this leads to the conclusion that the issue needs to be addressed at an economical and developmental level in the country.

22. OCCUPATIONAL BURNOUT IN MEDICAL WORKERS (DOCTORS/NURSES)

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Introduction. Burnout syndrome (BS) is considered according to the World Health Organization to be a mixture of energy depletion, increased mental distance from one's job and a reduced professional efficacy. According to S. Brand and E. Holsboer-Trachsler, BS is more likely to affect individuals from professions that require a higher degree of responsibility and frequent human interactions, therefore placing doctors and nurses in a high-risk category.

Aim of study. The aim of this study was to assess if doctors and nurses are exposed to BS in their working-activity and to determine their levels of BS.

Methods and materials. Using an anonymous questionnaire based on the Maslach Burnout Inventory that comprised a number of 25 questions directed in 3 dimensions, we recorded 100 entries from doctors and nurses found in their working-place. Each one of the 3 directions (emotional exhaustion, depersonalization and professional realizations) delivered a score that was later summed up and compared to preset results. The scores were interpreted as follows: 0-25 points resulted in an equilibrium at the workplace; 25-50 – prone to develop BS; 50-75 – on course to develop BS; >75 – BS.

Results. Out of the doctors and nurses from the eight medical departments that contributed to this study, the ones from 7 of them displayed BS, while the remaining were on course to develop BS,the average score being 76.30 out of 100.

Conclusion. The BS is a serious disorder that threatens the medical system here in Chisinau, making our doctors and nurses prone to errors and therefore placing patients at risk. Furthermore, by placing this actual study next to a similar one from Romania, it can be observed that the BS is common throughout the whole Moldovian medical system meaning that national measures to treat and prevent this syndrome are in order.

23. PARENTS PERCEPTION OF THE SCHOOL NURSE'S ROLE IN MANAGEMENT OF VIOLENCE CASES IN SCHOOLS

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Introduction. Violence in school as a phenomenon is a major challenge for health systems around the world. School nurses play a vital role in the school system, especially in maintaining a security environment in schools, treating and helping abused children. However, the full scope of their role has not been identified by parents.

Aim of study. The aim of the evaluation was to explore parents' perceptions of the role of the school nurse in management of violence cases in schools.

Methods and materials. The data were collected by a questionnaire distributed through social networks. The study included 51 parents that have children in schools 76,5% in urban areas. Parents were invited to complete a questionnaire to assess the socio-demographic dates and their perceptions of school nurses' roles in particular in management of violence cases in schools.

Results. In the 84,3 % cases in schools that their children attend there is a nurse, 7,8% mentioned that they „do not know", and in 7,9% cases in the educational institution there is no nurse, due to different reasons. The parents mentioned in 58,8% that there are cases of violence in the school. Responsible for the safety of children in the school were identified teachers in 35,3% cases, the director in 21,6%, parents in 19,6%, police and/or school security in 11,8% and only in 7,5% cases was mentioned the nurse. The most important school nurses roles perceived by the parents were providing first aid and emergency care to children (74,5%), to monitoring the health of children (84,3%) and preventing and controlling diseases (60,8%). Although 66% of respondents mentioned that they would call the nurse in case of acts of violence in school to receive care, only 17,7% of interviewees considered that the school nurse has an important role in managing cases of violence in school.

Conclusion. The results of this study indicate that parents recognize school nurse's roles of providing first aid and medical treatments, communication with parents, and disease prevention as highly important. However, the role of the school nurse in management of violence case in school is poorly understood.

24. PARTICULARITIES OF NUTRITION OF WOMEN WHO PRACTICE SYSTEMATIC PHYSICAL ACTIVITIES

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Introduction. Nowadays, more and more women in search of the best way to lose weight use different methods: diets, diverse meal plans and sports training, without realizing all the significance of maintenance of a healthy meal plan and food hygiene, especially for women who practice systematic physical activities, what can lead to various health disorders in case of non-compliance.

Aim of study. Assessment of the diet of women who practice systematic physical activities.

Methods and materials. In order to study this topic the questionnaire survey was used. In the survey 51 women participated, who practice systematic physical activities at the gym for a period of 1 month and more. The survey includes women of different age groups: the majority of women (43%) in the age of <25 years, 31% women of 25-35 years, 20% - women of 35-45 years and the lowest percentage (6%) – women >45 years old.

Results. According to the results, the majority of women (76,5%) have knowledge about healthy diet, but at the same time only a half of interviewed women (52,9%) consider that their meal plan is really healthy. The survey showed that almost a half of the interviewed women (56,9%) respect the 2-3 main meals per day, 25,5% respect a 4-5-time meals per day and 17,6% 1-2-time meals per day. Almost in equal numbers (25-26%) women during the day consume breakfast, lunch and dinner and only 11-12% try to consume snack in the time between the main meal, meanwhile a half of interviewed women (51%) as a snack prefer to consume fruits, 31% dairy products and 18% of women consume sweets. According to the cooking methods, which also plays an important role in maintaining a healthy meal plan, the majority of women (46%) use baking, in 39% - boiling, 15% - frying. An important component of a healthy meal plan is a diversity of products. The study showed that 80% of interviewed women consume fruits and vegetables daily, 60,8% consume dairy products 1-2 times a week, 31,4% consume meat 1-2 times a week and the same percent consume meat 3-5 times a week, 82,3% consume fish 1-2 times a week. According to the results, almost a half of the women (49,1%) allow in their diet the consumption of sweets 1-2 times a week and 23,5% do not consume sweets at all.

Conclusion. Since nutrition plays an important role in maintaining the health, to supply the body necessary nutrients and to provide the energy, especially women who practice intensive physical exercises, it's necessary to educate and promote the principles of rational and healthy diet, to avoid various diseases and dysfunction of body systems.

25. PERSPECTIVES AND PRACTICAL SOLUTIONS OF DIGITIZATION: PROCESSES OF CREATION, ANALYSIS AND IMPLEMENTATION OF IDEAS IN HIGHER MEDICAL EDUCATION SYSTEM IN THE REPUBLIC OF MOLDOVA

Author: Arapu Gabriel

Scientific adviser: Ludmila Goma, Doctor of economy, Associate Professor, *Nicolae Testemitanu* Department of Social Medicine and Management, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

Introduction. The digitization of the medical higher education system in the Republic of Moldova currently is an interdisciplinary theoretical and practical direction that addresses medical, technical, managerial, ethical perspectives. Framing digitalization in a simple, fair, user-friendly way is a priority in terms of guiding the joint efforts (students - teachers - administration) of continuous improvement of the university, and can create benefits at the administrative, teaching, financial, image of the institution, status, etc. The potential is limited only to the will of the responsible managers and to the limits of the applicative imagination of the participants

Case presentation. The USMF targets project is a self-made site that can serve as a model for creating, modifying, integrating, and using a system that allows any member of the academic community from student to rector to submit ideas for improving USMF, view the list of ideas available and appreciate them, be able to view the projects availables in the institution by filters of interest, be able to launch or vote on a petition, be able to launch a complaint - all in a simple format and accessible to the average user, in a form confidential and responsible.

Discussion. The findings of this study clearly show that even an inexperienced user, could create and improve free solutions in the interest of his Alma Mater, which is one of the Western basis of contemporary study system and ideology in generally– The Private Initiative. Imagine how it would be not one, but all users doing the same. The ethical problems that are resulting in this study coexist in the modern ethics problems: the limits of liberty of words, the limits between professor&student roles, the right to rule of students and professors vs administration roles of organization etc. The limits of this study are the technical knowledge and experience of the author by the time of preparation and could be improved by the academic community and experts always.

Conclusion. Digitization is an inevitable phenomenon of the 21st century, but it depends on how we meet it - prepared or not to change at the price of our ability to recognize potential benefits. The more ideas we have on this subject, the more potential chances we have of profit in various spheres and types of activities, related or not related to the digital domain, but certainly simpler administratively expressed and approved in this way. USMF targets it's only a vision of how it could be in our university, and it could open potentially a way to thousands of other notorious visions.

26. PERSPECTIVES OF NURSING ACTIVITY IN CLINICAL DENTISTRY FROM THE REPUBLIC OF MOLDOVA

Author: Lefter Elena-Adelina

Scientific adviser: Ala Ojovan, MD, Associate Professor, Department of Therapeutic Dentistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The contemporary development of nursing has initiated in today's practical medicine new possibilities of activity. This profession offers prospects to achieve a wide range of medical actions. In the national space so far, there have been no possibilities for training and application in clinical dentistry of the competences of the general nurse. At the same time, there is an acute need for nurses in this area.

Aim of study. Relevation of the essential aspects of the activity of the general nurse within the local dental service.

Method and materials. A literary review was made from pubmed databases, NCBI, MeSH, etc. The methods were applied: sociological and biostatistics. A questionnaire with 27 topics was compiled. 120 respondents participated in the survey.

Results. In the research, mainly, the real possibilities of activity of the general nurses in the clinical dental units were analyzed. Along with the theoretical sources, we proceeded to the questionnaire of some categories of specialists, students and patients: dentists – 30; nurses – 30; generalist students and dentists – 30; former patients (25-60 years) – 30. At the same time, the directions of the involvement of nursing in clinical dentistry were structured. The survey showed, among other things, that nursing assistance offers greater treatment safety (85.9%) and a higher quality of patient care (80.8%). Thus, 91% respondents claim that the general nurse must demonstrate clinical thinking skills and maintaining calm in solving the emergency, etc. The promotion of optimal strategies regarding this quota of professionals by the health system will constitute a satisfactory contribution to the qualitative provision of medical services to the population.

Conclusion. 1. Theoretical training within the specialty "General Nurse" and the practical skills obtained offer this category of specialists possibilities of activity in the most diverse fields of medicine, including dentistry. 2. The dental service in the Republic of Moldova offers the possibility of extensive application of competences: preparation of the patient to treatment; involvement with the doctor in medication; maintaining an adequate psychological support, etc. 3. General nurses are seen as health promoters with a special role in health education, fighting infections and preventing dental diseases. 4. The presence of the nurse inspires greater confidence in the replenishment of all clinical dental workmanship.

27. PROFESSIONAL BURNOUT SYNDROME IN NURSING PRACTICE

Author: Goranciuc Cristina

Scientific adviser: Virginia Salaru, MD, PhD, Associate Professor, Department of Family Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Burnout syndrome is a global phenomenon, especially in the health care sector. In the field of health professionals, nursing is one of the most exhausting professions due to the various factors and characteristics of professional practice that cause physical and emotional exhaustion.

Aim of study. The study aimed to assess Burnout syndrome in nurses in order to identify the factors that contribute to it.

Methods and materials. We conducted a cross-sectional study based on a group of 68 nurses, by interviewing directly 15 nurses working in different types of medical institutions in the country and indirectly by questionnaire on different online platforms. Data were collected from June 2021 until February 2022 using a self-reported questionnaire that includes socio-demographic dates and the Maslach Burnout Inventory- which was applied to identify Burnout syndrome. The data were analysed by the Excel program.

Results. The study included 68 nurses, 56 women (82%) and 12 men (17%), with a mean age of 38.21 ± 0.21 (range 20- 62) years. The average number of working hours per week was 46.40±4.4 (range 6-108) hours, and 34 (50%) nurses work night shifts. The average number of shifts per month was 6.95 ±0.05 (range 3- 12) shifts. According to the Maslach Inventory different degrees of Burnout syndrome were established in 61 (89,7%) cases. The intensity of work and the number of over-scheduled hours and/or patients affect nurses' professional activity in 44.3% (31) cases. The financial issues were identified as a factor that increased the Burnout syndrome in 20.6% of cases. At the same time, 41 (60%) nurses were directly involved in the care of patients with COVID-19, of which 40 nurses (58.8%) were „ totally agree" that the COVID 19 pandemic added stress to their professional activities.

Conclusion. Burnout syndrome was identified among 89,70% of the nurses from the study. We recognized a set of factors that negatively influence medical work contributing to Burnout syndrome, such as work intensity, the high number of patients or working, night shifts, and financial satisfaction. The COVID-19 pandemic has led to the worsening of the phenomenon of Burnout among nurses.

28. THE ASSESSMENT OF EATING HABITS IN PRESCHOOLERS FROM REPUBLIC OF MOLDOVA

Author: Guțanu Alina

Scientific adviser: Angela Cazacu-Stratu, MD, MPH, Associate Professor, Discipline of hygiene, Department of Preventive Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Nutrition is a very important part of the field of population general health, including children. Incorrect diet or habits, adapted from kindergarten or family, lead to the onset of obesity, which has become a global problem among children. In Europe, 1 in 5 children is overweight.

Aim of study. Analysis of eating habits in preschoolers from the Republic of Moldova.

Methods and materials. A questionnaire of 21 questions related to food was used. The questionnaire was sent to 85 parents who have preschool children, thus participating in the study, 39 girls (45,9%) and 46 boys (54,1%) from the Republic of Moldova.

Results. Results of this study showed that 69.4% of children have 3-4 meals a day, 18.8% have 5-6 meals a day and 11.8% have 1-2 meals a day. Of the total number of children, 46.4% like the food offered by the kindergarten often, sometimes - 31%, 10.7% - always, rarely - 9.5% and never - 2.4%. The menu of the institution is varied in 39.3% of cases. 30.6% of respondents said they eat fresh fruit daily, 23.5% eat meat daily, and dairy products 27.1% of children. 91.8% of the respondents consume more frequently cooked food at home, and 8.2% fast food. Overall, 58.8% confirmed that they eat fast food, of which 57.6% consume occasionally, 16.5% every 2-3 weeks, and 2.4% of them consume these products daily. Fast food products are consumed frequently for snacks (37.6%) and for 32.9% of the respondents for lunch. 65.9% of the respondents who consume fast food products state that the quality of the products is very important, for 43.5% of the respondents the saving of time is important, and the price of these products is important for 42.4% of the respondents. Out of the total respondents, 58.8% realise that fast food products are not healthy, and 81.2% consider that this type of diet can cause childhood obesity.

Conclusion. Firstly, the health of preschool children depends primarily on the eating habits adopted in the family, as the nutrition offered by the kindergarten is correct and varied. Secondly, due to the lack of time, but also the accessibility of people to fast food, the risk of childhood obesity increases.

29. THE BENEFITS OF KETOGENIC NUTRITION IN VARIOUS DISEASES

Author: Djaparidze Tatiana

Scientific adviser: Luminita Suveica, Doctor of Biological Sciences, Associate Professor, Department of Family Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. This literary review presents the general aspects of ketogenic nutrition, the action on the body in general, by the formation of ketone bodies, the body's entry into physiological ketosis, the supply of organs and cells by this method and especially its action on the endocrine system and hormonal changes. Also, it compares physiological and pathological ketosis, its benefits and contraindications for different diseases. By the World Health Organization (WHO) estimated that there were more than 1.5 billion overweight adults in the world and, of these, about 500 million are clinically obese. So, it is currently an important topic for solving such problems as obesity, which has become one of the most widespread health problems of our time.

Aim of study. Demonstrating the benefits of ketogenic nutrition in various diseases and in maintaining the well-being of the whole body, producing energy and nourishing each cell of the body in the process of formation and metabolism of ketone bodies. The practical importance of the thesis is the development of the ketogenic individualised food menu in the resolution of endocrine diseases, because it is an important key in all functional systems of the body, including obesity.

Methods and materials. This thesis is a narrative work of literature and international publications and scientific articles. A search strategy was developed using best practice guidelines, such as PubMed and Wiley Online Library databases from the last 10 years, meta-analyses and Cochrane guidelines.

Results. Literature studies have shown that the human body can function with carbohydrate restrictions up to 15-20% per day, thus entering a state of physiological ketosis using the body's own fats as energy, thus acting positively on the hormonal level, having positive results in several problems, both endocrine and metabolic, such as obesity.

Conclusion. Ketogenic diet is beneficial for the body, under the control of the doctor, having beneficial sides in the functioning of various systems, neurological diseases, but also decreasing and maintaining weight over time.

30. THE BIOETHICAL AND LEGAL BASIS OF FAMILY MEDICINE PRIVACY

Author: Munteanu Cătălina

Scientific adviser: Ludmila Rubanovici, Doctor in philosophy, Associate Professor, Department of Philosophy and Bioethics, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Privacy in family medicine is a mandatory necessity in the competent medical act that ensures the quality of primary health care and continues with prevention and education actions, and with therapeutic and recovery actions, contributing to promoting the medical condition of the patient, of his family and the community. The medical obligation of keeping the medical secret is stipulated by the law of the Republic of Moldova regarding health protection. Nevertheless, in medical practice there are situations when it is very difficult to keep the privacy out of medical as well as nonmedical reasons, and the life and health of the third party individuals can be in danger because of not disclosing the truth.

Aim of study. The purpose of the study is to present the bioethical and legal basis of privacy in family medicine and to show some exceptions in which a third party with a legitimate interest may have access to patient information.

Methods and materials. Legal acts of the Republic of Moldova on the protection of personal data; national orders and rules on the organization of primary care; empirical data of a personal study, conducted in October-November 2021. Methods used: surveys, observation, description of the bioethical principle, etc.

Results. Privacy protects the relationship between the family practitioner and each patient, ensuring that his health quality is kept, improved, and protected. Nevertheless, the privacy bioethical basis, as well as the legal one, form a conditioned privilege, rather than an absolute one, nowadays finding so many exceptions in which a third party individual with a legitimate reason can have access to the patient's information. Family medicine can be nowadays another deviation, because its conceptual framework does not follow the old treatment pattern of the individual alone, and uses a more advanced one both of the individual, as well as his entire family.

Conclusion. Keeping the privacy is the patient's right, as well as a moral and legal obligation of the medical staff inside the family medicine. Passing on patient personal data from the family physician to a third party person, can be necessary for diagnosing diseases, as well as for successfully treating family diseases. Therefore, during the first medical visit, the family physician must inform the patients that he will share with other members of the family some necessary and relevant aspects in order to treat the problem

31. THE ROLE OF NUTRIENTS IN BALANCED NUTRITION

Author: Anton Luminița

Scientific adviser: Luminita Suveica, Doctor of Biological Sciences, Associate Professor, Department of Family Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Food nutrients are the main source of energy for the growth, development and proper functioning of the human body. They can be divided according to their need, the amount in the daily food ration, in micro and macronutrients, as well as according to how the body responds to their deficiency, by changing the growth and body weights.

Aim of study. To investigate the role of food nutrients in rational nutrition and to determine their main food sources.

Methods and materials. The study method by which aspects of the studied topic were highlighted was analytical. The most current international nutrition guidelines, specialised nutrition manuals and research in the field of pathophysiology of the cardiovascular system have been analysed and studied. The latest publications in the field of dietetics, food hygiene, pediatrics and geriatrics have been consulted to create a broad understanding of the role of food nutrients in a balanced diet and accessible food sources.

Results. Macronutrients are the nutrients that are needed in larger quantities in the whole body which include fat, carbohydrates, and protein. They have an important role in development of the body, repair and development of new tissues, driving nerve impulses, and regulation of life processes. These nutrients are found in meat fat, butter, eggs, fish, fruits, starchy vegetables. Micronutrients are vitamins and minerals needed by the body in very small amounts. However, their impact on a body's health are critical, and deficiency in any of them can cause severe and even life-threatening conditions. Vitamins are necessary for energy production, immune function, blood clotting and other functions. Meanwhile, minerals play an important role in growth, bone health, fluid balance and several other processes. They are found in tomatoes, citrus fruit, sweet peppers, broccoli, kiwi fruit, chicken, cereals, bananas, milk and others.

Conclusion. The role of food nutrients, a subject studied for centuries, still remains an open subject for study and research, as a balanced diet adapted to individual characteristics, is a shield against disease and sometimes an accessible weapon, but demanding in handling certain pathologies.

32. THE ROLE OF THE HOLISTIC APPROACH IN PRIMARY CARE.

Author: Lisnic Diana

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Introduction. Holism is the philosophy of understanding people by addressing the factors that affect people in all situations. The parameters that guide a holistic approach are the patient's thoughts, feelings, culture, beliefs and attitudes in harmony with their body, mind and spirit. Globally, health care systems are facing unparalleled levels of demand for services and a greater emphasis on long-term condition management, as well as financial constraints and an increasing role for technology in care. The key factors influencing a person's health status are the quality of health care is only 10%. Heredity accounts for 18% and environment is 19%. Daily living choices are 53%. Relationship-centred care is a must when dealing with many chronic conditions that are not simple cures.

Aim of study. A health care approach, to support the patient and family to control a lifestyle that participates in patient satisfaction and health.

Methods and materials. Scientific articles were searched in PubMed, Google Scholar, Medline, databases over a 5 year period. Keywords used in the search: holistic , holistic care, patient.

Results. Recognising all human dimensions encourages a balanced and complete view of a person. Disease has the power to strike the strongest of individuals; no one is immune. By taking a holistic approach and looking at the bigger picture, it is possible to identify the underlying cause of a problem. Personalised health planning is used to individualise care strategically along the continuum from health promotion to disease treatment. Person-centred diagnosis is based on the biopsychosocial model, connects science with humanism and uses all possible ways for clinicians, patients and their families to work together for more effective disease management. Developing a holistic understanding and relationship with patients allows the health care worker to guide them more effectively towards health by helping them integrate appropriate self-care into their lives.

Conclusion. By achieving a balance between body, mind and spirit, the person will achieve a healthier, happier and more contented life, resulting in positive changes to their lifestyle and are motivated to continue this process throughout life.

33. THE SUBJECT OF MEDICAL TRUTH AND THE PLANNING IN ADVANCE OF THE CARE FOR PATIENTS WITH INCURABLE DISEASES

Author: Antonela Rusnac

Scientific adviser: Ludmila Rubanovici, Doctor in philosophy, Associate Professor, Department of Philosophy and Bioethics, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. One of the basic values in the case of patients with incurable diseases is respect for the autonomy of the patient. This study highlights some rules for the medical worker in the evaluation and preparation of the patient, the process of stating the bad news, the support and follow-up of the patient's actions in the procedure of telling the medical truth, and the planning in advance of the care offered to non-curable patients.

Aim of study. The purpose of the study is to present the role of bioethical landmarks in communicating the truth to patients with incurable diseases and the necessity of their application at the stage of advance planning of their care.

Methods and materials Scientific publications from theoretical medicine, oncology, national and international medical protocols, bioethics, medical ethics, empirical data of one's own study, conducted between January and February 2022, have been studied and analysed. Methods used: observation, questionnaire method, description, analysis, the bioethics principles-based methods, etc.

Results. In oncological practice, telling the truth to the patient with an unfavourable diagnosis can lead to the worsening of their health and can complicate the care process. The doctor will have to deliberate thoroughly based on a psycho-medical criteriology, taking into account the social, professional and family status of the incurable patient. It is important to avoid communicating the truth to those who did not suspect the unfavourable evolution of the disease and to those who, at the moment, have a good general condition. The opposite will be done with patients who appreciate truth and sincerity more than tragic subjectivism, have a strong character, as well as with those who have already intuited the sad diagnosis, refusing treatments and saving interventions. The truth can be suggested with great caution, increasing the patient's trust in the oncologist.

Conclusion. Based on the principle of respect for the autonomy of the patient, every patient has the right to decide on his own life regardless of the existential context. In the process of making the moral decision, the doctor must tell the truth under any conditions and circumstances, taking into account another principle – not to harm the patient's health, and all actions to be in the patient's benefit. The application of the rule of autonomy is not always easy to achieve in oncology, but a solution would be to a fully individualised process of informing the patient, adapted to the psychology of each patient.

34. VACCINE HESITATION AS A PUBLIC HEALTH ISSUE

Author: Onea Dina

Scientific adviser: Mihail Morosanu, MD, PhD, Associate Professor, *Nicolae Testemitanu* Department of Social Medicine and Management, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The vaccine is a substance used to generate immunity to one or more diseases through the production of antibodies. The substance is prepared from the causative agent of the disease, its products or a synthetic substitute, treated to act as an antigen without inducing the disease. Although vaccination is recognized as one of the most successful in public health, it is still perceived as unsafe and unnecessary by a growing number of individuals. Identifying the real causes in the hesitation of vaccination and denying them can make an essential contribution to solving the public health problem that affects today's society.

Aim of study. To assess the main causes of hesitancy of vaccination by the population and determine their role in generating public health problems, in the context of the current pandemic, and also of the previous ones.

Methods and materials. Analysis descriptive study was performed on the basis of a questionnaire was used to collect data, 106 citizens of Republic of Moldova over the age of 18 years participated in the survey.

Results. 50.9% of respondents accept all vaccines, 40.6% have a reserved attitude and 8.5% are against vaccines. The general refusal of the vaccine is prevalent among women: 85.8% of those who are against vaccines refuses vaccination. 62.3% of them are young women aged18-25 years. The rate of hesitation and acceptance is almost equal. 15 people (28.8%) considered the vaccine unsafe, as well as 15 people (28.8%) are worried about side effects. The amalgam of aberrant information, overshadows all the truthful information and makes it more difficult to access, or the widespread spread of conspiracy theories, is also a very important aspect in the hesitation of vaccines.

Conclusion. Different causes of vaccine rejection and hesitation were observed. The wide variety of information, both truthful and less, but also certain religious and cultural factors lead to distrust of vaccination companies. It is also essential to educate in vaccinology by continuously informing the population, with the help of qualified medical staff, to achieve the ultimate goal of ensuring the sustainability of vaccination programs that save lives globally.

35. WORKPLACE VIOLENCE AMONG PHARMACISTS

Author: Cazacu-Stratu Camelia

Scientific adviser: Elena Ciobanu, MD, MPH, Associate Professor, Discipline of Hygiene, Department of Preventive Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The pharmacist, along with the medical staff, was identified as having a high risk of violence at work. With the onset of the Covid-19 pandemic and the new developmental features of the pharmaceutical industry, it has become necessary to adapt to a new workplace environment. However, pharmacists continue to face violence that is caused by various factors: long waits for service, working alone, poor environmental design, inadequate security or providing services for patients who have a history of violence, abuse drugs or alcohol.

Aim of study. To evaluate workplace violence before and during the COVID pandemic and understand the existing types of violence prevention strategies.

Methods and materials. A cross-sectional descriptive study was initiated among 112 pharmacists aged 20 to > 60 years in the period of February 2022, with application of the on-line questionnaire "Surveillance of workplace violence among pharmacists" consisting of 3 sections (general information, the worst event in your experience, prevention strategies).

Results. Of the total number of participants in this study, women represent 88.2% with a work experience of more than 11 years. Pharmacists (70.6%) spend most of their working time in retail settings. During the pre-Covid period, most of the interviewed pharmacists – 76.5% faced threats or verbal aggression during work. Instead, in the pandemic this rate was lower (67.6%). The number of thefts or attempted thefts in the pre-Covid period was 29.4% among pharmacists, while in the pandemic their number (20.6%) decreased approximately by 9%. As a result of the violence encountered at work, 43% of the pharmacists required psychological support. In the most frequent cases, pharmacists were assaulted by patients (82.4%), colleagues (5.9%), managers and drug users (2.9%). Most aggression events – 91.2% occurred during days and only 8.2% during the night shift. According to the study, 52.9% of the participants considered that the pharmacies in which they work have a general policy for preventing violence, and 76.5% of them confirmed this.

Conclusion. Verbal violence remains the most significant problem in the workplace among pharmacists in both periods of the study. Alarms, different security systems and safe exit remain the safest ways to prevent workplace violence

IV. Fundamental Science Section

1. ABDOMINAL BREATHING TRAINING THROUGH RESPIRATORY BIOFEEDBACK IN ORDER TO REDUCE ANXIETY

Author: Grigoria Otgon

Scientific adviser: Svetlana Lozovanu, MD, Associate Professor, Department of Human Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Anxiety causes considerable impairment in patients and remains one of the most common complaints in primary care. Family physicians are often in a position to seek the most effective treatment for patients, including free method such as biofeedback. Biofeedback is a therapeutic tool to facilitate the self-regulation of autonomic functions to improve health. The method of respiratory biofeedback is based on performing voluntary controlled respiratory movements in the form of a special breathing pattern. Multiple researches in respiratory biofeedback, however, have very few references to the influence of biofeedback training on the parameters of the respiratory pattern and their connection with the level of anxiety in healthy people. This is the purpose of the present work.

Aim of study. Respiratory training in order to reduce anxiety involves abdominal breathing with a rate of 6 breaths per minute. The start of the respiratory cycle phases (inspiration/ expiration) was given by the sound of the metronome, so that the ratio between the duration of inspiration and that of expiration was strictly maintained from 4 seconds up to 6 seconds. Thus, the participant's goal was to limit the amplitude of thoracic movements and increase the amplitude of abdominal movements, using the instant visual feedback provided by the VISURESP application. The selected sample breathed according to this special program for a period of 14 days, daily with a duration of 15 minutes. There was a significant reduction in anxiety in the majority of participants included in the study (75%).

Methods and materials. A biofeedback respiratory method, VISURESP application was used to see instant visual feedback. The selected sample breathed according to this special program for a period of 14 days, daily with a duration of 15 minutes. It involved patients with anxiety.

Results. There was a significant reduction in anxiety in the majority of participants included in the study (75%).

Conclusion. The results of the current study allow to recommend the method of respiratory biofeedback in the complementary treatment of various anxiety disorders. At the same time, the results of the research open up the perspectives of training implementation through respiratory biofeedback as an effective method of prophylaxis and treatment of the suprapontine disorders of the central nervous system.

2. ACQUIRED SAVANT SYNDROME

Author: Sanooj Amina

Scientific adviser: Adrian Lupusor, MD, Department of Human Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. If life starts approximately a billion years ago, we will have to wait 400,000 years to see the aberration of the first nerve cells. It's not possible to determine any signs of intelligence yet. It acts more as a reflex. One neuron you are alive. Two neurons you are moving. Three neurons, interesting things begin to happen. Humans today as we know are capable of doing complex things as we can imagine. It took 100 years to clarify the concept of gravity, because we weren't able to see the hidden figures within the known figures. What if I say there is a possibility to acquire this talent by a mere correction in the human brain? Simple yet challenging 'mistake' that can be for the good of the coming Z generation. Neuroscientists have tried on a variety of tests and experiments to know more about the brain. But how far did it reach? Which is why I decided to talk about something that was known but wasn't explored. Savant syndrome. It is a rare condition in which persons with various developmental disorders, including autistic disorder, have an amazing ability and talent. The condition can be congenital (genetic or inborn), or can be acquired later in childhood, or even in adults.

Aim of study. The reason for this literature is to enhance the human ability to think, restore, develop and communicate with better advancement in every field like technology, literature and social well-being. A rising skill in human society can benefit the humans, country, nations, and universe itself. We could solve the ongoing problem of cyber hacking, wars, environmental destruction or maybe even the end of the earth that is confirmed to happen within the span of 20 billion years as the sun dies. The thing is, knowledge is always about specialization and context. So even if we're equally intelligent and suppose most of us are, we're all still screwed by bankers, economists, lawyers, bankers, doctors and politicians, because we're not as literate in those fields as they are. All discrimination based on gender, race, etc will take a huge hit - it would no longer be possible to mask such bias under the guise of meritocracy. This study was carried out on the thought that if we could create changes that exhibit humongous transformations in the organic brain stature, we may be able to complete the unfinished works of the genius scholars, who left behind clues of existence, universe, biome, nano and other speculated technologies. Acquired savant syndrome and the idea of “released” compensatory abilities (“disinhibition”) raise interesting questions regarding whether or not this dormant capacity might exist in each of us.

Methods and materials. This work is based on systematic literature review from 2008-2022. Online platforms like Google scholar and scientific research fields like PuBmed were selected. The key words used were "acquired savant syndrome". Articles published by a single author were not considered. All the articles were reviewed according to the scientific standards**.**

Results. Savant syndrome is a rare condition in which persons with various developmental disorders, including autistic disorder, have an amazing ability and talent. The condition can be congenital (genetic or inborn), or can be acquired later in childhood, or even in adults. Accidental geniuses like Jason Padget and Stephen Wiltshire weren't born savant. They became savants by an injury in the left anterior temporal lobe. This fascinating ability may be due to some organic or functional brain changes associated with trauma. From the review of various relevant articles, it was determined that the major factor of brain alteration is the increased connectivity among the neurons, may be in the form of glial cells or the neural processes themselves, which allowed better transmission of signals both electrically and with the help of neuro-transmitters. It still remains as a hypothesis and should be confirmed by conducting more extensive studies, with the involvement of various scientific fields and scholars. Major conflict encountered is from the ethical point of view, on conducting humanized experiments. Discussions on tackling the issue along with action plan development confirms a successful research.

Conclusion. The acquired savant raises questions about the dormant potential for such buried skills in everyone. The challenge is to be able to tap such latent abilities without head injury or other precipitating events. We now know that people with savant syndrome are true islands of geniuses. We also know that the relation to autism or autistic traits exists, and that this should be accounted for in an overall explaining theory. The fact that acquired savants gain their remarkable skills after injury give clues to the untapped potential in all of us. Hopefully one day we could discover whether it may be possible to bring out this potential without first experiencing an injury to the central nervous system.

3. ANGIOGRAPHIC STUDY OF THE RENAL ARTERIES ACCORDING TO SEX CORRELATION.

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Introduction. Kidney is the most transplanted organ worldwide, according the GODT. By 2019, 355 kidney transplants were performed in Moldova. The COVID-19 pandemic has had a negative impact on the number of kidney transplants, which in 2021 decreased by an average of 19.14% worldwide. In low income countries, this value decreased up to 64%. Therefore, any anatomical findings that improve the chances of a successful kidney transplant, by choosing the right donor should be taken into account.

Aim of study. According to various authors, the diameter of the renal arteries at the ostium level ranges from 3.0 mm to 9.7 mm. M. K. Tarzamni et al. has indicated the presence of a direct correlation between the diameter and angle of origin of the renal artery. Majos M. et al noted that the presence of additional renal arteries leads to a decrease in the diameter of both vessels. Kagaya S. and Co-author found that the diameter of the left renal artery is usually larger than the right one and this directly correlates with an increased incidence of acute renal infarction of the left kidney.

Methods and materials. The study was performed on 27 aorthograms, obtained from patients of both sex, from 24 to 78 years old, who did not suffer from any renovascular disease. The branching angle of the renal artery and diameter of the renal artery at the ostium level were measured. The obtained data was analyzed using a descriptive statistics method.

Results. In men, the average diameter of the left renal artery was 4.31 ± 0.63 mm, and of the right one was 4.27 ± 0.76 mm. The angle of branching of the left renal artery corresponded to 128.97±3.74. The right renal artery had ramification at an angle of 85.3±5.54. In women, the mean diameter of the left renal artery is 3.86 ± 0.50 mm and that of the right is 3.71 ± 0.42 mm. The left renal artery ramification angle = 127.21±4.75, and the right one at an angle = 80.11±3.29.

Conclusion. During our study, no significant differences were found between the right and left renal arteries in both the group: men and women. However, in women, the diameter of the renal arteries is generally smaller, by ~ 0.5 mm compared with the “men’s” group, which in most cases is explained by their constitutional features. The left renal artery branched into first-order branches at an obtuse angle in all cases, which may create difficulties in endoarterial distal embolization. The right renal artery had an acute or almost rectangular branching angle, which facilitates some surgical procedures.

4. ANTIRADICAL PROTECTION OF RAT LACRIMAL GLANDS UNDER CONDITION OF COMBINED INFLUENCE OF SIRS AND GENERAL ADAPTATION SYNDROME

Author: Matsytska Yelyzaveta K.

Scientific adviser: Mykytenko A. O.

Introduction. The general adaptation syndrome and systemic inflammatory response syndrome (SIRS) are opposite in their evolutionary patterns. Currently, the scientific literature provides a limited amount of data about possible synergistic or antagonistic effects of the combination of general adaptation syndrome and SIRS.

Aim of study. To determine the activity of catalase and superoxide dismutase in the rat lacrimal glands under conditions of SIRS and general adaptation syndrome.

Methods and materials. The experiment was performed on 18 adult male rats weighing 190-240 g. The animals were divided into 3 groups. I group consisted of intact animals (n=6). II group consisted of animals, on which we simulated stress syndrome (n=6) by daily holding over water surface for 1 hour for 30 days (patent №145226). III group consisted from animals that were intraperitoneally injected 0,4 mg/kg bacterial lipopolysaccharide (LPS) of S. typhi (pyrogenal) 3 times a week during the first week, then once a week for the duration of the experiment and simulated stress syndrome as in II group. Removal of animals from the experiment was done by bloodletting under thiopental anesthesia. The object of a study was organs that reflect stress development and severity and lacrimal glands in which the activity of catalase (Korolyuk, 1988) and superoxide dismutase (SOD) (Brusov OS, 1976) were determined. Statistical processing was performed by using a non-parametric Mann-Whitney test.

Results. Catalase activity in the rat lacrimal glands decreased by 2.11 times during chronic stress and by 1.68 times in the group of animals with SIRS and stress syndrome compared with the control group ($p<0.05$). The SOD activity in the rat lacrimal glands decreased by 4.87 times under conditions of general adaptation syndrome modelling and increased by 1.34 times in the animals with the combined effects of SIRS and stress syndrome compared to the control group ($p<0,05$). Thus, the general adaptation syndrome led to decreased antioxidant enzymes' activity in the rat lacrimal glands. The combined effects of SIRS and general adaptation syndrome lead to the activation of antiradical protection of lacrimal glands that was evidenced by an increase of catalase activity by 1.26 times and SOD activity by 6.51 times compared with the stress group ($p<0.05$).

Conclusion. The general adaptation syndrome in the rat lacrimal glands leads to a decrease of antioxidant enzymes' activity. The combined effects of SIRS and chronic stress leads to the activation of antiradical protection in rat lacrimal glands.

5. BILATERAL PERSISTENT MEDIAN ARTERY: A CASE REPORT

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Introduction. The median artery can persist in adult life and contribute to the formation of the superficial palmar arch. The persistent median artery (PMA) may compress the median nerve (MN) and has practical significance for surgeons. The presence or absence of anastomosis between the arteries that contribute to the formation of the palmar arch has been used to categorize the SPA as complete or incomplete.

Case presentation. A routine anatomical dissection was performed on the upper limbs of a male adult cadaver aged 60–70 years who was fixed in a 10% formalin solution. This study presents a rare case of bilateral presentation of the superficial palmar arch formed by PMA. The left persistent median artery was identified as originating from the trifurcation of the ulnar artery into the median artery, the common interosseous artery, and the ulnar artery, 69 mm distal to the epicondyles of the humerus. At the wrist, the persistent median artery with a diameter of 2 mm passed through the carpal tunnel and revealed no anastomosis with the ulnar artery, forming the incomplete superficial palmar arch of the median-ulnar type. The right ulnar artery is subdivided into the common interosseous artery, the median artery, and the ulnar artery at a distance of 80 mm from the intercondylar line. The SPA is formed by the median artery (MA) and the superficial palmar branch of the RA. The palmar digital branches from the ulnar artery supplies the medial two-and-a-half fingers, while those from the median-radial type of SPA supplied the lateral two-and-a-half fingers and gave the radialis indicis. The thumb had additional blood supply from the princeps pollicis branch of the radial artery.

Discussion. The PMA is a frequent abnormality that can induce carpal tunnel syndrome by pressing directly on the median nerve. According to several studies, the prevalence of persistent median artery varies between 1.1% and 27.1%. The palmar pattern was analyzed and had an incidence of 20%, more common in females than in males 1.3:1, appearing unilaterally more frequently than bilaterally 4:1. According to research, the prevalence of incomplete SPA varies from 3.6 to 54.76%. The angle between the ulnar artery and its common interosseous trunk was the most common source of origin of the median artery (59%). The palmar pattern usually joins the superficial palmar arch at 35% or ends as the 1st, 2nd, or 1st and 2nd common digital arteries at 65%. The median artery diameters varied from 0.8 to 2.6 mm, with a mean value of 1.7 mm. According to our results, the median artery in the palmar region has a diameter of 2 mm. This is the first case report in the human anatomy department that describes an incomplete palmar arch and bilateral persistent median artery in a cadaver.

Conclusion. The SPA has received a lot of attention recently because of its importance in contributing to the vascular supply of the hand. Our discovery was notable in that it revealed the presence of MA as well as an anastomosis between MA, RA, and UA. These variations are essential in supporting medical students in improving their clinical practice knowledge.

6. BIOCHEMICAL MECHANISMS OF MIGRAINE

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Introduction. Migraine is a neurovascular disorder with paroxysmal manifestations of headache lasting from 4 to 72 hours, often unilateral at onset, pulsatile, moderate or severe, which frequently alters daily activity and amplifies physical exertion. Is one of the primary types of headaches that affects one billion people worldwide, mostly women. The signaling molecules related to the biochemistry of migraine are widespread in the trigemino-vascular pathways and include: calcitonin gene-related peptide (CGRP), adenylate cyclase activating peptide (PACAP-38), nitric oxide (NO). Moreover, cortical spreading depression plays an essential role in generating migraine pain.

Aim of study. To research the biochemical pathways of migraine with possible therapeutic targets for these conditions.

Methods and materials. A wide area of articles from PubMed, NCBI, HINARI, Google Scholar databases over the last ten years describing the biochemical appearance of migraine, also potential therapeutic targets acting on these mechanisms were explored. Usual used keywords: migraine attack, biochemical mechanism, ion channel, nociceptive transmission..

Results. The CGRP and PACAP-38 molecules increase intracellular cAMP, while NO molecule increases cGMP. This suggests direct involvement in the biochemical pathways that initiate migraine. A preclinical evidence implicates that activation of cAMP and cGMP leads to the opening of ATP-dependent K+ channels with massive efflux of K+ ions, which produce vasodilatation, initiating the perivascular trigeminal afferents, generating nociceptive impulses. Through the ascending pathways of trigeminal pain are transmitted to the cortical and subcortical brain parts. This led to the hypothesis of modulation of nociceptive transmission through ion channels, mainly K + dependent, which may be a common pathway in the genesis of migraine attacks. New methods of treatment act by inhibiting the CGRP pathway by binding to its ligand or receptor (e.g. Erenumab, Fremanezumab, Galcanezumab, Eptinezumab). Moreover, studies revealed that the ionic gradient is also disturbed by cortical spreading depression, a self-propagating wave, producing an extended depolarization over the cerebral cortex, resulting in cerebral hypoperfusion. This wave activates the peripheral and central trigeminal neurons and opening, at the same time of the neural channels - Pannexin1, with the release of proinflammatory mediators, which induce the expression in astrocytes of COX2 and iNOS. Later on cytokines, prostanoids and NO are released in the subarachnoid space, a process that activates trigeminal nerve fibers and produces migraine pain.

Conclusion. Migraine is a common disabling brain disorder whose key biochemical mechanisms remain incompletely studied. Increasing evidence from literature supports the idea that cortical spreading can cause sustained activation of meningeal nociceptors and central trigeminovascular neurons and can thus initiate the headache mechanisms. Several findings support a fundamental role of calcitonin gene–related peptide (CGRP), adenylate cyclase activating peptide (PACAP-38), nitric oxide (NO) , but the mechanisms of action of these molecules in a migraine attack and the mechanisms underlying the hypersensitivity of migraineurs to modulation of nociceptive pathways remain unclear.

7. CIRCULATING miRNAs AS PROMISING CANCER BIOMARKERS

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Introduction. MicroRNAs (miRNAs) are small, non-coding RNAs (ncRNAs) of about 22 nucleotides in size that can function as potential oncogenes or tumor suppressors. Altered expression of these molecules was correlated with the occurrence of many cancer diseases and therefore they are considered a molecular tool for non-invasive cancer diagnosis and prognosis.

Aim of study. To highlight the role of circulating miRNAs as potential biomarkers for early cancer diagnosis and predictor of prognosis and cancer treatment.

Methods and materials. In order to achieve the aim of the study, various databases (miRCancer, OncomiR, miRactDB, mimiRNA, miRNAMap) were studied and a number of 31 scientific articles were analyzed.

Results. Aberrant expression of miRNAs in cancer is characterized by abnormal expression levels of mature or precursor miRNA transcripts in comparison with those in the corresponding normal tissues. Tumor-derived miRNAs measured in plasma can serve as non-invasive biomarkers for cancer detection. In the following, we will present some of the most conclusive examples that highlight the diagnosis potential of miRNAs. Plasma miR-21, miR-145, and miR-155 used in combination helped in distinguishing lung cancer from healthy smokers with 69.4% sensitivity and 78.3% specificity. Combination of miR-148b, miR-409-3p, and miR-801 discriminated powerfully between breast cancer cases and healthy controls. Three plasma microRNAs (miR-106b, miR-20a, and miR-221) had a statistically significant elevation in gastric cancer patients so as to serve as novel biomarkers for the early detection of the disease. Additionally, the combination of miR-16, miR-196a, and CA19-9 was more effective for pancreatic cancer diagnosis, especially in early tumor screening. Regarding the causes of the abnormal expression of circulating miRNAs in cancer, it can be mentioned that around 50% of the miRNA coding genes are located in areas of the genome that are associated with cancer, which are translocated or amplified in malignancies. Another reason is represented by the function variation of the enzymes involved in the biosynthesis of miRNA, like Drosha and Dicer 1. Consequently, a decrease in the levels of these enzymes has been reported in the case of bladder and ovarian cancers, while elevated levels are encountered in gastric and cervical squamous cell neoplasms. Lastly, the alteration of circulating miRNAs in cancer could also be caused by transcriptional errors of pri-miRNA.

Conclusion. Since the first discovery of circulating miRNAs, there have been a large number of studies focused on their biological functions and the potential of biomarkers in oncology. As described here, circulating miRNAs may derive from tumor cells in response to specific signals, enter the circulation in a stable form as cancer-related molecules, and contribute to early diagnosis, prognosis, and individualizing therapeutic strategies.

8. CLINICAL AND GENETIC ASPECTS OF PROGRESSIVE MUSCULAR DYSTROPHIES IN CHILDREN

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Introduction. In children, Progressive Muscular Dystrophies (PMD) are a wide group of genetic diseases which affect skeletal muscles by progressive weakness and degeneration, caused by genetic alterations. In some cases, involvement is not limited to muscles, but it may influence other organs, such as heart and respiratory muscles. This category of pathologies causes progressive weakness and loss of muscle mass. In muscular dystrophy, abnormal genes (mutations) interfere with the production of proteins needed to form healthy muscles. Histologically, Progressive Muscular Dystrophies are unified by the presence of necrotic and regenerating processes, related with an increased amount of connective and adipose tissues.

Aim of study. Elucidation and comprehensive overview of the clinical and genetic aspects of progressive muscular dystrophies in children.

Methods and materials. The presented work was created on the basis of review of literature exploring bibliographic sources, using manuals and articles published in databases: PubMed, Google Scholar, Medscape, NCBI, ScienceDirect.

Results. The analysis and synthesis of literature and bibliographic sources show the existence of many types of progressive muscular dystrophies. There are at least 16 different types of PMD in children. All of them are genetically determined diseases of the muscles which lead to progressive weakness. According to the mode of transmission, Progressive Muscular Dystrophies are classified in the following types (David Gardner-Medwin MD FRCP classification): X-linked recessive muscular dystrophies: - Duchenne muscular dystrophy (severe type); - Becker muscular dystrophy (benigne type); - Benign muscular dystrophy with early contractures; - Scapulo-peroneal muscular dystrophy (Emery-Dreifuss); X-linked dominant muscular dystrophies: - Hereditary myopathy in females; Autosomal recessive muscular dystrophies: - Scapulohumeral (limb-girdle) muscular dystrophy: LGMD2A-2W - Quadriceps myopathy; - Childhood hereditary autosomal recessive myopathy; - Congenital muscular dystrophy; - Adult distal muscular dystrophy: Nonaka, Miyoshi - Oculopharyngeal muscular dystrophy; Autosomal dominant muscular dystrophies: - Scapulo-peroneal autosomal dominant muscular dystrophy; - Late-onset proximal autosomal dominant muscular dystrophy; – Facioscapulohumeral muscular dystrophy (Landouzy-Dejerine). All these types are distinguished based on some specific genetic mutations unique for each type of PMD characterised by a different pattern of muscle distribution, different involvement of skeletal muscles, body organs and variable course of evolution. The most important and frequent PMD are Duchenne progressive muscular dystrophy (DMD) and Becker progressive muscular dystrophy (BMD). These are some of the most severe forms of progressive muscular dystrophies in children. Nowadays, there is no effective treatment for DMD/BMD and other PMD. Despite significant progress of molecular biology and genetics that has been achieved over the last two decades in this domain, prevention, carrier detection, counselling, and prenatal diagnosis remain the only effective strategies against these pathologies.

Conclusion. Progressive Muscular dystrophies (PMD) represent a collective group of inherited non-inflammatory but progressive muscle disorders with many phenotypic characteristics, which are difficult to diagnose in the early stage of the disease. Elucidation of clinical and genetic aspects are essential for prevention, establishment of an accurate diagnosis, genetic counselling of families in the high-risk group and prenatal diagnosis for prophylaxis. It is important to know the clinical and laboratory aspects in PMD to detect these diseases as early as possible and to apply therapeutic protocols in order to increase life expectancy, thus improving the quality of these patients' lives and of their families.

9. CLINICAL PARTICULARITIES OF INTELLECTUAL DISABILITY IN BOURNEVILLE-PRINGLE'S DISEASE

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Introduction. Tuberous sclerosis or Bourneville-Pringle's disease is a genetic disorder with an autosomal dominant transmission that variably affects the brain, skin, kidneys, heart, and other organs, characterized by multisystemic lesions. The disease results from mutations in one of the two genes: TSC1 and TSC2, encoding protein hamartin gene and protein tuberin gene. In 67% of patients, the disease resulted from de novo genetic mutations. We report in this article a case of tuberous sclerosis in a 10-year-old female. Physical examination revealed epileptic seizures and intellectual disability, as well as cutaneous manifestations such as fibromatous nodule, hypopigmented macules, and shagreen patch.

Case presentation. A 10-year-old female presented in the emergency department with generalized seizures in association with antiepileptic medication intake, gait disorders, memory, and behavior disorders. She is the second child in the family, born from a physiological pregnancy completed by a eutocic delivery, at term, weighing 3300 g and APGAR score 8/8, without signs of perinatal suffering. Psychomotor development appropriate up to 4 years old. It was identified that the first child in the family, a girl, has similar manifestations, but in a lighter form. The younger brother is healthy. The first symptoms identified at the age of 4 were seizures. The Neurologist establishes the diagnosis of epilepsy and generalized seizures initiating subsequently antiepileptic therapy with Valproic acid at age-appropriate doses. Consulted by a Medical Geneticist, the diagnosis of tuberous sclerosis was suspected based on clinical criteria: intellectual disability, generalized seizures, numerous fibromatous nodules in the thoraco-lumbar region.

Discussion. Tuberous sclerosis is characterized by the classic triad: cutaneous manifestations, epilepsy and intellectual disability. Clinical manifestations can range from fruste forms with minimal symptoms to severe forms with multi-organ damage. Epileptic seizures are the most common extracutaneous symptom of tuberous sclerosis. Their incidence is 80-90% often with onset in the first year of life, represented by infantile spasms or various types of partial or generalized seizures. The onset of epilepsy usually occurs between the ages of 4-7. The evolution is, in 25-50% of cases, towards treatment-resistant epilepsy. Intellectual disability is variable, from moderate to severe, associated with multiple behavioral problems, such as: hyperactivity, attention deficit disorder, aggression, sleep disorders, autism spectrum disorders. The treatment of neurological manifestations is mainly focusing on managing generalized seizures.

Conclusion. Tuberous sclerosis is a multisystemic disease, characterized by a variety of signs and symptoms that make it difficult for establishing an early diagnosis, in some cases, the diagnosis is delayed for long periods of time. The detailed consultation of the patient by the medical team ensures the establishment of a definite diagnosis of tuberous sclerosis. Early diagnosis is very important for complete clinical and radiological evaluation, continuous monitoring of clinical manifestations, family planning, genetic counseling, as well as reducing the rate of morbidity and mortality.

10. CLINICAL-GENETICS ANALYSIS OF EHLERS-DANLOS SYNDROME TYPE IV

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Introduction. Ehlers-Danlos syndrome type IV, vascular type, represents mutations in the procollagen type III (COL3A1) gene. Confirmation of the presence of a COL3A1 mutation and its nature can help evaluate the risks of complications.

Aim of study. Elucidating the clinical-genetics aspects of Ehlers-Danlos syndrome type IV.

Methods and materials. To achieve the proposed objective, a synthesis of the literature published from 2009 to 2021 was performed using 30 bibliographic sources, including electronic libraries such as PubMed, Medscape.

Results. Arterial events were defined by symptomatic dissections, aneurysms or spontaneous arterial ruptures. Arterial ruptures or dissections are responsible for the majority of deaths. In childhood many individuals with vascular type are first thought to have coagulation disorders. In adulthood, four main clinical findings, including a striking facial appearance, easy bruising, the skin is abnormally thin and pale, it is smooth, soft and velvety with multiple venous lesions.

Conclusion. Most affected patients survive the first and second severe complications, but Ehlers-Danlos syndrome type IV leads to sudden premature death. The diagnosis should be assumed in young people presenting to the doctor because of uterine rupture during pregnancy or arterial or visceral rupture. Early diagnosis is particularly important for surgeons, radiologists and obstetricians because knowing the diagnosis can help manage complications.

11. CLINICAL AND GENETIC ASPECTS OF MELAS SYNDROME (MITOCHONDRIAL ENCEPHALOPATHY, LACTIC ACIDOSIS, AND STROKE-LIKE EPISODES).

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Introduction. MELAS syndrome (Mitochondrial Encephalopathy, Lactic Acidosis, and Stroke-like episodes) is a rare condition with early childhood outset that affects the nervous and muscular systems. The condition is caused by mutations in the mitochondrial DNA, mutations that may be inherited through the maternal lineage may be spontaneous. Clinical manifestations include seizures, recurrent headaches, stroke-like episodes with hemiplegia, hearing loss, myopathy, cardiomyopathy.

Case presentation. The patient, a 2-year-old and 7-month-old girl, presented to the hospital with the following accusations: superior paraplegia, balance disorders, aphasia. From the history of the disease: at one year and 8 months on the background of pneumonia, the first convulsive crisis appears. He begins to receive anticonvulsant medication. MRI shows ischemic stroke with postischemic encephalomalacia, left cerebrovascular malformation, clinically manifested by right hemiparesis and motor dysphasia. The echocardiographic examination shows restrictive heart disease, ASD, severe atriomegaly, RV diastolic dysfunction, fluid pericarditis and pulmonary hypertension, Heart failure NYHA gr II-III. After about a year, based on the results and the multisystemic effect, the diagnosis of mitochondrial encephalopathy, MELAS syndrome with multisystemic effect is confirmed based on the clinical manifestations as well as the genetic test. In the process of following the patient, other diagnoses were evaluated and excluded.

Discussion. MELAS is a progressive mitochondrial disease whose key element is stroke-like episodes, but it remains heterogeneous and symptomatically variable. Patients with unexplained stroke-like symptoms should be investigated, especially children, for whom early onset of symptoms could indicate a more aggressive phenotype. The presence of cortical and subcortical lesions on MRI and MRS increase the likelihood of mitochondrial pathology. Increased lactate in CSF during acute episodes and skeletal muscle biopsy are specific tests for this syndrome. Confirmation requires genetic testing for mutations in the MT-TL1 gene (up to 80% of cases).

Conclusions: The occurrence of stroke symptoms in pediatric patients requires a multidisciplinary approach and complex investigations. The polymorphism of the manifestations in MELAS syndrome can create difficulties in the diagnosis of the disease, but at the same time its importance lies in the genetic consultation that the family and the patient's treatment will need.

12. CONTEMPORARY DIAGNOSIS OF CERVICAL CANCER CAUSED BY THE HUMAN PAPILLOMAVIRUS

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Introduction. Cervical cancer caused by the Human papillomavirus represents the IIIrd place within the morbidity and mortality of the Republic of Moldova. The main objective consists of HPV study, screening and diagnostic methods. The basic concepts of the study are the following: Human papillomavirus, structure and nomenclature, infection peculiarities of this virus, Papanicolau cytology, HPV - test, tumor markers.

Aim of study. Establishment and analysis of the problems referring to the infectious origin, infection peculiarities and methods of modern diagnosis of HPV virus in the Republic of Moldova and worldwide.

Methods and materials. This present study is a review of the relevant literature data, published in online medical data bases such as Medline (PubMed) and Scopus, Google Scholar, WHO websites and CDC, which refer to HPV screening and diagnosis. 68 publications were found. Research includes data from 31 publications.

Results. The study results include the infectious origin problems and presence of many modern methods used in the cervix screening and diagnosis. The main methods are: general and biochemical analysis of the blood, gynecological clinical examination, Papanicolau cytology, Bethesda system, colonoscopy, cervical biopsy, HPV test, tumor markers and PCR test. That were confirmed by current morbidity and mortality decrease compared to previous years.

Conclusions. Though there are many efficient methods in Human papillomavirus identification, in our opinion it is necessary a comprehensive information about the frequent oncogenic stereotypes, prevention, screening and diagnosis. In the Republic of Moldova, it is also difficult the studies concerning to diagnostic methods.

13. DEMINERALIZATION OF BONE GRAFTS

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Introduction. Bone grafting is a surgical procedure that is used to treat post-traumatic, rarely post-necrotic defects. Most often these bone transplants are collected from people who die no more than 6 hours ago, the femoral heads that are collected after surgery or autografts.

Aim of study. Determine the optimal environment (acid concentration and current voltage) for effective bone graft dimerization.

Methods and materials. The bovine bone is degreased with detergent and then depiriostat. With the help of the electric window, the bone is cut into segments in the form of discs, monitoring the temperature. Take 3 control segments and 3 experiment segments. First we perform the radiography, after the control segments we place them in a vessel with physiological solution, and the others in a glass vessel containing HCl acid. A carbon electrode is placed in the vessel. For 24 hours these segments are in acid of a certain concentration and voltage. The acid is changed every day and the x-ray is taken. When these segments are completely demineralized we record the result. The experiment continues but already with a different voltage and dose of acid. All results are documented.

Results. Complete demineralization of the graft at an acid concentration of 0.1 mmol / l and a voltage of 1.5 volts takes place in 10 days. At the concentration of 0.1mmol / l acid and the current voltage of 3-5 volts, the generalization is reached in 8 days. With the acid concentration of 0.1 mmol / l and the voltage of the electric current 6-9, the generalization is performed in 6 days. And in the case of the concentration of 0.1 mmol / l and the voltage of the current 12-20 volts, the result is erroneous due to the increase of the acid temperature above the norm. At the concentration of 0.5 mmol / l acid and the current voltage of 3-6 volts, the decrease takes place in 4 days. The rest of the clues are still being worked on.

Conclusion. From the previous results obtained, the most optimal acid concentration is that of 0.5 mmol / l and the current voltage of 3-6 volts for a demineralization in a shorter time.

14. ELECTROCARDIOGRAPHIC CHANGES IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Introduction. Breath control is automatic and its regulation is the target of vegetative influences. Therefore, involuntary and voluntary nervous regulation of respiration has a well-defined role in the occurrence and evolution of cardiovascular events. Chronic obstructive pulmonary disease (COPD), which ranks 3-5 in the structure of general morbidity and mortality, is often a cause of death, most often showing extrapulmonary changes and chronic pulmonary heart decompensation and fatal arrhythmias.

Aim of study. We aimed to analyze the cardiorespiratory interactions in patients with COPD by analyzing electrocardiographic changes (ECG).

Methods and materials. The study included 120 patients with COPD stage I-III GOLD, who underwent standard resting ECG test, evaluating the cardiac rhythm and conductibility, on the background of stopping drug therapy, which could have influenced the rhythmic activity of the heart.

Results. The results regarding the heart rhythm show that in 20.8% of cases no changes were registered, sinus tachycardia was registered in 58.3% of patients. Among other various rhythm disorders, 4.2% of patients had premature ventricular contractions (PVCs), in 1 case of trigeminal type, 7.5% of cases had PSVs. We did not notice any patients with paroxysmal rhythm disorders or any of high-grade ventricular arrhythmias. Highlighting of conduction disorders, denotes the right bundle branch block (RBBB) of the bundle of His at 24.2% of cases, the block of the anterior fascicle of the left bundle branch of the His bundle 2.5%, the bifascicular block at 5% of patients. Following analysis has established that indirect signs of right ventricular hypertrophy (RVH) were found in 39.2% of cases, represented by: R/SV5:R/SV1 <10.0 in 21.3 cases, deviation of the electrical axis to the right - in 87.2% cases, RV5 <5.0 mm at 19.9%; "pulmonary P wave" in leads II, III, aVF - 51.1%, RBBB in 61.7% of cases. Highlights of non-specific changes in the ST segment and T-wave such as flattening, amplitude reduction (smoothing, attenuation) or reversal, which involves the evolution of repolarization, were recorded in 23.4% of patients (most of them in standard leads II and III and right chest leads; others - either in the left lateral leads, or in most of the standard leads), and in 24.8% of investigated cases - a combination of the changes of the P wave in leads II, III; and in a number of cases a decrease of the voltage of the QRS complex. Intraventricular conduction delay and bundle branch block with the simultaneous changes of the P waves were recorded with the same frequency.

Conclusion. The investigation of COPD patients by the ECG method has shown that in 58.3% of cases a sinus tachycardia was diagnosed, in 8.2% of cases- heart rhythm disorders of various types and severity. The prevalence of the sympathetic component over the parasympathetic one of the vegetative nervous system presents an unfavorable prognosis of the disease, leading to the appearance of severe arrhythmias and increasing the risk of sudden death.

15. EPIGENETIC MODIFICATIONS IN CANCER

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Introduction. In order to treat effectively any disease, including cancer, it is necessary to understand the various biological processes that underlie its origin. Cancer is based on disorders of certain types of genes, such as: proto-oncogenes, which normally contribute to gene proliferation; tumour suppressor genes that inhibit proliferation and caretaker genes that repair or prevent DNA damage. There are many pathways that can lead to disruption of these genes, thereby causing uncontrolled proliferation and cell escape from apoptosis: from molecular genetic changes that transform cells by mutating their DNA to epigenetic modifications which transform cells by changing the chemical environment of DNA. In this review, we will focus on the epigenetic aspects of oncological diseases.

Aim of study. The goal of this thesis is to study epigenetic mechanisms and impact thereof on evolution and progressing of oncological diseases.

Methods and materials. This thesis was based on the review of literature references from the open access databases: PubMed, SpringerLink, MEDLINE.

Results. The importance of epigenetic modifications in the development of cancer cannot be doubted. Epigenetic modifications, including DNA methylation, histone modifications, and non-coding RNAs contribute to the development of neoplasms through their participation in tumour initiation, progression, metastasis, and resistance to therapy. This gives the ground for assuming that epigenetic modifications could be used as diagnostic and prognostic markers for many types of cancer. A good example is an MLH1 gene involved in DNA repair, the mutation of which leads to colon cancer. It has been shown that the drugs that deactivate DNA methylation reactivate the actions of the MLH1 gene in cancer cells, confirming that the structure of the gene is intact and that the loss of function was not caused by a mutation but by an epigenetic mechanism. Epigenetic modifications also contribute to the cellular plasticity and formation of cancer stem cells, which can self-renew and differentiate into other cell types. It is considered that this subtype of cancer cells is involved in resistance to therapy and cancer recurrence. Many cases of cancer recurrence occur because conventional chemotherapy does not kill cancer-producing cells. Pre-treatment with epigenetic drugs in different types of leukemia reduces the rate of cancer recurrence, indicating that these drugs are able to kill cancer progenitor cells.

Conclusion. The assessment of the perspectives of use of epigenetic markers as therapeutic targets for treating the oncological diseases has shown that this field is very promising.

16. ERYTHROPOIETIN - THE MAIN REGULATOR OF ANTENATAL AND POSTNATAL ERYTHROPOIESIS

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Introduction. The main regulator of erythropoiesis is erythropoietin (EP). Erythropoietin is synthesized in the kidneys, liver, and other organs. The factor that stimulates the formation of erythropoietin is hypoxia of different etiology (anemia, heart failure, lung failure, massive hemorrhage, erythrocyte hemolysis, decreased barometric pressure, etc.).

Aim of study. Analysis of data from the available literature regarding the level and mechanisms of action of erythropoietin in different periods: embryonic, fetal, neonatal and adult.

Methods and materials. Several articles were studied by keywords: erythropoietin, erythropoiesis.

Results. In the intrauterine period the level of EP increases simultaneously with the level of hemoglobin (Hb) of the embryo, and then of the fetus, which have a higher affinity for oxygen. In the umbilical cord and in the newborn, the level of EP is much higher than in the blood of the adult, which indicates an intensification of erythropoiesis. By the second postnatal day, its level decreases as a response of the body to a radical improvement in tissue oxygenation with the transition to pulmonary respiration. As a result of the reduction in the level of EP in the first week after birth in the peripheral blood the amount of reticulocytes also decreases, normoblasts disappear, the percentage of erythrocyte predecessors decreases dramatically in the red bone marrow, and extramedullary erythropoiesis disappears. The first months of life are characterized by a low level of EP, but it can vary depending on hypoxia, the concentration being inversely proportional to the level of Hb. During the second month of life, EP levels increase and are set at the characteristic level of an adult. There are several mechanisms that ensure the secretion of erythropoietin: the direct action of the blood with low oxygen partial pressure on the cells that secrete erythropoietin or by an indirect effect on the activation of the hypothalamic-pituitary-adrenal system which under hypoxia increases the release of glucocorticoids, catecholamines, stimulates the formation of erythropoietin in the kidneys by humoral mechanism and thus intensifies the processes of erythropoiesis in the red bone marrow.

Conclusion. The production of erythropoietin is regulated by the degree of oxygenation of the tissues. The body is able to compensate hypoxemia (regardless of the causes that caused it) with an increase in the level of EP production. As a result, erythropoiesis is stimulated, and the level of oxygenation of the tissues increases.

17. EVALUATION OF THE CLINICAL EFFICACY AND SAFETY OF ACE INHIBITORS IN VARIOUS CARDIOLOGICAL PATHOLOGIES IN CHILDREN AND ADOLESCENTS

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Introduction. According to various literature data, angiotensin-converting enzyme inhibitors (ACE inhibitors) are considered effective, safe and well-tolerated drugs in children and adolescents, despite the inconsistency and lack of sufficient evidence for their use. ACE inhibitors in pediatrics can be used in the treatment of arterial hypertension, heart failure, various congenital heart abnormalities, chronic kidney disease with massive proteinuria, glomerulonephritis and diabetes. The most commonly used ACE inhibitors in children and adolescents are Captopril and Enalapril, but it is also possible to use Lisinopril, Ramipril, Fosinopril, Quinapril.The use of this group of drugs in children and adolescents requires compliance with the recommended dosage and careful monitoring of the patient's condition due to a greater exposure to the risk of side effects than in adults. The recommended dose in children and adolescents for captopril are 0.3-0.5 mg/kg/day divided into 2-3 doses(maximum 6 mg/kg/day; 40 mg/day) and enalapril 0.08 mg/kg/day(maximum 0.6 mg/kg/day ; up to 5 mg per day).Enalapril is not recommended for neonates or children with glomerular filtration rate <30 mL/min/1.73m².

Aim of study. To identify and analyse the clinical efficacy of ACE inhibitors in pediatric cardiology for various heart pathologies in children and adolescents.

Methods and materials. In a retrospective study, data were processed from 598 (100%) inpatient medical records of cardiac patients in the age category of 1-18 years with various heart pathologies treated in the period 2020-2021 at the Children's Municipal Clinical Hospital named after V. Ignatenko in Chisinau.

Results. As a result of the study, it was found that 87% of cases were emergency hospitalizations. Pharmacotherapy analysis showed that ACE inhibitors (captopril or enalapril) were used in 33.74% of cases. Of these, 13.37% were associated with congenital heart defects, 1.5% with non-rheumatic myocarditis, 1.83% with mitral valve prolapse, 3.34% with post-infectious cardiopathies, 8.02% with arterial hypertension, and 5.68% with various degrees of heart failure. Doses of drugs depending on the diagnosis, purpose of use, and different age categories were:1 mg/kg / day for captopril, 0.02-0.05 mg/ kg/day for enalapril, and for hypertension in children over 6 years of age, depending on body weight: 0.625-1.25 mg/kg/day. The duration of treatment was 5-10 days.

Conclusion. This study of the use of ACE inhibitors in pediatric cardiology for various heart pathologies demonstrated high efficacy and safety due to the absence of side effects. There was a significant improvement in the condition of patients and an increase in exercise tolerance during treatment with ACE inhibitors at recommended doses due to vasodilating and cardioprotective properties.

18. EVALUATION OF THE MORPHOLOGICAL PARTICULARITIES OF CHORIONIC VILLI IN THE INTRAUTERINE DEVELOPMENT OF THE PLACENTA.

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Introduction. Chorionic villi are an important component of the placenta, ensuring the fetus' normal development. Knowledge of the villous profile in various periods of intrauterine development has major importance in the estimation of the placental status for the subsequent establishment of the pathological conditions, in particular, villous maturation disorders. Placental disorders, as well as villous maturation disorders, can lead to deplorable consequences for the development of the embryo and fetus in utero.

Aim of study. To evaluate the morphological particularities of the chorionic villi in the intrauterine development of the placenta.

Methods and materials. The study material included 95 scientific papers, taken from databases: PubMed, Springer, CyberLeninka, Google Scholar, ResearchGate. The scientific papers were selected according to the following keywords: placental development, chorionic villi, villous maturation disorders. As a subject of the study, the studied articles included the placentas of women in the first and third trimesters of pregnancy.

Results. The intrauterine development of the placenta was evaluated with the determination of four stages: differentiation and formation of the placenta, growth, maturation, and physiological regression with the differentiated evaluation of the chorionic villi profile. Four main types of chorionic villi have been determined: stem villi, intermediate immature villi, intermediate mature villi, and terminal villi. At the same time, several disorders of villous maturation were detected: stagnation of villous maturation, delayed villous maturation, deficiency of intermediate villi, immaturity of peripheral villi, and premature villous maturation.

Conclusion. The villous morphological profile in the intrauterine development of the placenta is diverse as a result of the gradual differentiation of chorionic villi. Postpartum or early morphological evaluation of the placenta is a desirable study in the correct and differentiated diagnosis of the causes of an unfavorable prenatal and perinatal outcome.

19. GENE THERAPY IN SOME GENETIC DISEASES

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Introduction. Gene therapy it's a complex of methods that treats at least 10% of the approximately 9,000 genetic diseases recorded. Genetic diseases involve all dysfunctions that include deficiencies, absence or surplus of certain genetic information. Gene therapy is a complex of treatments that comes to complete the deficiency or lack of genes indispensable for the proper living of patients with an active disease. Gene therapy is a relatively young field and thus an expensive one in production, therefor today some of the drugs (for ex.: Nusinersen, Zolgensma, etc.) can reach from 325 thousand $ to 725 thousand $ a year, any target disease of gene therapy that has a huge degree of specificity and personalization. Approved treatments with a considerable degree of success are: Duchene amyotrophy (DMD), spinal muscular dystrophy (SMA), central nervous system cancer - glioblastoma; and also some therapies that need to be approved for treatment: various forms of hemophilia, Wiskott-Aldrich syndrome, diabetic retinopathy, corneal neovascularization, cancer, etc.

Aim of study. Gene therapy techniques include the direct introduction of substituents into the intercellular space in the body through viral vectors - in-vivo such as: adeno-associated, adenoviral, retroviral, lentiviral vectors, etc. as well as non-viral vectors, for example: CRISPR-Cas9, introduction of plasmids, techniques such as: exon skipping, antisense oligonucleotides, also ex-vivo techniques such as introducing of modified cells, like CAR T. Some obstacles have already been overcome, for example the immune response has been partially resolved, enough to achieve the treatment, by combining it with immunomodulatory treatment with corticosteroids. Individualized forms, such as the degree in a spinal amyodistrophy type I-IV manifestation, are already coordinated with the amount of gene 2 copy.

Methods and materials. The paper was based on a review of the literature, using textbooks and articles published in electronic sources recognized by the international medical community as: PubMed, NEJM, NCBI, GeneCards. Also, two clinical cases of two children suffering from Duchenne progressive muscular dystrophy and belt-shaped muscular dystrophy that could benefit from gene therapy in the Republic of Moldova were described.

Results. During the study it was observed that gene therapy has widely started to be used in various diseases: cardiovascular, neuromuscular, oncology, ophthalmology, etc. Disappointing that in both clinical cases, costs of treatment are too high for the patients, this remains to be the main obstacle.

Conclusion. Gene therapy has a promising future in solving incurable diseases, by proposing a new way of treatment through the involvement in genetic pathophysiology and creation of cells. This encourages medical scientists to include new diseases in research and develop new ways, more accessible to production.

20. GLYCATED ALBUMIN – A BETTER GLYCEMIC CONTROL MARKER THAN HbA1C IN PREGNANCY AND GESTATIONAL DIABETES MELLITUS

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Introduction. Since glycation of various proteins is increased in diabetes, glycated proteins can be used as glycemic control indicators. Despite being the gold standard of glycemic control, HbA1c does not precisely reflect the actual status of glycemic control in some conditions including pregnancy and gestational diabetes mellitus (GDM). In comparison, glycated albumin (GA) more accurately reflects changes in plasma glucose because it is not affected by variable haemoglobin concentrations and modified erythrocyte life span that naturally occur in pregnancy.

Aim of study. Hyperglycemia that develops during pregnancy and disappears after giving birth is now recognized as a special type of diabetes, called GDM. GDM is a common medical complication of pregnancy, and the prevalence of undiagnosed hyperglycemia and even the incidence of diabetes in young women is constantly increasing. Therefore, new glycemic control markers are being investigated in order to ensure a good quality of diabetes care before, during and after pregnancy.

Methods and materials. To achieve the proposed goal, a synthesis of the literature published from 2009 until 2021 has been made, using 11 bibliographic sources, including electronic libraries like PubMed, Medscape, Diabetes Care and Diabetologia.

Results. Normally, erythropoietin and erythrocyte production is increased during normal pregnancy, which contributes to the understanding of the increased erythropoiesis on the one hand, and reduced haemoglobin concentration on the other hand. All of those explain the reduced life span of the erythrocytes that will determine a decrease in HbA1c values. Besides, in the first trimester there is a lower pre- and postprandial blood glucose values, which also causes a decrease in the percentage of HbA1c. Instead, in the third trimester there is an increase in the postprandial blood glucose values, which determines an increase in HbA1c. These assertions suggest that, in order to ensure an optimal glycemic control, it is mandatory to use HbA1c references specific for each trimester. Compared with HbA1c, GA reflects the short-term status of glycemic control (around 2-3 weeks). Additionally, GA reflects postprandial plasma glucose more accurately than HbA1c, which is important for the evaluation of plasma glucose level at a time point closer to the time of consultation with the physician. Moreover, as it has already been mentioned, GA does not interfere with increased erythropoiesis and erythrocyte life span, the states present in pregnancy.

Conclusion. Poor glycemic control can be associated with a higher incidence of perinatal maternal-infant complications. Regardless of its major clinical importance, HbA1c is not suitable for monitoring glycemic control in pregnant women with diabetes and GDM. It has become clear that GA, another indicator of glycemic control, is not influenced by the limitations of HbA1c and therefore might be a better indicator of glycemic control in patients with GDM and pregnant women with diabetes mellitus. However, further large-population studies are necessary in order to confirm these findings.

21. HEART RATE VARIABILITY IN PEOPLE WITH PERSONALITY DISORDERS IN THE PAIN TEST

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Introduction. The main features of each personality disorder (PD) are emotional disorders. The median prevalence in the population of Borderline personality disorder (BPD) was estimated at 1.6%, but may reach 5.9%. The increased incidence of cardiovascular disease associated with psychiatric pathologies has also led to increased attention to the autonomic nervous system. BPD with an increased rate of cardiovascular mortality, and characterized by emotional instability, is ideal for studying heart rate variability (HVR).

Aim of study. The purpose of the study is to determine the autonomic changes in people with BPD by studying the HRV both at rest and in the pain test.

Methods and materials. The study involved 95 people, 19 to 60 years old, using the Personality Inventory for DSM-5 (PID-5), all subjects were divided into 2 groups: control group (n = 64) and group of people with BPD (n = 32). The experimental protocol included the recording using the BIOPAC MP-36 Data Acquisition System of the electrocardiogram in the second standard lead in 3 functional periods: Resting (R) - 5 min, Pain test (pain stimulation) (PT) - 3 min and Post-pain test period (post PT) - 5 min. The primary data processing was performed with the help of the program Kubios HRV Standard (version 3.2.0, 2019). The spectral analysis Fourier of the RR interval was applied and following parameters have been analyzed – normalized low frequency component (LFnu) and normalized high frequency component (HFnu).

Results. In subjects with BPD, higher HFnu values are observed at rest, highlighting an amplified vagal modulation of the heart rhythm, and a lower sympathetic influence on the heart rhythm. During the pain test, a decrease in the vagal activity and an increase in the sympathetic activity on the heart rate were observed in both groups. In the post-pain test period, LFnu and HFnu values in subjects with BPD were reversed compared to resting period, which indicates an increase of sympathetic influences on the heart rate and a reduction of vagal modulatory effects. The LFnu and HFnu values in these subjects did not return to the initial values in the post-pain test period as they did in the control group, but, on the contrary, an increase in the dynamics of the sympathetic influence was registered, even compared to the pain test period.

Conclusion. The results present an increased vagal modulation in subjects with BPD at rest, which is reduced during pain stimulation and does not return rapidly to the initial value after removing the pain stimulus. This could be the proof of the inertia of autonomic influences in these subjects, which is in concordance with the results of the studies in the research papers regarding HRV.

22. HEPATOPULMONARY SYNDROME.

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Introduction. Nowadays hepatopulmonary syndrome (HPS) is a common and important cause of lung disease for the patients with cirrhosis of the liver. Extrahepatic complications include changes in many systems and organs and can be considered the multiorgan dysfunction syndrome. The most common complications in hepatopulmonary syndrome are: the complications of portal, splanchnic, and systemic hemodynamics in liver cirrhosis which are related to inflammatory and fibrotic processes in the liver, as well as intestinal bacterial translocation.

Aim of study. Highlighting the pathogenesis of hepato-pulmonary syndrome. Identification of the main and also alternative causes that occur in hepato-pulmonary syndrome.

Methods and materials. This review represents an analysis of actual information about hepatopulmonary syndrome from online biomedical sources, found with the research motors PubMed, Google Scholar, etc.

Results. From the pathophysiological perspective, the characteristic feature for the hepato-pulmonary syndrome is the remarkable dilation of the precapillary and capillary vessels, in association with the increased number of intrapulmonary vessels that suffer from these dimensional changes. The appearance of intrapulmonary arterio-venous communications and the development of porto-pulmonary anastomoses explain the symptoms of hepato-pulmonary syndrome. Another change which is observed in patients with cirrhosis complicated by the hepato-pulmonary syndrome is the absence of intrapulmonary vasoconstriction in response to the stimulus represented by hypoxemia, the so-called Euler reflex. A considerable role in the pathogenesis of the development of hepato-pulmonary syndrome and porto-pulmonary hypertension is attributed to an altered balance between vasodilator (Nitric Oxide) and vasoconstrictor (Endothelin 1) intrapulmonary substances, the main tools involved being macrophages, vascular endothelium and vascular smooth muscle. Proinflammatory cytokines are thought to play a key role in its occurrence. The studies have shown that endothelin-1 and its interaction with tumour necrosis factor (TNFα) from the pulmonary vessels contribute to the development of HPS. Another source of TNFα production is caused by stimulation of the endotoxin located in the Kupffer cells in the affected liver. The ascension of the diaphragm in ascites cirrhosis and the possible presence of a pleural collection also contribute to the deterioration of the lung function.

Conclusion. Knowing the mechanisms in development of complications in liver cirrhosis is essential in choosing the vasoactive pharmacological option with specific effects on fibrogenesis and portal hypertension syndrome.

23. IMAGING OF THE THYROID NODULES

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Introduction. During the last decades, there has been mentioned a rejuvenation of the pathology of the thyroid gland, including thyroid nodules. Precancerous conditions such as thyroid adenoma, autoimmune thyroiditis (Hashimoto's disease) and toxic nodular goiter represent an increased risk of malignancy that ranges between 4.0-6.0%. In our country, the number of primary thyroid cancer increases annually up to 3% per 100 000 population, women being affected 10 times more often than men. The maximum vulnerability is registered at the age between 34-45 years, but recently there has also been observed an increase of the incidence of tumors in children. In the last two decades WHO reports a doubling of thyroid cancer, with a mortality up to 1% of all deaths caused by cancer.

Aim of study. The goal of our research was to establish the topography and morphological aspects of the thyroid nodules, and the correlation between clinical parameters and nodule malignancy.

Methods and materials. The study was carried out on 140 patients of both genders, aged between 1 and 74 years that have been diagnosed with primary thyroid nodules at the Republican Diagnostic Center. Out of the total number 89 patients were examined by ultrasound method (15 male/74 female), and 51 of them (8 male/43 female) by scintigraphy.

Results. The ultrasound examination revealed 41 cases of thyroid nodules, among which 9 males and 32 females. Out of 41 patients with thyroid nodules 14 were diagnosed with multiple bilateral nodules; in 4 cases colloidal cysts were revealed; in 3 cases diffuse changes characteristic for autoimmune disturbances have been marked out, and in 20 cases a single unilateral nodule was identified. The scintigraphy scan pointed out in 26 patients, nonfunctioning or ”cold” nodules and in 8 cases ”hot” nodules were established. In 7 patients diffuse toxic goiter was established; in 2 patients acute or subacute thyroiditis was diagnosed; in other 2 cases abnormal sublingual thyroid gland was present; and 3 patients were diagnosed with hypertrophy of the thyroid gland.

Conclusion. The incidence of thyroid nodules prevailed in females. In 48.8% of cases a single unilateral nodule was established and in 34.1% of cases multiple bilateral nodules were revealed. The ”cold” nodules prevailed compared to ”hot” nodules with a ratio 3.07:1.

24. INDIVIDUAL FEATURES OF THE INNERVATION OF THE ROUND LIGAMENT OF THE UTERUS AND EXTERNAL GENITALIA

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Co-author: Olga Belic

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Introduction. At any age the female reproductive system is prone to many diseases. Every year 371.2 thousand patients with cervical cancer are registered in the world. In Moldova 180-210 women die every year from cervical cancer, most of them are diagnosed at stage III-IV. Uterine fibroid is diagnosed in 30-35% of women of reproductive age worldwide. Approximately for 70% of women this pathology requires surgical intervention. Knowledge of the anatomical variants of the structure of the genital organs vessels and nerves will improve the results of surgical intervention.

Case presentation. Individual variants of the genitofemoral nerve on the corpse of a woman were studied, using the macroscopic method of preparation. There are 1-3 branches which depart from the femoral-genital nerve to the round ligament of the uterus in the inguinal canal. In most cases, the nerve with its branches is located behind the round ligament. When exiting through the superficial inguinal ring, the nerve branches in the skin of the labia majora. In our case, up to 6 branches from the sympathetic trunk connected with the genitofemoral nerve on the right. Reaching the inguinal canal, the genitofemoral nerve connected with the iliac-inguinal nerve to form a rich plexus. Both nerves in the inguinal canal had a tortuous trajectory and exchanged communicating nerve branches. The nerves exited the inguinal canal in one trunk, which then split into two branches located in front of the round ligament and ended in the labia majora. On the left side, 6 branches from the common iliac perivascular plexus joined the genitofemoral nerve, before entering the inguinal canal. In the inguinal canal, the genitofemoral nerve was located in front of the round ligament, giving off branches to it, and ran parallel to the ilioinguinal nerve. From the superficial ring of the inguinal canal, each nerve exited independently and was directed to the innervation of the labia majora.

Discussion. The uterus and its ligamentous apparatus are innervated by the nerves of the autonomic nervous system and the lumbar plexus (S. D. Astrinsky). According to Anloague P.A., in almost 50% of cases of examination of cadaveric material, the genitofemoral nerve is represented by various anatomical variants: 20% of the nerves branch prematurely in the upper part (and not in the middle part) of the anterior surface of the psoas major muscle. Sometimes the genital and femoral branches do not merge into a common trunk and remain separate nerves as they pass into the pelvis.

Conclusion. Knowledge of the individual features of the structure and innervation of the organs of the female genital area will improve the indicators of diagnosis and surgical treatment of women.

25. INDIVIDUAL FEATURES OF TOPOGRAPHY AND STRUCTURE OF THE ILIOINGUINAL AND GENITOFEMORAL NERVES

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Introduction. The lumbar plexus includes the ilioinguinal and genitofemoral nerves. Knowledge of the individual topography features and structure of these nerves is necessary in regional anesthesiology to perform successful blockades, in neurology to establish the correct diagnosis, and in neurosurgery for effective surgical interventions.

Case presentation. The preparation method was used to study the structure and individual variants of the topography of the ilioinguinal and genitofemoral nerves on the corpse of a man. The ilioinguinal nerve had an unusual origin and course. On the left side, the nerve went out to the anterior surface of the psoas major muscle, piercing its more lateral to the exit point of the genitofemoral nerve, at the level of the aortic bifurcation. Descending, it entered the inguinal canal, accompanied by the testicular artery trunk. The left venous vessel emerged from the deep ring and rose upwards, flowing into the renal vein. On the right side, the ilioinguinal nerve appeared between the trunk of the inferior vena cava and the aorta. The nerve broke up into small bundles, which reconnected in its lower part to form the nerve trunk. The ilioinguinal nerve went down, crossing the right testicular vein and descending along the anterior surface of the inferior vena cava, and entered the deep ring of the inguinal canal. The right testicular vein emerged from the inguinal canal, flowing into the inferior vena cava, at the level of the ilioinguinal nerve appearance. The genitofemoral nerve descended laterally down the anterior surface of the psoas major muscle, splitting into the genital and femoral branches. The genital branch entered the deep ring of the inguinal canal. In the inguinal canal the genital branch of the genitofemoral nerve and the ilioinguinal nerve were located behind the spermatic cord, innervating the formations of the inguinal canal.

Discussion. According to various authors, nerves may have an unusual onset and course, and in some cases be absent entirely. P Bachul et al. indicated the absence of the left ilioinguinal nerve. The genital branch of the left genitofemoral nerve appeared higher than usual and supplied the groin region that is normally innervated by the ilioinguinal nerve. Robert Haładaj et al. described the absence of the genital branch of the right genitofemoral nerve of the corpse of a man and its replacement by branches of the right lateral cutaneous nerve. The femoral branch at the same time retains the classical course. The author also noted cases of absence of branches of the lateral cutaneous nerve and their replacement by the genital branch of the genitofemoral nerve.

Conclusion. The topography and structure of the lumbar plexus branches are variable. They may depend on gender and individual body size. This is important to consider in order to prevent complications during surgical interventions in this area.

26. ISCHEMIA MODIFIED ALBUMIN – A CURRENT MARKER OF MYOCARDIAL ISCHEMIA IN ACUTE CORONARY SYNDROME

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Introduction. Ischemic heart disease remains the leading cause of mortality worldwide. One of the clinical manifestations of ischemic heart disease is the acute coronary syndrome (ACS). It is caused by the atherosclerotic plaque rupture or endothelial erosion associated with coronary thrombosis, leading to ischemia, myocardial necrosis (AMI), and a possible risk of sudden cardiac death. Ischemia modified albumin (IMA) is proposed to be used to identify myocyte ischemia in early stages.

Aim of study. To elucidate the role of IMA as a marker of oxidative stress-induced myocardial ischemia and to evaluate the relationship between serum cardiac troponin T (cTnT) levels and IMA in ACS patients.

Methods and materials. Critical analyses of scientific publications data (2006-2019) from PubMed, Medline, Medscape, Hinari databases.

Results. Ischemia modified albumin (IMA) is a relatively new marker for the evaluation of patients with ACS who present to the emergency department with clinical chest pain, but normal ECG and cardiac troponin levels. IMA is produced during myocardial ischemia, due to structural changes at the N-terminal end of serum albumin, resulting in decreased ability to bind Co2+ and Ni2+. Serum IMA levels rise within 6-10 minutes of the onset of ischemia, peaking at 6 hours and return to baseline values within 12-24 hours. Plasma IMA content changes faster than cTnT and cTnI, CK-MB, ANP, and BNP, thus providing higher sensitivity and a greater negative predictive value for the diagnosis of ACS, but lower specificity and positive predictive value compared to the above-mentioned markers. There is a significant relationship between cTnT and IMA, suggesting that both markers might be useful for the detection of myocardial damage in patients with suspected ACS. If cTnT reflects myocardial necrosis, then IMA is thought to be a marker of cardiac ischemia and/or reperfusion injury. The ability to detect ischemia before myocyte necrosis will improve the early management of suspected patients.

Conclusion. Cardiac ischemia causes modifications of serum levels of IMA. The data findings suggest the utility of IMA as a contemporary biomarker of myocardial ischemia induced by oxidative stress. IMA might be used with cTnT and ECG to triage patients presenting to the emergency department with ACS symptoms.

27. MALIGNANT MELANOCYTIC SKIN LESIONS FROM THE PATHOLOGIST'S PERSPECTIVE

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Introduction. Melanoma (MM) represents a malignancy originating from melanocytes. The current WHO classification recognizes four major clinical and pathological melanoma subtypes arising in the skin: lentigo maligna melanoma, superficial spreading melanoma, acral lentiginous melanoma and nodular melanoma.

Aim of study. The present paper reveals the main types of cutaneous melanoma with the highlighting of all the parameters required by the new WHO classifications, 4th edition, 2018 and AJCC 8th edition, 2017 in the histopathological bulletins.

Methods and materials. The studied material was taken from the department of pathology of the Institute of Oncology and Timofei Mosneaga Clinical Republican Hospital. The macroscopic examination was performed and all the cases that presented macroscopic modifications underwent histopathological examination and immunohistochemical analysis. The positive and differential diagnosis was based on the usual immunohistochemical reactions for melanoma: S-100, HMB45, Melan A, MART1, SOX-10, P16 and Ki-67.

Results. In most of the cases the diagnosis of melanoma was established by using the routine hematoxylin and eosin staining and only in about 10% of cases we used immunohistochemical and molecular genetic tests.

Conclusion. The characteristic morphological features, supported by immunohistochemistry are important in making the correct diagnoses.

28. MANDIBULAR CANAL - ANATOMO – MORPHOMETRIC AND CLINICAL PECULIARITIES

Author: Margareta Melnic

Scientific adviser: Ilia Catereniuc, Associate Professor, Head of Department of Anatomy and Clinical Anatomy, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The initiation of this study was determined by the wide range of morphometric variability, position and location of anatomical elements (channels, orifices, etc.) which, in many cases, they are unsuitable with the topography, during the surgeries not being in accordance with the described norm in the specialized bibliographic sources.

Aim of study. The aim of the study is to evaluate and establish the anatomo-morphometric peculiarities and the individual anatomical variability of the mandibular canal, including the mental orifice, based on the analysis of bibliographic data and materials of own investigations.

Methods and materials. Through bibliographic data analysis from the literature, scientific publications on mandible structure, mandibular canal variants and anomalies. A retrospective study was performed, which included 55 radiological images (orthopantogram), of adolescents and adults of different age groups (males - 23 and females - 32), with their average age, respectively, men - 45.47 years, women - 44.71 years. As a research method, it served comparative analysis of the topography and trajectory variants of the mandibular canal on orthopantomographs.

Results. Morphometric parameters were evaluated bilateral (right / left) distance from the mandibular canal to the upper edge of the alveolar apophysis of the mandible (alveolar ridge) at the incisor-canine level, at the premolar-molar level and at the retromolar level (growth area), as well as the trajectory of the mandibular canal depending on gender. As a result of the evaluation, it was established that in females the greatest distance from the mandibular canal to the upper edge of the alveolar process of the mandible.

Conclusion. Three variants of the mandibular canal trajectory were established: for females - semi-arched - in 59.3%, curved - in 21.9% and in the cross - in 18.8%, and for males, respectively, 56.5%, 26.1% and 17.4%. The topography of the mandibular canal is variable, it requires special attention in performing surgical procedures, such as the implant with the mandible involvement.

29. MICROBIOLOGY AND THE ROLE OF STREPTOCOCCI IN DEVELOPING BACTERIAL ENDOCARDITIS

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Introduction: Streptococcal infection is currently a major cause of morbidity and mortality amongst the world. This calls for a comprehensive study of the underlying factors predisposing to streptococcal infection as well as early diagnosis, as studies show that most cases of bacterial endocarditis are diagnosed after the onset of infection.

Background: In this study our aim was to explore the matter of Description of the microorganism-host interaction process with emphasis on the main compounds involved in its occurrence. This study provides knowledge of the distribution of various groups and species of streptococci that cause infectious endocarditis (IE). With better classification of streptococci causing IE, future studies could examine differences in complications and outcomes associated with different streptococci.

Methods and materials. The present work studied 46 materials and literature sources from the Medscape, PubMed, Scopus, and Google Scholar databases in terms of clinical manifestations, symptoms and syndromes of the role of streptococci in developing bacterial endocarditis (2010-2022). Most of the used literature sources refer to the last years of publication (2016-2022).

Results. According to obtained outcomes the ethiological distribution of streptococcus endocarditis are following: viridans group streptococci accounted for 76% of all streptococcal IE, pyogenic streptococci were the causative pathogens in 17% of streptococcal IE, other streptococci were the causative pathogen in 6% of streptococcal IE.

Conclusion. According to this study there was determined that streptococci especially those from the viridans group are the most common in the infectious endocarditis.

30. MODIFICATION IN STRUCTURE AND FUNCTION OF CILIA IN EPITHELIAL CILIATED CELLS IN PATIENTS WITH HYDROSALPINX

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Introduction. The pathologies of the fallopian tubes remain to this day one of the major problems of modern reproduction as they can lead to infertility. Hydrosalpinx is among these pathologies and it is characterised by the dilation and filling with fluid of one or both of the fallopian tubes. As a result, the structure and functions of the cilia of the fallopian epithelium change, resulting in infertility.

Aim of study. To study the changes of the structure and function of the cilia in case of hydrosalpinx.

Methods and materials. Several scientific articles were selected by keywords: hydrosalpinx, cilia, axoneme.

Results. The study of the ultrastructure of the cilia of the tubal epithelium in patients with a normal reproductive function revealed a regular structure of the cilia axoneme, described by the formula (9x2) +2. It consisted of 9 doublets of microtubules, and a centrally located pair of microtubules. The central pair was surrounded by a central sheath from which the radial spokes extend to the peripheral doublets. These doublets were connected to each other by nexine bridges. Microtubule A was connected to microtubule B of the neighbouring doublet by dynein, which has ATPase activity. On the outside, each lash was covered with plasmalemma which normally has a flat surface. A detailed study of the cilia of the tubal epithelium of all patients with hydrosalpinx revealed abnormalities in their structure, in addition to the decrease in their total number. In most of the cases, the cilia plasmalemma was uneven, which seems to have been the reason for their adhesion and fusion into conglomerates. There were cilia with disturbed axoneme architecture in virtually all the specimens. In some cilia, the central doublets of the axoneme were replaced by a single microtubule, and some lacked dynein bonds. In many cilia, the disorganisation of the nexine bridges and radial spokes has been highlighted, which considerably reduced their motor potential. The changes in the structure of the cilia are secondary and are the result of a long-lasting chronic inflammatory process in the endosalpinx, which resulted in the development of fibrosis in the submucosal layer and local blood vessels walls, which in turn inevitably led to epithelial cell degeneration and to disrupted processes of ciliogenesis.

Conclusion. The changes of the ultrastructure of cilia in hydrosalpinx were found related to the disorder of axoneme architecture and their function, resulting in infertility, but these data require further studies in both hydrosalpinx and other fallopian tube pathologies.

31. MOLECULAR AND CELLULAR BIOMARKERS OF EPILEPSY

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Introduction. From over 50 million people that suffer from epilepsy, more than 30% stay uncontrolled, despite the availability of a large diversity of antiepileptic drugs. Epilepsy pathogenesis is still not clearly understood even though many studies have proved an evident relation to apoptosis, glial regeneration, inflammatory reactions, genetic molecularity and most recently a new discovery showed that oxidative stress has a major role in the pathogenesis of epilepsy. Taking all the studies into consideration there is still no sure way to prevent epilepsy from happening, that is why an existence of sensible markers may help in providing a better approach to patients' diagnosis, management and prognosis. Relevant and specific biomarkers would determine the effectiveness of treatment, stages the disease, monitoring and most importantly will reassure the development of promising antiepileptic medications.

Aim of study. This review has the intention to present the diversity of molecular and cellular biomarkers of epilepsy available at this moment.

Methods and materials. For the study were analyzed available online medical platforms such as PubMed Databases and other scientific libraries. Were selected and analyzed 30 articles including case studies and reviews, published in the last 15 years.

Results. The mechanisms of epilepsy linked with biomarkers suffer from a lack of reliable information and studies that will underline the diversity of epilepsy causes, such as genetic, cell loss and synaptic plasticity, malformations of cortical development, and autoimmune disorders, etc. Some biomarkers showed their strong yet not completely understood and unspecific relation to epileptogenesis: HMGB1 isoforms, oxidative stress markers are used also due to the fact that oxidative stress and metabolic malfunction are stimulated by epileptogenic injuries. Tissue, plasma, and urine 8-hydroxy-2-deoxyguanosine and F2-isoprostanes are additionally plasma biomarkers of metabolic perturbation. miRNAs showed its association with the many pathological processes involved in epilepsy; neuronal cell apoptosis, glial regeneration and inflammatory reactions and that due to its unique properties of profile expression changes which might be used as another marker. All these markers are still not one hundred percent and are constantly studied.

Conclusion. The uncertainty of epilepsy pathogenesis and lack of sensible relevant markers make the diagnosis and incidence of the disorder to be uncontrolled, more studies should and will be done to try to get the needed information from the source of the problem all up to the epileptic episode. Biomarker is the aim and main goal to make it easier to treat and to monitor epileptic suspects, an offer mentioned is that a predictive power will most likely require a combination of all the possible discovered markers at different post injury time points to get the one with the highest sensitivity and specificity.

32. NANOMEDICINE AS THE FUTURE OF MEDICINE

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Introduction. Every day we face health problems, especially with chronic diseases and their damage to people and the health system. That's why it is important and necessary to find a solution for them and nanomedicine can be this solution.

Aim of study. The objective of this research is to evaluate the role of nanomedicine in our health system and how nanoparticles work at different levels of our bodies.

Methods and materials. Were analysed PubMed articles published from 2012 to 2022, on the subject of nanomedicine and nanoparticles used in medicine. It is obvious that their number increases every year.

Results. The result of the study confirm that nanomedicine presents revolutionary opportunities in different types of cancer (recent progress in physics, chemistry and science of materials have provided nanomaterials that are expected to improve the treatment of many tumors resistant to current therapies), neurodegenerative and cardiovascular diseases, infections and other pathologies, with the help of miniature devices and nanoparticles. Nanotechnology is used as a tool to explore the darkest paths of medicine through imaging, targeted medication, delivery of gene systems and implants. The countries with the highest percentages of articles about nanomedicine were Europe (36%) and the United States (39%). In the rapidly growing nanomedicine market, an increasing number of items whose therapeutic efficacy has been enhanced by their nanoscale dimensions are already accessible. Furthermore, hundreds of nano based products are in various phases of preclinical and clinical research. The United States Food and Drug Administration has authorized over 20 nanomedicine products in the last 22 years. Despite the large number of papers and studies on nanoformulation of drugs, only a limited number of such nanosystems have advanced to market-related assessment, and an even smaller number have achieved final approval. According to some statistics, less than 10% of scientific findings get translated into clinical applications.

Conclusion. Nanomedicine offers us the capacity to prevent diseases, to find an early diagnosis and to treat pathologies at the molecular level. So, nanomedicine may change the current methods of diagnosis, treatment and will lead to new solutions and directions in research.

33. NEONATAL BRAIN ABSCESS

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Introduction. Brain abscess is a focal area of necrosis with a surrounding membrane within the brain parenchyma, that begins as a localised area of cerebritis and develops into a collection of pus surrounded by a well-vascularized capsule. It results from an infectious process or, rarely from a traumatic process. It can originate from infections in head and neck sites (such as mastoiditis or sinus infection). Various conditions can cause hematogenous seeding of the brain and the most common ones include pulmonary infections, such as lung abscess, pneumonia and pulmonary arteriovenous malformations. Cyanotic congenital heart diseases in children are associated in most of the cases. Brain abscesses associated with bacteremia commonly cause multiple abscesses, mostly in the distribution of the middle cerebral artery and usually at the grey-white matter junction. The most frequent microbial pathogens isolated from brain abscesses are Staphylococcus aureus and Viridian streptococci. Brain abscess in newborns is a very rare disease. It can lead to elevated intracranial pressure and has significant morbidity and mortality.

Case presentation. We will present the case of a 33-day-old male neonate with a complaint of fever for 9 days and multiple episodes of multifocal seizures for 6 days. He was born full term by caesarean section with a birth weight of 2.7 kg and cried immediately after birth. There was no history of maternal fever, rashes, vaginal discharge, or bleeding during the antenatal period. The infant was diagnosed with hypospadias and sent for examination by a paediatric surgeon. Examination of other systems revealed tachypnea, a-normal vesicular breath sounds in upper respiratory tract, tachyarrhythmia causing racing heart rate with systolic murmur at left sternal border. The rest of the systemic examination was normal. Magnetic resonance imaging (MRI) was subsequently performed and revealed a large well-encapsulated cystic formation with rupture into the left ventricle (brain abscess) and intracranial haemorrhage. Chest CT reveals Pneumonia Totalis Sinistra. Laboratory investigations showed a positive sepsis screen, anaemia and hypoproteinemia. After that, an emergency operation was undertaken. The infant was intubated and an aspiration was undertaken through a left frontal burr hole under local anaesthesia and about 300 ml of thin yellow pus was evacuated slowly. A left temporal craniotomy was undertaken for evacuation of the hematoma. After finishing the operation the baby was admitted to the Neonatal Intensive Care Unit. An improvement in general condition was observed, following which, the neonate started feeding well and was subsequently discharged after 3 weeks of therapy.

Discussion. Brain abscess is a rare condition in neonates and infants. Only a few large cases have been published. Some clinical presentations of brain abscess in the neonatal period require surgical intervention. This case was characterised by rupture into the left ventricle and intracranial haemorrhage as mentioned. The presence and persistence of the hematoma required not only neurosurgical drainage but also a left temporal craniotomy for evacuation. This atypical and exclusive presentation has not been reported in previous studies.

Conclusion. To conclude, the therapeutic management of neonatal brain abscess requires a multidisciplinary approach involving paediatric neurosurgeons, anesthesiologists, and radiologists. Neurosurgical drainage performed early by experienced hands seems to be the most effective approach in these high-risk paediatric patients.

34. NEW APPROACHES OF THE BIOCHEMICAL MECHANISMS OF INSULIN RESISTANCE

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Introduction. Insulin resistance (IR) is a complex metabolic syndrome that leads to diabetes mellitus type 2 (DM2) in about 90% of cases. There are various biochemical mechanisms behind IR, the majority being the interruption of signaling pathways such as insulin receptor substrate 1 and 2 (IRS 1 and IRS2) or serine/threonine protein kinase (AKT), leading to the blockage of the main proteins. The disruption of the insulin signaling pathway is the common cause of IR, especially with the decrease of the protein glucose transporter 4 (GLUT-4) that leads to a decrease in the insulin mediated glucose import to cells.

Aim of study. Aim of the study is to elucidate and describe the biochemical mechanisms of insulin resistance (IR) underlying the development of effective treatment for type 2 diabetes

Methods and materials. To achieve the proposed goal, a bibliographic search was performed using the following platforms: Medscape, PubMed, and American Physiological Society Journal. Articles that were published between 2010 and 2020 were selected.

Results. One of the main factors leading to IR is hyperlipidemia, which is present in obesity. Hyperlipidemia leads to the excessive formation of secondary mediators, such as diacylglycerol (DAG) and ceramides that disrupt the insulin signaling pathway in the cell. DAG activates protein kinase C theta (PKCθ), which, in the muscle, inhibits IRS 1 and IRS 2, and, in the liver, activates protein kinase C epsilon (PKCε). Ceramides, in turn, will block serine/threonine protein kinase (Akt) by altering its binding to protein kinase C zeta (PKCζ). Obesity creates a chronic low-intensity inflammation in the adipose tissue with the synthesis of proinflammatory cytokines, such as tumor necrosis factor α (TNF-α), interleukins 6, 18 and 1 β. These proinflammatory cytokines will cause systemic IR by activating inhibitory kinase of nuclear factor κ-B (IKK) and c-jun 1-terminal kinase (JNK), which will block IRS1 and IRS2 substrates. Smoking has also been shown to contribute to the development of IR. This occurs because the nicotine inside cigarettes binds with the nicotinic receptor α1 and with acetylcholine (NAchR), activating it. Once activated, NAchR increases the mammalian target of rapamycin (mTOR) with increased IRS-1 Ser636 phosphorylation and reduced insulin-stimulated glucose uptake.

Conclusion. IR is mostly caused by factors such as obesity, overnutrition, chronic inflammation and smoking. These factors lead to the interruption of the insulin signaling pathway at the level of the Akt kinase and the insulin receptor substrates IRS1 and IRS2, so these are the best places of action for newly developed medications.

35. NEW STRATEGIES IN THE DEVELOPMENT OF ANTIPLATELET DRUGS

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Introduction. Antiplatelet medication plays an essential role in prevention and healing of thrombotic affections such as myocardial infarction or cerebrovascular accident. Despite the shown efficiency in the prevention of ischemic events, bleeding issues, thrombocytopenia, and recurrent thrombotic events serve as an impulse for the elaboration of new medicine that will remove thrombotic risks without effects on hemostasis. Platelet adhesive receptors, coagulation process phases and thrombin receptors represent the main targets in the elaboration of new antiplatelet medicine.

Aim of study. The goal is to identify the progress of new antiplatelet medicine development in scientific literature.

Methods and materials. This workpaper is realized on the analytical basis of the articles published between 2018-2022 on PubMed and Google Scholar. The most relevant articles were selected with the help of key word antiplatelet and the generic name of medicines.

Results. In current therapy are more commonly used cyclooxygenase inhibitors (acetylsalicylic acid, triflusal), P2Y12 purinergic receptors antagonists (clopidogrel, prasugrel, ticagrelor, cangrelor, regrelor, elinogrel), GPIIb/IIIa receptor antagonists (abciximab, eptifibatide, tirofiban, xemilofiban, orbofiban, sibrafiban, etc.) and PAR-1 antagonists (voraxapar, atopaxar). The new antiplatelet drugs are in preclinical and clinical trials, targeting the following platelet receptors and pathways: receptors P2Y12 (selatogrel, AZD1283, SAR21647) and P2Y1 (BMS-884775), phosphoinositide 3-kinase (AZD6482, TGX-221, idelalisib), protein disulfide-isomerase (isoquercetin, ML359), GPIIb/IIIa receptor (elarofiban, RUC-1, RUC-4), protease-activated receptor 4 (BMS-986120), GPVI (revacept, losartan, scFv9012, Troa6 și Troa10), GPIb-IX-V (caplacizumab, antifibatide), 12-lipoxygenase (ML355), P-selectin (rPSGL-Ig, PSI-697, PSI-421), CD40 (anti-CD40, Ab), prostacyclin analogs (iloprost, treprostinil, beraprost), phosphodiesterase 3 (dipiridamol, cilostazol, anagrelide, milrinone), glucagon like peptide 1 receptor (exenatide), thromboxane–prostaglandin receptor (ramatroban, ridogrel, seratrodast, terutroban), serotonin 5-HT2A receptor (APD791), prostanoid EP3 receptor, nitric oxide donors.

Conclusion. The studies on mechanism of platelet blood clots formation have developed new antiplatelet therapies that would reduce side effects and would offer new perspectives on adapting the antiplatelet therapy on patient´s pathophysiology. For the realization of this goal, new studies are needed that should evaluate the therapeutic efficiency and the ability of new medications to prevent recurrent thrombotic events.

36. PATHOGENY OF DYSMETABOLISM IN GRAVES DISEASE

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Introduction. Thyroid dysfunction, especially Graves' disease, has a major impact on different levels of the components of the metabolic syndrome: hyperglycaemia, insulin resistance, high blood pressure and dyslipidemia. Also, a large number of pathophysiological manifestations remain to be discussed.

Aim of study. To summarize the available information on the action of excess thyroid hormones in the human body and to find convincing evidence to illustrate their major impact on the evolution of specific dysmetabolism.

Methods and materials. The study was realized on the basis of various researches and scientific materials (articles in journals, monographies and articles on the Internet, etc.) that refer to the description and observation of Graves' disease and metabolic syndrome.

Results. Multiple pathophysiological syndromes with specific clinical manifestations can be highlighted in Graves' disease. Inadequate hypersecretion of thyroid hormones triggers cold stress at ambient comfort temperatures, leading to thyroid hyperthermia syndrome: increased myogenic (muscle tremor), metabolic (increased basal metabolism) and functional (stimulating organ function) thermogenesis. In addition to these manifestations, Graves' disease has an important role in the appearance and development of the components of the metabolic syndrome, these being: hyperglycemia, elevated levels of low-density lipoprotein cholesterol, triglycerides and hypertension. The general effect of thyroid hormones is hypermetabolism - the paradoxical simultaneous activation of anabolism and catabolism of nutrients, resulting in increased nutrient turnover.

Conclusion. This study reports the pathophysiological manifestations in Graves' disease. We notice that in hyperthyroidism there are numerous disorders of carbohydrate, lipid, protein, energy metabolism; the components of the metabolic syndrome develop, a series of clinical syndromes with very pronounced symptoms are installed, which require special attention.

37. PHARMACOECONOMIC ANALYSIS OF ANTIBIOTIC THERAPY IN THE CURATIVE INSTITUTION

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Introduction. The rational use of drugs is one of the most important objectives of the health system because the financial resources for the purchase of preparations are constantly increasing at national and institutional level.This activity becomes very actual in the conditions in which the administration of the curative institution is forced to find methods of financial resources' rational use to ensure an efficient and harmless pharmacotherapy.The use of antimicrobial preparations in the curative institution, according to the number and volume of financial resources, is an indispensable component of the analysis of the pharmaceutical market and of the control programs after infections and prophylaxis of the development of resistance of microorganisms..

Aim of study. Optimal antimicrobial therapy will facilitate a reduction in the cost of treatment for the patient as well as the degree of antibiotic resistance

Methods and materials. In order to achieve this goal, the analysis of the acquisition of antibacterial preparations in PMI MCH Gheorghe Paladi- public medical institution+municipal clinical hospital, up to till pandemic, was performed, using the ABC / VEN analysis. The results of ABC / VEN can allow the assessment of the effectiveness of the implementation of national or institutional drug insurance programs in terms of clinical pharmacology and rational pharmacotherapy.

Results. 1,235,000 lei were spent on purchasing synthetic antibiotics and chemotherapeutics. Following the ABC analysis, it was concluded that: In class A were included 6 preparations for which 78.3% were allocated, for class B another 8 medicines for which 15% were invested, for class C another 23 preparations - 6.7% of the financial resources.

Conclusion. Analysis of the current evolution of infectious diseases, including the SARS CoV-2 pandemic and alarming global resistance demonstrates the need for developing effective infection control strategies. Based on the results of the study, we can conclude that the financial resources, released for the purchase of antibacterial preparations, were correctly distributed according to the requirements of the clinic.

38. RESPIRATORY AND CARDIOVASCULAR PARAMETERS DURING HYPERVENTILATION TESTED AT PATIENTS WITH AFFECTIVE DISORDERS

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Introduction. yperventilation is an important pathogenic factor in anxiety disorders as well as in affective disorder. It seems to provide symptoms by its metabolic and anxiogenic effects."

Aim of study. The purpose of the study is to determine the relationship among respiratory, heart rate variability and psychological traits in healthy subject and affective disorder patients.

Methods and materials. Respiratory and electrocardiographic characteristics were evaluated during voluntary hyperventilation test in 13 healthy subjects and 10 patients with affective disorders following the protocols: spontaneous breathing (Rest) -5 min followed by a voluntary hyperventilation at 20/min HV-3 min. Hyperventilation was performed at the controlled level of hypocapnia: end tidal CO2 (FETCO2) was maintained at 1 % below the individual spontaneous level. Respiratory plethysmograph Visuresp was used to record respiratory movements, Capnostream - to record PCO2 and PCO2 of exhaled air, ECG module - to record electrocardiographic trace. PID-5 and Nijmegen inventories were used to evaluate psychological traits.

Results. The breath by breath analysis of respiration and R-R intervals of rest and hyperventilation periods were performed. At each breath, the tidal volume (VT), the breath (TTOT), the inspiratory (TI) and expiratory durations, the minute ventilation, VT/TI, TI/TTOT were quantified. The spectral analysis of the R-R intervals was applied to evaluate the heart rate variability characteristics –the normalized powers of high (HF) and low frequencies (LF) and LF/HF ratio. The multifactorial statistical analysis was performed to evaluate the importance of different psychological traits, respiratory and heart variability characteristics. A few significant correlations between psychological traits, respiratory and cardiovascular were found in healthy subjects. More correlations were found in the patients group during the rest period. Voluntary hyperventilation increased the number of significant correlations in the patient's group. One of the 7 facets which is included in PDB is anxiousness, and probably this explains the changes of the breathing pattern caused by influences of anxiogenic structures on the brain stem respiratory center.

Conclusion. The high activity of anxiogenic structure in affective disorder patients provides respiratory and heart rate variability changes. Hypocapnia and respiratory alkalosis produced by voluntary hyperventilation seem to increase the activity of anxiogenic structures and provide more psychophysiological effects in affective disorder patients in contrast with the healthy subjects.

39. ROLE OF ADIPOKINES IN CARDIOVASCULAR DISEASES

Author: Ostap Felicia

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Introduction. Obesity is considered to be a risk factor for cardiovascular diseases, the leading cause of death globally. The discovery of the fact that adipose tissue has an endocrine function secreting a series of biologically active factors called adipokines offers a better understanding of this correlation. Adipokines are involved in regulation of processes such as energy expenditure, appetite, insulin sensitivity, inflammation, endothelial function, etc.

Aim of study. The aim of this paper is to describe the implications of adipokines in the pathogenesis of cardiovascular diseases.

Methods and materials. A literature review including 100 articles published in Pubmed database between 2015 and 2021 was carried out using the key words: „adipokines", „cardiovascular diseases".

Results. Obesity is associated with several morphological modifications of adipose tissue. Its expansion is performed through two main mechanisms: adipocyte hyperplasia (differentiation of preadipocytes) and hypertrophy (increase in cell dimensions). Increased adipocyte size is associated with a shift towards an increase in the secretion of proinflammatory adipokines such as TNF-α, IL-6, IL-8, monocyte chemoattractant protein-1 and leptin, promoting the low-grade chronic inflammation associated with obesity. Leptin functions as an anorexigenic hormone by binding to its receptor located in the arcuate nucleus of the hypothalamus. However, obesity is associated with resistance to the central effects of leptin. In the immune system, it up-regulates the release of proinflammatory cytokines and stimulates the differentiation of monocytes into macrophages. Also, leptin has sympathoexcitatory effects leading to an increase in blood pressure. Some studies revealed that plasma leptin levels are positively correlated with cardiac hypertrophy. Adipose tissue mass is inversely associated with adiponectin secretion. This adipokine has pleiotropic actions with anti-inflammatory and insulin sensitizing properties. The main targets for its beneficial effects include the heart, blood vessels and pancreatic β-cells. Adiponectin represents one of the candidates for the perivascular adipose tissue derived relaxing factor due to its ability to stimulate eNOS in an AMPK-dependent manner, while hypoadiponectinemia is associated with endothelial dysfunction.

Conclusion. Obesity is associated with the decreased level of the atheroprotective adipokine adiponectin, and an increase in proinflammatory mediators. Adipokines underlie the correlation between obesity and cardiovascular diseases and might thus become useful markers of cardiometabolic disorders.

40. SLEEP DISORDERS AND ACADEMIC PERFORMANCES OF MEDICAL STUDENTS

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Introduction. Sleep medicine is a field that has grown exponentially over the last 25 years. The interest arose both around doctors and the general population. This was due to the impact of sleep on human functions and subsequent long-term health. Sleep disorders of medical students have become a worrying problem, as they increase the risk of comorbidities, affecting the human psyche and physique not only during the university period, but also can have an impact on the future medical career.

Aim of study. The aim of this study is to research and analyze sleep disorders that appear among medical students and to evaluate their influence on academic success.

Methods and materials. Google scholar, Hinari, PubMed

Results. The results of the study confirm that students face stress factors such as overwork during lessons, long class hours and concerns about academic performance. Traditionally, medical students deal with mental and physical overload, such as dissections of human corpses and serious illnesses of patients. When associated with stress, management difficulties may arise and may lead to the onset of burnout and sleep disorders in the life of medical students. Moreover, burnout and sleep disturbances can influence each other, triggering negative feedback. The burnout student is generally defined by three characteristics: a high level of emotional exhaustion, high cynicism and low academic effectiveness. They can promote sleep disorders such as insomnia and daytime sleepiness, which in turn aggravate burnout and academic performance.

Conclusion. According to the results, medical students should review the factors predisposing to sleep disorders, recognize the first symptoms and carry out the primary management by the student or the secondary one by the specialist in sleep. Sleep can lead to or is associated with different psychosomatic or somatopsychological pathologies, in fact every doctor should be properly trained in this field. The diagnosis and preventive treatment of sleep disorders requires the involvement of the patient, doctor, family and society.

41. STRESS-INDUCED HAIR GRAYING: FACT OR FICTION?

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Introduction. Hair colour is determined by a special group of cells called melanocytes, which produce the melanin. Hair melanocytes, in contrast to epidermal ones, undergo apoptosis at the end of each follicular cycle. New cells arise from melanocyte stem cells that are located within the hair follicle. Stem cells number slowly decreases with age, and the new grown hair has less pigment. Hair graying is a complex process associated with both genetic and environmental factors. The persuasion that acute stress could hasten hair graying is a common belief that needs scientific provement.

Aim of study. The purpose of this study is to establish the relationship between acute stress and the morphological and pathophysiological changes in the hair follicle melanocytes.

Methods and materials. This review represents a synthesis of literature and meta-analysis of data of the numerous scientific researches.

Results. In humans, the bulge and hair germ region is the only source of melanocyte stem cells (MeSCs). Each follicle is initially loaded with a pool of melanocyte progenitors. These cells express glucocorticoid and β2-adrenergic receptors. They are normally quiescent, except during the anagen phase, when they generate mature melanocytes, respectively a new pigmented hair. In the catagen phase, differentiated melanocytes die. The adrenal glands are releasing catecholamines and glucocorticoid hormones into the bloodstream as a response to physical or psychological stress. However, there were no changes in the hair pigmentation when the levels of glucocorticoids increased. Scientific data suggested that catecholamines push the melanocyte stem cells out of quiescence state, facilitating the rapid division and differentiation of 50% of MeSCs comparatively to 6% of proliferating MeSCs in anagen phase, that lead to seriously migration of melanocytes away from the bulge which remain without stem cells.

Conclusion. Hair graying occurs in hair follicles in order to maintain melanocyte stem cells in their niches. The acute stress really causes a sharp and irreversible depletion of follicular melanocyte stem cells. Sympathetic nervous system hyperactivation overstimulates the pathway, which drives to the hair graying. Based on the recent results, the hair graying could be prevented by topically blocking the sympathetic release of hormones or its receptors. The hair graying is independent of increased stress glucocorticoids. Understanding how our body reacts to stress is the first key step towards the future treatment.

42. STRUCTURAL COMPONENTS AND ROLE OF EXTRACELLULAR MATRIX.

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Introduction. The old concept that the extracellular matrix is just a scaffold, which only has the supporting function for cells, is clearly incorrect. Nowadays, the extracellular matrix is considered a physiologically active component of all living tissues, which plays a crucial role in many cellular processes. The pathological remodelling of extracellular matrix drives to diseases progression and it seems to be an important research field and a potential therapeutic target.

Aim of study. Highlighting of structural components and main functions of the extracellular matrix. Identification of the medical domains for which extracellular matrix properties research findings are important.

Methods and materials. This review represents an analysis of actual information about the structural components and functions of the extracellular matrix from online biomedical sources, found with the research motors PubMed, Medscape, Google Scholar and including more than 50 references.

Results. The extracellular matrix is an extremely dynamic tissue component that is constantly being remodelled to maintain tissue homeostasis. The quantitative variations of matrix components and their organization lead to the appearance of different types of ECM, each of which is adapted to the physiological needs of the tissue. The structural components of the matrix interact closely with tissue cells to regulate various functions, including cell proliferation, migration, differentiation, and even apoptosis. It is difficult to estimate the role of the matrix in multicellular organisms, because there is no process without matrix implication: it functions as an adhesive substrate for cells, provides structure, stores and presents growth factors to their receptors, defines, perceives and transduces mechanical signals, activates intracellular signalling. Actually, the fields with advanced studying of ECM are oncology, because it participates in all stages of tumor progression, and regenerative medicine with transplantology, where a decellularized extracellular matrix, used as a bioink offers new possibilities for tissue reconstruction.

Conclusion. The functional importance of the extracellular matrix has been demonstrated in multiple severe diseases or embryonic deaths caused by the mutations of genes encoding matrix proteins. The studying and detailed characterization of the matrix composition, metabolism and biology, in healthy and pathological tissues, will lead to identification of new prognostic or diagnostic markers, will provide new therapeutic targets and will open new stages in tissue transplantation.

43. THE IMPACT OF CIRCADIAN RHYTHMS DISRUPTIONS ON NEURODEGENERATIVE DISEASES' ONSET

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Introduction. Circadian rhythm disruptions are common in modern society as result of the hectic lifestyles we lead associated with high stress and anxiety levels, night-shift jobs, inter-meridian travels and the spread use of light/screens in our quotidian. Thus, it has become essential to question how those will affect our cognition over time and will play a role in the development of neurodegenerative disorders.

Aim of study. Patients suffering from neurodegenerative diseases (ND) often show, as early signs of the disorder, alterations in their circadian rhythms explained by the progressive brain atrophy. However, less illustrated is the way disorganised biological rhythms could lead to ND. Thus, this review aims to identify the association and pathophysiological mechanisms that could lead to neurodegenerative modifications, subsequently, helping to suggest preventive measures.

Methods and materials. The research was based on 32 articles selected from the databases PUBMED from MEDLINE (15 articles) and SCOPUS (17 articles) published in the time frame 2017-2022 using the keywords: “Circadian rhythm and neurodegenerative diseases”.

Results. The studies lectured profiled a bidirectional relationship between circadian rhythm’s disruptions and the neurodegenerative diseases. Therefore, a series of pathogenic mechanisms induced by hectic sleep/wake cycles leading to the onset of ND were portrayed. The protein dyshomeostasis is one of the most recognized and it encompasses: increased amyloid aggregate production, proteostasis due to low autophagy clearance and decreased excretion by the glymphatic system or blood-brain barrier. Other involved pathogenic pathways are: neuroinflammation induced by glial clocks’ and immune circadian peripheral cycles’ dysregulations; neuronal oxidative stress that leads to metabolic and synaptic malfunction. Thus, the need of regulated circadian rhythms should be a priority for its neuroprotective mechanisms such as: ROS scavenge, BDNF stimulation of neurogenesis, voltage gated Ca++ and NMDA channels inactivation, stress granule degradation, etc. Most of those cited above are promoted by melatonin’s cytoprotective effect during sleep.

Conclusion. The association between disrupted circadian rhythms and the development of neurodegenerative diseases has been proven and occurs through various mechanisms that remain to be studied in detail as they still have many secrets to hide. Nevertheless, promoting lifestyles that correspond to the biological rhythms, especially to the sleep-wake cycles, should constitute the basis of all prophylactic measures to be implemented in the matter.

44. THE IMPACT OF NEUROLOGICAL COMORBIDITIES ON SLEEP AND THE PHARMACOTHERAPY OF TERMINAL HYPOSOMNIA

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Introduction. Neurological comorbidities are sometimes trigger factors for terminal hyposomnia and other sleep disorders. Tissue hypoxia in the hypothalamus, hippocampus, limbic system release a metabolic hyperexcitation of the whole body during sleep and wakefulness, increases cortisol and adrenocorticotropic hormone during the early sleep period, parasympathetic tone decreases in heart rate variability and electroencephalographic activity is high during NREM sleep.

Aim of study. The influence of neurological comorbidities on sleep and the approach of contemporary pharmacotherapeutic management in sleep disorders.

Methods and materials. I conducted a retrospective study, analyzing the indication sheets of the observation sheets of 50 patients diagnosed with terminal hyposomnia in common with neurological comorbidities, hospitalized in the Department of Vascular and Extrapyramidal Neurology of the IMSP of the Institute of Neurology and Neurosurgery, Chisinau, during the period 2019-2020.

Results. It was determined that vertebrobasilar syndrome and cerebral atherosclerosis have the highest share of sleep disorders, with the same level, representing 78% of patients. Depressive anxiety disorders were reported in 52% of patients, followed by migraine with a rate of 40%, tension-type headache with 30% and epilepsy with 4% of patients. The study showed that sleep disorders are closely correlated with vertebrobasilar syndrome and cerebral atherosclerosis having a high impact and favoring the occurrence of terminal hyposomnia because they have a common pathophysiology that leads to a marked deterioration of the brain, due to insufficient blood flow and as a result affects the posterior cerebral circulation followed by impaired sleep-wake circadian rhythm and the appearance of sleep disorders. The preparations used in terminal hyposomnia were listed: benzodiazepines (clonazepam, alprazolam), imidazopyridine derivatives (zolpidem) and associated with preparations of neurological comorbidities: MgSO4, mildronate, cyanocobalamin, piracetam and others. International guidelines also recommend preparations that help nourish neurons, brain vessels and ensure a smooth flow of blood. For example, atherosclerotic plaques or cerebral vasoconstriction will significantly improve the sleep-wake cycle, and the quality and quantity of sleep will be within the limits of the norm.

Conclusion. Ensuring proper pharmacotherapeutic management, including neurometabolic preparations significantly reduces the risk of terminal hyposomnia, and comorbidities are an important guide for formulating an individualized treatment that offers therapeutic opportunities and limitations.

45. THE IMPORTANCE OF HISTOPATHOLOGICAL EXAMINATION IN THE DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS OF INFLAMMATORY BOWEL DISEASE (IBD)

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Introduction. The inflammatory bowel disease is an idiopathic, chronic, disabling disease that appears from the interaction of the environmental and genetic factors. The ulcerative colitis (UC) and Crohn's disease (CD) represent the two major types of inflammatory bowel disease. The correct diagnosis of IBD is crucial as it is a lifelong disorder and requires a multidisciplinary approach. Another major problem of the diagnosis is the presence of mimics. One of the most important aspects in diagnosis is the histopathological examination correlated with clinical, laboratory and endoscopic data. This study will highlight the importance and necessity of histopathological criteria for the diagnosis of IBD.

Aim of study. Identification of histopathological criteria characteristic of the ulcerative colitis and Crohn's disease used in diagnosis and differential diagnosis of IBD.

Methods and materials. We have examined macroscopically and histologically some clinical cases suspicious of IBD from several institutions and have studied and revised the specialized literature and international guides from European Consensus on the Histopathology of the inflammatory bowel disease.

Results. The need to collaborate with the clinician and the endoscopist has emerged after examining the biopsy material. It was due to the absence of an exact test that would facilitate the diagnosis, the presence of histological changes that could mimic this pathology as well as the existence of atypical forms of manifestation of IBD. Through the histopathological examination we can diagnose and classify IBD, identify the degree of inflammatory process activity, the distribution and the degree of anatomical extension, the presence or absence of dysplasia or malignancies as well as the response to treatment. There are 4 categories of IBD mimics: 1) caused by specific infection, 2) caused by iatrogenic factors, 3) those due to a specific localized inflammatory process and 4) rare causes.

Conclusion. A correct diagnosis is the most valuable step towards healing in IBD. It requires a multidisciplinary correlation and, most importantly, endoscopic and histological approaches. Unfortunately, there are frequent difficulties in the diagnosis of inflammatory bowel disease, due to the absence of meetings and collective discussions between the teams of clinicians, endoscopists and pathologists and the lack of internal protocols adapted to the existing conditions.

46. THE IMPORTANCE OF PRENATAL GENETIC DIAGNOSIS IN PROPHYLAXIS OF PHENYLKETONURIA: CLINICAL CASE

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Introduction. Phenylketonuria (PKU) is an autosomal recessive genetic disorder caused by mutation in the allele genes responsible for the synthesis of phenylalanine hydroxylase (PAH) enzyme located on the 12 chromosome. The role of the phenylalanine hydroxylase enzyme is to convert the amino acid phenylalanine to the amino acid tyrosine. Thus, the disorder of the metabolism of this protein leads to excessive accumulation of phenylalanine that has toxic manifestations in the body. Loss of this enzyme results in mental retardation, organ damage, unusual posture and can lead to severely compromised pregnancy in cases of maternal PKU.

Case presentation. Patient P.E. after the first pregnancy was diagnosed to bear PAH gene mutations in both alleles, found on chromosome 12. Antecedents: The first pregnancy - boy, born at 39 weeks, weight - 2800 g, walks from the age of 1 year and 2 months. Diagnosed with PKU when he was 1 year old, with the clinical signs: mental retardation, organ damage, unusual posture, elevated serum phenylalanine – 8,2 U/l. PKU diagnosis was confirmed by genetic tests: mutations in both alleles of the PAH gene, found on chromosome 12. In the 2nd pregnancy (male fetus), prenatal genetic diagnosis (PGD) through amniocentesis didn't detect any mutation in the PAH gene. The boy was born healthy, on term. In the 3rd pregnancy (male fetus), the PGD detected the mutations in both alleles of the PAH gene, found on chromosome 12. By medical indication, the pregnancy was interrupted at 19 w.g. Currently, the woman is pregnant with her 4th pregnancy at term of 9 w.g. The mutations in the PAH gene were not detected. The pregnancy will be carried to term.

Discussion. The study included one clinical case of a pregnant woman, 32 years old, investigated for abnormal PAH gene using molecular-genetic analysis (amniocentesis) in order to achieve early detection and to prevent the birth of children with PKU.

Conclusion. Genetic counseling and PGD in PKU prophylaxis in risk groups for this disease are highly important. Performing PGD in women bearing the defective DG prevents the birth of children with PKU also helps to provide better treatment and management strategies for postpartum diagnosed children.

47. THE NORMAL STRUCTURE AND PATHOLOGICAL CHANGES OF BLOOD VESSELS IN TYPE 2 DIABETES MELLITUS

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Introduction. About 422 million people have diabetes mellitus, and more than 95% have type II diabetes. It is a major cause of heart attacks, strokes, blindness, kidney failure and lower limb amputation. A lot of these diseases are the result of pathological changes in the structure of blood vessels. These vascular complications are called angiopathies. They are a major clinical problem and lead to a higher mortality rate in the general population.

Aim of study. To research on normal blood vessels structure and pathological changes in type II diabetes.

Method and Materials. The scientific articles from PubMed, Medscape, BMC databases were analyzed.

Results. The diabetes mellitus is associated with macrovascular (involving large arteries) diseases like stroke, myocardial infarction, and microvascular (involving small arteries and capillaries) diseases, such as retinopathy, nephropathy, neuropathy. In diabetic microangiopathy pathognomonic alterations include thickening of capillary basement membrane, increase of endothelial permeability, and dysfunction of endothelial and vascular smooth muscle cell. The most important pathologic processes in macrovascular disease are atherosclerosis and vascular stiffness. A lot of functional changes and inflammation in smooth muscle and endothelial cells of the vascular wall are responsible for proliferation, hypertrophy, remodeling and apoptosis.

Conclusion. Normal structure and function of blood vessels in type II diabetes are essential for the proper functioning of the body. The damage of blood vessels can lead to disabling diseases and premature death.

48. THE ROLE OF GENES IN THE DEVELOPMENT OF OBESITY

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Introduction. Obesity is one of the major challenges faced by modern society. It has been generally accepted that obesity is a multifactorial condition, with diet, physical activity, stress, sleep pattern and environment playing a great role in its development. However, with the completion of the Human Genome Project, as well as the emergence of Genome-Wide Association Studies, there has been more evidence of a genetic component being present among other risk factors. Moreover, an individual's genetic background may also influence their response to a certain diet, making it necessary for a personalized approach to be considered.

Aim of study. This review has the aim to highlight the genetic component of obesity, as well as the perspectives of implementing a personalized nutrition plan that would take into account a person's genetic makeup.

Methods and materials. Data from specialized articles that include various research in the given field has been analyzed.

Results. The inter-individual variability of BMI has been attributed to genes in a 40-70% proportion. SNPs account for 30% of variation in BMI. The most common genes that have been linked to the development of obesity are FTO, MC4R and APO-A gene family. FTO gene polymorphisms result in a higher energy intake, overeating and reduced satiety. Variations of the MC4R gene highly expressed in the hypothalamus, result in an altered appetite control, which leads to hyperphagia with a preference for foods rich in fat. APO-A5 SNPs have been strongly associated with a higher risk of obesity, which is based on changes in the lipid metabolism, particularly an increased triglyceride level. Polymorphisms in these genes have also shown different dietary responses. FTO and MC4R SNPs present a lower adherence to the Mediterranean diet, while APO-A5 polymorphisms benefit greatly from a low fat diet, with a more significant reduction in total cholesterol and LDL-c.

Conclusion. The genetic component of obesity has been vastly studied over the past years, however extensive research is still needed in this developing field. This knowledge can give us important insights into prevention and management of obesity, with the introduction of a personalized nutrition approach that would increase patient compliance to certain diets.

49. THE ROLE OF STATINS IN THE TREATMENT OF CEREBROVASCULAR INSUFFICIENCY CAUSED BY ATHEROSCLEROSIS

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Co-author: Ursu Vera

Scientific adviser: Ecaterina Stratu, MD, Associate Professor, Department of Pharmacology and Clinical Pharmacology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Chronic cerebrovascular insufficiency is a common condition in the elderly due to the high prevalence of atherosclerosis. In most cases, the carotid artery is affected, which carries most of the blood supply to the brain. Cerebrovascular diseases include all ischemic disorders of the cerebral vessels that are temporarily or permanently affected. They include ischemic stroke, hemorrhagic stroke, carotid stenosis, vertebral stenosis, intracranial stenosis, aneurysm, vascular malformations, etc.

Aim of study. To approach the new principles of treatment of patients with cerebrovascular insufficiency caused by atherosclerosis.

Methods and materials. A retrospective study was conducted, analyzing the clinical observation sheets of 30 patients diagnosed with cerebrovascular disorders associated with atherosclerosis of the blood vessels. The study included patients admitted in 2021 to the Neurosurgery Department of the PHCS Institute of Neurology and Neurosurgery, Chisinau.

Results. A higher prevalence of atherosclerosis was determined among men, aged 57-71 years. Of the total number of patients with atherosclerosis, 77% were retired. Patients with dyslipidemia were subjected to the analysis of lipid parameters - total cholesterol, LDL, HDL and triglycerides. Of the total number of patients, 35% had dyslipidemia, and 24 patients had high total cholesterol. A normal level of LDL was found in 15 (50%) patients, while a modified level of HDL was revealed in 14 (47%) patients, and an unchanged level of triglycerides was recorded in a patient. The treatment of atherosclerosis included groups of lipid-lowering drugs (statins), antiplatelets, venotropic and nootropic drugs, medication that improves brain metabolism (citicoline, cocarboxylase), etc., complying with the treatment regimens of the National Clinical Protocol. Patients with symptomatic carotid stenosis were subjected to surgical treatment, such as carotid endarterectomy.

Conclusion. Having a good tolerability and safety profile, statins remain the first line of choice in patients with dyslipidemia and even with normolipidemia. Following a well-thought-out management, statins reduce the risk of morbidity and mortality. Their role in primary and secondary prevention of cardiovascular, cerebrovascular and peripheral arterial diseases in high-risk patients is emphasized in all modern treatment guidelines of specialized scientific societies, namely European, American and global ones.

50. THE ROLE OF TYROSINE-PROTEIN KINASE RECEPTORS IN TRIGGERING DIFFERENT TYPES OF CANCER

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Introduction. Tyrosine-protein kinase receptors (RTK) are proteins on the surface of the cell membrane that are encoded by a large group of genes in the eukaryotes body. RTK plays an important role in controlling the most fundamental cellular processes, such as cell cycle, metabolism and survival, migration, proliferation, and cell differentiation. Mutations in RTK and the aberrant activation of intracellular signalling pathways caused by them, lead to the onset of various types of cancer.

Aim of study. Synthesis of current studies aimed at identifying the role of tyrosine-protein kinase receptors and the causes that lead to the onset of different types of cancer, as well as potential targeted therapy.

Methods and materials. The bibliographic study was realised on the basis of scientific articles published in the period 2018-2021 in the databases PubMed, NCBI, and BioMed Central using key phrases "Tyrosine-kinase receptors", "RTK in oncogenesis", "targeted therapy on RTK".

Results. Tyrosine-protein kinase receptors include 58 different types that are classified into 20 families according to their structure and ligand. In human cancers, there are 4 mechanisms that lead to the constitutive activation of RTK: genomic amplification, gain-of-function mutations, chromosomal rearrangements, and autocrine activation. Genomic amplification has been identified in a variety of cancers: EGFR in glioblastoma, esophageal, lung, thyroid cancer; HER2 / ErbB2 in breast cancer, bladder cancer; MET in gastric and lung cancer. Activation by gain-of-function mutations can occur in extracellular, transmembrane, and juxtamembrane domains of RTK. FGFR3 extracellular domain point mutations have been reported in cervical carcinomas. Transmembrane HER2 mutations have been identified in non-small cell lung cancer. The KIT V560G and PDGFRA V561D mutations in the juxtamembrane domain are found in gastrointestinal stromal tumours. Chromosomal rearrangements occur in patients with chronic myeloid leukemia-fusion of the gene encoding tyrosine kinase ABL1 on chromosome 9 with the BCR gene on chromosome 22 (BCR-ABL). Autocrine activation of various RTKs has been well characterised in various cancers, including TGFα-EGFR. Over the years, numerous studies have been performed on targeted therapy. Thus, there are currently 61 RTK inhibitors approved by the Food and Drug Administration starting from July 22, 2020.

Conclusion. Malignant tumours have always been a serious problem for human life. Thus, RTK studies are an important perspective on oncology and subsequently the development of targeted therapies.

51. THE TELOMERASE ON DUTY IN ANTIAGING TECHNIQUES: MYTHS AND FACTS

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Introduction. The contemporary medicine has made the lengthening the human's life a reality. On the other hand, the age-linked problems are one of the cornerstone theses of modern biology. Nowadays, the telomere commitment in aging is demonstrated and the anti-aging theories are based on the human's telomerase studying and furthermore on human's genetics rejuvenation.

Aim of study. To research on the telomerase impact on human's aging.

Methods and materials. We have selected and studied some scientific articles based on the next keywords: telomerase, telomere, and aging.

Results. The telomeres are the regions found on the chromosome extremities, involved in the preserving of the genetic material during the dividing process. Each cell division makes the telomeres to short themselves, this turning the genetic material unstable, thus giving the cell the premise to stop dividing. The scientists made a huge effort to decode the telomerase structure, knowing its role in telomere restoring. There is a high amount of the telomerase in the STEM cells, sex cells and in the tumoral ones, giving them the possibility to divide much more as compared to the somatic cells, in which telomerase is absent. A number of studies have shown the telomerase importance by injecting the telomerase gene in skin and vascular endothelium, and activating the telomerase. It helped to keep the same length of chromosomes among divisions. This made the scientists to increase the cell lifespan. Subsequently, there is a set of restrictions in the usage of telomerase, because its involvement leads to the appearance of cancer cells. A solution would be to activate the telomerase parallel to oncosupresor activation (like p53, p16, p14), resulting in lengthening of cells life length.

Conclusion. The detailed description of telomerase and its mechanisms will bring us to the elaboration of medications having the capacity to slow down or even stop aging, without inflicting the cancer apparition. It's necessary to gain more information about the risks associated with telomerase activity.

52. THE USE OF ENZYME REPLACEMENT PREPARATIONS: SYMPTOMS AND CAUSES.

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Introduction. Exocrine pancreatic insufficiency is a public health problem due to morbidity, precipitating factors, poor symptomatology and inappropriate use of enzyme replacement preparations. Information and education in the rational use of enzyme replacement preparations can improve the quality of life of patients.

Aim of study. To identify respondents' level of awareness of diversity of medicinal forms, indications, mode of administration and criteria for efficacy of enzyme replacement therapy in the exocrine insufficiency of the pancreas.

Methods and materials. Respondents were interviewed online on the Google Forms platform based on the questionnaire with the following analysis of the data regarding the aspects of use of the enzymatic preparations for substitution therapy.

Results. The obtained data showed that 96 out of 125 respondents (77%) used pancreatic enzyme preparations. The most common symptoms that led them to use such preparations were: heaviness (51%), flatulence (26%), pain (15%), diarrhea (7%),weight loss (1%). The most common reasons for taking enzyme preparations were: overeating(70%), acute pancreatitis (16%),chronic pancreatitis (13%), hepatitis / hepatic cholecystitis (1%).98% of respondents prefer monocomponent preparations and only 2% combined. Depending on the dose, 71% of respondents administered the preparations in a dose of 10,000 IU, 21% - 8000 IU, 7% - 20,000 IU and 1% -1500 IU. Regarding the time of administration of enzyme preparations 43% of respondents administered before the meal, 43% - during the meal, 11% - 30 minutes after the meal and 3% - 30 minutes before the meal. It was found that 97% of respondents had no side effects and 3% reported dyspeptic reactions.

Conclusion. Heaviness, flatulence, pain syndrome, diarrhea and weight loss were the most frequent symptoms which led the respondents to use enzyme replacement preparations and overeating was the most common cause. Monocomponent preparations were preferred in small doses (up to 10,000 IU) with their administration before or during a meal.

53. UNCOUPLING AGENTS AND THEIR BIOMEDICAL ROLES

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Introduction. Uncoupling agents, or uncouplers, are molecules, which are classified as ion transporters, located in the internal membrane of mitochondria. They discharge the proton gradient, which is generated by the respiratory chain, by transporting hydrogen ions. As a result, ATP-synthetase cannot be activated due to the lack of that gradient, thus the oxidative phosphorylation is "uncoupled" from the electron transport chain. Therefore, the energy used for ATP synthesis is dissipated in heat, which explains the main role of thermogenesis. There are 2 types of uncouplers: natural, which are UCPs (short for Uncoupling Proteins) and synthetic, which have an importance in research and not only.

Aim of study. Explor.ing the roles and flaws of the uncoupling agents and the factors which increase their activities

Methods and materials. Selected from articles, found in databases (PubMed, NCIB, Google Scholar, etc) according to the keywords "uncoupling", "uncoupling agent", "oxidative phosphorylation".

Results. The most known and most studied uncoupling agent at the moment is thermogenin (UCP 1), which is present mostly in the brown adipose tissue in newborns and hibernating mammals. It is also involved in energetic balance due to its involvement in uncoupling oxidative phosphorylation from the respiratory chain. The main stimulating factor of thermogenin is exposure to cold temperatures. Besides thermogenesis, uncoupling agents have significant roles even in other organs. For example, in the nervous system, they stimulate the transport of calcium ions outside mitochondria, thus avoiding neuronal hyperexcitability, which is a key feature in epilepsy. Also, they help the neuronal tissue recover from injuries. Another interesting effect scientists noticed about uncouplers is weight loss. Dinitrophenol, a synthetic uncoupling agent, was used as a miracle pill for losing weight in the 1930s until FDA illegalized it in 1938 due to severe side effects. The increase of an uncoupling protein can inhibit beta cells from endocrine pancreas to synthesize insulin, leading to their dysfunction or even to type 2 diabetes. Another point about the uncouplers is that the main factors that increase their activities are free fatty acids and thyroid hormones.

Conclusion. Uncoupling agents are not only molecules that generate heat, but have a major influence towards some processes such as neuronal excitability, insulin synthesis, weight loss and so on. At the moment, the scientists are still studying the recently discovered uncouplers, whose roles are still unknown.

54. VARIANTS OF TOPOGRAPHY AND BRANCHING OF THE STOMACH ARTERIES

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Introduction. We know from the literature that the left gastric artery along with the right gastric artery and the left and right gastroepiploic arteries are the main vascular trunks involved in the blood supply to the stomach. Knowledge of the individual characteristics of gastric vessels is especially applicable in diagnostic procedures. For example, in angiographic imaging of the accessory left gastric artery, its trajectory is similar to that of the intrahepatic arteries in the left lobe of the liver, leading to misdiagnosis and unnecessary surgery.

Aim of study. According to classical data, the arteries of the stomach come from the branches of the celiac trunk (Netter F. H., Sinelnicov R. D.). The arterial crown of the lesser curvature consists of the left gastric artery (branch of the celiac trunk) and the right gastric artery (branch of the common hepatic artery). The arterial crown of the greater curvature consists of the right gastroepiploic artery, coming from the gastroduodenal artery (branch of the common hepatic artery) and of the left gastroepiploic artery (branch of the lienal artery).

Methods and materials. The topography and branching of the stomach arteries were studied by the macroscopic method of preparation of 6 organocomplexes.

Results. Using the macroscopic method, the morphological and individual characteristics of the stomach arteries were studied. The greater curvature of the stomach is vascularized by the right gastroomental artery and the left gastroomental artery. The vessels were identified in all cases. The left gastroomental artery emerged from the lienal artery or its branches (2 cases), it was doubled on one piece. The right gastroomental artery emerged from the gastroduodenal artery or the anterior superior pancreatoduodenal artery (2 cases), it was doubled in 2 cases. The lesser curvature of the stomach is vascularized by the left gastric artery and the right gastric artery. The left gastric artery branches from the celiac trunk or the abdominal aorta (1 case), the splenic artery (1 case). In 2 cases the vessel was doubled. The right gastric artery emerged from its own hepatic artery and departed from the left hepatic artery only on one complex of organs.

Conclusion. According to our data, the topography and branching of the stomach arteries are variable. This is important to consider in order to prevent complications during organ surgeries.

55. VARIATIONS IN THE STRUCTURE OF THE MUCOSA AND PAPILLAE OF THE DUODENUM IN ADULTS

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Introduction. We know from the literature that the duodenum is the central organ of the biliopancreaticoduodenal system. The duodenal papillae and the longitudinal fold of the duodenal mucosa have many individual features, their knowledge is very important to understand the morphopathological changes of all processes that may occur at this level, but also to choose the right surgical tactics and subsequent prevention of postoperative complications.

Aim of study. Using the macroscopic method of anatomical preparation, the mucosal folds, the size and shape of the duodenal papillae were studied on 20 organocomplexes in adults.

Methods and materials. According to the literature, the dimensions of the duodenal parts vary: the superior part 4.5-5.8 cm, the descending part 9.4-10.2 cm, the horizontal part 10.1-12.0 cm, the ascending part 5.0-6.2 cm. According to the authors Щербаков П., Лохматов М. М, the height of the major duodenal papilla is between the limits of 0.2-2.0 cm, from where in 80% of cases both ducts open (pancreatic and choledochus) and in others 20%, the pancreatic duct opens 2-4 cm higher. According to the authors B. B. Коваленко, С. Д. Denissov, the duodenal papilla is the most common place to undergo surgery, which is why it is necessary to know the individual features.

Results. Using the preparation method, the morphological and individual characteristics of the duodenal mucosa and papillae were studied. According to our data, the superior duodenal part was 2.5 cm to 4.0 cm long, with an average of 3.4 cm ± 0.38 cm; descending part - from 5.0 cm to 7.5 cm, with an average of 6 cm ± 0.82 cm; the horizontal part was 5.0 cm to 8.2 cm long, with an average of 6.7 cm ± 1 cm; the ascending part of the duodenum was 2.1 cm and 3.8 cm long, with an average of 3.1 cm ± 0.48 cm. Regarding the duodenal folds, in 53% of the pieces, the longitudinal fold was present, in others 21% both folds were present (longitudinal and circular), in 16% both folds were absent, and in others 11% were present only circular fold around the major duodenal papilla. Regarding the height of the major duodenal papilla, the minimum value was 0.1 cm, the maximum being 1.0 cm, with an average of 0.33 cm ± 0.2 cm.

Conclusion. According to our data, the duodenal mucosa has many individual varieties, both in terms of portion size and in terms of the height of the major duodenal papilla, as well as the presence or absence of duodenal folds. This is important to consider to prevent complications during surgery on the organ.

V. *Internal Medicine Section*

1. A CASE OF GRAVE'S DISEASE AND THROMBOCYTOPENIA

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Introduction. Thrombocytopenia may coexist with Grave's disease. However, the mechanisms of decrease in platelet count alongside with autoimmune thyroid disease have not been comprehensively investigated.

Case presentation. A case of Grave's disease is reported in a 55-year-old man who has been receiving continuous treatment with synthetic antithyroid drugs for 7 years. Laboratory analysis showed suppressed thyroid stimulating hormone (TSH) 0.01 mlU/ml, normal free T4 level 21.60 pmol/l, increased free T3 6.99 pmol/l and thyroid stimulating immunoglobulin (TSI) 23.60 IU/L. Complete blood test revealed severely decreased platelets 3 x 10^9 / l, decreased hemoglobin 110.00 g/l, leucocytes 9.58 x 10^9/l, hematocrit 21.90%, Prothrombin Index 11%, International normalized ratio (INR) 7.00. The patient has recovered from viral pneumonia caused by SARS-COV-2, 1 month prior to the medical consultation.

Discussion. Thrombocytopenia observed in hyperthyroidism may be mediated by both metabolic and immunological phenomena. In our case, the following causes may be considered: (1) an overlapping autoimmune process; (2) antithyroid drugs creating destructive antibodies; (3) COVID-19 disease. An autoimmune process is capable of triggering both conditions by activation of the reticuloendothelial system by thyroid hormones along with a cross-reaction between thyroid antibodies and platelet epitopes [1,3]. Carbimazole generates a drug-dependent immune response against platelets, involving platelet endothelial cell adhesion molecules and thus provoking thrombocytopenia [4]. SARS-CoV-2 can induce thrombocytopenia by mass production of cytokines causing progenitor destruction in the bone marrow with decreased primary platelet production. Infection increases the number of autoantibodies and immune complexes that destroy platelets. Lung damage by decreasing pulmonary capillary bed and evoking the fragmentation of megakaryocytes, leads to a reduced number of circulatory platelets [2].

Conclusion. A severe thrombocytopenia was detected in a patient with Grave's disease, in whom the number of platelets was 50 times below the lower limit of the reference range. Coexistence of thrombocytopenia may be explained by (1) an overlapping autoimmune process; (2) the effect of carbimazole; (3) its occurrence or aggravation secondary to COVID-19.

2. A CASE OF GRAVES ORBITOPATHY TREATED WITH TOCILIZUMAB

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Introduction. Graves' orbitopathy (GO), one of the main extrathyroidal manifestations of diffuse toxic goiter, can have a severe evolution in 5% cases and even lead to sight loss. The first-line treatment is intravenous methylprednisolone. Rarely there is a lack of response to corticosteroids, or there are certain contraindications (recent viral hepatitis, significant hepatic dysfunction, severe cardiovascular morbidity, or psychiatric disorders). Therefore, alternative treatment methods have been found. Tocilizumab (TCZ) is a monoclonal antibody inhibitor of the interleukin-6 receptor, implicated in GO's pathogenesis (expressed in adipocytes, fibroblasts, and macrophages of orbital tissue).

Case presentation. A 46 years old Caucasian female known with hyperthyroidism is admitted to the endocrinology unit of „Timofei Moșneaga" Hospital with asymmetrical bilateral exophthalmos, convergent strabismus, spontaneous retrobulbar pain, movement induced pain, scratchy sensation, hyperlacrimation, sometimes- diplopia. Her past medical history had developed 8 months prior to our hospital admission. At that time she'd been diagnosed with diffuse toxic goiter and endocrine ophthalmopathy, treated with antithyroid drugs, beta-blockers and the last 2 months with oral corticosteroids. During this period, the ocular symptoms worsen, therefore she's referred to the Endocrinology Department. Also, for the last 20 years, she's known with a psychiatric disorder, treated with risperidone daily. The CAS (4 points out of 7- spontaneous pain, movement induced pain, conjunctival hyperemia, palpebral edema) and NOSPECS score (4B, 5, 6A) established a severe, active form of GO. Laboratory findings: TSH 0.01 UI/ml, fT3 4.01 pmol/l, fT4 21.51 pmol/l and positive TR-Ab (6.69 IU/L). Orbit MRI confirms asymmetrical bilateral exophthalmos (R>L), convergent strabismus of the right eye. A second line treatment was chosen for this patient with severe and active GO, because of lack of response to corticosteroids and contraindications for IV methylprednisolone (psychiatric disorder), with TCZ (IV 8 mg/kg) at 4-week intervals for 4 months. Following the first dose of TCZ the patient improved significantly clinically (with 2 points in CAS score).

Discussion. Some studies have shown the efficacy of TCZ in the treatment of GO, but as long as there are no clear guidelines for its use, every case is important to establish the further management of corticosteroid-resistant Graves orbitopathy.

Conclusion. Tocilizumab remains a second-line treatment of glucocorticoid-resistant Graves orbitopathy or for those with contraindication for systemic corticosteroid treatment. Major cost, high rate of recurrence, and side effects are the main inconveniences.

3. A NOVEL PERSPECTIVE ON HYPERTENSION AND COGNITIVE IMPAIRMENT: THE CHALLENGE OF THE MODERN WORLD

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Introduction. The brain is considered to be one of the main targets of hypertension (≥140/90mmHg), because a history of hypertension is proven to increase the risk of cognitive impairment. Several studies reveal the negative impact of hypertension on cognitive functions in patients without complications related to it, i.e. stroke. In the last years, more patients develop hypertension without a vascular condition, thus it was suggested the implication of the brain renin angiotensin system (RAS) as a precondition of hypertension. Its receptors (AT1) play a key role in the regulation of brain function. Their hyperreactivity is a major early injury factor of endothelial dysfunction and premature brain aging. Moreover, it is also a starting point of the pathological chain of various neuronal disorders, as well as cardiovascular diseases.

Aim of study. This study aims to compare cognitive deterioration attributable to normal aging and premature brain aging in patients with hypertension that do develop strokes and the ones who do not develop it.

Methods and materials. This was a single-visit, prospective, non-interventional, observational study conducted on 34 patients (53,12%) from the Institute of Neurology and Neurosurgery, Chisinau. MMSE and MoCA tests were used in order to assess their cognitive state. The patients were divided into the following groups: with hypertension and no stroke, with hypertension and stroke and the control group (30 patients=46,88%), all aged above 50. The study included 32 women (50%) and 32 men (50%). It also comprehends the latest studies on the topic, published in PubMed, NCBI and Google Scholar.

Results. The hypertensive patients (34 = 53,12%), both with stroke and without, displayed/presented impairment in all tests in comparison with the normotensive subjects (30 = 46,88%). The average points obtained in the MMSE test were 26,44±1,41 in the first group; 22,4±5,12 points in the second and 28,17±1,25 in the control group. For the MoCA test, the average points obtained were 26,8±2,04 for the first group; 22,7±5,73 for the second and 28,65±1,17 for the control group. The maximum for both tests is 30 points. The average values of hypertension are 149,6 mmHg; 158 mmHg and 129,31 mmHg respectively. The tests have the same degree of sensitivity for all of the groups ($p<0,001$) and proved easy to use in clinical practice. A negative correlation between hypertension and test scores was shown, in all of the groups studied, being stronger in the group with hypertension without stroke (-0,39). It means that higher systolic values give lower test scores.

Conclusion. There is conclusive evidence for the involvement of hypertension in premature brain aging. Hypertension is a risk factor for lower MMSE and MoCA test scores, which is directly correlated with the value of the systolic pressure. Therefore, neurocognitive tests are useful for early diagnosis of premature brain aging. It brings us a step closer to lowering the incidence of hypertension induced complications.

4. ADVERSE REACTIONS OF TUBERCULOSIS TREATMENT IN CHILDREN.

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Introduction. The incidence of tuberculosis in children is an indicator of the general epidemiological situation, since it is the result of primary infection with Mycobacterium tuberculosis. The success of tuberculosis treatment is determined by several factors, among which significant is the development of side effects. The administration of antituberculosis preparations is frequently accompanied by various side effects of different severity – from mild to very serious, which require discontinuation of treatment. Thus, adverse reactions of tuberculosis treatment in children can determine the success of treatment and the prognosis of the disease.

Aim of study. Studying the types of side effects of antituberculosis treatment in children.

Methods and materials. There were analysed 52 cases of children admitted for treatment in the children's section of the Municipal Clinical Hospital of Phthisiopneumology, with the diagnosis of tuberculosis and with side effects signalled during the administration of the treatment during the years 2018-2020.

Results. It was established that 35(67,3%) children with adverse reactions during treatment had the age of up to three years, 10 (19,2%) children were aged 4-10 years and 7 (13,5%) children – older than 11 years. The most common side effects were from the gastrointestinal tract and were manifested by dyspeptic syndrome – in 35(67,3%) cases. Toxic hepatitis with increase in biochemical indicators (transaminases and bilirubin) was notified in 27(51,9%) cases. Less often the following side effects were recorded: allergic dermatitis - 20 (68,5%) cases, convulsive syndrome - 5(9,6%) cases, kidney damage - 2(3,8%) cases. In 23 (45,8%) cases were reported mixed side effects. Among the children with tuberculosis, who had adverse reactions of the administration of the treatment predominated the cases with drug-resistant TB – 35 (67,3%) cases. The analysis of clinical forms of tuberculosis in children who had adverse reactions of anti-TB treatment established the predominance of extensive and pulmonary processes – in 39(75%). Comorbid status in children included in the research was determined in 1/2 of the cases. The development of adverse reactions to the administration of antituberculosis drugs required discontinuation of treatment in 32 (61,5%) cases, so measures were necessary to correct the side effects and the drug that caused the adverse reaction was cancelled – excluded from the therapeutic scheme. Thus, the duration of treatment was longer at about 1/3 of the total number of children included in the study.

Conclusion. Adverse reactions of treatment in children develop predominantly at an early age and can require both therapeutic success and the course of the disease.

5. ASSESSMENT OF QUALITY OF LIFE IN COPD PATIENTS WITH COMORBIDITIES

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Introduction. Chronic obstructive pulmonary disease (COPD) continues to be one of the leading causes of death and health-care cost worldwide. The majority of patients have at least one comorbid condition of clinical significance.

Aim of study. Study of comorbidities in chronic obstructive pulmonary diseases.

Methods and materials. The study was conducted in 75 patients with COPD. Comorbidities were assessed by Charlson comorbidity index (CCI). Health-related quality of life was assessed by the Clinical COPD Questionnaire (CCQ), COPD Assessment Test (CAT) and St. George Respiratory Questionnaire (SGRQ). Spirometric data were analyzed (FEV1, FVC, FEV1/FVC).

Results. 75 COPD patients were studied, mean age was 59.2±6.5 years, mean FEV1, % was 36.6±13.3%. Patients across all stages of the GOLD classification had similar age and pack/years ($p>0.01$). Charlson comorbidity index (CCI) had a moderate negative correlation with 6MWD ($r=-0.39$, $p<0.01$) and absence correlation with the rate of exacerbations ($r=0.15$, $p=0.01$). CCI had a moderate correlation with SGRQ activity ($r=0.39$, $p<0.01$), impact ($r=0.38$, $p<0.001$) and total ($r=0.38$, $p<0.001$) scores. Questionnaires for assessing the quality of life when applied to assess the risk of comorbidities showed unsatisfactory discriminatory power (SGRQ AUC - 0.4, CCQ AUC - 0.44 and CAT AUC - 0.39).

Conclusion. COPD is frequently associated with other diseases. Comorbidities have a greater negative impact on COPD patients in terms of quality of life. HRQL questionnaires, when applied to assess the risk of comorbidities showed unsatisfactory discriminatory power.

6. AUTONOMIC DYSFUNCTION IN PATIENTS WITH RHEUMATIC DISEASES

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Introduction. It was long established that patients with rheumatic disease display signs of autonomic dysfunction. The main purpose of COMPASS-31 questionnaire is to assess dysautonomia based on 31 questions that cover 6 domains (intolerance for orthostatism, secretomotor, urinary, constipation, diarrhea, and pupilomotory reflexes)

Aim of study. Assessment of autonomic dysfunction in patients with rheumatic diseases with the help of COMPASS-31 questionnaire.

Methods and materials. For the assessment of dysfunction of dysautonomia there has been used COMPASS-31 simplified questionnaire. To appreciate pain and the condition of the patients globally, VAS scale was used. Patients' ages are between 30 and 63 years old. A total of 34 patients were investigated, including 26 women and 8 men. Because of pandemic reasons has been developed an electronic questionnaire in Google Forms. The patients were offered the link to complete the questionnaire in their devices.

Results. Orthostatic intolerance was present in 29 patients (85.3%), out of which in 14 patients (48.3%) the phenomenon was present each time when they would get up, and in 12 cases (41.4%) the patients described it as very strong. From the gastro-intestinal system can be observed diarrhea at 16 (48.5%) and constipations at 19 (55.9%) patients. Feeling bloated was reported by 82.5% or 28 patients, while 73.5% had a cramping or colicky abdominal pain. Xerostomia was present in 20 cases (58.8%). Also xerophthalmia was noticed by 16 patients (47.1%) and sensitivity to light in 29 patients or 85.3%, while in 55.9% of cases, duration of sensitivity was evolving in the last 5 years. Urinary system involvement presented as lost control of bladder function and difficulty passing urine in 10 cases (29.4%). Half of the patients noticed skin discoloration, such as purple, red or blue as a reaction to cold temperatures or stress. 1/3 of patients presented changes in hands or feet, but 1/3 included both of them. Patients were asked to assess pain intensity on a VAS. Patients reported pain scores by 8 and 9 in 14 cases (41,2%) the maximal score was reported by 6 people (17.6%), reflecting chronic and profound suffering. However, patients reported the overall condition with a score of 5 in 29,4%. There was observed a correlation between the duration of disease and accumulated points – i.e. the patient with rheumatoid arthritis diagnosed in 1989 reported the maximal score of 96 points.

Conclusions. Symptoms of dysautonomia may be confounding in many patients with rheumatic diseases. It is important to acknowledge the presence and the nature of such changes as the approach may be challenging.

7. BODY MASS INDEX IN PATIENTS WITH COPD AND ITS IMPACT ON QUALITY OF LIFE

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Introduction. Chronic obstructive pulmonary disease is a chronic inflammatory condition of the lungs characterized by obstructive airflow limitation, which leads to a deterioration in the quality of life. It increases mortality and is characterized by a big number of complications. Body mass index is an important parameter for the prognosis in patients suffering from COPD. Despite the fact that most often a high body mass index leads to a deterioration in the quality of human life, in patients with COPD often the reverse pattern was observed.

Aim of study. Patients with COPD were divided in two categories based on the value of the BMI and compared their quality of life, using different parameters.

Methods and materials. In the study were included two categories of patients, the first – with BMI lower than 18, and the second – with BMI higher than 30. The difference in the quality of patient's lifes was analysed, using the SGRQ (Saint George Respiratory Questionnaire), CCQ total, the rate of exacerbation, the characteristics of dyspnea, FEV1 (forced expiratory volume in 1 second), FVC (forced vital capacity), FEV1/FVC, the correlation between the BMI and GGRQ total and 6MWT (6 minute volume test).

Results. In the research men and women of different ages participated. It was observed that BMI has a significant effect on the number of exacerbations. In particular, it has a correlation with grade of dyspnea and changes the results of SGRQ and CCQ.

Conclusions. COPD patients require a special individual approach. First, they must be provided with accurate and timely treatment. Secondly, the prevention of COPD complications should be carried out. Thirdly, of course, careful monitoring of the BMI of such patients is important and needed, because its values directly affect the course of disease.

8. CAN EPSTEIN-BARR VIRUS CAUSE MULTIPLE SCLEROSIS?

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Introduction. Multiple sclerosis (MS) is a disabling chronic, autoimmune, inflammatory, neurodegenerative disease of multifactorial pathogenesis, where both, endogenous (i.e. genetic) and exogenous (i.e. environmental) factors play a specific causative role. Among the preventable environmental factors associated with MS, the cumulative evidence strongly points towards previous infection with Epstein-Barr virus (EBV), which recently became extremely important in light of new developments in MS prevention and treatment.

Aim of study. To provide a balanced assessment of evidence on EBV's role on MS etiopathogenesis and critically appraise the existing empirical studies. Key words: Epstein-Barr virus, multiple sclerosis, causality.

Methods and materials. Scoping review of articles published in English in 2000 - 2022 on human studies on EBV and MS had been extracted from OVID Medline and PubMed databases. Boolean search using keywords "Epstein-Barr virus", "infectious mononucleosis", "multiple sclerosis", "causality"/ or "etiology" yielded a pool of 267 abstracts that had been analysed for this review. Information about results, conclusions and gaps was extracted in a master spreadsheet for critical thematic analysis.

Results. Three directions of research on MS causality emerged: 1) strong association between MS and EBV infection; 2) synergistic effects of EBV infection with patients' residence at birth, vitamin D deficiency and smoking on MS progression; 3) genetic susceptibility and immune deregulation that triggers MS in EBV convalescents. As association does not mean causation as yet, to date there is no evidence of a single pathogen being accepted as a causal agent of MS. Hence, both genetic, environmental and the EBV factors are required to trigger the disease. Thus, despite the acknowledgement of being a leading predisposing factor for MS, the EBV infection is not a specific, necessary and sufficient agent capable of causing the disease alone. A notable gap in the literature is the lack of attention on whether a disruption of interaction between the EBV infection, genetic susceptibility and environmental risk factors at the population level would be capable of preventing the MS progression.

Conclusion. Given that emerging experimental developments in MS prevention (via new mRNA and nano-vaccines) and treatment (using new antivirals and immunotherapy) continue to strongly rely on a single dominant etiologic factor, more research is needed (i.e. observational prospective longitudinal trials) to assess the selective and cumulative impact of each and all causative factors on MS progression.

9. CATAMENIAL STATUS EPILEPTICUS. A RARE CONDITION OR AN UNDERDIAGNOSED EVENT.

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Introduction. Catamenial epilepsy (CE) is a phenomenon in which seizures are related to hormonal changes due to the menstrual cycle. Estrogen has proconvulsant assets, whilst Progesterone has anticonvulsant proof. Three varieties of catamenial seizures have been defined: 1) C1- the most typical pattern (perimenstrual), is linked with withdrawal from high progesterone levels, 2) C2- periovulatory, is linked with follicular phase of the menstrual cycle, with high estrogen levels and 3) C3- inadequate luteal-phase, in which progesterone levels are under normal limits, seen in healthy controls. The incidence of catamenial status epilepticus (CSE) is unknown and is seldom mentioned.

Aim of study. To review scientific information about CSE for practical and scientific purposes.

Methods and materials. This paper provides a review of clinical cases using PubMed and Hindawi databases over ten years period. Key terms used in the are searching for: CSE, CE.

Results. During the ten years, only four clinical cases were reported in which CSE due to CE was diagnosed. Two of them were presenting with recurrent episodes of CSE, which became seizure-free with Triptorelin treatment. Triptorelin is a gonadorelin analog, which causes amenorrhea by suppressing hormonal fluctuations. Another case in which Recurrent Catamenial Nonconvulsive Status Epilepticus (CNCSE) was presented in a 21-year-old woman. Around the first episode of CNCSE, she was diagnosed with Polycystic Ovary Syndrome, she used progesterone vaginal pessaries, with no effect on seizures. The patient received Norethisterone for six months, after this treatment episodes of CNCSE were no further reported. Menstrual cycle and seizure calendar are important in CE. This documentation and video-electroencephalogram help the diagnosis.

Conclusion. Recurrent CSE can also occur in CE. CSE is infrequently noted in the literature. This phenomenon and hormonal treatment should be considered in female patients.

10. CAUSES OF CERVICAL-DORSO-LUMBAR SPINE PAIN IN RHEUMATOLOGY

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Introduction. Spinal pain is one of the most common health problems. The multiple possible diagnoses associated with this symptom make it difficult to correctly attribute back pain to a particular disease. This dilemma requires an organized approach to separate patients with mechanical disorders from those with rare systemic disorders.

Aim of study. To study the clinical and paraclinical aspects of rheumatic pathologies (PSA, SA, AR, ARe, OA) regarding the pain syndrome in the cervico-dorso-lumbar spine.

Methods and materials. There were retrospectively studied 1620 patients from the rheumatology and arthrology department hospitalized between 2019-2020, of which 391 were male and 1229 female patients. The average age of the subjects included in the study was 53.82 years.

Results. Within SA, 57.05% of patients had diffuse pain along the spine, 30.12% had pain in the cervical region, 17.30% had pain in the thoracic region. and 86.53% had low back pain. Here the onset of the disease was mainly at 31.87 years and the first joint affected was 53.20% - the joints from lumbar region. Within PSA, the presence of pain was with a special predilection in the lumbar spine - 93.51%. The radiological stage on average was 2.15. In 91.46% of the SPA it manifested itself with cutaneous psoriasis. In the case of RA, the onset of the disease was on average at the age of 42.16 years, with diffuse pain in the spine mainly at 55.69%, at the the cervical region - 30.02%, and at the level of the lumbar joints - 61.01% with an average radiological stage of 2.57. In the case of ARe, the first affected region was the lumbar region in 21.62%, with an onset of the disease at the age of 35.51 years on average, the maximum being 62, with the presence of pain mainly in the lumbar region - 64.86% and in the cervical region in 45.94%. In OA, 70.32% had pain in the lumbar region, and 48.51% in the cervical region, with an onset of the disease on average at the age of 50.03 years, and the first joint affected in 10.98% was the lumbar region.

Conclusion. The region of the spine with the most pronounced pain syndrome is lumbar - 77.77%. Paraclinical analyzes showed that the highest indices of inflammation were in RA with an average ESR of 18.04, fibrinogen 3.31, PCR 15.95, with an average morning stiffness of 69.51 min, and a radiological stage of 2.57 on average, FR of 107, and an IFA of 2.65, with lumbar pain in 61.01%.

11. CHALLENGES IN MANAGING PSEUDOMONAS AERUGINOSA INFECTION IN A CASE OF NON-CYSTIC FIBROSIS BRONCHIECTASIS

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Introduction. Patients with bronchiectasis, due to recurrent respiratory infections and permanent dilatation of the bronchi, are frequently colonized with potentially pathogenic microorganisms. P. aeruginosa chronic infection triggers airways inflammation and destruction that perpetuate the vicious cycle and lead to disease progression.

Case presentation. A 38-year-old woman was referred to the pulmonary clinic at the age of 34 with a history of frequent respiratory infections during her childhood and recurrent pneumonias. She had symptoms of chronic cough, progressive dyspnea on exertion and a big amount of daily purulent sputum (120-200 ml) for more than 5 years. She has complained for three to five exacerbations per year for the last 3 years and didn't use to perform daily chest physiotherapy. Evaluation of the radiological archive (chest X-Rays performed from the age of 18 till present) demonstrated progression of the bronchiectasis from a small number of tubular bronchiectasis in the lower lung fields till extensive saccular bronchiectasis in all the lobes. The first HRCT was performed at the age of 34, when she had experienced the first episode of severe hemoptysis, and severe bilateral bronchiectasis were identified, associated with emphysema, peribronchial thickening, air-fluid level and collapsed pulmonary segments. The patient was evaluated for underlying etiology, such as congenital disease, postinfection, immune dysfunction, cystic fibrosis, primary ciliary dyskinesia, ABPA, NTM, TB or autoimmune disease but no one was confirmed and idiopathic etiology was accepted. Sputum culture showed persistent infection with P. aeruginosa (PA) despite several attempts of eradication treatment for chronic PA infection with fluoroquinolones and cephalosporines being tried. At the last admission a mucoid type of PA colonies resistant to ceftazidime were identified, and the exacerbation has been managed with intravenous fluoroquinolones.

Discussion. Frequent exacerbations need a prompt review of all aspects of the bronchiectasis management including reviewing of antibacterial treatment correlated with sputum microbiology. In our case the patient neglected airway clearance regime and adequate antibacterial treatment during exacerbations, which contributed to rapid deterioration of the lung function and severe pulmonary architecture distortion.

Conclusion. Chronic PA infection in patients with bronchiectasis is associated with a more severe disease, mainly characterized by frequent exacerbations, severe dyspnea and significantly higher radiological scores.

12. CHILDREN TUBERCULOSIS IN THE PRESENCE OF PRIMARY IMMUNODEFICIENCY CRITERIA

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Introduction. Children tuberculosis (TB) is of primary genesis - represents the response of the macroorganism to the first contact with the source of infection. Latent TB Infection (ITBL) develops frequently in children, and under certain conditions progresses to TB disease, the decisive factor being the presence of primary immunodeficiency (PID). Genetic correlations of TB susceptibility derive from the functionality of TB protection mechanisms: innate and acquired immune response. The identification of children at high risk of developing TB is essential and can be achieved by assessing the presence of criteria for PID.

Aim of study. Studying the clinical evolution, diagnostic and treatment characteristics of TB in children with PID criteria.

Methods and materials. 40 new cases of TB in children were analysed between January 2020 and December 2021, selected based on a result of the IDR score ≥6 (Immunodeficiency disease related score), considered as a significant threshold value for the suspicion of a PID condition.

Results. The average age of the analyzed cases was 6.9 years. The TB screening method was active in 20 (50.0%) cases, passive – 17 (42.5%), active with suggestive symptoms - 3 (7.5%). Symptomatic cases - 20 (50.0%) were manifested by the following TB "masks": pneumonia - 15 (75.0%) bronchitis - 2 (10.0%), neurological - 2 (10.0%), influenza-like - 1 (5.0%). Contact with other TB patients was in 30 (75.0%) cases. The frequency of the PID criteria based on the IDR score were: lymphadenopathy in 31 (77,5%) cases, neutropenia - 26 (65,0%), bacterial pneumonia - 24 (60,0%), acute bronchitis - 22 (55,0%), failure to thrive - 20 (50,0%), lymphopenia - 5 (12,5%), acute otitis media -4 (10,0%), malabsorption - 3 (7,5%), septicemia - 2 (5,0%), osteomyelitis - 2 (5,0%), splenomegaly -2 (5,0%), chronic bronchitis - 2 (5,0%), fever of unknown origin - 2 (5,0%), lymphadenitis - 2 (5,0%), abnormal weight loss - 2 (5,0%), other abcecess - 1 (2,5%), giardiasis- 1 (2,5%), gastroenteritis - 1 (2,5%). BCG immunisation was recorded in 39 (97.5%) cases. Identified clinical forms: TB of intrathoracic lymph nodes – 20 (50.0%) cases, Infiltrative pulmonary TB - 8 (20.0%), Primary TB complex - 6 (15.0%), TB pleurisy - 2 (5.0%), Bone TB - 2 (5.0%), TB of peripheral lymph nodes - 1 (2.5%), Generalised TB (with meningitis) - 1 (2.5%). In all the studied cases, the TB process was in evolution phase. Complications had 5 (12.5%) cases, manifested by: pleurisy - 2 (40.0%), atelectasis - 2 (40.0%), respiratory failure - 1 (20.0%). Microbiological confirmation - 12 (30%) cases, and histologically - 3 (7.5%). The result of the Mantoux test was negative in 25 (62.5%) cases. Treatment for sensitive TB received 29 (72.5%) of cases, and for resistant TB - 11 (27.5%). The treatment results were: completed in 28 (70.0%) cases and cured in 12 (30.0%).

Conclusion. Tuberculosis in children in the presence of PID criteria is diagnosed more frequently at an early age, with the development of pulmonary forms and complications.

13. CLINICAL AND PARACLINICAL PARTICULARITIES OF MIXED CONNECTIVE TISSUE DISEASE

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Introduction. Mixed connective tissue disease (MCTD) is a rare autoimmune and distinct disease that includes features of Systemic sclerosis, Systemic lupus erythematosus, Myositis and Rheumatoid Arthritis + the presence of antibody anti U1-ribonucleoprotein (RNP). It is most found in female patients at the mean age of 35-37 years old, sex ratio M/F of 1:10. Patients develop clinical features as: Raynaud's phenomenon, edema of the hands, arthralgias, myalgias and sclerodactyly with a high titer ANA and anti-U1 RNP.

Aim of study. Aim of the study is to represent the clinical and paraclinical particularities of MCTD in patients from Republic of Moldova in comparison with Systemic sclerosis (SSd) and Rheumatoid Arthritis (RA).

Methods and materials. This retrospective study included 30 discharge records from the section Artrology and Rheumatology of the Public Medical-Sanitary Institution Clinical Republican Hospital (IMSP SCR) "Timofei Moşneaga " for the years 2018-2020. In the number of 30 patients, 10 were diagnosed with MCTD (code M351), 10 with SSd (code M340) and the others 10 with RA (code M058). The age range was 40 to 66 years old.

Results. The M/F ratio in all 3 sets of patients was 1:10. The average age of all 30 patients was 54 y/o. The disease debuted and the diagnosis was reported: in MCTD at 42/46 y/o, in SSd at 35/45 y/o and 34/42 years old in RA. The most frequent symptoms found in patients diagnosed with MCTD were: arthralgias and morning stiffness in 10 cases, Raynaud's phenomenon (RP) – 9, myalgia - 7, edema of the hands – 6, fatigue – 6, photosensitivity – 5, esophageal dysmotility and dysphagia – 5, pulmonary fibrosis with shortness of breath was seen in 4 cases. Regarding immunological profile in MCTD, at the moment of evaluation 5 patients manifested elevated ESR (erythrocyte sedimentation rate), high titre of anti U1-RNP antibodies and presence of ANA (Anti-neutrophil antibody). On the other side, patients with scleroderma are mostly presented with specific features such as: RP-10, sclerodactyly and myalgia –7 cases, telangiectasia and hyperpigmentation of the skin –5. Lung fibrosis and dysphagia were reported more frequently – 8 cases and as for the immunological changes, there were found the presence of anti-centromere antibodies in 6 cases which were also ANA positive. RP was found in 2 cases of RA in comparison with arthralgia/arthritis and morning stiffness that were present in all 10 cases. Unique features in RA were elevated values of CRP (C reactive protein) and RF (rheumatoid factor) in 9 out of the 10 cases as well as signs of thoracolumbar vertebrae involved in the pathological process.

Conclusion. To summarize this study, we can conclude that MCTD is indeed a rare disease that affects mostly women with the average age of 42 y/o. During its debut and evolution it can be confused with other overlap syndromes or connective tissue diseases such as scleroderma, RA, SLE, but at the same time MCTD shows milder manifestations of those named above. Key words: mixed connective tissue disease, anti U1-RNP.

14. CLINICAL ASPECTS OF NON-HODGKIN LYMPHOMAS WITH PRIMARY MEDIASTINAL INVOLVEMENT

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Introduction. Non-Hodgkin's lymphoma (NHL) is a totality of lymphoproliferative diseases that differ in clinical evolution, morphology and response to various treatment regimens. NHL can develop in various organs and tissues. One of the primary locations of NHL is the mediastinum, with an involvement rate of 2.5-5.7%, and due to the topographic-anatomical features, it makes it difficult to diagnose the disease early. Thus, the study of the clinical - morphological aspects of NHL with primary mediastinal involvements is current.

Aim of study. Evaluation of the clinical and morphological features of NHL with primary mediastinal involvement

Methods and materials. The clinical and morphological characteristics were studied in (on) 49 patients, aged between 20-74 years with NHL primary mediastinal involvement, who were treated and recorded in the Department of Haematology of Oncological Institute of the Republic of Moldova. In all cases, the diagnosis was morphologically confirmed. The degree of the tumoral process spreading was determined by the International Clinical Classification received in Ann - Arbor in 1971 (USA). It was performed as a retrospective descriptive study.

Results. Studying the NHL with primary mediastinal involvement determined that, the onset of the disease more frequently occurred 40-59 (40.8%) years old, followed by 20-39 (36.8%) years, and less frequently in those over 61 (22.4%) years old, mainly in women (69.4%). Following the morphological examination, it was found that in most patients (40 out of 49 - 81.6%) were determined aggressive variants of NHL and only in 9 (18.4%) cases - indolent variants. In stage I of the disease were diagnosed 7 (14.3%) patients, in stage II - 4 (8.2%), stage III - 6 (12.2%) and in stage IV - 32 (65.3%) patients. Extranodal metastases were most commonly identified in lung tissue - 19 (59.4%) cases, pleura - 9 (28.1%), bone marrow - 9 (28.1%) cases. Less frequently, extranodal metastases were detected in the liver - 6 (18.8%), and thoracic soft tissue - 5 (15.6%) cases.

Conclusion. NHL with primary mediastinal involvement developed more frequently in the age group of 40-59 years old, mostly women. The aggressive variants of the NHL predominated. Extranodal metastases have been reported more frequently in lung tissue, pleura, and bone marrow

15. CLINICAL FEATURES IN PATIENTS WITH GOUT AND METABOLIC SYNDROME

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Introduction. In the last decades, the incidence of gout has increased in patients with metabolic syndrome. Gout associated with metabolic syndrome increases the risks of cardiovascular and renal complications.

Aim of study. Evaluation of clinical features in patients with gout and metabolic syndrome.

Methods and materials. A retrospective study of 120 medical records of patients diagnosed with gout (according to ACR criteria) hospitalised in the Rheumatology and Arthrology departments of the Public Medical Sanitary Institution Republican Clinical Hospital Timofei Mosneaga during 2019-2021.

Results. The study included 110 men (91.6%) and 10 women (8.4%). The average age of patients is 59 years. There were 75 patients with acute gout (622.5%) and 45 patients with chronic gout (37.5%). MS was detected in 65 patients (54.2%), of whom 7 were women (10.8%) and 58 were men (89.2%). Presence of MS-associated diseases: diabetes mellitus - 27 patients (41.5%), hypertension - 62 patients (95.4%), dyslipidemia - 37 patients (56.9%), hepatic steatosis - 17 patients (26.2 %), obesity - 27 patients (41.5%), chronic heart disease - 57 patients (87.7%), kidney stones - 28 patients (43.1%), chronic pancreatitis - 49 patients (75.4%). According to the laboratory data of 120 patients: hyperuricemia was detected in 55 patients (45.8%). According to the treatment for cupping the acute process was administered colchicine - 59 patients (49.2%), anti-inflammatory nonsteroidal drugs - 45 patients (37.5%) and infiltrations in joints with glucocorticosteroid - 36 patients (30%). The long-term treatments: allopurinol - 105 patients (87.5%), febuxostat - 27 patients (22.5%). Keywords: gout, metabolic syndrome, features, target organs.

Conclusion. The development of target organs damage in patients with metabolic syndrome and gout was detected in 65 patients (54.2%), compared to patients with gout without metabolic syndrome - 55 patients (45.8%). Highlighting patients with gout, with or without metabolic syndrome, is necessary in order to establish the early target organs damage and prevent complications.

16. CLINICAL FEATURES, DIAGNOSIS AND TREATMENT OF CHRONIC LYMPHOCYTIC LEUKEMIA

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Introduction. Chronic lymphocytic leukemia (CLL) is a primary lymphatic tissue disease characterized by the proliferation and accumulation of a malignant clone of lymphocytes stuck in maturation and immunologically incompetent. Morbidity in the Republic of Moldova is 1.2 cases per 100,000 population. Thus, the reason for studying this pathology has served as an increase in morbidity in recent years, frequent relapses, the development of infectious and immune complications, leading to inability to work, sometimes even the death of people with chronic lymphocytic leukemia.

Aim of study. Study of clinical aspects, diagnostic methods and the principles of treatment at patients with chronic lymphocytic leukemia.

Methods and materials. A group of 60 patients (35 men and 25 women) aged 40-76 years (average age 64.2) were studied, who were under the evidence of hematologists inside the Hematology Consultative Center of the Oncological Institute from the Republic of Moldova. The clinical diagnosis of CLL was confirmed by morphological examination.

Results. The disease has developed mainly in people aged 60-79 years. In stage A, 32 (53.3%) patients were diagnosed. In the evolution of CLL in 7 (11.7%) patients, the disease evolved to stage C, sarcomatization, with the development of Richter syndrome. At the objective examination were found: lymphadenopathy and hepatomegaly (85.7%) splenomegaly (57.1%). In the peripheral blood the leukocytes varied between 12-505 109 / L, and the lymphocytes between 55-97%. As a treatment, in stage A, chlorambucil therapy was initiated in only 10 (6%) patients, the rest were monitored ("watch and wait"). In stage B, chlorambucil, rituximab, vincristine, ibrutinib were used and in more advanced cases, FCR (fludarabine, cyclophosphamide, rituximab), R-CP (rituximab, cyclophosphamide, prednisolone), R-CVP (rituximab, cyclophosphamide, vincristine, prednisolone). Autoimmune haemolytic anemia was detected in 6 (10%) patients, autoimmune thrombocytopenia in 6 (10%) patients, and (5%) were associated with both autoimmune complications, patients with infectious complications 19 (31.6%). The overall survival rates over one year, 3 and 5 years were 97.4%, 90.2% and 74.1%, respectively.

Conclusion. Chronic lymphocytic leukemia develops more frequently at the age of 60-69, mainly in men. Most patients were diagnosed in clinical stage A. In stage B in the clinical picture, peripheral lymphadenopathy, splenomegaly and hepatomegaly predominated. Infectious complications were recorded in 31.6% of people. Overall survival over 5 years was 97.4%.

17. COMPLETE REMISSION OF TYPE 1 DIABETES MELLITUS

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Scientific adviser: Džilda Veličkienė MD, PhD, MBA, Professor of Endocrinology

Introduction. Typically people diagnosed with type 1 diabetes mellitus (T1DM) are treated with insulin for the rest of their life in order to substitute the lost function of beta cells. In the beginning of the treatment some patients may regain lost function of beta cells for some time. This phase is called honeymoon period and such recovery can be partial (when only minimal doses of insulin are needed) or complete (when patients do not require any insulin or oral medication at all – it is extremely rare and pathogenesis is not clear yet). This case is about a 23 year old woman with complete remission of T1DM.

Case presentation. A 21 year old woman visited a general practitioner complaining of thirst and dry mouth. Random plasma glucose (PG) levels were 6,02 mmol/L and 6,69 mmol/L. Glucose tolerance test was: fasting PG – 7,15 mmol/L, two-hour PG – 9,25 mmol/L. C-peptide – 1,3 mmol/l (within the normal range). Because of the typical symptoms of diabetes mellitus and glycemia > 7,0 mmol/l the patient was diagnosed with T1DM. Moreover, increased levels of antiGAD65 (2,94 nmol/L) were found which also confirmed the diagnosis of T1DM. The patient was prescribed insulin Toujeo (4 units per day) and the usage of it resulted in the reduction of symptoms and corrected PG levels, so the woman discontinued using insulin for more than one year and still does not use it. Because of a long period of T1DM remission and suspicion of MODY the patient was consulted by a geneticist. Mutations of GCK, HNF1A and HNF4A genes were not detected, so the diagnosis of MODY was not confirmed. Also, some cases of T2DM and gestational diabetes were found in woman's family history. Because of the pregnancy the patient at the age of 23 was consulted by a gynecologist and no abnormalities were found as well. Consultation of the endocrinologist was also indicated for further observation and treatment of T1DM. Her glycemias and HbA1c were in normal ranges without any episodes of hypoglycemia during the entire pregnancy period and PG levels were successfully controlled by diet only. Afterwards in the 40 weeks of gestation the woman gave birth to a healthy girl weighing 3200 grams. After the birth the patient was absent with DM symptoms and levels of PG were normal as well.

Discussion. Complete remission of T1DM is immensely infrequent with a rate of 0% to 3,2%. It occurs because of normalization of sensitivity to insulin and transient recovery of beta cells. Pathogenesis of this process remains unclear but it is predicted to be related to IL-10-dependent T-cell regulatory pathways.

Conclusion. This case of complete remission of T1DM before, during and after pregnancy is surprising and raises even more questions which answering them may reveal a new approach to diabetes mellitus development and pathogenesis.

18. CONTEMPORARY APPROACHES IN DERMATOCOSMETOLOGY

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Introduction. Dermatocosmetology is a branch of aesthetic medicine, the science that deals with solving different problems of the skin, in order to maintain the elasticity of dermis, muscle tonicity, freshness and aspect, through loads of innovative procedures that are non-invasive or minimally invasive.

Aim of study. During the last years, a great interest is observed for esthetic medicine. There is enormous success in mini-invasive procedures or injectable and laser therapy. In case of some deformities, inherited or acquired, real or imaginary, invasive interventions are increasingly used – plastic or reconstructions.

Methods and materials. An electronic, anonymous questionnaire made up of 18 questions was composed. The answers were collected during three months.

Results. The results of the questionnaire were systematized so in the study took part 713 people, most of them aged between 15-25 (42, 2%), followed by 25-35 years (39%) according to gender - men 8,8% and 91,2%- women; in the urban environment live 71, 8%, and in the rural 28,8 %. Out of 23 dermato-cosmetological procedures provided to respondents the most often requested are the following manual cosmetic cleaning-54, 8%; Laser epilation, IRL -41,4 % and chemical peeling -25,2%. The respondents specified that they also did aesthetic plastic interventions 11,8%, the more requested were scar treatment – 8,7%; hair implant -7,4% and facial lifting-5,4%. The another question ,,how often do you call for medical services of aesthetic medicine”- 29,9% stated 3-4 times a year, 28, 4% once in a few years, 20,5% go every month,18, 5% - once a year, and only 2,6% monthly. The factors that determined them to use these services – 89,7% stated - on their own initiative, followed by the answer ,,under the influence of the mass-media” - 17,6%. The most often, the respondents chose to perform in the cosmetic offices-69,4% as well as in the aesthetic medicine clinic - 30,5%, being provided by a cosmetologist-32,7%, by an esthetician- 29,4%, and – 27, 6% -cosmetician, as well as 21,7% mention that go to a dermatologist. The next question, "Who can practice cosmetology?" the majority selected- a doctor- 61,4%, and regarding the accessibility of aesthetic medical services - 59,3% stated that they are expensive. For the majority of them it matters the most in a clinic - the professionalism of the doctors - 95%. According to the degree of satisfaction, the respondents divided in the following way, 64,2% said that they are satisfied, 22,9% very satisfied, and only 12,9% partly satisfied.

Conclusion. Our study showed that both men and women of different ages often use cosmetic medicine, aimed to treat skin conditions and alert the imperfections through different contemporary methods.

19. DEPRESSION - EPIDEMIOLOGY AND TREATMENT

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Introduction. Depression is a common and serious medical illness that negatively affects how you feel, the way you think and how you act. Approximately 280 million people in the world have depression (Global Health Data Exchange). According to Our World in Data, in the Republic of Moldova in 2017, depression affected 153 thousand people, of which 36% were men and 64% women. Depression is the result of complex interactions between social, psychological and biological factors. People who have gone through adverse life events are more likely to develop depression. Recovery requires great efforts, a multidisciplinary and holistic approach. Treatment options for managing depression can generally be divided into antidepressants, electroconvulsive therapy, and psychosocial interventions.

Aim of study. The purpose of the research is to identify the socio-determining factors in the appearance of the depressive syndrome, to study the epidemiology, the principles of prophylaxis and treatment.

Methods and materials. A survey was conducted through 15 questionnaire questions about the influence of various socio-demographic factors on depression. The questionnaire has an important data about age, gender, living environment, level of education, marital status, social and professional status. The survey was conducted on a sample of 50 people from the territory of the Republic of Moldova.

Results. Based on an opinion poll conducted on a group of 50 people from Republic of Moldova, aged 18-35 years, it was found that 23 of them (46%) suffered at least once in their lifetime from depression, 60.86% of them being aged from 18-25 years, with the predominance of the urban environment (64%). Of these 23 people, 11 are married, that represents 48%. The highest number is registered among students 48.82% (from these 23 positive answers), or 11 students out of 19 who participated in the survey. Regarding the way they overcame the episode of depression, 91.31% of affected persons passed over him with help of music, sport, travel, and only 8.69% turned to specialized help.

Conclusion. Depression is a common illness worldwide, with an estimated 3.8% of the population affected, but the results show that the real number far exceeds the estimated. According to the results of the survey, most of those who have suffered from depression live in urban areas and are between 18-25 years old. A fairly high prevalence is registered among married people, which confirms the involvement of environmental factors in the etiology of depression, and if we refer to social and professional status, the highest prevalence is among students and people with higher education. Thus, we can confidently say that depression has a complex etiology and the main measure of prophylaxis is to detect and remove the triggers.

20. DIGITAL MONITORING OF MULTIPLE SCLEROSIS PATIENTS

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Introduction. It is not possible to predict how multiple sclerosis (MS) will progress in any individual and it's difficult for a single specialist to manage all data of the disease and to offer an individual approach to each patient. The existing management strategies require patients to attend regular follow-ups at the medical centers, ideally at 6 or 12 months intervals. More regular personal consultations could improve disease outcome, but are limited by the time, cost and geographical restraints. The spread of COVID-19 pandemic has even further tightened the burden on monitoring chronic diseases like multiple sclerosis. Additionally, studies find that patients with MS more often feel depressed, have a higher level of stress and feel significantly less social support.

Aim of study. Review of literature on evaluation of the efficiency of new digital methods of monitoring patients with multiple sclerosis.

Methods and materials. Published literature of the last 5 years, involving the digital technologies for remote monitoring of patients with multiple sclerosis.

Results. Technological innovation is changing the traditional interaction between the patient and the healthcare workers, enabling patients to contribute with more health data between the regular visits. The most accessible device used is the smart-phone through apps or the internet. The apps can be divided in four categories to evaluate: screening and assessment, monitoring and self-management, treatment and rehabilitation and advice and education. The screening and assessment apps are an alternative to the standard neurostatus scoring tests performed by the physicians. Apps for monitoring disease can be combined with portable activity monitoring sensors, like wireless pressure sensors in patient shoes, accelerometers, gyroscopes, grip sensors can detect small changes in patient's gait, posture and balance. Some applications can provide advice and education to stimulate the patient's adherence to treatment and rehabilitation exercise programs. To collect the high volume of information that certain tools generate we can use Artificial Intelligence to create a digital twin paired to a patient's data, a technology in development at the moment.

Conclusion. Digital technologies may be a game-changing strategy in monitoring multiple sclerosis, however most of them need to be perfected and further studied before widespread adoption is likely. Introduction of movement sensors and Artificial Intelligence could help detect small changes in the course of the disease and alert the physicians. It remains to be studied if in the long term they benefit the patient's outcome.

21. DOPING PREVENTION IN SPORTS

Author: Turcanu Natalia

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Introduction. Doping prevention is a matter for society as a whole and not an exclusive concern of elite sport. This statement is the consequence of considering the desire for performance-enhancement as a societal phenomenon and acknowledging the association of athletic success and appearance with strength, competence, and social ability.

Aim of study. This research aims to study the fundamental role of athletes in competing in a clean, doping-free sport and thus to promote health, fairness and equality of athletes worldwide and to implement effective, coordinated and harmonised anti-doping programs to prevent doping.

Methods and materials. National and international regulations, 30 scientific publications, reports of national and foreign statistical data were studied. The following methods were applied: statistical, structuralist, analytical.

Results. Doping should focus on young athletes, involving family members and coaches. In connection with anti-doping programs that focused on health education and information skills, prevention of doping based on moral behaviour was considered to be more effective in the actual doping behaviour of athletes. Because coaches could influence athletes' anti-doping behaviour, there should be collaboration between sports organisations and decision makers to help coaches work according to anti-doping rules by creating certain doping prevention programs. Sports regulatory authorities have reported rates ranging from 5% to 31% for the use of performance enhancing substances among athletes. Athletes can have serious injuries and morbidities, which leads to poor health using such substances. Commonly abused substances in sports include anabolic-androgenic steroids and its analogues, blood, erythropoietin, growth hormone and its derivatives, nutritional supplements, creatine, amphetamines, beta-hydroxy-beta-methylbutyrate (HMB), diuretics, stimulants, and analgesics.

Conclusion. (1) In order to minimise the phenomenon of doping, it is necessary to carry out information campaigns and formulate certain prevention programs, starting with athletes from an early age with the involvement of other stakeholders (sports doctors, coaches or family). (2) Focusing on sports pharmacology in the medical curriculum can help future health professionals to help athletes improve their quality of life by using different medicines and other substances within standardised limits and avoiding doping.

22. DRUG INDUCED LIVER INJURY: RISK FACTORS

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Introduction. Drug induced liver injury (DILI) is a relatively rare hepatic condition as a result of the use of illegal drugs, herbal products, dietary supplements, medications or other xenobiotics. It occurs in susceptible subject through a combination of genetic and environmental risk factors believed to modify drug metabolism and/or excretion leading to a cascade of cellular events, including oxidative stress formation, apoptosis/necrosis, haptenization, immune response activation and a failure to adapt. Liver toxicity related to drugs has been classically divided into two varieties: intrinsic and idiosyncratic. The intrinsic is dose related and occurs after exposure, the idiosyncratic does not correlate with the dose,

Aim of study. Assessment of risk factors in the evolution of hepatic disease induced by drug use

Methods and materials. All information was obtained from a literature review based mostly on EASL Clinical Practice Guidelines.

Results. New epidemiologic data suggest that approximately 20 new cases of DILI per 100,000 persons occur each year. Idiosyncratic drug induced liver injury accounts for 11% of the cases of acute liver failure in the United States. According to the research DILI is more likely to occur in females, the elderly, and patients with chronic liver disease, HIV, and obesity. Female sex may be considered a risk factor for DILI associated with specific drugs. Age has been cited as a risk factor for DILI, but the at-risk age groups differ according to specific drugs. Older age is a risk factor for DILI from isoniazid, whereas youth is a risk factor for DILI related to valproate and aspirin.

Conclusion. Drug induced liver injury is assumed to be a multifactorial condition. Risk factors for DILI are: medication dose, drug lipophilicity, and extent of hepatic metabolism. There is mixed evidence to support the role of host factors such as age, sex, and chronic liver disease. The impact of these risk factors may vary between individuals.

23. EPIDEMIOLOGICAL, CLINICAL AND TREATMENT ASPECTS OF HEMOPHILIA IN THE REPUBLIC OF MOLDOVA

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Introduction. Hemophilia is a rare inherited, recessive X-linked disease caused by a deficiency or lack of a plasma coagulation factor (VIII or IX). In the structure of inherited coagulopathies, hemophilia occupies 96-98%, being considered one of the most common forms of coagulopathies.

Aim of study. Studying the epidemiological, clinical and treatment aspects of patients with hemophilia in the Republic of Moldova.

Methods and materials. Is a retrospective study performed on a group of 92 adult patients with hemophilia, under supervision and treatment in the Hematology Department of the Oncological Institute of the Republic of Moldova. The study is based on the analysis of data from outpatient medical records and clinical observation sheets of the respective patients based on a questionnaire developed to achieve the purpose of the research. The inclusion criteria in the study was the existence of an established clinical diagnosis of hemophilia.

Results. As a result of the research, it was determined that the diagnosis of hemophilia A was found in 80 (86.9%) cases, and hemophilia B in 12 (13.1%). The obtained data correspond to those in the literature. Data on the concentration of coagulation factor were also processed, which was determined in only 35 patients, of which 22 (63 %) the concentration was <1%, from 1% to 2% - 7 (20 %), from 2% to 5% - 5 (14 %) patient and > 5% in 1 (3 %) cases and the distribution of all patients with hemophilia according to the degree of severity according to clinical data determined the presence of very severe form in 20 (21.7%) patients, severe in 32 (34.8%), moderate in 19 (20.7%) and mild in 21 (22.8%) cases. The analysis of the data regarding the complications of the disease, which is an index of the quality of life of the patient with hemophilia, showed the predominance of the complications of the basic disease (58.7%), mainly arthropathies (54.3%) but it was found that they were diagnosed frequently and post-transfusion.

Conclusion. Progress in the treatment of patients with hemophilia, with the introduction of maintenance therapy with factor concentrates, has prevented life-threatening bleeding accidents, reduced the number of hospitalizations, avoided complications that could lead to disability and ensuring a favorable quality of life with a socio-economic impact for a long time.

24. ETIOLOGICAL APPROACH CORRELATED WITH RADIOLOGICAL, FUNCTIONAL AND MICROBIOLOGICAL PROFILE IN ADULT PATIENTS WITH BRONCHIECTASIS

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Introduction. Bronchiectasis is a disabling disease that remains under-diagnosed with significant delay in the initiation of an appropriate therapy according to the etiology and appropriate microbiological and pulmonary function tests.

Aim of study. This study aimed to determine the etiology, radiological, microbiological and lung function profile in adult patients with non-cystic fibrosis bronchiectasis hospitalized in a tertiary care hospital due to an acute exacerbation.

Methods and materials. We prospectively evaluated 36 patients with bronchiectasis confirmed by high resolution computed tomography (HRCT) of the chest. Etiology, clinical data, mReiff radiological score, microbiological profile and lung function were analysed.

Results. We evaluated 36 patients (25 women) with bronchiectasis (mean age: 55.5 ± 16 years), 25% of them being non-smokers. The etiology of bronchiectasis was identified in 75% of cases and 25% being idiopathic. Past tuberculosis (34%) was the most common cause, followed by COPD (28%) and post-infectious (13,8%). All patients presented with cough and mucopurulent sputum, and in 15% cases hemoptysis was reported. Mean duration of symptoms was 10.7±11.7 years. Obstructive pulmonary pattern was identified in 63%, and 37% of cases were with a preserved pulmonary function. The patients had normal spirometry. *P. aeruginosa* was the most common pathogen yielded in sputum cultures (19%), followed by *H. influenzae* (13%). Patients with *P. aeruginosa* chronic infection had a more long-standing disease and a worse lung function.

Conclusion. Idiopathic, past tuberculosis and COPD constitute major bronchiectasis etiologies in our cohort of patients and P. aeruginosa was the most frequent bacteria isolated, being associated with a more severe disease.

25. EVOLUTION OF TB IN BCG UNIMMUNIZED CHILDREN

Author: Crangaci Marin

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Introduction. The anti-vaccination movement increase in society has led to a significant decrease in children vaccinated with BCG. This has a direct impact on the increase in the number of severe cases of TB and makes the outcome of anti-TB treatment unpredictable.

Aim of study. Study of the evolution of tuberculosis in children not vaccinated with BCG.

Methods and materials. We examined a sample of 20 cases of TB in BCG unimmunized children and evaluated the risk factors of having TB, the methods used to confirm TB, and the clinical evolution.

Results. The study sample included 12 boys (60%) and 8 girls (40%), 15 (75%) children being of risk age. Parent refusal of BCG immunization was found in 9 (45%) cases, followed by 2 (10%) children that have contraindication. 14 (70%) children were found in a family or school TB outbreak, 4 (28,5)% of them were from MDR outbreak. There were 19 (95%) cases tested by Mantoux test - 16 (80%) were negative and 3 (15%) were hyperergic, by CT were examined 16 (80%), and by Quantiferon 9 (45%) out of which 4 (20 %) were positive. There were found 6 (30%) children with intrathoracic tuberculous lymphadenopathy, 2 (10%) HIV co-infected children. Furthermore, 1 (5%) adolescent was found with infiltrative pulmonary TB. At hospitalization, the structure of concomitant pathologies was: anemia 9 (45%), RS– 4 (20%), GIS 3 (15%), US - 1 (5%), CVS - 1 (5%) CNS - 1 (5 %). The improvement in clinical dynamics at 1 month was estimated at 30%. At 2 months the clinical manifestations improved by 65%, and at more than 2 months of treatment

Conclusion. The data in the literature on the prevention of M. tuberculosis infection of the BCG vaccine are controversial, but the fact that the BCG vaccine has a protective effect and decreases the time needed to relieve symptoms remains irrefutable.

26. FIVE DISEASES MAKE A MIXED CONNECTIVE TISSUE DISEASE

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Introduction. Mixed connective tissue disease (MCTD) is a rare autoimmune disorder that has 5 other connective tissue diseases: systemic lupus erythematosus, systemic sclerosis, polymyositis, dermatomyositis and rheumatoid arthritis. A sixth - Sjögren's syndrome, is commonly associated with each of these diseases. Current clinical records often note that one autoimmune rheumatic disease seems to evolve into another over the course of several years and this occurs in approximately 25 percent of patients.

Case presentation. We report a case of a female patient A, 43 y.o., she is complains started with the insidious onset manifested by inflammatory joint syndrome of bilateral radiocarpal, talocrural, synovitis of knee joints and decreased muscle strength, morning stiffness > 30 minutes with relief from exercise and movement, swelling of the proximal and distal metacarpophalangeal joints, skin hyperpigmentation on the trunk, heart palpitations, positive Shirmer test, weight loss 10 kg, severe fatigue by VAS - 82/100 mm.

Discussion. Radiography features showed erosions and deforming like in rheumatoid arthritis. Echo showed moderate pulmonary hypertension, mitral and tricuspid valve regurgitation stage II. Serological examination showed (anti-CCP, ScL-70, dsDNA -negative, C3, C4- norma, rheumatoid factor, anti-RNP are positive. A diagnosis of MCTD was made, based on the criteria of Alarcón-Segovia and Villareal; patients met both clinical and serological criteria, with Anti-RNP values in high titers.

Conclusion. MCTD is a well-defined entity using well-defined criteria. The complications of the disorder have already been described, most deaths from MCTD are due to heart failure caused by pulmonary arterial hypertension and ILD because it is important to note that both comorbidities worsen patient prognosis. The medications and dosage will depend on the severity of activity and damage disease.

27. GONADAL FUNCTION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Introduction. Epidemiological studies prove that androgen deficiency frequently develops in men with type 2 diabetes mellitus (DM), predicts future diabetes risks and increased mortality. Although this link is established, the role of testosterone replacement therapy in type 2 DM has not been fully clarified.

Aim of study. To assess the current evidence on the relationship between endogenous testosterone and type 2 diabetes, the mechanisms that might mediate this relationship and the impact of exogenous testosterone treatment in men with type 2 diabetes.

Methods and materials. A literature review was performed regarding the correlation of hypogonadism and type 2 DM, risks and benefits of testosterone replacement therapy. Source selection was based on PubMed and Google Scholar search engines, from January 2020 to February 2022.

Results. Analysis of the literature found a bidirectional relationship between type 2 diabetes and hypogonadism. The prevalence of hypogonadism is three times higher in type 2 DM, compared to people without diabetes, it has an inverse correlation with age and body mass index, and is a strong independent risk factor for mortality. The pathogenesis of hypogonadism involves dysregulation at all levels of the hypothalamic–pituitary–testicular axis. Reduced testosterone in type 2 DM is due to insulin resistance at CNS receptors, as well as to high concentrations of proinflammatory cytokines, which inhibit gonadoliberin and decrease luteinizing hormone levels. Testosterone replacement therapy has positive effects on carbohydrate metabolism, weight and body composition, erectile function, pharmacological doses induce vasodilation of coronary arteries and are associated with a reduced incidence of angina pectoris. However, testosterone therapy also has certain shortcomings, the most common adverse effect is increased haematocrit, and cardiovascular safety remains controversial. At this point, most authors recommend testosterone replacement therapy only to symptomatic patients with confirmed hypogonadism that persists after reaching glycaemic objectives, in the absence of contraindications, but not to asymptomatic patients or those with decompensated DM.

Conclusion. Hypogonadism is frequently associated in type 2 DM with negative impact on quality of life, sexual function, accentuating metabolic disorders, cardiovascular risks. Considering the benefits and risks associated with testosterone replacement therapy, there is a need for further studies, the ultimate goal being the safe and effective management of hypogonadism in patients with type 2 DM.

28. GOUT IN WOMEN

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Scientific adviser: Larisa Rotaru, MD, Associate Professor, Discipline of Rheumatology and Nephrology, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The incidence of gout has doubled in women over the past 20 years, according to the Rochester Epidemiological Project. Given the important role of estrogen in serum uric acid concentrations as well as the substantial difference in the incidence of gout between the sexes and probably in uric acid metabolism.

Case presentation. The patient CM, 65 years old, was hospitalised in the Nephrology Department IMSP SCR "Timofei Moşneaga" accusing: low back pain, bilateral, permanent arthralgias in the joints of the lower limbs, accentuated at the knees, permanent pain, increasing in intensity to physical exertion; morning stiffness; precordial pain, constrictive type; mild dyspnea on exertion; marked asthenia; fatigue; dizziness. Precordial drugs twice a month. He went to the Institute of Cardiology, the diagnosis of rheumatic valvulopathy was established: mitral regurgitation. Hypertension, grade III, very high additional risk. Severe bradycardia, FCC 30-35 b/m, in 2009 the patient was implanted with electrocardiostimulator. After the age of 50, arthralgias in the knee joints intensified. In 2010, the diagnosis was established: Secondary gout, mixed variant, chronic evolution. Left kidney nephrosclerosis. Right renal artery stenosis. In 2019, clinical diagnosis was established: Secondary gout, mixed variant, chronic gout, with damage to the joints of the lower limbs, in association with osteoarthritis, polyosteoarthritis, bilateral gonarthrosis, st.R.II-III. Mixed osteoporosis. Chronic bilateral pyelonephritis, recurrent evolution, incomplete remission. Uric nephropathy. Left kidney nephrosclerosis. Right renal artery stenosis. Additional right renal artery. BCR IV. Mixed grade II anemia. Rheumatic valvulopathy: wide mitral stenosis of the mitral valve. V Mtr. Insufficiency VAo. gr.II. Insufficiency VTr gr.II. Calcined gr.IV in the cusps VAo gr.II. Moderate pulmonary hypertension (50mmHg). FE 63%. Hypertension gr.II-III, very high additional risk. ICC II-III (NYHA). Chronic hepatitis of viral etiology. Mixed chronic discirculatory encephalopathy grade II-III.

Discussion. The main impediment in the diagnosis of gout in women, however, is the rarity of this disease in females. In the postmenopausal period, most patients have a non-specific clinical picture, there is no classic acute access to gout, which is why it is required to make a differential diagnosis with a series of diseases starting in the postmenopausal period.

Conclusion. We wanted to highlight once again the increased incidence of gout in the postmenopausal period, especially in women with earlier onset of menopause as in the case of our patient. The patient chronically uses diuretics, which still causes hyperuricemia.

29. IMAGING DIAGNOSIS IN LIVER CIRRHOSIS (ULTRASONOGRAPHY)

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Introduction. Liver Cirrhosis is a chronic disease that is irreversible and characterized by necrosis of liver parenchyma further leading to fibrosis. It is a broad hepatic disease marked by fibrosis and the transformation of normal liver architecture into structurally aberrant nodules, according to histology. Cirrhosis can develop over a period of weeks to years after a liver injury. Cirrhosis affects some persons who are fully asymptomatic and have a normal life expectancy. Others have all kinds of the most severe symptoms of end- stage liver disease, as well as a poor chance of surviving. Hepatic fibrosis has already advanced to the stage where the hepatic vasculature is distorted, resulting in vascular distortion that will cause the portal and arterial blood supply to shunt directly into the hepatic outflow via central veins. While the alcoholic liver disease was once thought to be the leading cause of chronic hepatitis and cirrhosis in the US, hepatitis C is now the leading cause of cirrhosis and chronic hepatitis in the country. Non-alcoholic fatty liver disease (NAFLD) appears to be the cause of many occurrences of cryptogenic cirrhosis. Many patients with cryptogenic cirrhosis have one or more of the conventional risk factors for NAFLD, such as obesity, diabetes, and hypertriglyceridemia. In advanced liver cirrhosis, imaging findings include atrophy of the posterior segments (6 and 7) of the right lobe, as well as hypertrophy of the lateral segments of the left lobe (segments 2 and 3) and caudate lobe. Changes in the blood flow between the segments are most likely to be responsible for these changes.

Aim of study. Cirrhosis of the liver is the final step of a complicated process that begins with hepatocyte injury and ends with partial regeneration and fibrosis of the liver. Cirrhosis stage 1 is distinguished by liver scarring but few symptoms. Compensated cirrhosis in this stage is characterized by the absence of complications. Cirrhosis stage 2 is associated with worsening portal hypertension and the appearance of varices. Cirrhosis stage 3 is described by abdominal swelling and advanced liver scarring. Decompensated cirrhosis, with serious complications and the possibility of liver failure, is diagnosed at this stage. Cirrhosis at stage 4 can be fatal, and some people develop the end-stage liver disease (ESLD), which could potentially cause death without liver transplantation. Basic imaging diagnosis of liver cirrhosis has improved over the last few decades, allowing for early detection of morphological abnormalities in the liver using ultrasonography (USG). The liver has a large area of contact with the abdominal wall.

Methods and materials. In this article, previous articles were studied and analyzed from PubMed, Google Scholar, and NCBI sites.

Results. Sonography is a safe, non-invasive, fast, and relatively low-cost method of testing the liver that can be done at the patient's bedside with minimum assistance. Ultrasound of the liver is frequently used to determine the size of the organ. Changes seen in Liver on USG include surface nodularity: (88% sensitive, 82-95% specific), overall coarse and heterogeneous echotexture, segmental hypertrophy/atrophy, caudate width: right lobe width more than 0.65 mm (43-84% sensitive, 100% specific), reduction of the transverse diameter (less than 30 mm) of the medial segment of the left lobe (segment 4).

Conclusion. The study shows the importance of Ultrasonography in Liver Cirrhosis and its stages.

30. IMPACT OF COPD EXACERBATIONS ON HEALTH-RELATED QUALITY OF LIFE

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Introduction. COPD is a complex heterogeneous disease, characterized by persistent and progressive airflow limitation with estimated prevalence ranging between 8 and 15 %. Acute worsening of clinical state being associated with significant mortality making it the third leading cause of death worldwide and a true socioeconomic burden. With each exacerbation, quality of life tends to worsen due to lung function decline described by patients as aggravation of subjective and physical state that do not fully reflect patients condition. The task of the medical community is to identify the right tools for assessing quality of life in patients with multiple exacerbations in COPD.

Aim of study. Comparative assessment of the quality of life in frequent exacerbators and non- exacerbators by using standard tools.

Material and methods. In this study were enrolled 67 patients with different COPD severity, hospitalized during the period of 2012-2016. From each patient were collected anthropometric data, were evaluated dyspnea severity via mMRC and lung function using Jaeger® Master Screen Body by measuring FVC, FEV1, FEV1/FVC. Collected statistical data were processed by using Statistica 6.0 (Statsoft Inc).

Results. 55 (82%) men and 12 (18%) women with mean age of 62,3 ± 9,9 years participated in the research, 31 were included in non exacerbators group (≤ 1 exacerbations/ year) and 36 in frequent exacerbators group (≥ 2 exacerbation/ year). Comparative assessing of clinical markers depending on the rate of exacerbation (age, weight, height, BMI, pack/year, mMRC) and mean results of quality of life measurement tools (SGQR and CCQ) of both groups revealed a decline of quality of life in patients with multiple exacerbations (SGRQ-non exacerbators- 54,34 ± 14,18, frequent exacerbators- 65,84 ± 11,59 ($p < 0,05$); CCQ non-exacerbators- 2,60 ± 0,64 , frequent exacerbators 3,05 ± 0,62 ($p < 0,05$);). 6MWD showed a moderate correlation with exacerbation rate ($r = -0,67$ $p < 0,05$).

Conclusions: In COPD multiple exacerbations lead to decline in quality of life. Malleable exogenous factors should be modified in order to reduce the rate of exacerbations.

31. IMPACT OF TUBERCULOSIS ON THE EVOLUTION OF PREGNANCY, DELIVERY AND PERINATAL OUTCOMES

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Introduction. Pregnancy, childbirth and the postpartum period in women are factors that contribute to the appearance and exacerbation of inactive outbreaks of tuberculosis. The overload of all body systems during pregnancy conditions the aggravation of the woman's state of health. In pregnant women, the nervous and cardiovascular systems are significantly affected, an increased load on the kidneys is required, associated with an additional excretion function of the products of the metabolism of the fetus. The placenta is included in the hormonal metabolism, thus contributing to the hormonal changes of the woman's organism. Accumulation in the blood of human chorionic gonadotropin, increased level of estrogen, glucocorticoids and aldosterone is disrupting hormonal balance and leading to immunosuppression. During pregnancy, childbirth and lactation, iron loss can be up to 700-800 g, this is with an impact on the health of the mother. The management of TB cases detected in women during pregnancy depends on the time of detection, which has a major impact on the prognosis.

Aim of study. Studying the peculiarities of pulmonary tuberculosis in pregnant women and evaluation of risk factors in the development of tuberculosis.

Methods and materials. 28 cases of tuberculosis diagnosed in women during pregnancy in 2010-2020 were analyzed.

Results. It was established that women diagnosed with tuberculosis during pregnancy had the age of 35-40 years in 12 (42,8%) cases, 20-34 years –in 9(32,2%), and in 7(25%) cases - they had the age of more than 40 years. The gestation term in the analyzed cases were: in the first quarter they were diagnosed with TB 7 (25%), in the second quarter – 13 (46,4%), in the third quarter – 8(28,6%). Screening of TB during pregnancy was by addressing in 100% cases. Contact with other TB patients was established in 13(46,4%) cases. In most cases 13(78,5%) women diagnosed with TB during pregnancy were not officially employed, so the social risk factor is very important. Among the clinical forms of pulmonary TB diagnosed in pregnant women were: infiltrative pulmonary tuberculosis – 17(60,8%), Nodular pulmonary TB – 6(21,4%), TB Pleurisy – 5(17,8%) cases. Pulmonary destruction was present at the radiological examination in 16(57%) cases. Analyzing the type of case was found "New Case" in 21(75%) and "Retreatment" in 7(25%) cases. Anemia had 22(82,1%) of the women included in the study. The treatment for sensitive TB was administered in 19(67,8%) cases and for resistant TB – 9(32,2%). In all cases, treatment was administered according to individual schemes. Adverse reactions of antituberculosis treatment were recorded in 6(21,4%) of patients. Positive result of antituberculosis treatment had 23(82,1%) cases. Pregnancy in women diagnosed with TB ended beneficially – with the birth of a healthy baby in most cases, only in one (3,6%) case the pregnancy was solved with the death of the child. Premature birth was recorded in 1/3 cases.

Conclusion. Diagnosed TB in pregnant women has a severe course. Infiltrative pulmonary TB predominates. Administration of antituberculosis treatment is imposed by the gestation term. Pregnant women with suspicious signs should be evaluated for a timely diagnosis of TB.

32. KIDNEY LESIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Introduction. Kidney lesions in SLE develop at the beginning and during the course of the disease, in the form of glomerulonephritis, tubulointerstitial nephritis or vasculitis. Characteristic clinical and laboratory changes help to make a definitive diagnosis.

Case presentation. Female patient, 53 y.o., was hospitalized on 17.01.2018 in the RCH ``Timofei Mosneaga" with complaints of: joint pain with inflammatory character, with a predominant lesion of the shoulder joints, periodic dysuria, nocturia, severe weakness, tachycardia and heart pain with minimal physical activity. She considers herself ill since April 2016, when pain in the shoulder joint appeared with a decrease in its mobility. Soon almost all joints joined, shortness of breath, pain in the heart, tachycardia appeared. The diagnosis was made: Spondylopathy, Cardiopathy, treatment was prescribed. Soon changes on the skin appeared in the form of discoid rashes, after which, on 23.01.2017, the patient was hospitalized in the RCH "Timofei Mosneaga" in the Department of Rheumatology, where a clinical diagnosis was made: SLE, chronic course, activity II, SLEDAI= 20/105 with a predominant lesion of the skin (facial erythema, discoid erythema, photosensitivity), peripheral vessels (Raynaud's syndrome, livedo reticularis), musculos

Discussion. Lupus nephritis is diagnosed in about 50% of patients with SLE. However, the overall prevalence is probably > 90% because renal biopsy in patients with suspected SLE without clinical signs of kidney disease reveals changes characteristic of glomerulonephritis, following the example of our patient, who fell into this category of patients and as a result of which the patient needs Hemodialysis.

Conclusion. Kidney lesions in SLE is a common manifestation of the disease, which largely determines the course of SLE, so timely diagnosis and treatment affect the prognosis of the disease.

33. LADA MISDIAGNOSED AS TYPE 2 DIABETES MELLITUS

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Co-author: Gabrielė Žūkaitė

Scientific adviser: Džilda Veličkienė MD, PhD, MBA, Professor of Endocrinology

Introduction. Latent autoimmune diabetes in adults (LADA) is an autoimmune disease considered as biphasic type of diabetes because it has both type 1 diabetes mellitus (T1DM) and type 2 diabetes mellitus (T2DM) indications. LADA is genetically and immunologically related to T1DM because of its pathophysiology as progressive β-cell dysfunction occurs, while it is also similar to T2DM because of the age and in most cases alike phenotype. Some physicians may have a problem diagnosing LADA correctly as there are no clearly defined diagnostic criteria. This case is about a 51-year-old woman who was misdiagnosed with T2DM and was treated incorrectly in the beginning.

Case presentation. A 51-year-old woman was diagnosed with T2DM based on her high glycemia and was prescribed Metformin. However, she experienced side effects such as diarrhea and this kind of medication was cut off. Afterwards she was prescribed with Gliclazide 60 mg once a day but it did not help to correct her glycemia as well. Ineffectiveness of the drugs mentioned before led to the suspicion of immune dependent diabetes and prompt to test the antiGAD. The results were 1378,54 kU/l and HbA1c before therapy of insulin was 9,1%. These results confirmed earlier suspected diagnosis that diabetes was caused by the processes of the immune system. As a result, the therapy of insulin was started. The patient was prescribed insulin Toujeo 20 units per day in the evening and her glycemia after some time was in normal ranges. In order to diagnose LADA, there are no clear criteria, but there are several points which patients with LADA have to meet: the age of the patient should be > 35 years old, positive antiGAD test results and insulin therapy is not necessary in the first 6-12 months after the diagnosis. This woman met all the criteria mentioned before. It is necessary to mention that this patient also had nodular goiter (she experiences hyperthyroidism but after the usage of Metizol for one year it developed into euthyroidism) and was suspected with autoimmune thyroiditis as it is very common that people who have LADA experience problems with goiter. Other comorbidities apart from nodular goiter were arterial hypertension, obesity, dyslipidemia and diabetic nephropathy with normal renal function which misled T2DM with LADA at first.

Discussion. Even though the Immunology of Diabetes Society has established main criteria to diagnose LADA, the definition of it still remains controversial. There are some studies showing that about 10 % of the patients are misdiagnosed with T2DM while actually having LADA. Heterogeneity of this disease as it varies genetically, phenotypically and immunologically complicates the treatment and there is still no determined first-line treatment.

Conclusion. Diagnostic criteria of LADA are not very clear and this leads to acceptance of incorrect diagnosis and improper treatment is chosen. These factors can worsen the situation and trigger the disease even more.

34. LYMPHOCYTIC PROFILE IN PATIENTS WITH SLE: A CROSS-SECTIONAL STUDY

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Introduction. Systemic lupus erythematosus (SLE) is an autoimmune disease driven by the activation of autoreactive T and B cells. Recent studies have found abnormalities in lymphocytic profile, but the data concerning the association of lymphocytic pattern with lupus disease activity is contradictory.

Aim of study. To evaluate the lymphocytic profile in patients with systemic lupus erythematosus and to determine the correlation between the lymphocytic profile and the inflammatory markers.

Methods and materials. We have conducted a descriptive study of SLE patients above 18 years old who fulfilled at least 4 criteria from the SLICC, 2012 classification criteria. We excluded from the study patients with severe concomitant diseases and in case of patient refusal. Damage index was calculated by SLICC/ACR, and disease activity was evaluated by SLEDAI. Immunophenotyping was assessed by flow-cytometry which was analyzed in mean values. The correlation between the variables was calculated by Pearson's correlation coefficient.

Results. The study included 23 SLE patients, predominantly female patients (95%) with a mean age of 42,4±13.6. According to SLICC clinical criteria, the most frequent manifestation of SLE in our study included the acute cutaneous lupus while during investigation of the immunological criteria it was determined that anti-dsDNA appeared in 95.6% of the patients. Disease activity by SLEDAI has shown a mean value of 8.08±5.9 points, range 0-10 points. While assessing the lymphocytic profile in SLE patients, we have found that CD3 was the most elevated in case of lupus with the mean value of 950 cells/microliter. It was also determined that there was a high correlation between CD4 cells and CD8 cells and ESR (r=0.67) as well as the correlation between CD19 and ESR (r=0.61). These data suggest that both T and B lymphocytic lines are implicated in the pathogenesis of SLE, being directly associated with the inflammatory markers in these patients.

Conclusion. The results of our study suggest that both CD4/CD8 and CD19 lymphocytes lines are implicated in the pathogenesis of SLE, being directly associated with the inflammatory markers in these patients.

35. MDR TB IN CHILDREN- GLOBAL AND SOCIAL MEDICAL PROBLEM

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Introduction. The World Health Organization estimates that pediatric TB accounts for 11% of all tuberculosis cases in 2020. Pediatric TB is of primary genesis, it is the result of first contact with a source of infection.Under the current pandemic of SARS Cov-2 virus, there is a risk of underdiagnosis of TB in both children and adults. In most cases, in children, Mycobacterium tuberculosis infection remains latent and only under certain conditions progresses to TB disease. Drug-resistant TB is even worse from the risk of developing primary-resistant forms of TB in children in the event of contact with a source of resistant TB infection.

Case presentation. We present the case of a 11-years old patient admitted to Municipal Clinical Hospital of Phthisiopneumology in Chisinau in February 2020 with complaints of fatigue,asthenia, decreased appetite and rare dry cough. History of the disease: The patient has the status of contact with the patient with TB MDR with Gxpert - positive, Rif-resistant (father), permanent family contact for 6 months. General condition of medium severity. Pale pink skin, herpes blisters on the back of the rib 5-6. Paraclinical examination: Bronchial lavage examination: microscopic BAAR -positive; BACTEC liquid culture and classic solid culture Levenstein Yensen -MBT positive with resistance to Rifampicin and Isoniazid. Computed tomography: Nodular opacity in both lungs, presence of bilateral mediastinal and axillary lymph nodes, suspicion of specific process. IDR Mantoux with 2UT-positive. CBC: Leukocytosis with lymphocytopenia, ESR–25mm/h- slightly accelerated. On EEC examination- bioelectrical changes of the brain with irritating character. Dysfunction of diencephalic structures. Clinical diagnosis: TB of intrathoracic lymph nodes, evolutive phase with bronchogenic dissemination, BAAR - positive, MDR. Periodic seizures. Atopic dermatitis. Treatment- line II antituberculosis drugs, individual scheme, based on the presence of comorbidities. At 5 months of treatment positive dynamics, amelioration of intoxication and radiological syndrome (resorption of infiltrative elements). Microbiological-negative BAAR at 2 months of treatment; bacteriological - MBT negative after three months of treatment.

Discussion. The susceptibility of Mycobacterium tuberculosis corresponds to that of the source of contact - in this case MDR TB with primary resistance is established.

Conclusion: The reported clinical case confirms that TB in children is the result of contact with an adult with TB. The clinical form of TB that has been diagnosed confirms that children are more likely to develop intrathoracic lymph node TB, the extrapulmonary form of TB. TB in children has a favourable evolution and prognosis.

36. MINERAL BONE DISORDERS IN CHRONIC KIDNEY DISEASE

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Introduction. Chronic kidney disease is a global health problem that affects 8-16% of the general population and with the decline in kidney function increases the risk of developing disorders of bone and mineral metabolism.

Aim of study. Assessment of changes in mineral metabolism in chronic kidney disease up to hemodialysis.

Methods and materials. There were selected and analyzed the articles from the PubMed, HINARI and Scopus database according to the keywords „chronic kidney disease", „mineral bone disorders".

Results. Hypocalcaemia is common in patients with CKD and leads to increased PTH secretion and abnormal bone remodeling. The total serum calcium concentration decreases as a result of phosphate retention, a decrease in the concentration of 1.25 (OH) (calcitriol) and resistance to the calcium actions of PTH on the bone during the progression of CKD. Calcium usually remains normal until stage IV of BRC. Phosphate retention begins early in CKD and plays an important role in the development of secondary hyperparathyroidism by inducing hypocalcemia. Usually, serum phosphate levels are not elevated in the early stages of CKD due to a decrease in renal phosphate reabsorption in the proximal tubules due to elevated levels of PTH and fibroblast growth factor (FGF) -23. Serum phosphorus usually remains normal until stage IV of CKD. In advanced CKD, hyperphosphatemia stimulates the synthesis and secretion of PTH and FGF-23. PTH usually remains normal until stage III of CKD. As glomerular filtration decreases, the prevalence of secondary hyperparathyroidism increases. The causes of the increase in PTH are: phosphate retention, decreased ionic calcium, decreased calcitriol levels, increased FGF-23 levels. A serum level of 25 (OH) D (calcidiol) <30 nmol / L indicates vitamin D deficiency, which is common in patients with CKD. It has been observed that calcitriol levels begin to decline from CKD stage III. It has been observed that the decrease in calcitriol levels occurred earlier than the increase in PTH levels. The main cause for the reduction in calcitriol levels is an increase in the concentration of FGF-23.

Conclusion. Changes in mineral and humoral metabolism are observed even in the early stages of chronic kidney disease. Early diagnosis of mineral and bone metabolism disorders helps prevent bone fractures.

37. NEGATIVE PROGNOSTIC FACTORS IN STROKE PATIENTS

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Introduction. Stroke is a heterogeneous disease that causes a major problem by reaching epidemic proportions. In the Republic of Moldova, stroke ranks second deadliest disease and is the leading cause of disability among the adult population. Analyzing and realizing the importance of stroke-generating factors separately, their interaction through the manifestation of associated diseases and post-stroke complications is crucial in obtaining a favorable prognosis in stroke patients.

Aim of study. A systematic review of observational studies evaluating the association between risk factors and negative prognosis in stroke patients.

Methods and materials. The analysis and retrospective synthesis of the bibliographic database from the last 10 years was performed, which includes meta-analyzes and dynamic revisions relevant to the researched topic. The highlighted variables included both modifiable and non-modifiable risk factors, comorbidities, treatment and medical complications from onset to discharge related to the prognosis of stroke patients.

Results. As a result of studying the existing data, we highlighted the risk factors with a major resonance in the prognosis of stroke. There was a significant negative correlation between age, the coexistence of obesity and dyslipidemia, hypertension, diabetes, atrial fibrillation and other cardiac causes and stroke. At the same time, risk factors were elucidated, with no less influence on the prognosis, classified according to the potential for reversibility and associated with a vulnerable outcome such as family history of stroke, behavioral factors such as smoking and alcohol consumption, lack of lipid therapy, especially statins, antihypertensive treatment and a suboptimal degree of anticoagulation. Other reliable predictors included prestroke Rankin Scale (pRS) score, door-to-needle time for tissue plasminogen activator therapy and The Modified Rankin Score (mRS), generating a number of complications with an impact on the prognosis of stroke. Among the most common early complications in the hospital were cerebral edema, respiratory infections and urinary tract infections.

Conclusion. Old age accompanied by increased prevalence of risk factors such as diabetes, high blood pressure, atrial fibrillation and coronary heart disease are predictors of stroke mortality. The Rankin Score has remarkable potential for use in assessing stroke prognosis.

38. OBESITY AND PREDIABETES STATE

Author: Caliga Ecaterina

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Introduction. Prediabetes is a high-risk state for the development of diabetes and its associated complications. Recent data have shown that in developed countries, more than one-third of adults have prediabetes and in most of them it is associated with obesity.

Aim of study. Obesity promotes a chronic, low-grade, inflammatory state, which is associated with vascular dysfunction, thrombotic disorders, multiple organ damage, and metabolic dysfunction. These physiological effects ultimately lead to the development of a range of morbidities, including prediabetes. Prediabetes raises short-term absolute risk of Diabetes five-to sixfold. It can be delayed or sometimes prevented in individuals with obesity who are able to lose weight, improving glycemic control and cardiovascular disease risk factors. This can be achieved medically with behavioral therapies that combine diet and exercise treatment or with behavioral therapies combined with weight-loss medications or weight-loss surgery.

Methods and materials. We analyzed a range of studies that show the relation between obesity and prediabetes. The first represented by body mass index (BMI) and the second, defined using glycated hemoglobin (HbA1c).

Results. Depending on ethnicity, age and gender, 50-90% of prediabetic patients exhibit a BMI over 25 kg/m2, while patients with BMI over 35 kg/m2 are almost 20 times more likely to develop prediabetes or Diabetes, compared to individuals with BMI in the normal range 18.5-24.9 kg/m2. Large-scale population studies have shown that obesity is the most important independent risk factor for prediabetes. In adults, the relative risk for prediabetes begins to increase even at BMI values within the normal weight range, 24 kg/m2 for men and 22 kg/m2 for women, while it rises exponentially with increasing BMI over 30 kg/m2. Thus, morbid obesity is associated with markedly high relative risk for prediabetes in both genders.

Conclusion. Obesity has a huge impact on the appearance and development of prediabetes. Even modest weight loss is important for Diabetes prevention, significantly reducing the risk and delaying the onset of the disease. Among individuals within a healthy BMI range, the prevalence of prediabetes and abdominal obesity has substantially increased.

39. OPTIC NERVE DAMAGE IN MULTIPLE SCLEROSIS

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Introduction. Optic neuritis(ON) is an inflammatory disease of the nervous system. It is usually associated with unilateral eye pain which is exacerbated by eye movement and color perception disturbances. The etiology of optic neuritis in most cases is multiple sclerosis (MS). With that, physicians should keep in mind that patients who present with optic neuritis do not necessarily have, or will develop MS. The patients may suffer from other underlying pathology that should be excluded first. The diagnosis of ON is made clinically, but doctors can also use laboratory methods like cerebrospinal fluid analysis and imagistic methods like magnetic resonance imaging scan to help put the correct diagnosis. When optic neuritis is due to MS, it is usually depicted as Clinically isolated syndrome, which is the primary form of MS in most cases. Using visual evoked potential (VEP) shows us if demyelinating lesions exist in the pathway, by increasing the time of the response from the stimulus. 100 milliseconds after the stimulus is called P100 latency.

Aim of study. Explore whether there is a difference between optic neuritis associated with MS and optic neuritis which is not.

Methods and materials. This study concludes 13 patients, who are aged from 29-65 years old. 6 of them are females and 7 are males. 6 patients are diagnosed with MS, and 7 patients are diagnosed with Neuromyelitis optica spectrum disorders (NMOSD). All of these patients did have visual evoked potential and with these results we try to differentiate optic neuritis that is associated with MS from optic neuritis that is associated with NMOSD, by comparing the P100 latency. The mean P100 value of MS patients is 149.961 ± 9.77. The mean P100 value of patients with NNOSD is 145.376 ± 15.36.

Results. There is no statistically significant difference between ON with MS and ON with NMOSD, using VEP $P=0.5428$. On the opposing side, it is well documented that there is a difference in symptoms and signs between ON with MS and ON with NMOSD. The lack of significance can be due to small sample size.

Conclusions. The performed study didn't reveal a statistically significant difference between ON with MS and ON with NMOSD, a more extended study should be performed to establish the value of VEP in the differential diagnosis between ON with MS and ON with NMOSD.

40. OXIDATIVE STRESS MARKERS IN PATIENTS WITH HEART FAILURE AND COMMUNITY-ACQUIRED PNEUMONIA

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Introduction. Oxidative stress is a common pathogenic mechanism in patients with community-acquired pneumonia (CAP). The role of oxidative stress biomarkers in patients with CAP and concomitant heart failure (HF) have not been well described.

Aim of study. To evaluate the changes of oxidative stress biomarkers in patients with CAP and different stages of HF.

Methods and materials. Plasma levels of oxidative stress biomarkers were studied in 77 patients admitted in the hospital during October 2020-January 2021. In study were included 31 men (30.3%) and 46 women (59.7%), with the mean age of 68.6±8.01 years. Patients were divided into two groups, according to New York Heart Association (NYHA) classification of HF: group 1 (n=42) – patients with CAP associated with HF, NYHA stage II, group 2 (n=35) – patients with CAP associated with HF, NYHA stage III. The levels of ischemia modified albumin (IMA), advanced glycation end products (AGE), protein oxidation products (POA), malondialdehyde (MDA) and superoxide dismutase (SOD) were compared in both groups.

Results. All patients with CAP and advanced HF presented high values of pro-oxidative stress biomarkers. Ischemia modified albumin (IMA) was increased in group 2 compared to group 1: 212±54.3 µM/L (95% CI 231-99) vs 189±58.2 µM/L (95% CI 171-207), $p>0.05$, while PPOA had higher values in group 1 compared to group 2: 74±35.1 µM/L (95% CI 63-85) vs 61±24.0 µM/L (95% CI 52-69), $p<0.05$. MDA and SOD were without significant changes in both groups. AGE products were higher in patients with CAP and advanced HF (group 2) compared to group 1: 633±301.4 µM/L (95% CI 530-757) vs 459±181.7 µM/L (95% CI 403-516), $p<0.05$.

Conclusion. The dynamics of pro-oxidative stress levels in patients with CAP and concomitant HF, depending on the stage of the disease, indicates the association of HF severity with that of oxidative stress, which could be useful to determine the disease progression.

41. OZONETHERAPY IN NEUROLOGY

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Introduction. In the medical field we often intertwine with a variety of new methods and therapies which are directed into helping and treating patient's problems. One of the methods that proved its usefulness for more than a century now is Ozonetherapy. With an abundance of positive effects, such as: vasodilation, anti-aggregation, tissue oxygenation, anti-inflammation and, at times needed, immunostimulation, ozonetherapy tends to improve and to smooth the path in treating a multitude of diseases that occur especially in neurological patients. In this research we have a propensity in proving ozonetherapy's efficacy in neurology.

Aim of study. As the background for the research we were prone to discuss the usage of ozonetherapy in neurology, a topic that consists of a diversity of known diseases, such as: dyscirculatory encephalopathy, vegetative dystonia, chronic fatigue syndrome, migraine, ischemia, disseminated sclerosis. We tended to highlight the effects that ozone has on patients suffering from those neurological disruptions.

Methods and materials. In order to achieve the stated objective, the initial search of the specialized scientific literature, identified by the search engine Google Search, medical books and from the databases PubMed, NihGov was performed. The publications were selected according to the following keywords: „ozonetherapy", „vegetative dystonia", „disseminated sclerosis", „encephalopathy". After processing the information in the databases, we selected all publications starting with January-June 2011.

Results. With the help of various cohort studies, we concluded that using ozonetherapy in neurological disturbances such as: dyscirculatory encephalopathy, ischemia, the ozone decreased the level of aterosclerotic plagues and thrombi that were obstructing the arteries, thus leading to a better oxygenation of the cerebral parenchyma and a better cognitive function of the brain. Moreover in some cases, referring to: vegetative dystonia and chronic fatigue system, a therapy course with ozone (major autohemotherapy) optimized the functionality of the limbic-reticular complex, hypophyseal hypothalamic axis and had an optimizing effect on the symptomatic clinic because it had vegeto-modulatory effects on the vegetative nervous system.

Conclusion. The use of ozone in minimal and controlled amounts can bring major benefits to the human body with procedures such as: major and minor autohemotherapy, abdominal insufflation with ozone and perfusions with ozone-treated physiological substance, that can be widely used in treating diseases and ailments affecting the nervous system. Furthermore the presence of ozone therapy is a daring, yet holistic approach to pathologies present in nowadays' medical practice, a method which can elevate homeostasis by facilitating tissue's oxygenation process, improving blood's rheology and reducing the aforementioned neurological sequelae. Thus we wanted to provide and elevate ozonetherapy's effectiveness in diminishing and treating patients who suffer from neurological diseases, lessening the symptoms and upraising their recovery.

42. PAGET'S DISEASE OF BONE- A LITERATURE REVIEW

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Introduction. Paget's disease of bone (PDB) accounts for 2-4% of adults over 57, and is more frequent in males than females. PDB is the most common metabolic bone disease after osteoporosis. The most likely etiology is a slow paramyxovirus infection.

Aim of study. Paget's disease of bone proved a family history genetic susceptibility in 10-20% of cases. Bone damage occurs due to focal excessive bone resorption, abundant formation of the new bone structure and developed over time bone marrow replacement with vascular and fibrous tissue. Often, patients are diagnosed incidentally on X-ray, the most sensitive test being bone nuclear scintigraphy. Thus, the most common clinical presentations are bone pain, bowing and deformity of long bones, fractures, enlarged skull, hearing loss etc. It can affect a single bone (monostotic) or many bones (polyostotic). The main differential diagnosis is with sclerotic or lytic metastases.

Methods and materials. The nature, type and design of the research is narrative descriptive with the extensive systematic review of international and in-country academic and grey published literature with the main focus on Medline, PubMed, Google scholar and Google searching of websites to identify the range of the spectrum as well as most common forms of various clinical presentations of PDB, review of diagnostic tests and pharmacological and non-pharmacological treatment options. The desk research of published articles in peer-reviewed journals was supplemented by documentary analysis of published reports, key publications (including aide memories) and health care statistics provided by the WHO, NCBI, Directory of Open Access (DOAB) and online researches using Google scholar with the focus of the recent publications from the year 2000 and up to present. The initial study selection identified 88 articles and sources with the following inclusion criteria: 1.Be publically available in a published journal article or website; 2.Have a clear focus on good description of clinical presentation of PDB and treatment options; 3.Include a specific set of aspects to follow such as review of the most common clinical types of presentation, evolution pattern, differential diagnosis, various correlations, etc. The excluded articles were the ones which were limited to one specific aspect of PDB; focused on specific medical practice guidelines, clinical techniques and/or based on limited experience. The applied inclusion and exclusion criteria narrowed the list of the relevant articles to 47.

Results. According to the analyzed literature, the most common clinical manifestations of PDB are musculoskeletal, such as bone deformity and pain, fractures and spinal stenosis. The neurological complications are also common and include deafness, tinnitus, spinal stenosis with cauda equina syndrome, vascular steel, cerebellar dysfunction, obstructive hydrocephalus and various cranial nerve palsies. Para- or quadriplegia rarely occurs. Cardiovascular complications are uncommon. The most described in the literature are increased congestive cardiac failure, aortic stenosis and endocardial calcification. Hypercalcemia, hyperuricemia and immobilization hypercalciuria with nephrolithiasis count for metabolic complications of PDB. Very rare is described the neoplastic transformation of PDB in osteosarcoma, chondro- or fibrosarcoma.

Conclusion. Paget's disease of bone is the second commonest metabolic bone condition after osteoporosis. The follow-up monitoring of the patients for clinical relapses or complications development is mandatory. Common clinical manifestations include bone pain. Bone transformation results in enlargement leading to deformity, fragility, compression and, very rare malignant transformation. An elevated serum alkaline phosphatase reveals the disease activity. The long-term biochemical remission in Pagetic bone activity can be easily controlled by the intravenous bisphosphonate. For the difficulties resulting from deformity and abnormal biomechanics physiotherapy and occupational therapy proved helpful. However, patients can still have pain or problems from complications (e.g. secondary osteoarthritis). Orthopedic surgery for correction of deformity, joint total hip or knee replacements and nerve decompression are recommended for patients with PDB who develop osteoarthritis. However, hearing loss does not seem to respond to treatment of the PDB. Malignant transformation to an osteosarcoma has a poor prognosis.

43. PARTICULARITIES OF GONARTHROSIS IN WOMEN

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Introduction. Gonarthrosis – represents the degeneration of the knee joint, which usually manifests itself clinically in elderly patients (generally over 60 years), but on the background of risk factors: general (sex (female), heredity, obesity (plus 5 kg of body mass increases the risk of gonarthrosis by 30%), hormonal status (postmenopause)) and local (professional strain, joint trauma, weakening of the joint muscles, surgery on the joints in the anamnesis (meniscusectomy)) occurs earlier, after 40 years. Gonarthrosis is more common in women and is characterized by progressive wear of the articular cartilage, which causes the appearance of pain and its intensification with the passage of time.

Case presentation. Patient N.B., 43 years old, was hospitalized on a scheduled basis, in the Artrology department of RCH ``Timofei Moşneaga" with the following accusations: pain in the knee joints bilaterally asymmetrical, mainly the right join, appear "out of the blue", with a mechanical character, which intensifies when moving, the mobility of the joint being preserved. Lately pain has become much more intense. From the anamnesis: menopause from 40 years, working as a salesman in a food market, 6 months ago had a trauma (fall on the knees during movement). Clinical: the patient has the II degree of obesity after WHO, the knee joints bilaterally – painful on palpation, at active and passive movements – crepitations, pain in the knee joints is accentuated, mainly from the right; from the side of the internal organs – without particularities. The patient was examined: laboratory (ESR 22 mm/hour, CRP 8 g/l) and instrumental (MRI of the knee joints, conclusion: horizontal rupture of the posterior horn of the medial meniscus, gonarthrosis of the right knee joint, grade I-II, Baker's cyst). The clinical diagnosis was established: secondary bilateral gonarthrosis, grade I-II, Baker's cyst on the right. Obesity, II degree (after WHO). The patient followed the treatment with Muscoflex sol. inj. 4 mg/2 ml i/m for 7 days, Diclofenac sol. inj. 75 mg/ 3 ml i/m for 7 days, Neuromax sol. inj. 50 mg/50 mg/0.5 mg/ml i/m for 7 days, magnetotherapy, ultraphonophoresis, kinetotherapy for 5 days. The patient was discharged with pain relief and outpatient recommendations were given: to take control over the body mass, physical therapy – to maintain joint mobility and muscle strength of the lower members, to possibly change profession, drug treatment (NSAIDs, Pain relievers, Chondroprotectors, Vitamin D) to relieve the course of the disease.

Discussion. Gonarthrosis is a condition of a degenerative nature, related to cellular apoptosis, and as a result progressive loss of knee cartilage. Gonarthrosis has a very long evolution, for years or even decades, greatly affecting the quality of life of patients. Gonarthrosis is a condition that can greatly influence the patient's life, but if the symptoms are recognized in time and the patient goes to the doctor, its evolution can be significantly slowed down.

Conclusion. In order to prevent the progression of gonarthrosis, it is necessary to establish the diagnosis at early stages and influence (if possibly) on risk factors (in case of our patient – to lose weight, to change the profession (saleswoman)). Treatment should be combined: diet, regular exercise, physiotherapy, drug treatment (general and local), spa treatment.

44. PARTICULARITIES OF THE EVOLUTION OF GOUT IN MEN

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Introduction. Gout is a joint disease from the group of microcrystalline arthritis. The disease is constantly growing worldwide for both men and women. There are various risk factors however, the most important are obesity, diet, and drugs. Gout is most commonly found in men due to the influence of testosterone on purine metabolism. In women, gout develops more often after menopause, due to the influence of estrogen on purines.

Aim of study. Assessment of comorbidities and the course of the diseases of gout in males.

Methods and materials. A retrospective study was performed, analysing 90 medical records of patients diagnosed with gout (according to ACR criteria), hospitalised in the Rheumatology and Arthrology department of the Timofei Mosneaga Republican Clinical Hospital during 2019-2021.

Results. There were 90 patients included in the study: males 83 (92.2%), females 7 (7.8%). The patients' ages ranged from 34 to 83 years old, with an average of 69 ± 1. Acute gout attack was observed in 34 patients (40.96%), chronic gout in 49 patients (59,03%). The following comorbidities were found in men: hypertension – 74 men (89.15%), chronic heart disease - 73 men (87.95%), osteoarthritis – 65 men (78.31%), chronic pancreatitis - 62 men (74.7%), chronic pyelonephritis – 59 men (71.08%), kidney stones – 33 men (39.76%), liver steatosis - 21 men (25.3%), diabetes – 15 men (18, 07%). According to laboratory data, hyperuricemia was detected in 32 men (42.16%). Patient treatment: allopurinol 80 patients (88.8%), nonsteroidal anti-inflammatory drugs – 64 patients (66.7%), colchicine – 19 patients (52.2%), Steroids – 20 patients (20%), febuxostat – 19 patients (21.1%). Key Words: gout, males, features, evolution.

Conclusion. Males with gout represented 92.2% compared to 7.8% females. Among the features of gout in men, chronic gout is found in 9.03% compared to acute gout, which is 40.96%. The presence of hypertension was detected in most patients (89.15%) with the development of chronic heart disease (87.95%). Renal impairment due to chronic pyelonephritis was found in 59 men (71.08%), in association with the development of kidney stones (39.76%).

45. PATIENT KNOWLEDGE ON STROKE RISK FACTORS, SYMPTOMS AND TREATMENT OPTIONS

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Introduction. Worldwide, stroke is the second leading cause of death and a common cause of disability for adults. Stroke has a physical, psychological and major financial impact on patients, families, the healthcare system and society wholeness. Most (about 75%) cases of stroke occur in people over the age of 65, and about one-third of patients die in the first year of onset. In the Republic of Moldova, the mortality rate from stroke remains one of the highest in Europe. According to the data of the national statistical office, in 2018 there were 7735 new cases of stroke, 5227 patients died as a result of stroke, or 1 in 7 annual deaths are attributed to stroke. In the structure of mortality, cerebrovascular diseases occupy the 3rd place, giving way only ischemic heart disease, and oncological diseases.

Aim of study. The aim of this study was to explore knowledge on stroke risk factors, symptoms and treatment options among acute stroke and transient ischemic attack (TIA) patients without previous cerebrovascular disease.

Methods and materials. This prospective study was performed in two groups of patients: 36 stroke patients and 19 patients in the control group who did not have the disease. Patient characteristics are presented as mean or median values, depending on whether the variables were normally distributed. Statistical analysis was performed using Statwing.

Results. A total of 55 patients were included in the study. Mean age was 60.7 years, and 50.9% were men. The distribution of cerebrovascular disease was: 35 (97.2%) ischemic strokes, 1 (2.8%) intracerebral haemorrhage. All 100% of patients in the study group had at least one modifiable risk factor. Only 14 patients (25.4%) know the notion of stroke and only two patients gave a correct answer when asked to define this disease. When they were asked which organ would be affected in the stroke, only 26 (47.3%) patients answered that this is the brain, the other 29 (52.7%) patients listed other organs such as limbs or mentioned that they do not know. Regarding acute stroke treatment, 37 patients (67.3%) could not name any treatment option, 14 patients (25,4%) named antihypertensive treatment as a treatment option, while 4 patients (7,3%) named anticoagulants/antithrombotic treatment.

Conclusion. In conclusion, this study showed a low level of knowledge of patients about modifiable and unchangeable risk factors, measures of prophylaxis and treatment of stroke. The need for patients to be informed and educated is very high and even vital. An important role is played by the means by which patients are informed and the information disseminated using these channels. It is very important for public campaigns to provide information on risk factors, symptom recognition (FAST) and the importance of time to address medical units.

46. POST-TRAUMATIC STRESS DISORDER: A POSSIBLE FACTOR OF MIGRAINE CHRONIFICATION

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Introduction. Migraine is a worldwide severe and disabling condition, associated with significant personal and social stress. Over the last decades, important evidence has emerged regarding the major role of post-traumatic stress disorder (PTSD) in the chronicity of migraine.

Aim of study. The purpose of this research is to review the scientific literature and present the most relevant facts concerning the major role of PTSD, regarding natural or social phenomena, in the process of migraine chronification.

Methods and materials. Using the Scholar Google search engine, PubMed, NCBI and Medscape, the most relevant studies were selected for a systematic review of publications on this topic from the last 5 years. The search provided 4550 articles, of which 55 proved to be potentially eligible, 39 reviews and 16 meta-analyses.

Results. Actual research reported that PTSD is a psychiatric disorder that can occur among people who have experienced or witnessed a major traumatic event, falling into 2 categories: a) PTSD related to natural and social phenomena: floods, war, acts of terrorism, serious accidents, etc.; and b) PTSD related to interpersonal relationships: moral harassment or sexual violence. A large proportion of migraineurs have PTSD, with a higher prevalence among people with chronic migraine (CM) compared to those with episodic migraine. Besides the risk of death, trauma and disruption of daily life, PTSD caused by a natural disaster can have long-term effects, with a cumulative risk of suffering that can be felt even 20 years later. Traumatic experiences enhance the risk of chronic pain by altering common brain circuits, amygdala, hippocampus, medial prefrontal cortex - key regions associated with stress responses and chronic pain. According to current literature, refugees are at a major risk of developing PTSD, and the prevalence of persistent migraine among them is high. In addition, a previous experience of torture, especially psychological torture, is associated with an increased risk of prolonged pain. Furthermore, considering the high rate of concussion and probability of brain injury among the military population, PTSD is a disabling trauma among war veterans, and they are more likely to exhibit aggression, substance abuse, unemployment, etc. all of which contribute to the migraine chronification.

Conclusion. Comorbidity between PTSD and CM has a negative impact on developing both disorders, with significant quality of life and psychosocial impact. The mechanisms underlying these relationships are diverse and multifactorial.

47. PRECOCIOUS PUBERTY

Author: Cojocaru Carolina

Scientific adviser: Dumitru Harea, MD, Associate Professor, Department of Endocrinology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Precocious puberty is a disease that refers to the appearance of physical and hormonal signs of sexual development at an earlier age (before 8 years in girls and 9 years in boys) that is considered normal. Precocious puberty can be divided into 2 categories: central and peripheral precocious puberty. The etiology of central precocious puberty (CPP) is based on premature synthesis of sexual hormones by activation of the hypothalamic-pituitary-gonadal (HPG) axis. Peripheral precocious puberty (PPP) does not implicate the HPG axis and is secondary to other diseases.

Aim of study. To study precocious puberty for identification of etiological, diagnostic and treatment particularities

Methods and materials In the study participated 34 patients (age range 3-15 years) that have addressed themselves to the Institute of Mother and Child between years 2018-2021. After primary examination they have been diagnosed with precocious puberty.

Results. From 34 patients, 30 (88,23%) patients have been diagnosed with central precocious puberty and 4 (11,77%) with peripheral precocious puberty. From patients with CPP 29 (96,67%) are girls and 1 patient (3,33%) is a boy. Patients with PPP are presented by 1 girl (25%) and 3 boys (75%). Analysing the average onset age of the first symptoms of early puberty, we reveal that the average age is lower in the group of girls: 6.29 years, compared to the average age in the group of boys: 7.5 years. Time interval between the onset of the disease and primary medical consultation is shorter in girls: 1,34 years than in boys 5,87 years. Following the assessment of the structure of the study groups according to BMI, it was established that the prevalence of obese patients as a risk factor is 20.58%, the average BMI is 26.11 and non-obese patients are 79.42%, their BMI being 17.09. According to the analysis of the history of patients with primary medical disease, it was established that 25 patients (73.52%) report fatigue, as well as an accelerated growth rate, 28 (82.35%) report headache, 6 patients (17.64%) accuse pubarche, 4 (11.76%) accuse emotional lability, 23 patients (67.64%) accuse the appearance of thelarche, and 5 (14.70%) menarche.

Conclusion. The highest number of patients diagnosed with precocious puberty are girls. The average age of diagnosing this disease is 7,73 years. CPP is more common in girls and PPP in boys. Girls have a shorter time interval between the onset of the disease and primary medical consultation. Boys most commonly experience headache, fatigue, emotional lability, and accelerated weight gain, while girls, to the aforesaid symptoms, have thelarche, menarche, and/or pubarche.

48. PRIMARY MYELOFIBROSIS: CLINICAL PICTURE, DIAGNOSIS AND TREATMENT

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Introduction. Primary myelofibrosis is a rare chronic myeloproliferative disorder with an annual incidence of 0.5 cases per 100.000 individuals and is characterized by bone marrow fibrosis, extramedullary haematopoiesis, splenomegaly and leukoerythroblastic blood picture. Primary myelofibrosis typically occurs in people older than 50 years, the mean age at diagnosis being 65 years.

Aim of study. The study of clinical manifestations, diagnostic methods and treatment principles in patients with primary myelofibrosis.

Methods and materials. A study was conducted based on a group of 52 patients who were registered at the Hematology and Diagnostic Consultative Center of the PMSI Institute of Oncology of Moldova. The group of individuals enrolled in the study consisted of 30 (58%) women and 22 (42%) men. The age of patients ranged from 38 to 83 years and the median was 64 years. The diagnosis of primary myelofibrosis in all cases was morphologically confirmed.

Results. The disease has developed mainly in people aged between 60 and 69 years (46.15%). The main complaints were discomfort and/or pain in the left hypochondriac region in 30 (58%) cases and with asthenic syndrome in 22 (42%) cases. During the objective examination, splenomegaly was determined in 42 (80%) patients and hepatomegaly in 26(50%). Autoimmune haemolytic anemia was determined in 4 (8%) patients and metaplastic anemia in 8 (15%). In 48 (92%) patients, hyperthrombocytosis was found with values from 450-2450 x 109 /L, and in 4 (8%) autoimmune thrombocytopenia. The treatment was performed with Hydroxycarbamide in the regimen and standard doses with achievement of partial remission. In cases with immune complications, corticosteroid has been administered with efficacy in 7(63.6%) patients. Four patients were followed up until death. The overall survival rate over 1 year, 3 and 5 years was 96.1% accordingly.

Conclusion. Primary myelofibrosis is more common in people aged 60-69 years, mainly in women (58%). The primary objective sign was splenomegaly in 42 (80%) cases. Partial remission was achieved in all patients on a treatment background. The overall survival rate over 1 year, 3 and 5 years was 96.1%.

49. PROINFLAMMATORY MARKERS IN PSORIATIC ARTHRITIS

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Introduction. Rheumatoid arthritis (RA) and psoriatic arthritis (APs) are prevalent forms of inflammatory arthritis that affect up to one percent and 0.3-1 percent of the population, respectively. The etiology remains unknown, but both genetic and medium, are agents of triggering given arthropathies. The onset of APs is clinically recognized when it meets the CASPAR criteria, although it's recognized that it occurs long before clinical symptoms. It's clear that a protein biomarker that could predict joint damage at an early stage would support appropriate, and individualized treatment tactics. Although many biomarkers have been reported in the literature for rheumatoid and psoriatic arthritis, relatively few have reached clinical, and their numbers stay stagnant for a long time.

Aim of study. The aim of this study was to identify specific biomarkers that could be used as a screening method for psoriatic arthritis, as well as to assess the action of the sickness and the outcome of treatment in affected patients.

Methods and materials. Eleven outpatients, eligible for anti-TNFα treatment, were enrolled in a prospective cohort study for one year.

Results. Serum samples for metalloproteinase-3 (MMP3) and high-sensitivity C-reactive protein (hs-CRP) were collected at baseline (t0) and after six (t6), twelve (t12) treatment. The benchmarks were compared with those of an age-appropriate grouping of healthy controls. Sickness action scores and post-treatment functional tests were found to be significantly different baseline. Initially, MMP3 and hs-CRP values in patients with APs were found to be significantly higher than their levels in the control group. MMP3 was significantly lower at t6 ($P < 0.00011$), t12 ($P < 0.00011$). hs-CRP decreased significantly at only twelve months of treatment ($P < 0.012$). A correlation was observed between MMP3 and hs-CRP ($r = 0.35$, $P = 0.00052$).

Conclusion. MMP3, hs-CRP show up to be full for early detection of PsA and for monitoring sickness progression.

50. PSYCHOLOGICAL CHARACTERISTICS OF DYSFUNCTIONAL BREATHING

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Introduction. Panic disorders (PD), depression, and anxiety are specific conditions commonly found in Dysfunctional Breathing (DB). Hyperventilation induces significant changes in respiratory rate, breath-hold time, and depth of breath, which are mainly mediated by current/previous traumatic or psychological experiences. Thus, DB plays an important role in the clinical diagnosis and treatment of psychological disorders.

Aim of study. To highlight the psychological characteristics of DB and remark the correlation between abnormal breathing patterns, anxiety and PD.

Methods and materials. Literature review, including 50 scientific-practical articles addressing similar aspects of the proposed topic.

Results. There is extensive research on changes in breathing patterns, especially hyperventilation in PD. Arbitrary hyperventilation is accompanied by changes in autonomic nerve regulation, with a predominance of sympathetic effects leading to anger and panic attacks. According to DSM-5, diagnostic criteria for a panic attack include a discrete period of intense fear or discomfort in which at least four of the following symptoms develop suddenly and peak within minutes: palpitations, and/or increased heart rate, sweating, shaking, short of breath, feeling of suffocation, chest pain or discomfort, nausea or abdominal pain, dizziness, unsteadiness or fainting, chills, derealization (feelings of unreality) or depersonalization (detachment from self), fear of losing control or going mad, feeling of impending death, paresthesia (numbness or tingling), hot flushes. Many of these symptoms attributed to PD are also common to DB. The underlying origin of these respiratory symptoms is attributed to an acute disturbance of acid-base balance. The breathing pattern of these patients is disorganized, with low carbon dioxide (PCO2) levels and increased breathing frequency. Moreover, these patients are often anxious and depressed.

Conclusion. Hyperventilation plays a major role in the clinical diagnosis and treatment of psychological disorders. Considering the high frequency of abnormal breathing patterns, attention to hyperventilation symptoms should be a routine part of every psychological examination, regardless of the specific complaints presented.

51. R-CHOP TREATMENT OUTCOMES OF NON-HODGKIN's LYMPHOMA IN A PATIENT WITH A GENERALIZED STAGE OF THE DISEASE

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Introduction. Aggressive non-Hodgkin's lymphomas are a group of lymphoid tissue neoplasms that originate from B- and T-cell precursors and mature B- and T-cells, and are often characterized by rapid growth, tumor mass-driven symptoms, or systemic effects of the malignant process. The cancer process develops quite rapidly, but about 62-65% of patients manage to go into long-term remission. However, almost half of these patients may show signs of disease progression or develop refractory symptoms after chemotherapy, where the vast majority of features are determined by the pathogenetic course of the disease. Therefore, early identification of non-responders to standard chemotherapy offers the possibility of adapting the treatment regimen, which could potentially improve the clinical course of the disease and reduce the toxic effects of ineffective and expensive chemotherapy. The introduction of Rituximab (R-CHOP) into anthracycline polychemotherapy regimens has made it possible to increase survival time for most CD20-positive patients.

Case presentation. A 67-year-old patient with the diagnosis of diffuse lymphoblastic lymphoma with involvement of cervical lymph nodes and progression in the mediastinum, hillary lymph nodes, and the inferior lobe of the left lung, stage IVB. The patient was presented with the following complaints: enlargement of the cervical lymph nodes, dry and heavy cough, dyspnoea, fatigue, headaches, and weight loss for approximately 10 kg in the last 5 months. History: The symptoms started about 3 months ago. The patient visited the family doctor and after a complete examination was directed to the Institute of Oncology for a proper diagnosis and treatment. The physical examination showed enlarged bilateral cervical lymph nodes with 4,0-5,0 cm in diameter. Harsh respiration at auscultation in the projection of the inferior lobe of the left lung. The CT examination showed an appearance of bilateral diffuse mediastinal and bronchopulmonary lymphadenopathy, bilateral insignificant pleural fluid effusion. CT signs of incipient perihilar interstitial pulmonary edema. A performed histopathology examination determined the following appearance: biopsy tissue fragments of a malignant tumor proliferation consisting of solid plaques of medium-sized cells with small cytoplasm and vesicular nuclei showing high mitotic activity and areas of necrosis. Immunohistochemistry showed a positive diffuse reaction in tumor cells to CD45, CD20, CD79a, CD19, moderate positive reaction to PAX5, a positive reaction in plasma cells to CD138 and MUM1, and negative reaction to Pancitokeratin, OCT2, TdT, and CD3.

Discussion. After the diagnosis has been histologically confirmed, the patient was admitted to the Hematology department of the Institute of Oncology for a specific treatment. The chemotherapy scheme which was administered to that patient was R-CHOP. This type of combined regimen (R-CHOP) is considered the most appropriate for that particular case. In total, the patient received 13 cycles of R-CHOP chemotherapy. Complete remission was installed after the 8th cycle of combined chemotherapy and was confirmed by cervical lymph node involution of about 95% from their initial size and the absence of mediastinal lymphadenopathy and pulmonary involvement radiological signs on a CT examination image. After the complete remissions were installed, the patient received 5 more cycles of R-CHOP for maintenance. By the date of the last examination, the duration of the complete remission consisted of 9,5 months.

Conclusion. As far as aggressive non-Hodgkin’s lymphoma is considered a rapid progressive neoplasm, they also tend to respond rapidly to combined chemotherapy treatment with long-lasting remissions. Adding Rituximab to anthracycline regimens for the treatment of aggressive non-Hodgkin’s lymphoma has truly changed the patient's outcome and disease evolution.

52. ROSACEA IN EPIDEMIOLOGICAL AND CLINICAL-EVOLUTIONARY SYNTHESIS AMONG PATIENTS REGISTERED IN THE PERIOD 2017-2021 AT THE DERMATOLOGICAL AND COMMUNICABLE DISEASES HOSPITAL, CHISINAU, REPUBLIC OF MOLDOVA

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Introduction. Rosacea is a chronic skin condition that usually affects the face. The most common signs and symptoms are persistent, diffuse redness, rashes with or without pus, swelling, dilation of small blood vessels on the surface, and burning, itching or stinging, heat, and/or tightness in the face. The most affected regions of the face are the nose, cheekbones, forehead, and chin. A red, enlarged nose may occur in severe disease, a condition known as rhinophyma.The cause of rosacea is unknown. Risk factors are believed to include a family history of the condition.

Aim of study. The exact incidence of rosacea remains unknown, although it is a common condition associated with severe noncutaneous diseases. Worldwide, the incidence of rosacea ranges from 1 to 20%. Among the inhabitants of Europe, it's prevalence ranges from 1.5% to 10%. It often occurs in fair-skinned women of the Caucasian race at the age of 30-50.

Methods and materials. A systematic review of population-based and dermatological outpatient studies reporting the incidence of rosacea was performed using the basic data of patients registered in the Dermatological and Communicable Diseases Hospital, Chisinau, Republic of Moldova.

Results. In the period 2017-2021 at the Dermatological and Communicable Diseases Hospital, Chisinau, Republic of Moldova was registered 7995 patients diagnosed with dermatological pathologies, in 6,92 % of the cases has been established rosacea. Among these patients, 36.4% were diagnosed with rosacea as the principal disease and 63.58 % as the secondary disease. Research has shown that women are more prone to rosacea, it was diagnosed in 54.6% of cases. However, in 2019 the incidence of rosacea among men was slightly higher than in women (52.9%) also the relatively small difference in previous years of the incidence of the disease between women and men (9.2%), would indicate the possibility of the tendency to equalize incidence of rosacea between genders or even increasing it in men. In most of the patients studied, gastrointestinal pathologies were detected among concomitant diseases, with the possible presence of Helicobacter and cardiovascular diseases.

Conclusion. The results of the study allow us to make the conclusion that it is necessary to continue the study of the incidence of rosacea, in particular, the difference between women and men, and its causes. It is advisable to continue to study the effect of concomitant pathology and drugs on the occurrence and course of rosacea. It is necessary to develop methods of therapy and prevention.

53. SALMONELLA AND ANKYLOSING SPONDYLITIS

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Introduction. Ankylosing spondylitis (AS) is one of the autoimmune diseases which remains a deliberating factor in the population. Initially, it was disregarded as a mere result of an altered immune response. Salmonella is a pathogenic factor causing enteric fever and salmonellosis which is gastroenteritis with symptoms of diarrhea with or without blood, cramps, fever, abdominal pain, etc. These are the basic symptoms of food poisoning, which resolves on its own and doesn't need further treatments, unless with some complications.

Aim of study. The association of Salmonella and AS was established on a sporadic basis. Over the years it was estimated that genetic factors and environmental factors play some roles in varying degrees but no specific factors were elucidated that specified the exact role in the pathogenesis of AS that connected the factors in the baseline.

Methods and materials. This information is based on a review of different articles from the open-access databases: PubMed, PMC, and GoogleScholar. The following keywords were used: Salmonella and ankylosing spondylitis.

Results. How Salmonella led to AS was a dilemma till the discovery of HLA-B27 and its antigenic mimicking property. The role of interleukins and the innate immunity response along with the T-cell pathogenesis led more light to the hypothesis. Being a rare combination, it was hard to establish the exact relationship with the infectious-inflammatory regimen. But studies were conducted on both animal models and humans themselves, in the form of controlled trials, cohort, and meta-analysis. Advancement in gastroenterology, rheumatology and better studies of life cycles of infectious organisms finally led to the proposal of the gut-joint axis. It was also proved that Salmonella and related enterobacteria and other microbes caused a significant intestinal dysbiosis, which was regarded as the key pathogenetic factor in the development of AS. Still, it was confusing to relate between the intestinal flora and autoimmune disorder of the joints. Evidence was obtained regarding the intestinal macrophages and their presence at the synovial fluid of the vertebrae, more keen investigations were focused on the MALT cells to establish the profuse link between the phenomenon. Studies were also done focusing on other rheumatologic disorders belonging to the group of spondyloarthropathy like reactive arthritis and similar results were obtained. The ability of Salmonella to alter the intestinal mucosal permeability and the discovery of this fact led to more elaborate investigations over the mucosal barrier and its effects on the gut flora. It was also noted that individuals infected previously with Salmonella are seen to be with rheumatologic disorders more frequently than that of a normal population. Both typhoidal and non-typhoidal Salmonella were associated but there is still no evidence of the degree to which each of them causes AS or the degree to which it remains as the risk factor. Depending on the etiology of the disorder there must be changes in treatment approaches, for better management and a major role in prophylaxis, as AS affects the lifestyle and quality of life of the patient to a humongous extent. In addition to the immuno-suppressive drugs and physiotherapy, approaches must be taken to improve the gut microflora and to maintain a stable equilibrium between them. Careful administration of antibiotics and natural probiotic implementation is of prime importance in disease prophylaxis and treatment.

Conclusion. This study was intended to establish the link between Salmonella and ankylosing spondylitis and also to implement a better understanding of the gut-joint axis. Though we succeeded a long way in figuring out the relationship between them, furthermore studies are required to get a profound link in the evolutionary features of Salmonella-related AS. This work gives a lot of answers as well as further questions regarding a clear-cut insight and relationships between not only infectious and autoimmune disorders but also shows a possibility of links between unrelated diseases or conditions.

54. SCREENING FOR DEPRESSION IN THE POPULATION ENVIRONMENT

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Introduction. According to the World Health Organization (WHO), about 151 million people suffer from depression, the number of women affected being twice as high as that of men. Finally, 15% of depressed patients commit suicide. Depression is a condition that has a significant negative impact on quality of life, daily functioning and productivity. The WHO also estimates that in 2030, depressive disorders will be the leading cause of disability, confirming the need to build an adequate system of services that could meet the needs of the population.

Aim of study. Screening for depression among patients at the level of PHC. Assessing the prevalence of depressive disorders based on the PHQ-9 and PHQ-2 questionnaires, collecting and analyzing data, creating the premises for new strategies and approaches in the early diagnosis and management of depressive disorders.

Methods and materials. In this research 55 patients were included. All patients were investigated at the primary health care level, in a health center, and they went to the family doctor with other complaints. The tools of analysis used were clinical data of the patients and results from general questionnaires and special for depression screening PHQ-9 and PHQ-2 questionnaires. Patients were divided into 5 groups depending on the severity of the depression level.

Results. The most patients 43,6% detected with mild depression severity. These patients mention 2-3 depression personal and environmental risk factors, 36,3% healthy patients, without depressive disorders. These patients mention 0-1 depression personal and environmental risk factors, 12,7% moderate depression. These patients mention 3-4 depression personal and environmental risk factors, 5,5% moderately severe depression. These patients mention 4-5 depression personal and environmental risk factors. 1,9% severe depression. These patients mention 6 and more depression personal and environmental risk factors. Patients with suicidal thoughts were found in all 5 groups, regardless of the severity of depression. This allows us to assume that suicidal tendencies are caused by the influence of factors from the environment, and depend on the characteristics of the personality, temperament and individual response of the patient to various stress factors.

Conclusion. In addition to the high prevalence of depression in patients from the primary care level, there are other arguments in favor of screening for depression, namely: At the primary care level in patients, depression often coexists with physical illness and pain, which make it difficult to recognize depression. In primary care patients, as well as in the general population, a lot of people with depression remain untreated, negatively impacting productivity and economic costs. Depression is not only the most common mental health problem, but also a serious condition that requires expensive and long-term treatment and frequently becomes the most common cause of suicide. During the global pandemic of COVID-19, we can see an increase in the number of patients suffering from depressive disorders and there is a need to develop accessible and effective methods for depression screening and diagnosis, which can be applied to all levels of healthcare.

55. SEROTONINERGIC SYNDROME IN MEDICAL PRACTICE

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Introduction. Serotonergic syndrome is a health disorder caused by the use of drugs or the accidental interaction of drugs that affect serotonergic neurotransmission. Because the mentioned syndrome is one with lethal potential, but it is insufficiently studied, this investigation has been initiated.

Aim of study. Elucidation of the causes, etiopathogenic mechanisms, clinical manifestations and treatment principles of serotonergic syndrome based on literature data.

Methods and materials. In order to achieve the proposed goal, the specialised scientific publications were analysed, and also using the databases Google Search, Google Scholar and PubMed aiming at the studied problem. The articles published during the years 2000-2021 were selected as a filter, so 6,151 articles were found that address the topic "Serotonergic Syndrome".

Results. Research has shown that the main causes of serotonergic syndrome include the reckless administration / overdose of drugs with a serotonergic mechanism of action, as well the incompetent combination of serotonergic remedies with other classes of drugs. The main etiopathogenic mechanisms in the onset of serotonergic syndrome include: inhibition of serotonin reuptake in the synaptic cleft; reducing serotonin metabolism; increase serotonin synthesis; increased serotonin release; activation of serotonergic receptors; inhibition of certain enzymes involved in the metabolism and elimination of serotonergic remedies. The listed mechanisms trigger essential changes in the general homeostasis of the body. The Hunter triad may be useful for a positive diagnosis: 1) altered mental status, 2) neuromuscular arousal, and 3) vegetative nervous system dysfunction. The severity of the syndrome can range from mild to severe, associated with rhabdomyolysis, myoglobinuria, metabolic acidosis, kidney failure, coma and death. The differential diagnosis should be made with neuroleptic malignant syndrome, anticholinergic syndrome, malignant hyperthermia, hypertoxic schizophrenia, encephalitis with anti-NMDA receptor antibodies, and others. Therapeutic management, depending on the severity, includes non-pharmacological and pharmacological interventions, including the administration of serotonergic antagonists.

Conclusion. 1) Knowledge of the etiopathogenic causes and clinical manifestations can prevent the onset of this potentially fatal health disorder. 2) Proper therapeutic management significantly reduces the risk of death.

56. SEVERE HYPOPOTASSEMIA AS A STROKE MIMIC

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Introduction. Stroke mimics are specific conditions that present with an acute neurological deficiency simulating acute stroke and constitute approximately 30% of all acute stroke admissions. While often overlooked, electrolyte disturbance is a rare but important reversible cause of the acute focal neurological deficit and should remain on the differential diagnosis. In one stroke study, metabolic disorders accounted for 30% of stroke mimics. Hypokalemia is one of the most common electrolyte abnormalities encountered in medical practice. An accurate diagnosis can be provided by a careful history and well-timed testing.

Case presentation. An 83-year-old man, presented at the Emergency Department (ED), with first symptoms of hemiparesis and motor aphasia. Ischemic stroke was preliminarily diagnosed based on acute onset of clinical manifestation and medical history of hypertension, atrial fibrillation, and recent myocardial infarction. Before the admission, our patient had diarrhea for two days. On Computer tomography (CT) patient developed cardiac arrest and it was successfully resuscitated. Brain CT scan showed fusiform aneurysmal dilatation of the basilar artery. The electrocardiogram showed normal sinus rhythm with a mildly flattened T-wave. Cardiac markers- troponins were in the reference ranges, Glucose levels 10mmol/l, but serum potassium level was low (1,9mmol/l). The potassium correction was started and the patient's neurological deficit rapidly resolved. 24 hours brain CT scan didn't reveal a new consistent abnormality. Brain magnetic resonance imaging was performed, also without ischemic lesions. Severe hypokalemia was diagnosed in our patient.

Discussion. This case illustrates that mimicking hypokalemia can induce a unilateral motor deficit, as stroke is such a condition being rarely described previously in the literature, but remains an important diagnosis in the ED. The pathophysiology of unilateral motor deficit in acute hypokalemic hemiparesis remains to be unknown. Previously, only one case was reported with hemiparesis due to severe hypokalemia.

Conclusion. We present an atypical case of hypokalemia which induces hemiparesis. So, physicians should be alert about these conditions. The correct diagnosis can be lifesaving.

57. SEVERE MENTAL DISORDER - IMPACT AND BURDEN ON COMMUNITY MENTAL HEALTH

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Introduction. Severe Mental Disorder (SMD) refers to a diagnosis of psychotic disorder, bipolar disorder, or either major depression with psychotic symptoms or treatment-resistant depression. Also includes anxiety disorders, eating disorders and personality disorders, if the degree of functional impairment is severe. These deficiencies often lead to an inability to maintain a lucrative activity, poor social support, repeated psychiatric hospitalizations, homelessness, incarceration and coexisting substance use disorders. Community mental health (CMH) care focuses on providing services within the community, close to people's homes, organized promptly and used in case of need. It offers a series of medical, social services in the form of integrated care, in order to optimize the possibilities to recover the person with SMD. Aim of the study: Is to identify the social functionality and the needs of people suffering from SMDs, as well as to elaborate recommendations based on the detected needs.

Aim of study. SMD is defined as a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities. The impact of mental illnesses is particularly concentrated among those who experience disability due to SMD. It represents a high burden of disease in the Republic of Moldova. Its incidence and prevalence, as well as the disability caused by depressive disorders, is continuously increasing.

Methods and materials. Review of the literature on SMDs and health care. Analyzing methods for studying social functionality of people suffering from SMD. The use of multifunctional questionnaires to elucidate the psycho-social peculiarities of patients with SMDs. Research subject: 20 beneficiaries of the Community Mental Health Center of the Buiucani sector with SMDs. Inclusion criteria: People with SMDs with a disease duration of at least 5 years. People aged 18-65 years old.

Results. Due to the early onset of the disease, all beneficiaries face difficulties in their ordinary life. They fail to integrate socially and educationally (difficulty in reading/writing/speaking). Family integration is being very challenging for them, no stable partner for a long-term relationship, no children. The satisfaction of material and individual needs in people affected by SMDs is low. They have difficulties with housing, mostly no adequate nutrition and financial difficulties due to a limited income. Physical disabilities of varying degrees, difficulty in performing personal care, in doing household chores. Most suffer from psychotic symptoms (hallucinations and/or delusions), are affected by cognitive problems, face psychological exhaustion, depressed mood, insomnia. The presence of non-suicidal self-injury is attested, also they believe that they can be dangerous to those around them.

Conclusion. SMD is a current public health problem with a high incidence and prevalence. It leads to a high rate of disability which eventually leads to the disintegration of people within the society. It is a social, family and personal burden, which leads to financial, psychological and moral damage. People do not have friends and social networks, are rejected by their families, society and so they feel abandoned. There is still a long way to go to rehabilitate people with SMD and integrate them into the community. Key-words: severe mental disorders, mental health community.

58. SKIN MANIFESTATIONS MARKING A HEPATO-BILIARY PATHOLOGY

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Introduction. Hepatobiliary pathologies are very often associated with changes in the skin, nails and hair that are directly or indirectly caused by these diseases. As the skin is the largest organ of the body, it often provides a clue to the underlying systemic disease, and therefore the skin manifestations in systemic disease are often encountered by dermatologists.

Aim of the study. The aim of this study is to highlight the spectrum of skin changes in correlation with the pathologies of the hepatobiliary system.

Methods and materials. Several bibliographic sources have been studied: articles, textbooks, electronic databases (Medscape, PubMed, etc.).

Results. Most studies reported the most common pathologies of the hepatobiliary system, including hepatitis B (32%), followed by alcoholic liver disease (26%), viral hepatitis C (14%), cholestatic liver disease (8%), hepatocellular carcinoma (6%), Wilson's disease (4%) and autoimmune disease (2%). Among the extrahepatic manifestations in hepatobiliary pathologies, the skin is most frequently involved. The cutaneous manifestations in chronic hepatitis are represented by vascular, pigmentary and annex changes. Most studies reported a wide range of skin manifestations, the most common being xerosis and excoriation, pruritus, jaundice, pigment changes (hypo-hyperpigmentation), spider angioma, Terry's nails, palmar erythema. Chronic hepatitis C virus infection is currently considered a systemic condition with multiorgan involvement. The association of chronic hepatitis C virus infection with a lot of skin manifestations has been widely reported in the literature. In registry-based studies, approximately 17% of hepatitis C virus patients have at least one manifestation of the skin, which may be directly or indirectly induced by chronic hepatitis C virus infection. The most common skin manifestations associated with chronic hepatitis C virus infection due to a strong epidemiological and pathogenetic association are mixed cryoglobulinemia, lichen planus and late cutaneous porphyria. Stellar angiomas, palmar erythema and contracture of Dupuytren are observed in approximately 72% of cases in patients with alcoholic cirrhosis. 80% of them have a concave nail, Terry's white nail and a clock glass nail.

Conclusion. In conclusion, the pathology of the hepatobiliary system can give a wide range of skin manifestations, such as xerosis, pruritus, pigment changes, spider angioma. These manifestations are nonspecific as not suggested by a specific diagnosis, but may reflect the severity of liver disease.

59. TB/HIV CO-INFECTION – COMORBIDITIES AND OPPORTUNISTIC INFECTIONS

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Introduction. TB/HIV co-infection is a medical and social problem, because they are two infectious diseases involving cellular immunity and based on the impact of these diseases on the state of health in people with specific social status. The presence of comorbidities and the development of opportunistic diseases in people living with HIV significantly affect the outcome of treatment and prognosis.

Aim of study. Studying the evolution of tuberculosis in people living with HIV in the presence of other comorbidities and diseases.

Methods and materials. 27 cases were analyzed – patients diagnosed with TB/HIV co-infection in the presence of other opportunistic diseases and infections, hospitalized for treatment in the years 2018-2020.

Results. It was established that in 19 (70%) patients of TB cases, in people with HIV-positive status, was present the opportunistic infection. TB diagnosis was the reason for the examination for HIV infection in 16 (60%) cases, in other 11 (40%) cases TB developed in people with known HIV status. Males predominated – 18 (67%). Young age – 25-50 years had 21(80%) patients. In anamnesis contact with TB patients was highlighted in 1/2 of the analyzed cases. The way of TB detection was by direct addressing with clinical signs in 20 (75%) cases. Comorbidities present in the patients included in the study were: Anemia – 20 (75%) cases, Viral Hepatitis – 17 (65%) cases, UDI – 12 (45%) cases, pathology of the digestive tract – 9 (35%) cases, diseases of CNS – 9 (35%) cases. Opportunistic infections diagnosed were – Pneumocystis jiroveci – 5 (18.51%) cases, Cytomegalovirus – 3 (11.11%) cases, Toxoplasmosis –2 (7.4%) cases. Pulmonary TB was confirmed by microbiological methods in 20(74%) cases. 25(92%) of the patients had extensive pulmonary processes with destruction. TB with resistance was established in 21(77,7%) of cases. The evolution of the disease was torpid in 100% of cases: 14 (51.85%) patients – had the individual treatment scheme due to difficult tolerance, 6 (22.2%) patients – therapeutic failure, 3 (11.1%) patients – abandoned treatment. The administered treatment was appreciated – ”with success” in 5 (20%) of cases. The complications found in the analyzed cases were: Respiratory failure – 12 (45%) cases, Pleurisy – 9 (35%) cases, Pneumothoraces – 4 (14.81%) cases, Hemoptysis – 3 (13%) cases.

Conclusion. The presence of comorbidities and opportunistic infections in patients with TB/HIV co-infection influences the prognosis and success of treatment. People at risk for HIV infection require increased alertness, counseling for a timely diagnosis.

60. THE CLINICAL COURSE OF CIRRHOSIS

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Introduction. Cirrhosis represents the culmination of decades of liver injury and is thought to represent an irreversible disease. The clinical course of cirrhosis includes several disease states which require multistate models and competing risks analysis for proper assessment. Clinical states are defined according to the type of decompensation and increasing mortality. The traditional multistate models of cirrhosis have been validated in several studies and are currently widely used in clinical practice but mainly focus on the natural history of patients that are relatively stable.

Aim of study. Liver cirrhosis is characterized by a silent phase until decompensation, which is defined by ascites, bleeding from esophageal varices or hepatic encephalopathy. Herein, we aimed to analyze and characterize the clinical course and survival in cirrhosis.

Methods and materials. An advanced search was performed in the PubMed, Medline, and ScienceDirect databases, taking into account relevant articles, published in the last 10 years. The search English terms used were: ”Cirrhosis”,”Portal hypertension”,”Clinical states”,” Multistate model”,”Prognosis”

Results. Cirrhosis is classified as compensated or decompensated, based on the absence or presence of complication such as variceal bleeding, ascites, jaundice or encephalopathy. More recently, it has been recognized that increasing portal hypertension and several major clinical events are followed by a marked worsening in prognosis, and disease states have been proposed accordingly in a multistate model. The clinical course of cirrhosis may not be considered as unidirectional anymore . Aetiological treatment of cirrhosis may halt or even reverse the clinical course of the disease, particularly when it is still in a compensated state. Therefore, watchful follow-up of patients in whom the cause of cirrhosis has been successfully treated is recommended. Several clinical conditions associated with significantly different outcomes have been proposed as relevant clinical states during the course of the disease. Clinical states of cirrhosis are based on distinct outcome patterns and have a prognostic classification value. The progression of cirrhosis across clinical states is not predictable, although it parallels the progression of liver damage with its haemodynamic, inflammatory and functional consequences. However, it is notable that there is no predictable sequence of such clinical states and that they may not be considered as progressive disease stages. However, clinical states enable the classification of patients according to increasing mortality risk. Moreover, assessing transitions across states may facilitate the description of the clinical course of the disease in a multistate model. Compensated cirrhosis without varices (state 1). This is the earliest clinical state with a low incidence rate of decompensation and very low mortality. Compensated cirrhosis with varices (state 2). These patients are at risk of variceal bleeding and decompensation. Thus, they require a different monitoring schedule and specific treatment according to the severity of risk. Variceal bleeding (state 3). Patients with bleeding alone have better outcomes than patients with ascites without bleeding, and much better outcomes than patients with bleeding and ascites. First non-bleeding decompensation (state 4). Ascites is the most frequent first non-bleeding decompensating event and is in fact considered the hallmark of decompensation. Further decompensation (state 5). Following any first decompensating event, most patients develop further decompensation before dying. The most frequent combination is bleeding and ascites, although jaundice and encephalopathy are also frequent. Late advanced decompensation (state 6). The progressive increase in splanchnic vasodilatation, hyperdynamic circulation, bacterial translocation and systemic inflammation result in a more advanced, late decompensation state where multi-organ dysfunction becomes clinically evident.

Conclusion. The development of multistate models implies the assessment of the probabilities of more than one possible outcome from each disease state. Recognising different clinical states of cirrhosis may have important implications on the most likely clinical outcomes. Hence, clinical states may be used to inform treatment interventions to prevent disease progression.

61. THE CONCEPT OF PERSONALISED MEDICINE

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Introduction. Personalised medicine is a progressively developing approach in health care, focusing on the unique genetic characteristics of each individual, thus guiding the decisions and treatments adjusted specifically to the requirements of every patient. The researches in this field have been on an exponential growth in recent decades.

Aim of study. The purpose of this study was to determine the concept of personalised medicine and the importance of its implementation in healthcare.

Methods and materials. A selection of material was performed by searching the PubMed database according to the following keywords: "personalised medicine", "concept of personalised medicine" and "precision medicine". The final evaluation underwent 87 works, including original works, meta-analyses, and reviews.

Results. Personalised medicine and its approaches in different domains, including preventive measures and lifestyle changes, is permanently evaluating and developing. According to ICPerMed it is widely understood that personalised medicine defines as a medical model using characterisation of individuals' phenotypes and genotypes for tailoring the right therapeutic strategy for the right person at the right time, to identify whether the patient is predisposed to a certain disease and to provide the conveniently designed prevention. The key element in the development of the concept constitutes the research of the genetic characteristic of the patient, which incorporates the holistic perspective of the patient-centred care. Oncology, cardiology, pulmonology, neurology, family medicine, etc. are only some domains with the most convenient applicability of this motion. Continuous development of personalised medicine and implementation in everyday practice is the both short and long - term purpose in the developed countries, emphasising this approach is the vision, which still needs proficiency.

Conclusion. The concept of personalised medicine consists of the patient centred approach based on the study of one's specific genetic data, with the purpose of improving the preventive, diagnostic and treatment measures, and its cost-effective implementation in health-care practices.

62. THE DIAGNOSTIC CHALLENGES OF WILSON'S DISEASE RELATED TO COPPER FINDINGS

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Introduction. Wilson's disease - a genetic disorder due to mutations of the ATP7B gene which causes disturbance of copper metabolism and its accumulation in various tissues, especially the liver and brain. Deviations in parameters of copper metabolism are not exclusively attributed to Wilson's disease. Complex biochemical processes are involved in copper homeostasis. Disruptions in these processes lead to separately described diseases contrary to the ATP7B defect.

Aim of study. To analyze the bibliographic data regarding the changes in copper homeostasis and the differential diagnosis of Wilson's disease related to its findings.

Methods and materials. An advanced search was performed in the PubMed, Medline, and ScienceDirect databases, taking into account relevant articles, published in the last 10 years. The search English terms used were: "human copper metabolism", "inherited disorders", "serum ceruloplasmin", "serum cooper", "serum" "free" "copper", "24-hour urinary copper", "hepatic cooper".

Results. A single biochemical test is not sufficient to establish a diagnosis of Wilson's disease. Typical findings include low serum ceruloplasmin and serum copper, high copper urinary excretion in 24-hour and high hepatic copper content. The decrease of serum ceruloplasmin is not 100% sensitive or specific, and it must be differentiated from over cases, as well malabsorption, autoimmune hepatitis, celiac disease, familial aceruloplasminemia, MEDNIK syndrome, Menkes disease, etc. Serum copper (which includes copper incorporated in ceruloplasmin) is usually decreased in proportion to the decreased serum ceruloplasmin. Hypocupremia can occur in insufficient oral intake, an increased zinc uptake, taking valproic acid, idiopathic cases. In some situations, it may be within normal range or markedly elevated, that's why the serum "free" copper was proposed as a diagnostic test for Wilson's disease. However, it is recommended to be used as a pharmacotherapy monitoring test rather than a diagnostic test. Interpreting 24-hour urinary copper excretion can be difficult due to the overlap with findings in other types of liver disease (e.g. autoimmune hepatitis, chronic active liver disease, or cholestasis), incorrect urine collection, and copper contamination of the collection device, while in case of impaired kidney function, the test is not applicable. Hepatic copper accumulation is the hallmark of Wilson's disease, but it can be misinterpreted due to inhomogeneous distribution of copper, long-standing cholestatic disorders, in idiopathic copper toxicosis syndromes such as Indian childhood cirrhosis.

Conclusion. Numerous conditions can influence copper homeostasis, including several genetic diseases. Not a single test is specific per se and, thus, a range of tests has to be applied. The diagnostic finding can only be interpreted plausibly in context with other findings (clinically and laboratory) to avoid false-positive or false-negative results.

63. THE EVOLUTION OF TUBERCULOSIS AMONG THE STUDENTS

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Introduction. Tuberculosis (TB) remains a major medical and socio-economic problem of public health, growing alarmingly. There are about 10 million new cases of tuberculosis and more than 1.5 million deaths worldwide each year. It is one of the top 10 causes of death in the world. In recent decades there has been a constant "rejuvenation" of TB. Contact with TB-infected patients is known as a major factor of Mycobacterium tuberculosis infection.

Aim of study. The features of the evolution of pulmonary TB, diagnosed in student-patients.

Methods and materials. A descriptive, retrospective study was conducted for the period 2018-2020. The subjects of the study consisted of 36 cases of pulmonary TB diagnosed in students from different educational institutions in Chisinau. The data was collected using the information system of tuberculosis monitoring and assessment (SIME TB) and the patient's medical history, archive's database. Were estimated the clinical symptoms, results of bacterioscopic examination of liquid and solid culture. The high-sensitive detection method as molecular-genetic test GeneXpert MTB / RIF), thoracic radiology examination and treatment strategy were assessed.

Results. The males predominated about three times according to follow-up.The vast majority of the patients lived in rural areas - 29 (89%) and only 7 (11%)- in Chisinau. Was observed that students from rural areas had a more difficult adaptation period, living in dorms or in dissatisfied conditions, which exposed them to higher risk for tuberculosis. The active and passive patient's screening was applied in approximately 1:1. According to research, the broncho-pulmonary syndrome was most common, especially cough - 90%, followed by intoxication and temperature's rising in 69% of cases. Among the comorbid conditions were the mentioned digestive tract pathology -15 (41.6%), previous allergy to various foods and drugs - 12 (33.3%), urinary tract infections - 10 (27.7%), Central Nervous System (CNS) impairment - 7 (19.4%), history of trauma - 5 (13.8%) cases. The infiltrative pulmonary tuberculosis was the most common clinical form of TB, found in 32 (88.8%) of patients. Nodular pulmonary tuberculosis and pleurisy of tuberculous origin were detected in 2 (5.5%) cases. From the total number of patients included in the study, the microbiological etiology of TB was established only in 27 (75%) cases, when in 9 patients (25%) it was not confirmed. According to outcomes, complete recovery from TB was in 25 students (69.4%), enclosed treatment-in 9 (25.0%) patients and in 2 (5.6%) cases the therapeutic failure was found.

Conclusion. The medical-biological and social factors increase the risk of TB in students due to adaptation period, unfavorable nutrition and living conditions. Early diagnosis and correct treatment of TB lead to benign evolution and favorable outcomes.

64. THE INCIDENCE OF ENTHESOPATHY AS AN EARLY MANIFESTATION IN PSORIATIC ARTHRITIS

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Introduction. Psoriasis is a common chronic immune-mediated skin disease that affects ~2% of the population. Psoriatic arthritis may be present in different clinical forms whose major features are synovitis and/or enthesitis. Enthesopathy is one of the features characterizing patients with spondyloarthropathies. Its diagnosis is usually based on clinical symptoms such as the presence of calcaneal pain or tenderness at the insertion(s) of ligaments.

Aim of study. The importance of enthesitis as the key pathological lesion underpinning the pathogenesis of psoriatic arthritis (PsA) has been increasingly recognized. Studies for more than 3 decades have shown a high frequency of osseous and entheseal abnormalities in patients with psoriasis without clinical signs of arthritis. From a clinical viewpoint, about 10% of patients with psoriasis develop PsA over a decade, so there is a need to better define predictive factors for the identification of future PsA in patients with psoriasis. The ability to accurately predict development of PsA in subjects with psoriasis could have implications for prevention of the morbidity associated with PsA and also for studies aimed at elucidation of the early phases of disease.

Methods and materials. This is a review of articles of clinical studies, trials, bibliographies and articles from databases like JRheum, Europe PMC, Oxford Academic, BMJ.

Results. Mean GUESS (Glasgow Ultrasound Enthesitis Scoring System)score was significantly higher in patients with psoriasis as compared with controls: 7.9 (0.6) vs 2.9 (0.3); $p<0.0001$. In particular, the thickness of all tendons examined was significantly higher in cases than in controls ($p<0.0001$), as well as the number of enthesophytes in all sites examined. In both cases and controls, the GUESS score was directly correlated with age ($r=0.22$; $p=0.008$), body mass index ($r=0.23$, $p=0.0067$) and waist circumference ($r=0.17$; $p=0.02$). In contrast, the GUESS score was not correlated with the duration and severity of psoriasis according to the Psoriasis Area and Severity Index ($r=0.03$; $p=0.8$) and body surface area involvement ($r=0.07$; $p=0.6$).

Conclusion. Entheseal abnormalities can be documented by ultrasonography in clinically asymptomatic patients with psoriasis. These findings could be related to a subclinical entheseal psoriatic inflammation. We suggest close follow-up of patients with psoriasis with entheseal abnormalities for early diagnosis of psoriatic arthritis.

65. THE NUMB CHIN SYNDROME AND LYMPHOMAS

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Introduction. The Numb chin syndrome (NCS) also known as mental neuropathy is a rare sensory neuropathy characterised by oral and lower face numbness, often in association with jaw pain and paresthesia. The hypoesthesia usually involves the lower lip, chin and/or lower anterior teeth mucosa. The clinical acknowledgement of the NCS is important mainly because frequently can be the first clinical manifestations of an occult malignancy. Breast cancer and non-Hodgkin lymphoma are the most common reported causes of NCS. Hypoesthesia can occur unilaterally or bilaterally. Thorough diagnostic evaluation should always be performed when no clear cause is evident.

Aim of study. The first report of mental neuropathy as the initial presentation of malignancies dates from 1963. The mental nerve has no motor fibres that is why the NCS is a purely sensory neuropathy. The mandibular branch of the trigeminal nerve leaves the skull through the foramen ovale dividing into two trunks: an anterior motor trunk for mastication muscles and a posterior sensory trunk passing through the mandible and forming the inferior alveolar nerve. The last exits the mental foramen as the mental nerve, responsible for the sensation of the lower lip and the skin of the chin. In most cases, the neuropathy results from mechanical compression or tumour infiltration. The most common haematologic neoplastic cause is non-Hodgkin lymphoma (NHL). The NCS is an under-recognised condition in spite of the fact that NCS is vastly documented in the literature. Thus, the lack of awareness causes delay in diagnosis and treatment.

Methods and materials. Desktop research with systematic review on Medline, PubMed, Mendeley, Google scholar and Google searching for articles published in English until February 28, 2022 with the search terms “Hodgkin and non-Hodgkin disease,” “lymphoma,” “neurolymphomatosis” in combination with “Numb Chin syndrome,” and “mental neuropathy”.

Results. Usually, the NCS is the first sign of recurrence or metastasis in patients with a history of malignancy. Often though, the NCS is the first manifestation in hematologic malignancies, preceding the diagnosis of the primary tumour. The NCS can underline many malignant conditions, including lymphoma, acute leukaemia, Burkitt lymphoma, multiple myeloma, Ewing sarcoma, melanoma, but also breast, lung, esophageal colon and prostate cancers. The pathophysiology of NCS can vary from direct compression of the mental nerve by the tumour, leptomeningeal invasion or lesion of the bone at the mental foramen. Heavy infiltration of tumour cells in the trigeminal nerve and destruction of axons and myelin in the mandibular nerve have been reported in post-mortem studies. A particular vulnerability of inferior alveolar nerve/mental nerve to malignant alteration is due to their tortuous course through the mandibular bone. Is interesting though that the bilateral NCS are more often associated with hematologic malignancies than with solid malignancies. This could be explained by the infiltrative character of the hematologic malignancies versus the solid tumours.

Conclusion. The NCS may be a subtle sign of occult malignancy progression or recurrence or disease progression in patients with a history of cancer; • Thus, the panoramic radiography of the jaw, computed tomography (CT) or magnetic resonance image (MRI) of the jaw, face, and brain makes shall be compulsory for every NCS; • The most common non-haematologic neoplastic cause of NCS is breast cancer, while the most common haematologic neoplastic cause is NHL; • The exact pathophysiology of NCS is still unclear. Currently known mechanisms include direct compression of the mental nerve by tumour mass, leptomeningeal invasion or a bony lesion at mental foramen. However, other mechanisms may also exist, such as dural lesions.

66. THE ROLE OF FAMILY FACTORS IN THE DEVELOPMENT OF MENTAL DISORDERS IN CHILDREN AND ADOLESCENTS.

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Introduction. Mental health is the main element on which the processes of learning, adaptation and well-being of the person depend. The family structure influences the child psychologically and psychopathological. Some studies have documented the link between separation and depressive disorders. Factors that increase the likelihood of children having mental health problems are: marital conflict, increasing poverty, incomplete families, hostile parents, etc. Single-parent children are more likely to report internalization and outsourcing problems to children from whole families. Children who lived with their mother and a foreign partner showed poor emotional control and high levels of conduct problems. Children with separated parents have low self-esteem, showing more emotional and behavioral difficulties, but sometimes divorce is a better solution for the child than to grow up in an inappropriate family environment that creates a marked intrapsychic tension. The formation of the child's personality involves resolving conflicting and frustrating situations. Conflicting states between the child and the parents or between the parents, make the child anxious, untruthful, leave home, straying, stealing. Hyperprotective parents make their children restless, dependent and difficult to adapt. In the case of inconsistent, oscillating parents, who go from exaggerated harshness to excessive protection, indulgence and pampering, children have behavioral difficulties, emotional balance disorders. Some parents want to achieve their own aspirations through their children, thus appearing to have an inner conflict with their possibilities of effort, being subjected to an overload with psychic repercussions. Equally serious is the disinterest in the child's education. When the father is too demanding and the mother is too lenient, the father-mother opposition appears in the child's subconscious. When the parents are exaggeratedly severe and the educational climate is harsh, the child will have a state of distrust in his own strength, will be impulsive, ready to defend or on the contrary will be punished for anything.

Aim of study. The aim is to establish the influence of family factors (unfavorable intra-family relationships, divorce, death of a parent, etc.) on the occurrence of mental disorders in children and adolescents.

Methods and materials. Collection of anamnestic data and retrospective analysis of clinical observation sheets, as well as data from the literature on the studied subject.

Results. It is necessary to keep developing strategies to prevent psychiatric disorders in children and adolescents oriented to the family, but also to increase the quality of life of each family member. The support network is also very important for the prevention of psychopathology.

Conclusion. The family is the fundamental living environment for the existence and formation of the child's personality, as a determining educational environment, but it can be a source with a negative causal effect of maladaptation and the appearance of mental disorders. Health and social care systems must recognize family risk factors, bio-psycho-social intervention in primary, secondary and tertiary prevention. Currently, there is a great diversity of family structures with a direct influence on development, but the most important element remains the quality of intra-family relationships and education, which are essential for the prevention of a mental disorder.

67. THE ROLE OF INFLAMMATORY MARKERS IN EARLY DETECTION OF INFECTION AMONG PATIENTS WITH LIVER CIRRHOSIS

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Introduction. Liver cirrhosis yearly causes 1.2 million deaths worldwide, ranking as the 14th leading cause of death in the world and 10th and in the most developed countries. High susceptibility to infections along with a significant risk for infection-related mortality justifies the description of liver cirrhosis as the world's most common immunodeficiency syndrome . The infections are among the most common triggers of the acute-on-chronic liver failure syndrome, which is the most common direct cause of death in patients with decompensated cirrhosis. An early identification of the bacterial infection increases the treatment success rate. The diagnosis of bacterial infection among cirrhotic patients is difficult, because of the absence of classical signs such as fever or an increase of white blood cell count . Up to 30-60% of hospitalized patients may have a bacterial infection . The most common infections in cirrhosis are Spontaneous Bacterial Peritonitis (SBP, 25%-31%) followed by Urinary Tract Infection (UTI, 20%-25%), Pneumonia (15%-21%), Bacteraemia (12%) and Cellulitis (11%). We aimed to study the patient characteristics with liver cirrhosis and bacterial infection as well as the role of inflammatory markers in early detection of the infection.

Aim of study. Identification of clinical aspects in patients with liver cirrhosis associated with community acquired bacterial infection.

Methods and materials. All adult cirrhosis patients admitted to the Clinical Republican Hospital "Timofei Moșneaga", within the period 01.01.2020-31.12.2021 were consecutively evaluated. We collected data from 60 hospitalized patients with cirrhosis. A comparison between data shown by patients with and without associated infections was carried out. We obtained clinical and paraclinical dates in the first days of hospitalization.

Results. Regarding the liver cirrhosis associated infections: 20 patients (30%) were diagnosed with community acquired infections, of which 14 were patients with urinary tract infection (70%), 6 patients with pneumonia (30%) and 6 patients with spontaneous bacterial peritonitis (30%). 14 out of 20 patients were diagnosed with only one infection whereas 6 patients had mixed infections. According to the Child Pugh Class of Liver Cirrhosis: Class C was in 70% of those with infection versus 25% in patients without infections. The average value of the MELD-Na score was 20 points for those with infections and 18.2 points for those without infections. Of those with infections, 30% had fever, 10% had chills, 100% in both groups presented signs of physical asthenia. The cholestatic syndrome was more pronounced in patients with infections, with the average total bilirubin being 71 μmol/l in those with infections and 33 μmol/l in those without infections. The average fibrinogen values were 1.84 g/l in those with associated infections and 2.26 g/l in those without infections. Hepatorenal syndrome was more pronounced in patients with associated infections, with the average value of prothrombin being 51% in those with infection and 63% in patients without infection respectively. The average value of albumin was 23 g/l in those with infections and 31 g/l in those without infections. Leukocytosis was detected in only 30% of cases in those with associated infections. ESR had an abnormal value in 60% of cases in patients with infections and in 30% of cases in patients without infections, the average value of ESR being 25 mm/h in those with infections versus 17 mm/h in those without infections. C-reactive protein was above the norm in 90% of patients with associated infections, whereas in patients without infections it was detected in only 15%. The average value of C-reactive protein was 29.89 mg/dl in those with associated infections and 11.2 mg/dl in those without infection respectively.

Conclusion. Patients with decompensated liver cirrhosis are prone to the association of community acquired infections. C-reactive protein and ESR are highly sensitive inflammatory markers in the early detection of community acquired infections, while leukocyte levels are not informative in the detection of inflammatory syndrome in patients with liver cirrhosis.

68. THE ROLE OF RESPIRATORY BIOFEEDBACK IN THE TREATMENT OF PAIN

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Introduction. Biofeedback can be described as an operant conditioning of physiological activities, by which the patient learns to self-regulate his physiological processes (respiration) with the help of feedback information, in order to influence other biological processes and subjective feelings such as pain and relaxation. Respiratory biofeedback provides patients with a simple, effective, and cost-efficient tool in managing different pain conditions.

Aim of study. The purpose of this review is to provide a comprehensive update of recent advances in the use of respiratory biofeedback for the management of different pain conditions, as well as to highlight the pathophysiological processes that lay at the basis of the interaction between respiration and pain.

Methods and materials. We performed a simple search of the databases (Medline, PubMed, Google Scholar) followed by a reverse snowball search, which yielded 176 articles. We used the following keywords and word combinations to search for the relevant articles: respiratory biofeedback, respiratory feedback and pain, biofeedback-assisted diaphragmatic breathing, respiratory rate biofeedback, effect of diaphragmatic breathing on pain, cardiorespiratory biofeedback, biofeedback-assisted breathing retraining, heart rate variability biofeedback, respiratory sinus arrhythmia, breathing and pain management;

Results. We were able to find scientific data that supports the addition of respiratory biofeedback interventions in the management of pain, which has proven to be very effective in allowing patients to better manage their symptoms related to pain. Respiratory biofeedback exerts its effects on pain modulation mostly through a series of indirect mechanisms: distraction, attentional focus, blood pressure, baroreflex, and vagal activity. From all of the above mechanisms, vagal activation seems to have the most effect on reducing the levels of pain. Some breathing patterns such as slow deep breathing can lead to a bigger rise in intrathoracic pressure, venous return, and a transient increase in blood pressure during inspiration. This leads to higher activation of arterial baroreceptors and through glossopharyngeal and vagal afferents activate the nucleus of the solitary tract. This in turn activates pathways involved in vagal and pain regulation, which include a descending inhibitory pathway from the caudal ventrolateral medulla that inhibits spinal nociceptive neurons.

Conclusion. It's been concluded that respiratory biofeedback treatment can lead to improvements in various pain-related outcomes, both in the short and long terms, either as a standalone or as an adjunctive intervention.

69. TRANSVERSE MYELITIS AND GUILLAIN BARRE SYNDROME - COINCIDENCE OR CAUSALITY?

Author: Cocieru Călin

Scientific advisor: Șapira Violeta

Introduction. Transverse Myelitis is a rare neurological disorder, often without any known cause but with an important negative effect on patients quality of life. The neurological symptoms provided by the transverse Myelitis take the form of motor, sensory and autonomic dysfunctions. It has a slow onset but a progressive course and it's linked to an important loss in patients quality of life.

Case presentation. We present the case of a 71 years male patient with clear progressive spinal cord related neurological symptoms but with repeated normal laboratory and imagistic findings in the first 6 months since its onset. Pathological imagistic signs could be detected only at the stage in which the patient already suffered an important loss in the quality of life.

Discussion. Even at 2 months since onset there were no pathological laboratory and imagistic findings which made a nearly impossible differentiation between transverse Myelitis and Guillain-Barre Syndrome. Under a treatment with intravenous immunoglobulins we could temporarily reach a significant reduction in motor dysfunction, although sensory and autonomic dysfunctions remained unchanged. The course of the motor, sensory and autonomic dysfunctions showed 3 distinct patterns: motor- slow onset and a temporary relief under treatment, sensory- later onset but no relief under treatment, and autonomic early onset and no changes during the entire course. Only a repeated MRI with contrast enhancement at 6 months since onset could provide a confident explanation of the ongoing pathology, timepoint at which the patient already suffered an important loss of his quality of life.

Conclusion. Early diagnostics require a detailed anamnesis and comprehensive physical examination, a continuous monitoring and a correct and prompt use of the necessary laboratory and imagistic techniques. Sometimes setting the right diagnosis requires several repeated laboratory and imagistic techniques.

70. TREATMENT OF AGGRESSIVE FORMS OF MULTIPLE SCLEROSIS

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Introduction. Aggressive multiple sclerosis is a clinical form of multiple sclerosis (MS) that has remained undefined uniformly, with full consent around the world. This disease form is not common and therefore has not been studied much. Treating MS can be challenging for doctors, and when discussing aggressive MS, the challenge is massive. Aggressive multiple sclerosis treatment, early as possible, has been found to have a major impact on disease course. Ocrelizumab is a recombinant humanised monoclonal antibody to CD20. It is the only therapy approved by the food and drug administration for primary progressive MS (PPMS).

Case presentation. A female patient, 38 years old presents the following complaints: Weakness in the left limbs, numbness in the left hemi-body, dizziness; balance disorders with the movement of the body to the left, sensation of "cotton wool legs", Sensation of electric current on the route of the spine at the movement of the head. diffuse muscle pain, general weaknesses; urinary retention, and constipation. The patient has been diagnosed with MS since 2018. She developed the first symptoms while she was in the United Arab Emirates. A contrast-enhanced brain MRI was recommended, and demyelinating foci are described. She was hospitalised with pulse therapy of Cortisone 1000 N5. In May and December 2020, she had Ocrelizumab. the patient reported an episode of itching with each treatment. At discharge, the condition improved. On physical examination: Marinescu-Radovici positive bilaterally. Cortical hypo-aesthesia on the left, pyramidal hypertonia in the left limbs. Pathological reflexes: Babinski on the left, Jacobson positive, clonus reflex on the left. Intention tremor on the left with asymmetry. Romberg: slight instability. The diagnosis: PPMS, clinically and imaging defined. Moderate hemiparesis on the left. Hemi-hyposensitivity syndrome on the left. Cerebellar disorders (asymmetry). Cognitive-behavioural disorders. Sphincter disorders (urinary retention, constipation). Diffuse neuropathic pain projected in the lower limbs. EDSS 3.

Discussion. In this case the patient has taken Ocrelizumab. She had an exacerbation since she should have taken another dose and didn't. This case is proving the effectiveness of Ocrelizumab for PPMS, along with a side effect which affected the patient's quality of life.

Conclusion. Ocrelizumab is the only therapeutic option approved for PPMS, which makes it an important therapy for aggressive MS. It is an effective treatment. Adverse events can be infusion reactions, infections, and breast cancer.

VI. Mother and Child. Gynecology and Obstetrics Section.

1. A CASE OF UTERINE MYOMA IN A VIRGIN FEMALE

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Introduction. Uterine fibroids are benign gynecological tumours originating from smooth muscle cells of the uterine wall. They are very common among women of reproductive age, being found in an estimated 20% to 40% of women under 50 year of age.

Case presentation. A 27-year-old virgin patient was admitted to the IMSP IM and C clinic and was diagnosed with intramural fibroids for 2 years. According to the accusations, the patient has an irregular menstrual cycle 3-4 / 28 days, moderate pain, quantitative physiological flow, sometimes with clots. As a method of treatment, myomectomy was performed by Pfannenstiel laparotomy, was enucleated an intramural fibroids nodule 7.5 cm X 5.0 cm x 5.0 cm, the abdominal cavity was drained. On histological examination, the leiomyoma was confirmed.

Discussion. Fibroid growth is strongly dependent on the female hormones, estrogen and progesterone, which usually promote the growth of fibroids, making fibroids to be more common in women who have never been pregnant (nulliparous women) or those who have had only one child

Conclusion. Two scientific observations gave rise to the popular saying, “Bad girls get pregnant, good girls get fibroids”. Thus, it is not virginity itself that increases the risk of developing fibroids, but the absence of pregnancy, which leads to continual exposure to hormones that promote fibroid growth. This means that if their exposure to the other risk factors is the same, a sexually active lady who does not get pregnant and a virgin lady have equal chances of developing fibroids.

2. ACCESS TO CONTRACEPTIVE SERVICES DURING THE COVID–19 PANDEMIC RESTRICTION MEASURES

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Introduction. As a public health emergency, the COVID-19 pandemic has influenced every aspect of human life. The global impact of the COVID-19 pandemic has had a consequence on sexual health services, being a major public health issue.

Aim of study. The aim of the study was assessment of the impact of COVID-19 social distancing measures in The Republic of Moldova on access to contraceptive services.

Methods and materials. The Republic of Moldova became part of a cross-sectional multi-country study called "International Sexual Health And Reproductive Health during COVID-19" (I-SHARE) with a common instrument in participating countries as an online survey [https://ishare.web.unc.edu/]. The study included 248 participants. IBM SPSS Statistics V21.0 software was used to analyse the statistical data.

Results. The average age of respondents of the study was 33.5±9.9 years, varying in the limits of 18-68 years. The majority of participants were women (200/248, 80.6%), 19.0% (47/248) men and 0.4% (1/248) identified themselves as other sex. 64.0% (158/248) of the participants were legally married and living together, 11.7% (29/248) - not legally married but living with a partner, 6.1% (15/248) were in a relationship but not living together. In 2% (5/248) cases the relationship ended during or after COVID-19 social distancing measures, albeit, 60% (3/5) of them consider that their relationship brake-up was precipitated by COVID-19 social distancing measures. The current methods of contraception used by the respondents was of the interest. As a result of the research, it was discovered that some of the participants used different contraceptive methods at the same time. However, the condom was the most popular method of contraception, followed by withdrawal and pills. Only 68 responders were seeking or obtaining contraceptive services before the COVID-19 pandemic, therefore 37/68 (54.4%) chose medical providers, and 45.6% (31/68) selected other sources for obtaining contraceptive services. However, during COVID-19 social distancing measures, only 32/248 (12.9%) participants were seeking or obtaining contraceptive services, 68.7% (22/32) asked medical providers and 31.3% (10/32) selected other sources. According to the study, the COVID-19 social distancing measures prevented or hindered only one respondent (0.4%) from seeking or receiving contraception, however the person did not identify the reason.

Conclusion. Our findings reveal that during the period of the COVID-19 social distancing measures, participants solicited or obtained fewer contraceptive services, which was accompanied by an increase in the frequency of accessing contraceptive services, particularly from medical providers.

3. APPROPRIATE CLINICAL MANAGEMENT OF WOMEN WITH HERLYN-WERNER-WUNDERLICH SYNDROME

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Introduction. Uterine didelphys with obstructed hemivagina and ipsilateral renal agenesis are assigned to the Herlyn-Werner-Wunderlich (HWW) syndrome. It generally reveals in adult women or a post-pubertal adolescent in whom hematometrocolpos generates a noticeable pain on the flank of the blind hemivagina.

Case presentation. A 14-year-old adolescent was admitted with right pelvic pain and dysmenorrhea. The symptoms have become more intense over the past two weeks. Menarche occurred at 13-years-old and the patient had a history of regular menses with cyclic pelvic pain. On first clinical examination, tenderness in the right lower abdomen and normal vulva, anus and hymen were noted. The ultrasound examination revealed a right pelvic mass (90/74 mm), double endometrial echoes, and hematocolpos. Uterine didelphys with stasis signs in the right corn, renal agenesis on the right, doubled kidney on the left were found on CT with contrast. After receiving the informed accord, the surgical team accomplished a vaginal septum incision and identified a hematocolpos, which was drained. The next follow-up visit was planned for one month later, when the patient revealed the absence of the symptoms.

Discussion. The explicit causation and pathogenesis of HWW syndrome are still not known, but are possibly associated to the role of Wolffian ducts in the evolution of internal genital organs and kidneys, and müllerian ducts fusions. For this reason, an embryologic anomaly of one Wolffian ducts may cause unilateral renal agenesis associated with obstructed hemivagina. It is not initially diagnosed, because of the regular menstruations from the blind hemivagina. The literature mentions a right-sided prevalence of the obstructed system. Despite such an advance in diagnostic technology, the significant heterogeneity of its clinical manifestation suggests it hinders quick recognition. The absolute treatment of HWW syndrome is the incision of as much of the obstructing vaginal septum as possible. Fertility is maintained with this surgery, which is not remarkably decreased in women with uterine didelphys.

Conclusion. The immediate and correct diagnosis of female genital organ disorders, including HWW syndrome, is obligatory to avert complications and maintain future fertility.

4. ASSISTED VAGINAL DELIVERY. INDICATIONS, MANAGEMENT, MATERNAL – FETAL COMPLICATIONS

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Introduction. Assisted vaginal delivery is the birth of the fetus with the help of special tools to ensure efficient extraction of the fetus. Although World Health Organization statistics have estimated that about 68% of births occur naturally, operative vaginal delivery remains at a fairly high level and represents about 10% in the UK, 3% in the USA, and in the Republic of Moldova - 6%. Globally, the quality of assisted deliveries is of particular interest and importance, the aim being reducing perinatal mortality and maternal-fetal complications. Now, there are 2 main options for operative delivery: vacuum extraction and forceps extraction. For the first time vacuum extraction was described by Dr. James Young and by 2000 it had reached 66% of all assisted vaginal deliveries. On the other hand, forceps extraction represents now only 1,1 % of all operative deliveries but, nevertheless, once it is applied correctly the probability of caesarean section is reduced considerably. The most occurred clinical situations that require assisted delivery are fetal distress and maternal indications as maternal exhaustion and failure of pushings. Contraindications serve unengaged fetal head, unknown fetal position, preterm pregnancies of < 34 weeks and fetal bleeding disorders.

Aim of study. The aim of the study is to reduce maternal-fetal mortality and complications after attending instrumental delivery.

Methods and materials. The retrospective study was conducted in the Obstetrics Department no.1 of IMSP SCM no.1 during 2021. All cases of operative vaginal deliveries were analyzed, which were 555 cases out of the 6319 natural births that were registered in total.

Results. The first place among indications for assisted vaginal delivery was fetal distress which was registered in 270 cases, followed by maternal indications in 12% of cases and thereafter by failure of maternal pushings in 6% of cases. In 194 cases the duration of application was up to 1 minute, in 106 cases - up to 2 minutes, in 44 cases - 3 minutes and in 14 cases - more than 3 minutes. In 73% of cases the fetal head was in the cavity, in 21% - at the exit of the small pelvis, in 6% - with the large segment at the entrance of the small pelvis and all of the 358 cases were successfully completed. When assessing the Apgar score of newborns in the first minute after delivery, we found that their condition was assessed as satisfactory in 76.5% of cases, and in 23.5% of cases mild hypoxia was determined, which in the following minutes of life has been corrected. The soft tissues of the birth canal were damaged in most cases. It was found that the most damaged was the perineum - in 210 cases, followed by vaginal laceration in 174 cases, cervical laceration in 64 cases and labial laceration in 36 cases.

Conclusion. Operative vaginal delivery is of special practical interest in the field of obstetrics and remains relevant due to its impact on perinatal and maternal outcomes, as well as those with early-onset as with late-onset, taking in consideration the severity of complications that may occur. Early diagnostics of maternal-fetal indications for assisted delivery and a correct instrumental technique are the key factors for a safe operative delivery. It can improve both maternal and fetal outcomes reducing complications at the same time.

5. CARE OF WOMEN PRESENTING WITH SUSPECTED PRETERM PRELABOUR RUPTURE OF MEMBRANES FROM 24+0 WEEKS OF GESTATION

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Introduction. Preterm Premature Rupture of the Membranes, also known as Preterm Prelabour Rupture of the Membranes (PPROM), is the rupture of the membranes prior to 37 completed weeks of gestation and prior to the onset of labour. PPROM complicates up to 3% of pregnancies and is associated with 30–40% of preterm births. It can result in significant neonatal morbidity and mortality, primarily from prematurity, sepsis, cord prolapse and pulmonary hypoplasia. In addition, there are risks associated with chorioamnionitis and placental abruption.

Aim of study. The diagnosis, assessment, care and timing of birth of women presenting with suspected PPROM from 24+0 to 36+6 weeks of gestation.

Methods and materials. All relevant information was obtained from literature review from the open access databases. The Cochrane Library and electronic databases (DARE, EMBASE, Trip, MEDLINE and PubMed) were searched looking for the following terms in the title or abstract "preterm prelabour rupture of membranes"; "chorioamnionitis"; "intra-amniotic infection"; "IGFBP-1"; "PAMG-1"; "antenatal corticosteroids" and "tocolytics".

Results. The diagnosis of spontaneous rupture of the membranes is made by maternal history followed by a sterile speculum examination. If, on speculum examination, no amniotic fluid is observed, clinicians should consider performing an insulin-like growth factor-binding protein 1 (IGFBP-1) or placental alpha microglobulin-1 (PAMG-1) test of vaginal fluid to guide further management. Following the diagnosis of PPROM, an antibiotic (preferably erythromycin) should be given for 10 days or until the woman is in established labour (whichever is sooner). Women who have PPROM between 24+0 and 33+6 weeks' gestation should be offered corticosteroids; steroids can be considered up to 35+6 weeks' gestation. A combination of clinical assessment, maternal blood tests (C-reactive protein and white cell count) and fetal heart rate should be used to diagnose chorioamnionitis in women with PPROM; these parameters should not be used in isolation. Women whose pregnancy is complicated by PPROM after 24+0 weeks' gestation and who have no contraindications to continuing the pregnancy should be offered expectant management until 37+0 weeks; timing of birth should be discussed with each woman on an individual basis with careful consideration of patient preference and ongoing clinical assessment. In women who have PPROM and are in established labour or having a planned preterm birth within 24 hours, intravenous magnesium sulfate should be offered between 24+0 and 29+6 weeks of gestation.

Conclusion. In pregnancies following PPROM, women should be cared for by an obstetrician specializing in preterm birth; ideally, this would take place in a dedicated preterm labour clinic. Modifiable risk factors, such as smoking and respiratory diseases should be addressed. There is evidence that screening for lower genital tract infections and midwife continuity throughout antenatal care are beneficial in preventing preterm birth. Clinicians may offer these women genital tract screening for infections and/or serial transvaginal ultrasound scans to determine the cervical length, but the evidence to support these interventions is lacking.

6. CESAREAN SCAR ENDOMETRIOSIS – A CASE REPORT

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Introduction. Cesarean scar endometriosis (CSE) is a rare form of endometriosis that occurs due to previous surgical scars from obstetrical or gynecological procedures. The incidence of scar endometriosis after cesarean section is reported to be 0,03-0,45%, and it may cause long-term discomfort and cyclic lower abdominal pain.

Case presentation. A 43-years-old multiparous woman came to our hospital complaining of a painful lump in the post-operative scar projection after a cesarean section with approximate sizes of 60x70 mm, which appeared 7 years ago but has increased significantly in the last year. Ultrasounds findings show a solid heterogeneous mass in hypogastric region extending from the lower region of the umbilicus to the projection of post-operative scar on the abdominal wall, immediately posterior to the subcutaneous adipose tissue in the projection of the muscle plane on the midline, measured 80x90x50x20 mm with moderate neovascularization in the interior. In February 2022, was performed mass resection, intraoperatively a solid infiltrate was detected in the aponeurosis, which was separated from the subcutaneous tissue, muscle, and peritoneum. Histological examination confirms fibromuscular tissue fragments with endometriosis outbreaks.

Discussion. Abdominal wall endometriosis is largely related to the previous history of surgery, especially cesarean section and early hysterectomy. There is a combination of theories that best explains the pathogenesis of abdominal wall endometriosis: direct implantation during a surgical procedure on the endometrium or transportation to a cesarean section scar via lymphatic or hematogenous routes. The tissue implants either proliferate under the same hormonal stimulation as the endometrium in the uterus or induce metaplasia of the surrounding fascial tissue to form an endometrioma. Scar endometriosis may occur months and even years after surgery, and initially can be asymptomatic. Medical therapy is generally ineffective, and surgical resection of the scar endometrioma remains the mainstay of treatment. Because of the possible recurrence and malignant degeneration of this disease, in our case, there was performed a large surgical excision, with subsequent tissue reconstruction.

Conclusion. Scar endometriosis is a rare disorder in which both stromal tissue and functional endometrial glands are seen outside the uterine cavity. It should be suspected in any female patient with a lump in the surgical scar, which becomes more painful and swollen during the menstrual period.

7. DIAGNOSIS OF INTRADUCTAL CHISTADENOPAPYLOMA OF THE MAMMOGRAPHIC HIDDEN BREAST GLAND

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Introduction. Intraductal cystadenopapilloma (CAP) or "bleeding mammary gland" is a precancerous condition of the mammary gland that occurs in about 10%. The average age of onset is 35-55 years. The risk of malignancy is 5-6.3%. It may have a central, retromammary location in the central galactophore ducts, or a peripheral location in the peripheral galactophore ducts. It can also be single or multiple. According to one study, 88.9% of cases of surgically removed CAP show no signs of cellular atypia, while 9.2% show signs of malignancy.

Aim of study. Analysis of national and international bibliographic sources on the diagnostic features of cystadenopapilloma of the occult mammographic mammary gland.

Methods and materials. From the PubMed and Scopus databases (Elsevier), the articles published during the years 2015-2021 were selected, according to the keywords: intraductal cystadenopapilloma, diagnostic features, evolution. Information on the epidemiology, diagnosis, and prognosis of the occult mammographic mammary gland was selected and processed.

Results. After processing the information identified by the Google Search search engine and the PubMed and Scopus (Elsevier) databases, according to the search criteria, 275 articles were found that address the topic of CAP. There are situations when, although there are clinical signs suggesting the presence of a CAP (bloody nipple discharge), it cannot be detected mammographically. In such situations, ultrasound of the mammary gland is used. Ultrasound may detect the presence of an intraductal retromammal or peripheral formation of oval or round shape with well-defined edges. Another method of diagnosis is galactography, where CAP is manifested by intraluminal filling defect or by a complete blockage of the galactophore duct. MRI describes the presence of one or more round or oval intraductal papillomas. However, the morphopathological diagnosis is the strong point in establishing the diagnosis of CAP. It can be performed by the following techniques: nipple smear removal, fine aspiration puncture, vacuum-assisted biopsy or excision biopsy. Both clinical and paraclinical investigations (instrumental and pathomorphological) are the diagnostic algorithm of CAP.

Conclusions. Occult mammographic CAP can be detected by various clinical-paraclinical methods. The morphophonological examination is the basic investigation in establishing the diagnosis and determining the treatment tactics of the CAP.

8. ECTOPIC PREGNANCY - PARTICULARITIES OF METHOTREXATE TREATMENT COMBINED WITH MIFEPRISTONE

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Introduction. Ectopic pregnancy is still a cause of maternal mortality, despite modern methods of diagnosis and treatment. As a result of the analysis of bibliographic sources, it was established that the frequency of ectopic pregnancy is 12 to 14 per 1000 pregnancies. Other authors report an incidence of ectopic pregnancy of 23.1 / 1000 births. Solutions for a treatment, in the case of tubal and cervical ectopic pregnancies, include: careful observations, monitorization, laparoscopy, laparotomy and specific medication. The choice between these solutions depends on each doctor's level of ability and the urgency of the medical act.

Aim of study. Currently, there are 3 therapeutic opportunities in definitely diagnosed ectopic pregnancy: surgical (laparoscopy or laparotomy), expectation and medication options. A new method, recently promoted in the world, is medical abortion, which offers an effective and safe treatment option for women who want to avoid surgical evacuation of pregnancy. The richest experience in the conservative treatment of ectopic pregnancies has been gained through the use of methotrexate, which is used as a cytostatic in the treatment of proliferative trophoblastic processes. In the case of cervical ectopic pregnancy, early clinical diagnosis of cervical pregnancy can be difficult. In most cases, the specific sign of cervical ectopic pregnancy is massive hemorrhage, which poses a danger not only to the health but also to the life of the patient.

Methods and materials. There were used following materials and methods: literature review in the area; secondary data analysis, results of randomized clinical trials and baseline observational studies, According to the National Clinical Protocol "Ectopic Pregnancy" as well as the provisions of the Protocol "Grossesse extra-uterine" developed by CNGOF, Fernandez and Elito scores data analysis.

Results. In the case of cervical ectopic pregnancy, early clinical diagnosis of cervical pregnancy can be difficult. In most cases, the specific sign of cervical ectopic pregnancy is massive hemorrhage, which is a danger not only to the health but also to the life of the patient. The success of drug treatment with methotrexate and mifepristone in ectopic pregnancy (tubal, cervical) avoids the risk of surgery and at the same time does not affect fertility. Drug treatment with methotrexate and mifepristone is not always effective, but its low cost and favorable prognosis on the quality of life of patients makes this therapeutic option perfectly argued at the current stage.

Conclusion. Tubal ectopic pregnancy subjected to drug treatment with methotrexate in this study represents 6.53% of the total number of tubal ectopic pregnancies recorded in 2010-2016. The most important risk factors for the development of ectopic tubal pregnancy are: ectopic pregnancies in the anamnesis (34.5%), gynecological / obstetric surgeries (27.3%), the age of the pregnant woman> 35 years (27%); chronic smoking (10%). The premordial indications of methotrexate in the treatment of tubal ectopic pregnancy are: hemodynamically stable patient (6.53%); minimal symptoms (abdominal pain - 74.5%, leukorrhea - 67.3%, asthenia - 21.8%); lack of fetal cardiac activity at USG (70.9%); maximum fetal egg diameter <3.0-3.5 cm (100%), serum β-hCG level> 2000 IU / L (60%). Methotrexate treatment is contraindicated in tubal ectopic pregnancy with fetal cardiac activity visible in the USG due to the risk of failure and complications that may occur. The success rate of methotrexate drug treatment in tubal SE is over 80% of cases. The 50mg / m² single dose treatment regimen is most appropriate given the minimal side effects. The success of drug treatment with methotrexate in ectopic tubal pregnancy avoids the risk of surgery and at the same time does not affect fertility. Drug treatment with methotrexate is not always effective, but its low cost and favorable prognosis on the quality of life of patients makes this therapeutic option perfectly argued at the current stage. Early clinical diagnosis of cervical pregnancy can be difficult. Despite the fact that ultrasound has become commonplace, it is not always possible to establish the correct diagnosis before surgery. Given that cervical pregnancy is very rare, there is still no consensus on the best treatment and no recommendations for good practice.

9. ENDOCRINE AND METABOLIC DISORDERS INVOLVED IN THE PATHOGENESIS OF ENDOMETRIAL CARCINOMA

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Introduction. Endometrial cancer is the most common gynecological malignancy in industrialized countries, the incidence is constantly increasing globally. Globally, endometrial cancer ranks third among female genital malignancies, after the cervix and ovary, accounting for six percent of new cases of cancer in women and accounting for three percent of all cancer deaths in women. About 69,950 new cases of endometrial cancer were estimated in 2022, with 12,550 deaths from the disease, according to the American Cancer Society. The most common histological type is endometrioid adenocarcinoma, accounting for 75-80%.

Aim of study. The purpose of this study was to review data about characteristics of endocrine and metabolic disorders involved in the pathogenesis of endometrial carcinoma.

Methods and materials. The source of information was represented by articles published in the online databases: PubMed, HINARI, SCOPUS, EMBASE.

Results. Current evidence revealed the hypothesis that the complex of endocrine and metabolic disorders that occur long before the development of endometrial carcinoma determines the biological characteristics of the tumor, both its clinical evolution and the prognosis of the disease. Based on prospective studies in patients with endometrial carcinoma, the authors postulate the existence of two different pathogenetic types of endometrial carcinoma. The first pathogenetic type of the disease with a frequency of 65% occurs in women with obesity, hyperlipidemia and signs of hyperestrogenism: anovulatory uterine bleeding, infertility, late onset of menopause and hyperplasia of the ovarian and endometrial stroma, developing high and moderate superficial invasion tumors. myometrium, high progestin sensitivity and favorable prognosis (survival rate greater than 5 years) While the second pathogenetic type (35%) of the disease occurs in women who have no signs mentioned above or these signs are not clearly defined and endocrine.

Conclusion. Endocrine and metabolic disorders are divided into two clinical / epidemiological entities: type 1 cancers, which occur in young and obese patients, are associated with excess estrogen, a favorable prognosis and endometrioid histology, and are often accompanied by and / or endometrial hyperplasia (EH); compared to type 2 cancers, which are tumors that appear in older and non-obese patients, are associated with an unfavorable prognosis and nonendometrioid histotypes and are usually serous histology with no associated hyperplastic lesions.

10. ETIOPATHOGENESIS, DIAGNOSIS AND TREATMENT OF PATIENTS WITH HSIL OF THE CERVIX

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Introduction. HSIL is a precancerous layer of the cervix associated with HPV. It presents 3 morphopathological features CIN 2, CIN 3 and cancer in situ. The spectrum of abnormalities and mode of treatment was first subdivided in 1968 by Richart who also laid the basis for today's CIN classification.

Aim of study. The assessment of treatment aspects of the patients with different degrees of high-grade squamous epithelial dysplasia.

Methods and materials. The study was conducted on 46 patients with HSIL at the Oncologic Institute of the Republic of Moldova during 2020-2021. It is a prospective and retrospective analysis of the original documentation. The patients included in the study were divided according to the histological type in CIN 2 (18 patients), CIN 3 (20 patients) and cancer in situs (8 patients), age (<35, >48 years) and type of treatment (LLETZ - large loop excision of the transformation zone, total hysterectomy with bilateral adnexectomy). All the patients underwent primary surgical treatment within the Public Medical and Sanitary Institution – Oncological Institute.

Results. From 46 patients included in this study within 25 and 72 years old, 18(39,13%) patients had CIN 2, aged <35 years and were underwent LLETZ, 20 (43,47%) patients had CIN 3, of which 17(36,95%) were aged <35 years and were underwent LLETZ and another 3 (6,52%) had age >48 years and were underwent total hysterectomy with bilateral adnexectomy, 8(17,39%) patients had cancer in situs , of which 2(4,34%) had age <35 years and were underwent LLETZ and others 6 (13,04) had age >48 years and were underwent total hysterectomy with bilateral adnexectomy. All the patients after surgery had a positive outcome and were discharged from hospital.

Conclusion. Patients with HSIL in childbearing age (<35 years) can undergo a less radical operation like LLETZ with subsequent observation of health status. Patients older than 48 years are more likely to develop malignant cancer from HSIL and are recommended a total hysterectomy with bilateral adnexectomy.

11. EVOLUTION AND MANAGEMENT OF THE MULTIPLE PREGNANCY

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Introduction. Multiple pregnancy is a high risk situation for both mother and fetus. Prematurity is the main outcome, with important contributions from IUGR (intrauterine growth restriction), malformation and twin-twin transfusion syndrome. The risk of cerebral palsy is increased 6 fold with twins and up to 24 fold with triplets, with etiology not just restricted to prematurity. Maternal mortality is double that of singleton pregnancies mainly due to an increase in pre-eclampsia and hemorrhage. Up to 25% of multiple pregnancies are complicated by pregnancy-induced hypertension and the incidence of gestational diabetes is 2-3 times that seen in singletons. The risk of pre-eclampsia increases 3 fold for twins and is greater for higher order pregnancies. Antepartum and postpartum hemorrhage, urinary tract infections and operative delivery are all more common.

Aim of study. The diagnosis, assessment and management of women with multiple pregnancies.

Methods and materials. This publication brings in several review data and the results of a clinical study that was based on analysing 50 women with multiple gestation that were hospitalised in "Gheorghe Paladi" Municipal Hospital in the period of 2021. We studied whether these pregnancies occurred spontaneously or with treatment (and if they occurred with treatment: what kind of assisted reproductive technology was used), which complications occurred during the pregnancy, preterm birth rates and status of discordance between the foetuses.

Results. The incidence of multiple gestation was observed to make up 0.79% in the period of 2021. A total of 50 twins were followed in our clinic during the last 1 year. 42 of the twin pregnancies (84%) occurred spontaneously and 8 of them via in vitro fertilisation (16%). Dichorionic-diamniotic placenta was found in 33 (66%) of Twin pregnancies, 17 (34%) of them had monochorionic-diamniotic placenta. The most common presentation of twin pregnancies was head-head which was followed by head-breech, breech-head and head- fetal transverse site. Preeclampsia, urinary tract infection and cholestasis were observed in 3, 4 and 7 patients respectively. Twin-to-twin transfusion syndrome was present in one patient (2%) and 5 patients had IUGR twin pregnancy. Eight (16%) patients had emergency cesarean section due to fetal abnormal position, while 11 patients were hospitalised because of preterm labour and 12 (24%) women had preterm premature rupture of the membranes. Only 9 patients had no problem during pregnancy. The optimal mode of delivery of twins is a controversial issue. In twin pregnancies, caesarean section is recommended. In our case, 21 women gave birth by caesarean section (40% urgently and 18% electively) and 29 women gave birth vaginally, of which 4% were complicated by the application of the suction cup and placental tissue defect.

Conclusion. Therefore, in order to avoid these complications, all multiple pregnancies should have chorionicity determined at the first scan, ideally in the first trimester. Monochorionic pregnancies should be scanned at fortnightly intervals and complications such as twin to twin transfusion or IUGR referred to a fetal medicine center. In twin pregnancies, caesarean section is recommended in the existence of monoamniotic twins, conjoined twins, foot presentation in one of the twins, placental disorders, breech presentation and existence of weight difference of more than 20% between the twins. The high frequency of prematurity, preeclampsia, hydramniosis, abruptio placentae increase the mortality in these pregnancies. Furthermore, preterm birth was observed more in twin pregnancies that occur after a treatment compared to ones that happen spontaneously. Developments in assisted reproductive technology have been increasing the number of multiple gestations and their complications. In a small percentage of patients, treatment results in multiple pregnancy may place the mother and the babies at increased risk for an unhealthy outcome. Since multiple pregnancies and their complications are an inevitable risk of fertility therapies, education about these risks is crucial prior to treatment. Ultimately, prevention is the key to reducing the risk of multiple pregnancy.

12. GENERAL PRINCIPLES OF CONDUCT IN LOCO-REGIONAL RECURRENCES AFTER MASTECTOMY

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Introduction. Breast cancer is the most commonly diagnosed life-threatening cancer in women and one of the leading causes of cancer death among women. Mastectomy is one of methods of treating breast cancer, but after performing it there is a risk of local and general recurrences. Approximately 10 - 15% of patients with stage I/II invasive breast cancer will develop a local recurrence. In case of relapses there are treatment tactics that allow us to apply it individually depending on the type of recurrence.

Aim of study. Studying specialized literature in order to present the general principles of conduct in loco-regional recurrences after mastectomy and to emphasize the importance of individualizing treatment strategies in patients with loco-regional recurrences. The treatment of loco-regional recurrences after mastectomy remains a clinical challenge.

Methods and materials. The "PubMed MEDLINE" database and the last European and American guidelines were used to select relevant full-text original articles published from 2016 till 2021, using a search formula "Recurrences after Mastectomy", review articles, as well as non-human studies were excluded. According to research criteria, there were retrieved full-text, clinical trial articles.

Results. In case of local recurrence if initial treatment with mastectomy and level I / II axillary lymph nodes dissection and prior local radiotherapy (RT), will be performed surgical resection if it is possible. In initial treatment with mastectomy and no prior RT, the same will be done surgical resection if it is possible and RT. In the event if it is present regional only or local and regional recurrence, the method of treatment will depend on it. Axillary recurrence will be treated through surgical resection and RT if possible. Supraclavicular and internal mammary node recurrences will heal with RT if possible. Also in all cases of local and regional relapses will resort to systemic therapy with preoperative or adjuvant chemotherapy, adjuvant endocrine therapy and biologic therapy.

Conclusion. The general principles of breast cancer treatment includes the treatment of local disease with surgery, radiation therapy, or both, and systemic treatment with chemotherapy, biologic therapy, endocrine therapy or combinations of these. The need for and selection of diverse local or systemic therapies are based on several prognostic and predictive factors.

13. GESTATIONAL DIABETES

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Introduction. Gestational diabetes is defined as diabetes with onset or early diagnosis in the second or third trimester of pregnancy in previously unknown women with pre-existing type 1 or type 2 diabetes. One in six pregnant women is thought to have gestational diabetes, increasing the risk of health issues. Gestational diabetes accounts for about 90% of all diabetes-related pregnancies.

Aim of study. Studying the multifactorial etiology of gestational diabetes to highlight the most common causes. Analyzing the screening, diagnosis and treatment criteria to reveal their effect on maternal and neonatal outcomes.

Methods and materials. This study is a systematic review of data of the publication from the last 5 years. 20 publications were selected and analyzed. We used the systems: PubMed, Hindawi, NCBI, national and international guides. The research includes data from all 20 publications.

Results. Gestational diabetes can be caused by an increase in the level of hormones in the blood whose function is antagonistic to insulin, which leads to insulin resistance. hCG may be a determining factor in the risk of gestational diabetes. Another cause could be pancreatic β-cell dysfunction. Insulin resistance is one of the main pathogenetic mechanisms of gestational diabetes. Neurohormonal dysfunction has been implicated in the pathogenesis of insulin resistance present in gestational diabetes. Oxidative stress and genetic predisposition can also lead to gestational diabetes. A retrospective cohort study by Bartha et al. found that early screening for glucose intolerance could prevent diabetes-related complications such as polyhydramnios, fetal abnormalities, and premature birth in women diagnosed with gestational diabetes. Hong et al. reported that women who were tested before 20 weeks were more likely to receive insulin and give birth prematurely compared to women who were routinely tested. IADPSG recommends a one-step universal approach with a TOTG of 75 g of glucose at 24-28 weeks of pregnancy for the screening and diagnosis of gestational diabetes.

Conclusion. Analyzing the selected publications, we concluded that observational studies have shown contradictory results in terms of early diagnosis. The debate on the best way to screen continues, with conflicting recommendations for universal and selective screening. Most guidelines such as the ADA, WHO and FIGO recommend universal screening in countries with sufficient resources, while alternative screening strategies can be used in low-resource places. Patients with gestational diabetes should be screened early in order to monitor them, develop proper birth control, and avoid maternal and neonatal complications.

14. GIANT CYST IN PREGNANCY

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Introduction. Ovarian cysts are small fluid formations that develop physiologically in the process of ovarian formation. These can be functional (follicular cyst, lutein cyst) and pathological (cystadenomas, teratomas). The incidence of ovarian cysts varies between 5 and 15 %. According to the literature, the incidence of ovarian cysts in pregnancy varies between 0.15 and 5.7%. The majority of the ovarian cysts are diagnosed in the first two trimesters of pregnancy, which are often asymptomatic and are resolved spontaneously by 14 weeks of amenorrhea. The safest time for surgical methods is in the second trimester, ideally between weeks 14 and 16.

Case presentation. Patient N, aged 35, was hospitalised at IMSP "IM si C" according to the referral from the consultative department where an ultrasound examination was performed and a giant ovarian cyst was found on the right (234*204 mm). History: the ovarian cyst detected primarily by an ultrasound examination at 12 weeks of amenorrhea (45*50 mm). Tumour markers were investigated (CA – 125), ROMA score – negative. Due to the small size of the cyst, lack of suspicion of malignancy, complicated gynecological history (primary infertility – 10 years), in-vitro pregnancy and patient insistence, it was decided to initiate a conservative treatment with dynamic monitoring of cyst size and values of the tumour markers. During the 32nd week amenorrhea ultrasound examination showed a sudden volume increase of the ovarian cyst, although tumour markers remained negative. It was decided to finish the pregnancy by elective cesarean section. In the 38th week of amenorrhea, after clinical and paraclinical investigation, a caesarean section was performed. A giant ovarian cyst was found (250*300mm) during right flank exploration. It was decided to perform a cystectomy with partial ovary resection and fallopian tube preservation. The cyst was successfully removed, the ovary was sutured. The right uterus hord was also sutured. Hemostasis. The patient was discharged on the fourth day of the postoperative period, which passed without peculiarities. At the histopathological examination of the cyst, the diagnosis of the multicameral cystadenoma lined with non-dysplastic gastrointestinal epithelium was established .

Discussion. Management in pregnancy with ovarian cysts can be both conservative and surgical.

Conclusion. It is important to perform paraclinical investigations to determine the malignancy of the formation. Surgical treatment will be the "golden standard" for patients with suspected giant malignant formations.

15. HEMORRHAGES ASSOCIATED WITH CESAREAN SECTION

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Introduction. Hemorrhage associated with cesarean section is the most serious complication that endangers the health and life of the patient. Hemorrhagic complications that occur during or after cesarean section are of several types, arising from the anatomical and pathophysiological conditions of the pregnant woman. In many cases the indication of cesarean section is given too easily, the risk of complications far exceeding the benefit from a natural birth. After the time of occurrence of hemorrhages can be: immediate (continuation of a process that was the indication of the operation and intraoperative accidents); early (in the first hours postoperatively); late (after the third day after the operation) and removed. Hemorrhages in cesarean section are higher than in normal childbirth, ranging from 275 to 3180 ml on average 1300 ml, in the norm blood loss should not exceed 1000 ml. The source and location of the hemorrhage may be different: the uterine cut, after the extraction of the fetus; segmental veins, which normally no longer bleed after the extraction of the fetus; the surface of take-off of the placenta; damage to the lateral uterine plexuses or even the pedicles by excessive prolongation of the transverse incision; uterine atony; openness of sutures; amniotic fluid embolism; state of shock and coagulopathy.

Aim of study. Analysis, highlighting of the causes and structure of hemorrhages associated with cesarean section.

Methods and materials. Our study included 2662 clinical cases finished by caesarean section in 2019-2020 from ISMP SCM "Gheorghe Paladi", Chisinau city, Republic of Moldova. Of these cases, 87 resulted in hemorrhages associated with caesarean section. In order to achieve the purpose and objectives of the study, we collected patient data according to the survey conducted and systematized them in the Microsoft Excel program.

Results. Of the total caesarean section, 3.27% (87 cases) resulted in hemorrhages associated with caesarean section. Out of 87 cases with hemorrhages associated with caesarean section, planic were performed in 16 cases (18.4%), the others were performed urgently constituting 71 cases (81.6%). 68.96% (60 cases) of hemorrhages associated with cesarean section were immediate as a preoperative indication. Of them 43.34% (26 cases) was as indication hemorrhage in Placenta Previa, 31.66% (19 cases) was as indication Detachment of the placenta normally inserted and 25% (15 cases) was as indication Scar insufficiency on the uterus. Out of 87 cases 26,44% (23 patients) had intraoperative hemorrhages such as uterine atony 73,91% (17 cases) and uterine myoma 26,09% (6 cases). Out of 87 cases, 4.60% (4 cases) resulted in late post-traumatic hemorrhages on the background of acute endometritis. According to the age of 87 patients, aged 18-20 years there are 5 patients (5,75%), age 20-29 years include 18 patients (20,69%), age 30-39 years comprising 40 patients (45,97%), age exceeding 40 years include 24 patients (27,59%). According to constitutional type, 21.84% (19 patients) were obese. According to the number of births: primiparous were 6 patients (6.9%), secundiparous were 48 patients (55.17%), multiparous were 33 patients (37.93%). According to pathologies during pregnancy 9.20% (8 patients) had gestational HTA and 8.04% (7 patients) had Preeclampsia. According to extragenital pathologies 3,45% (3 patients) have Diabetes. Complicated obstetrical anamnesis with caesarean section in 31.03% (27 cases). Out of 87 caesarean section operations, 19.54% (17 cases) resulted in radical hemostasis - hysterectomy and 33.33% (29 cases) needed hemotransfusions.

Conclusion. In our study, the following conclusions were found: The incidence of hemorrhages associated with cesarean section is 3.27%. According to the data obtained, the incidence of hemorrhages associated with cesarean section has a higher rate in emergency caesarean section compared to the planic one. The risk factors that may be involved in the occurrence of hemorrhages associated with cesarean section are: Age from 30-39 to more than 40 years, high-grade obesity, pathologies during pregnancy (gestational HTA, pre-eclampsia), uterine myoma, extragenital pathologies (Diabetes), complicated obstetrical anamnesis with scar on the uterus. The hemorrhages associated with caesarean section are dramatic and may result in a need for hemo transfusions and with radical hemostasis such as hysterectomy.

16. INCIDENCE AND STRUCTURE OF PERINATAL MORTALITY IN PREGNANCIES > 41 WEEKS

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Introduction. Prolonged pregnancy (PP) is one that lasts more than 42 weeks (294 days) and is associated with an increased incidence of perinatal mortality and morbidity. The leading causes of high mortality in PP are fetal postmaturity syndrome, when a growth-restricted fetus remains in the uterus after term, and macrosomia, which increases the likelihood of abnormal labour and birth trauma.

Aim of study. To analyse the incidence and causes of perinatal mortality in pregnancies > 41 weeks and the role of labour induction in prevention of perinatal mortality.

Methods and materials. Using information from births registers, we compared perinatal outcomes in pregnancies at > 41 weeks and at 37-41 weeks of gestation, as well as neonatal deaths associated with labour induction among 30,212 births occurred between 2011 and 2021 years in the Obstetrical Department No. 1 of Municipal Clinical Hospital ”Gh. Paladi”. Relative risk and statistical significance (confidence interval (CI) and p-value) were calculated using the MedCalc statistical software.

Results. From the total number of births, 3414 were at > 41 weeks of gestation (11.3%) and 25,287 (83.9%) - at 37- 41 weeks. Perinatal mortality after 41 weeks was 4.4 ‰ (15 out 3412 births) versus 2.6 ‰ at 37-41 weeks (66 out of 25,287 births) - a non-statistically significant difference: RR = 1.68 (95% CI, 0.95 - 2.93, P = 0.07). At the same time, we determined a statistically significant, two-fold increase of antenatal mortality at > 41 weeks (3.2 ‰ (11 deaths in 3412 births)) compared to 37-41 weeks (1.6 ‰ (41 in 25,287)), RR = 1.98, 95% IC, 1.01 - 3.85, P = 0.04). Only 2 (18.2%) of the antepartum deaths were registered in fetuses with growth restriction; 4 newborns (36.2%) had a birth weight > 4000 gr. The most common cause of antenatal deaths was umbilical cord abnormality (7 out of 11, 63.5%). Early neonatal mortality did not differ between groups: 1.17 ‰ (4 deaths in 3410 live births) at > 41 weeks versus 0.98 ‰ (25/25272) at 37-41 weeks: RR = 1.18, 95% CI, 0.41 - 3.39, P = 0.75. Two of these 4 deaths were caused by birth defects and one - by shoulder dystocia; only one death occurred in an induced labor.

Conclusion. Pregnancies at > 41 weeks are associated with a substantial increase in the risk of antenatal mortality compared to term pregnancies at 37-41 weeks. The risk of antepartum death is difficult to predict, as most of the stillbirth occurred in appropriate and large gestational age fetuses and not in those with growth restriction. Induction of labor at 41 week gestation would prevent most of these deaths.

17. INDUCTION OF LABOR VERSUS PRENATAL MONITORING WITH EXPECTATION OF SPONTANEOUS LABOR IN PATIENTS AFTER 41 WEEKS OF GESTATION

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Introduction. Induction of labor is certainly one of the most common obstetric procedures in the world: recent data indicate a percentage of 6.8 to 33% in Europe. It is practiced to prevent results such as: cesarean section, prolonged labor postpartum hemorrhage, traumatic birth.

Aim of study. To determine the method of finishing the birth with fewer complications, comparing the labor induction policy versus the expectation of spontaneous labor in patients with a tendency to overmaturation.

Methods and materials. An analysis of 47 articles published between 2015-2022 using the NCBI database was performed. In the induction group, labor was acquired by prostaglandins E2. And the other group of patients had non-stress tests, assessment of amniotic fluid vomiting, and fetal counts.

Results. This review attests to data suggesting that nulliparous women who are induced compared to multiparous women are more likely to give birth by cesarean section. Other risk factors associated with postpartum birth: obesity and maternal age over 30 years. The Apgar score at 5 min in 11 studies was determined to be higher compared to the policy of waiting for labor. There were fewer deaths of newborns in mothers who were induced to labor, although the absolute risk of death was low.

Conclusion. Induction of labor in overtreated patients decreases postnatal complications versus labor expectancy policy, according to international standards Labor induction begins at 41s + 0z. After this period, the risk of neonatal infections, antenatal death, complications increases postnatal.

18. LABOR TEST AFTER PREVIOUS CESAREAN SECTION

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Introduction. The rate of cesarean section is increasing globally. On the territory of the Republic of Moldova, the frequency of cesarean section is from 6.7 to 8%, and for SCM No. 1, this index is about 14%. The widening of the indications for caesarean section, as well as the gynecological surgeries on the uterus have contributed to the appearance of the scar uterine problem, which in most cases leads to repeated caesarean section. The most severe complication in the birth per vias naturales in parturients with operated uterus is the rupture of the uterus in labor, which has a frequency of 1-3%.

Aim of study. The aim of the study is to determine the dynamics and criteria for vaginal birth after previous cesarean section and the rate of births per vias naturales in women with scarred uterus during the years 2020-2021 in the Municipal Clinical Hospital No.1.

Methods and materials. This is a retrospective study in which the obstetric observation sheets of 100 patients with scars on the uterus were subjected to analysis, who tried the trial of labor after cesarean sample in SCM NR.1 in Chisinau for the years 2020-2021. By the statistical-medical method - from the anamnesis were selected previous cesarean operative indications, the age of the pregnant woman, the result of the labor test, the postpartum complications and the sex of the newborn.

Results. Of the total number of patients included in the study, who tried the labor test after the previous cesarean section in the obstetrics department no. 1 of IMSP SCM NO.1, 67 patients were between 21-30 years old, 31 patients - between 31-40 years and 2 patients> 40 years. The test of labor in 25 parturients ended with the birth per vias naturalis, and in 75 with repeated caesarean section. From the information obtained from the obstetric files it was found that the indications for repeat cesarean section were: double scarred uterus, prematurity, scar failure on the uterus, fetal distress, macrosomic fetus, pain in the projection of the scar. Of the total number of cases examined, 40% had postpartum complications, including: hemorrhages, laceration of the birth pathways, adhesion process, umbilical cord prolapse. Of the total number of newborns, 46 are female and 54 are male, being rated according to the Apgar grade with 7-10 points.

Conclusion. 1. In the absence of contraindications, women in childbirth should be encouraged and given the opportunity to give birth per vias naturales after a previous cesarean section. 2. The parturient must be provided with certain conditions and resources to perform an emergency caesarean section if necessary. 3. Management of intra- and postpartum labor after cesarean section is similar to that of patients with uncured uterus, with some considerations arising from the risk of uterine rupture.

19. MALIGNANCY RISK ASSESSMENT OF OVARIAN AND ADNEXAL LESIONS DISCOVERED ON ULTRASONOGRAPHY

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Introduction. Ovarian cancer is one of the most common gynecologic cancers. Accurate assessment of ovarian lesions is essential in planning clinical management. Ultrasound (US) is the first-line diagnostic tool in adnexal pathology evaluation. Multiple studies and expert consensus support the use of pattern recognition approach in discriminating benign and malignant ovarian lesions. However, the examiners expertise level varies widely. To improve assessment, standardized and evidence-based stratification risk rules and algorithms are developed.

Aim of study. In many cases, an US expert could determine the specific diagnosis of the ovarian lesion or limit it to a specific histological subtype. However, experts are not widely available. In order to standardize the assessment of ovarian findings discovered on US and increase diagnostic accuracy, in 2000 the International Ovarian Tumour Analysis (IOTA) group published a consensus paper on evidence-based terms and definitions to describe adnexal lesions. Also, Ovarian-Adnexal Reporting and Data System (O-RADS) was first published in 2018 the lexicon for US, providing standardized US descriptors of adnexal lesions. Thereafter, to assist clinicians with different levels of training in the stratification of malignancy risk, IOTA developed and validated US-based rules, as well as prediction models based on logistic regression analysis, incorporated later in O-RADS. The aim of study is to examine the current methods of the malignancy risk assessment of ovarian lesions discovered on ultrasonography.

Material and methods. A current literature review of relevant studies, consensus and guidelines were evaluated using the Medline database. Ultrasound, ovarian lesion, differentiation benign and malign were used as keywords for search. From 259 issues the most relevant 29 were evaluated.

Results. Subjective assessment by an expert US examiner has the best accuracy to predict the likelihood of ovarian malignancy. Alternatively, US-based rules, such as “IOTA Simple Rules” may be applied to a lesion based on the presence or absence of 5 benign and 5 malignant US features. The first multiclass risk prediction mathematical model Assessment of Different Neoplasias in the Adnexa (ADNEX) with or without CA125 levels allows discrimination between benign and malignant tumors. Also, estimates the likelihood and risk of any type of adnexal lesions and offers subclassing of malignancy into: borderline tumors, stage I and stage II-IV primary cancers and secondary metastatic tumors. A large multicenter study proved ADNEX as the best model for ovarian lesion assessment. Another effort to improve the US evaluation, reporting and management of a pelvic lesion is the O-RADS, representing a collaboration with the algorithmic-style IOTA ADNEXA model. For risk stratification, the system defines six categories (O-RADS 0–5) based on IOTA data, ranging from normal to high risk of malignancy. Management recommendations in the different risk categories are provided.

Conclusions: Assessment by expert examiners has the highest accuracy to distinguish between benign and malignant ovarian tumors discovered on US. Alternatively, the use of US-based diagnostic models (“Simple rules” and IOTA ADNEX) can assist clinicians to distinguish between benign and malignant ovarian tumors and provide the risk of malignancy. Further, the classification of the lesion into one of the O-RADS categories can guide the management and referral to the gynecological oncology center for differentiating between subgroups of malignancy using IOTA ADNEX or expert opinion.

20. MANAGEMENT OF PREGNANCY WITH PLACENTA PREVIA PERCRETA

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Introduction. Placenta percreta is a condition of abnormal placental invasion, the most rare and severe manifestation of accreta, where chorionic villi invade through the uterus and the serosa into the peritoneal cavity or bladder, is one of the most serious complications of placenta previa. Its incidence has been rising in recent years and this appears to correlate with the increase of caesarean section rates. The condition is associated with a high risk of maternal morbidity and mortality secondary to catastrophic haemorrhage. We present a clinical case of placenta previa percreta diagnosed by ultrasound, in which we accomplished a scheduled cesarean followed by cesarean hysterectomy for massive hemorrhage, with a good postoperative recovery period.

Case presentation. A 35-year-old woman (gravida 7, para 3) with a history of prior cesarean section due to placental abruption. During a routine sonographic examination at 16 weeks of gestation the placenta previa was diagnosed. At 24 weeks of gestation transvaginal Eco-Doppler images suggested the diagnosis of placenta previa percreta. During pregnancy the patient often presented spotting and weak abdominal pain and she was many times spitalized for monitoring and treatment. At 35 weeks of gestation a caesarean section was planned. The patient was informed with the possible complications and approval has been given. The abdomen was entered with a median incision under the umbilicus. After opening the abdominal wall, intra-abdominal inspection showed the “Medusa head” infiltration of the uterine anterior wall by the placenta. The placenta has invaded the lower segment and part of the bladder, left broad ligament and the upper vagina. Muscle tissue in the lower uterine segment and cervix was absent. The tissues were very fragile due to placental invasion. Was decided to make a transverse corporeal uterine incision - placenta cesaree with active bleeding from placental vessels. A healthy neonate was delivered. Because of severe acute bleeding and placental invasion of the upper part of the vagina, a total hysterectomy was performed. On the bladder wall hemostatic sutures were applied. After vascularised areas on the bladder and the abdomen were checked for bleeding, the operation was completed by putting two drain tubes, in the Douglas space and right side flank. Finally, the abdomen was closed using a regular technique. The total blood loss was 5000 mL. Intraoperative allogeneic red blood cells and free-frozen plasma were transfused. The patient was cared for in intensive care for two days. The postoperative course was uneventful, and the patient was discharged on day 7 in good conditions.

Discussion. Placenta previa, previous caesarean section, endometrial dilatation curettage, mother aged over 35 are risk factors for abnormal placental invasion. In our case, all these factors are present. In the studies, in placenta previa cases, where there is no uterine surgery, the rate of placenta accreta was reported to be 5%. The risk ratio for those who had one or two caeserean sections is respectively 24% and 50% and even 67% for those who had four or more operations. There are two procedures to handle invasion abnormalities, which are surgical and conservative. Surgical treatment depends on the degree of placental invasion. With conservative approach, complications such as vaginal bleeding, infection and disseminated intravascular coagulation can be detected and patients may need to be hysterectomized. For this reason, more randomised controlled studies about conservative approaches must be carried out.

Conclusion. A pregnancy complicated with placenta previa and previous cesarean delivery, should be evaluated by doctors with experience in the diagnosis of placenta accreta spectrum by Doppler sonography. Antenatal diagnosis is a key element to improving maternal and perinatal outcomes.

21. MANAGEMENT OF THE ECTOPIC PREGNANCY

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Introduction. Ectopic pregnancy continues to be an important cause of maternal morbidity and mortality of the first trimester of pregnancy world-wide. The primary objective in the management of EP is that the treatment used is safe i.e. that it avoids maternal death and minimises morbidity, either from the complications of EP or from the complications of treatment. Whilst EP remains an important cause of maternal death, it is an uncommon complication, and most women who are faced with EP will be more concerned with the associated morbidity. Various congenital and acquired risk factors had be related to this condition Classical triad still to be an important tool for clinical diagnosis in patients in reproductive age but it should be completed with serum ß-hCG levels and ultrasonography, ultrasonography consider being the best tool for investigation because it's safe, fast, low cost, available and has a high sensitivity to detect the ectopic, now days the improvement in diagnosis techniques leads to increase of cases are detected, however the development of new theories and approaches of treatment are decrease significant the mortality rate. Ectopic pregnancy is associated with reduced subsequent fertility, recurrence of EP in the future and persistence of EP after treatment. The morbidity associated with the method of treatment must also be considered.

Aim of study. The diagnosis, assessment and management of women with ectopic pregnancy.

Methods and materials. This publication brings more review data and the results of a clinical study that was based on the analysis of clinical and anamnestic data of 173 women with ectopic pregnancy who were enrolled in the Municipal Hospital "Gheorghe Paladi" in 2021.

Results. The incidence of ectopic pregnancy was observed to make up 2.71% in the period of 2021. A total of 173 ectopic pregnancies were followed in our clinic during the last 1 year. The highest rate of ectopic pregnancy was at 30-35 years and constituted 93 of the women out of 173. We found 38 cases of recurrence EP in our study which represent 21.97% in ratio. It's important that women who had a previous EP to be instructed to have an early scan when they next become pregnant, even when they are asymptomatic. We analysed different risk factor for EP and found that 38 patients have previous EP representing 21.97%, also 32 patients have spontaneous apportion they representing 18.49%, in addition 29 patients have medication induced apportion they represent 16.76%, also 15 patient had cesarean operation in the past and they represent 8.67%, where 10 patients have undergo appendectomy which represent 5.78%, in addition to other risk factors mentioned in the graph. Notably some patients.

Conclusion. As EP has a significant associated mortality and morbidity, it is good that more EPs are detected as early as possible. Better diagnostic tools lead to an increase in the number of EPs detected. Changes in sexual behavior patterns - such as more sexual partners - mean that you are more likely to be exposed to sexually transmitted infections and to be able to develop pelvic lesions as a result of this exposure before conception. Changes in reproductive practices, both the introduction of assisted conception techniques and the use of contraceptives that reduce the incidence of intrauterine but not extrauterine pregnancies have an impact on the number of pregnancies that are implanted outside the endometrial cavity. However, if increased detection leads to an increase in therapeutic procedures in women who did not know beforehand that they have an PE which, in turn, is associated with morbidity and mortality, this is not desirable. Reducing mortality and morbidity associated with PE. Raising awareness of the pelvic.

22. NEWS ON THE DIAGNOSIS AND TREATMENT OF OVARIAN CANCER

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Introduction. Ovarian cancer is a global problem with poor prognosis, is typically diagnosed at a late stage, and has no effective screening strategy. Standard treatments for newly diagnosed cancer consist of cytoreductive surgery - total hysterectomy with ovariectomy with omentectomy, taxol, and platinum-based chemotherapy.

Aim of study. Ovarian cancer is the second most common and the most lethal gynecologic malignancy in the western world. So far, there is a lack of methods recommended for screening and early diagnostics of this disease. As a consequence, and also due to the absence of early warning symptoms, about 70% of cases are diagnosed at an advanced stage and have bad prognosis. Late-stage ovarian cancer is incurable in the majority of cases, but recently it tends to become a kind of chronic disease. This is mostly due to the progress in surgical technology and contemporary regimes of systemic treatment, as well as some new drugs entering the clinic.

Methods and materials. A systematic review of the literature was performed, using the databases Medline, PubMed, Google Scholar to identify relevant articles, with reference to "ovarian cancer", " diagnosis", "treatment".

Results. Early diagnosis improves survival, but only 15% of ovarian cancers are diagnosed at an early or localized stage. Most of the cases are diagnosed at an advanced stage, which leads to poor outcomes of this disease. The existing screening tests have a low predictive value. Detailed gynecological evaluation along with transvaginal ultrasound and laboratory markers like cancer antigen-125 (CA-125) assay are the key early detection strategies which have shown no significant beneficial effect in the morbidity or mortality of this cancer. Surgery and combination treatment with carboplatin and paclitaxel are the standard of care for patients with newly diagnosed disease, although the use of neoadjuvant chemotherapy is increasing. Clinical strategies have also evolved along with the understanding that ovarian cancer is not one disease but rather comprises several with different histologic and underlying genetic characteristics. The most common histologic type is high-grade serous carcinoma, which is associated with underlying DNA repair deficiencies and copy number alterations. Other, less common histologic types include endometrioid (both low- and high-grade) as well as low-grade serous, mucinous, and clear cell carcinomas. Antivascular agents (specifically bevacizumab) and poly(ADP-ribose) polymerase (PARP) inhibitors have received regulatory approval for many aspects of treatment. PARP inhibitors, which inhibit DNA repair, have shown the greatest activity in those ovarian cancers that harbor deleterious BRCA mutations, and they have also demonstrated activity in the maintenance setting after a response to and completion of platinum-based chemotherapy in patients with sensitive recurrent ovarian cancer regardless of BRCA status. Newer or experimental strategies to improve both up-front and second-line or later treatment include the addition of biologic agents to chemotherapy; the use of newer combination strategies that employ antivascular agents, PARP inhibitors, and immuno-oncology drugs; and the use of new agents such as antibody-drug conjugates.

Conclusion. Standard treatment for ovarian cancer is surgery, with a goal of complete tumor resection, and chemotherapy based on platinum compounds and taxanes. Currently, there are many possible new treatment options emerging from recent clinical trials, based both on the modifications of standard approaches and on the addition of new biological drugs to the standard treatment. From among new drugs, bevacizumab and several PARPi were recently approved for ovarian cancer treatment. They are still tested in several settings, including maintenance treatment which is itself an emerging approach with growing applicability and potential.

23. NORMALLY INSERTED PLACENTA ABRUPTION. RISKS AND COMPLICATIONS.

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Introduction. Abruption of normally inserted placenta (ANIP) is an obstetric emergency and one of the most serious complications of pregnancy, with an incidence of 0.5-1.5% worldwide. ANIP has a negative impact on the condition of the mother and fetus with a high level of maternal and fetal morbidity and mortality. Risk factors that can cause ANIP are: hypertension, trauma, IVF pregnancy, polyhydramnios, thrombophilia, etc. Common maternal complications are: posthemorrhagic anemia, hemorrhagic shock, CID syndrome, polyorganic insufficiency and hysterectomy. Fetal complications can be: severe hypoxia, prematurity and death. These complications depend on the severity and degree of detachment of the placenta. ANIP management requires prompt action by a team of professionals at a high level of perinatal care.

Case presentation. The 37 y.o. pregnant woman, 17-18 weeks pregnant, was hospitalized in the Department of Pregnancy Pathology and Obstetric Emergencies in August 2021, with the accusations: pain in the lower abdomen, bloody elimination from the genital tract.

Discussion. The patient is registered from 10 w.p., previously hospitalized twice: 13-14 w.p. and 16-17 w.p. with the diagnosis of imminent abortion. From the anamnestic data, the patient had 4 pregnancies, 1 birth (cesarean section) and 2 miscarriages, is known as syringomyomy cyst with inferior paraparesis, hereditary thrombophilia, autoimmune thyroiditis. On physical examination: eccentric cervix, shortened 2.0 cm/, moderate bloody vaginal discharge. At the para-clinical examination: genetic tests confirmed hereditary thrombophilia, USG denotes pregnancy 18-19 w.p. imminent late abortion, retroamnational hematoma excluded, cervical length 27 mm, opening 4 mm. After a day, a repeated USG was performed and was found that: Monofetal pregnancy in evolution, imminent late abortion. Cervix length 27 mm, i/o5 mm, in the region i/o of the cervix retrocorial hematoma 17x10x8 mm. On the 3rd day bloody eliminations reappear, Ps 74 bpm, BP 110/70 mmHg, total hemorrhage 70 ml, at USG a massive retroamnational hematoma is identified d = 100x91x94mm, volume of 448 ml, the placenta located on the anterior wall to the bottom and the left lateral wall. An enlarged consilium decided to terminate the pregnancy urgently by small caesarean section. Postoperative hemorrhage amounted to 2600 ml, ineffective hemostasis measures let to performing a relaparotomy with total hysterectomy without bilateral appendages, intraoperatively was detected uterine hypotonia. The total hemorrhage was 3600 ml. The patient was in intensive care for postoperative recovery for 3 days, then transferred to the aseptic gynecology department, on the 8th day the patient was discharged at home. The actions taken were performed according to the clinical situation and the clinical protocol in ANIP. An important factor that contributed to the irreversibility of the massive hematoma was confirmed hereditary thrombophilia. The final decision of relaparotomy with total hysterectomy without bilateral appendages led to the rescue and stabilization of the patient's condition.

Conclusion. The patient's pregnancy progressed to a morbid background of hereditary thrombophilia, autoimmune thyroiditis, retroplacental hematoma that aggravated the evolution of the current pregnancy. Pathological insertion of the placenta (placenta increta), confirmed pathomorphological, led to the appearance of hypotonic hemorrhage after cesarean section, requiring total hysterectomy. The preconception of hereditary thrombophilia and the administration of specific treatment would have prevented the development of ANIP.

24. OBESITY DURING PREGNANCY

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Introduction. Obesity in women of reproductive age is on the rise, being associated with lower perinatal outcomes, obstetric difficulties, and longer-term care for the mother and newborn. In parturients with an abnormal mass index, there are complications in all periods of birth, starting with labour and ending with the period of childbirth. Obesity influences the condition of the newborn, especially weight and the Apgar score.

Aim of study. To determine the influence of pregestational maternal body mass index on obstetric outcome success.

Methods and materials. We retrospectively studied 280 medical records, which we divided according to body mass index. The control group of 140 women with pre-gestational normal weight (BMI = 18,5-24,9 kg/m^2) and the research group of 140 obese women (BMI = 30 kg/m^2 or greater). Both groups were statistically analysed regarding maternal age, term of gestation at birth, type of birth, newborn mass, Apgar score and number of days in the hospital.

Results. The average age of women with obesity was 34 years, including the patients between 21-40 years, compared with the average age of normal weight women 29 years, (19-37 years). The average term of gestation/ pregnancy at the time of birth in obese patients was 39,2 weeks (28-42weeks), but in women with normal body mass index the average was 38,2 weeks (34-41 weeks), p=0,06. The study showed us a significant difference between types of birth. The rate of cesarean section was higher in obese women. In obese women the birth ended physiologically in 83 (59,28%) cases, while in 43 (30,71%) cases the birth took place by cesarean section, the pneumatic birth was in 14 (10%) cases. In normal-weight women, physiological birth without any complications occurred in 109 (77,85%) cases, cesarean section was performed in 24 (17,14%) women, and pneumatic birth occurred in 7 (5%) cases. The newborn weight from obese mother was 3645 ± 314 grams, but the weight from non-obese mother was 3210 ± 242 grams. The mean of Apgar score in the first and fifth minute of life was 7/8 for children with obese mother and 8/9 for children with non-obese mothers. Women with abnormal body mass index were in hospital 1.5 days longer than women with normal weight p=0,03.

Conclusion. Although the results of the study did not show major differences in the condition of newborns regardless of the mother's weight. Women with high body mass index require more medical attention, especially in time of labour and postpartum supervision.

25. OLIGOHYDRAMNIOS – EFFECTS ON PERINATAL OUTCOME

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Introduction. Quantification of amniotic fluid is an important component of the biophysical profile in USG evaluation of perinatal outcome. Oligoamnios is a clinical condition characterised by amniotic fluid index (AFI) < 5. It often increases the risk of fetus distress and accompanies a wide range of reproductive disorders including anomalies of fetus and disorders of mother, fetus and placenta.

Aim of study. The aim of study was to analyse the fetal outcome in pregnant women with oligoamnios at term.

Methods and materials. This is a prospective study of 30 antenatal women with gestational ages between 34 and 41 weeks. All women enrolled were subjected to history taking, examination and AFI estimation.

Results. Fetal distress was higher in patients with oligohydramnios. The congenital anomalies of kidney and urinary tract of the fetus were discovered in 16,6 % , intrauterine cytomegalovirus infection – 23,3 %, low birth weight in 13,3 %, APGAR score < 7 in 10 % out of 30 patients. There are several additional complications to be aware of during the gestation complicated by oligoamnios. These include an increased risk of cesarean delivery, fetal heart rate decelerations, or umbilical cord compression.

Conclusion. In conclusion, oligohydramnios is a serious clinical condition that increases the risk of perinatal complications. It frequently creates premises for the development of intrauterine growth retardation in addition to many pathological conditions, including congenital anomalies of kidney and urinary tract, low birth weight, CMV infection. Therefore, newborns with oligohydramnios demand intensive fetal surveillance and proper antepartum and intrapartum care.

26. PARTICULARITIES OF ACUTE PYELONEPHRITIS IN PREGNANT WOMEN

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Introduction. Pyelonephritis is one of the most frequent diseases between pregnant women (about 20%), with teratogenic effect and unfavorable prognosis in cases with inadequate treatment. The determining factors in Pyelonephritis in pregnancy are morpho-functional changes of the maternal organism, associated with comorbidities (gestational diabetes, gestational hypertension, pre / eclampsia, liver disorders, nephrolithiasis). There are also physiological changes in pregnant women that are favoring the appearance of Pyelonephritis: progressive dilation of the ureters, hypotonia of the excretory system, mechanical compression of the pregnant uterus, pregnancy hydronephrosis, elevated levels of progesterone. This disease has a negative impact on the pregnancy itself, by causing progressive kidney failure, septic forms, Hepatorenal syndrome, and others. Also, Pyelonephritis is an emergency in obstetrics since it can cause preterm delivery, Intrauterine Growth Restriction, chronic fetal hypoxia, development abnormalities or spontaneous abortion.

Aim of study. In the study of this pathology in pregnant women, was determined an entire complex of mechanical, hormonal, immune and hydro-electrolytic factors that favor the installation of Acute Pyelonephritis. From the first weeks of pregnancy, 90% of pregnant women experience functional changes in reno-urinary tract that are manifested by a hypotonia and hypokinesia of the ureters. As a result - there is a bladder-ureteral reflux, which elevates the pressure in the calyx, which facilitates the penetration of bacteria and toxins into the kidneys and facilitates the appearance of Acute Pyelonephritis, or exacerbation of the chronic process. Pyelonephritis frequently occurs asymptomatically in pregnant women (asymptomatic bacteriuria), but tends to worsen in 48% of cases in the 3rd trimester of pregnancy. There were also cases of primary clinical manifestation of the infection in the puerperal period. The importance of gestational PN study is conditioned by the presence of asymptomatic bacteriuria in pregnant women, as well as the installation of physiological pregnancy hydronephrosis in 90% of cases, starting with weeks 6-10, reaching the maximum level - at 22-24 weeks of pregnancy. Glucosuria and urinary alkalinization, which is also associated with urinary stasis in the ureters, exacerbates the risk of developing PN, due to the creation of optimal conditions for the invasion and development of conditionally pathogenic microorganisms.

Methods and materials. A retrospective study, that includes data from 45 medical files of pregnant women that were diagnosticated with Acute Pyelonephritis : age (V), nr of pregnancy (P), pregnancy trimester (TS), type of lumbar ache (DL), hydronephrosis (H), urinalysis (AGU), results of USG (USG), uroculture (U), complications : imminent abortion (IA), premature birth (NP), retarded fetal development (R.DIU).). Test x^2

Results. A : 26,5 years (p=0.203) , P : 66,7 % primiparous (p=0.278), TS : 57,8 % trim. III (p=0.310), LA : 71,1 % (p=0.183), H : 53,3% cases (p=0.254), UA : leucocytes 100% (p<0,001) / RBC – 60,5% (p=0.130), bacteria – 57,1 % (p=0.197), USG : 62% pyelocaliceal dilation (p=0.174), U : 95% E. Coli (p<0,001), IA : 40% (p=0.165) PB : 15,5%(p=0.212) RFD 13,3% (p=0.262). x^2=29,7

Conclusion. Acute Pyelonephritis affects pregnant women, due to many morphological and functional changes that appear during pregnancy, has a bad influence on intrauterine development of child, elevates the risk of pregnancy disruption, premature delivery, IUD retardation, intr-uterin infection development, etc.

27. PECULIARITIES IN THE DIAGNOSIS OF PATIENTS WITH STAGE I OVARIAN CANCER.

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Introduction. Ovarian cancer is the 5th leading cause of cancer death in women worldwide. Every year, approximately 238,719 new cases are diagnosed worldwide and 151,905 deaths are recorded due to ovarian cancer. The prognosis is bleak, the 5-year survival rate is only 15-40%, and the cause is the lack of obvious early symptoms and lack of an effective diagnostic approach in the early stages of the disease.

Aim of study. Ovarian cancer, diagnostic methods, tumor markers.

Methods and materials. This is an article analyzing the diagnostic methods of ovarian cancer based on clinical trials, bibliographies and books from databases such as PubMed, Elsevier, Wiley Online Library, Medscape.

Results. In the context of the research, it was found that the diagnostic methods approached in case of suspected ovarian cancer are: clinical examination, high resolution ultrasound in combination with color and power doppler techniques, ultrasound guided puncture, dosage of tumor markers (CA 125, CA 19-). 9, BRCA-1 oncogene on chromosome 17q) and pelvioscopy. Another way is computed tomography which is used for the differential diagnosis of malignant and benign tumors of the ovary, specifying clinical data on the location, size, shape, contours, internal structure and correlations with adjacent organ tissues. And with the help of the cytological examination, the clinical diagnosis of ovarian cancer is morphologically confirmed, the degree of spread of the tumor process is assessed and, in combination with other methods, the effectiveness is controlled and the degree of remission after the initiation of treatment.

Conclusion. Currently there are no screening tests that would allow early diagnosis of ovarian cancer, but the least invasive and accessible method is transvaginal ultrasonography which includes a systematic examination of the uterus, ovaries and appendages that can detect the tumor mass attached to the ovary, and this method can be combined with dosing of CA 125 tumor markers, thus increasing diagnostic specificity

28. PECULIARITIES OF PREGNANCY AND DELIVERY IN PREGNANT WOMEN WITH INTRAUTERINE GROWTH RESTRICTION OF THE FETUS.

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Introduction. Intrauterine growth restriction (IUGR) is the second leading cause of fetal morbidity. Its polyethiological aspect is represented by the genesis factors: placental, maternal, fetal, environmental or their association. There is a direct link between IUGR and diseases identified in pregnant women. The most common diseases are kidney, cardiovascular, and respiratory. Among the factors that negatively influence fetal growth are the pregnant woman's vices, namely smoking, drugs, alcohol. Early diagnosis of IUGR and prevention of fetal distress is paramount, the method of choice is Doppler ultrasound. The basic criterion for establishing the diagnosis of fetal IUGR is the placement of fetal biometrics indices below the 10th percentile.

Aim of study. Analysis and highlighting of factors associated with intrauterine growth restrictions of the fetus.

Methods and materials. To achieve the goal, a retrospective study was conducted based on 100 medical records of clinical observation of hospitalised patients with intrauterine growth restrictions of the fetus in "Gheorghe Palade" IMSP SCM in the period 2020-2021.

Results. The study was performed on a group of 100 patients, selecting data from the archive, in the period 2020-2021, with extremes of 18 and 42 years, the average age being 30 years. Age distribution: with the age between 18-25 years were 33%, 26-30 years were 25%, 31-40 years were 38%, >40 years were 4%. The majority of patients studied were 55% primiparous and 45% multiparous. According to the living environment, 82% of patients living in urban areas and 12% in rural areas were identified. The study included 66 patients with a complicated obstetric history, imminent premature birth, miscarriage 12%, medical abortion 11%, uterine scar 3%, stagnant pregnancy 2%, antenatal fetal death 2%, infertility 2%. During pregnancy, 100% of pregnant women performed Doppler ultrasound. Ultrasonography revealed 60% of pregnant women with circulatory failure. According to ultrasonography, the type of fetal retardation was also determined: small fetus for gestational age 34%, asymmetric 24%, symmetrical 23%, unspecified 19%. In 31% of cases, the pathology of the amniotic fluid was identified: oligoamnios 25% and polyhydramnios 6%. In 89% of cases, gestational age does not correspond to the term ultrasonography. According to the degree of fetal retardation: gr. I - 53%, gr. II - 33%, gr. III - 3%, corresponds to gestational age with the term ultrasonography - 11%. The study in pregnant women identified the following pathologies that complicate pregnancy: anemia in 33% of cases, vulvovaginitis 22%, pyelonephritis 20%, pregnancy-induced hypertension 20%, hereditary thrombophilia 6%, obesity 5%, gestational diabetes 4 %, intrauterine infection 4%, preeclampsia 2%, autoimmune thyroiditis 2%, antiphospholipid syndrome 1%, lack of pathology 27%. Of particular importance is the termination of pregnancy in the case of fetal distress, so according to the study in 76% of pregnant women the pregnancy was completed by cesarean section, in 44% of cases it was urgent cesarean section and in 32% planned, at 24% of pregnant women completed the pregnancy by birth per vias naturalis, in 18% of cases the birth was induced and in 6% spontaneous.

Conclusion. The predisposition to IUGR is represented by the complicated obstetrical anamnesis, the presence of pathologies that complicate the pregnancy, the presence of circulatory insufficiency, living environment, and the age of the pregnant woman. The earliest possible detection of IUGR in the ultrasonographic examination, allows a faster approach to a management of the pregnant woman by excluding risk factors, treatment of existing maternal diseases and pathologies that complicate the pregnancy, choosing the method to complete the pregnancy and its conduct.

29. PERINATAL ASSISTANCE SERVICES DURING THE COVID–19 PANDEMIC RESTRICTION MEASURES

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Introduction. Worldwide, the COVID-19 pandemic established common restrictive measures that have limited access to perinatal care, with unfavourable consequences for perinatal indicators.

Aim of study. Analysis of the access to perinatal care services in the Republic of Moldova (RM) during COVID-19 pandemic.

Methods and materials. The RM became part of a study called "International Sexual Health and Reproductive Health during COVID-19" (I-SHARE) using a common instrument for 30 participating countries. The study included 200 women, the analysis of the obtained results was performed using the IBM SPSS Statistics V21.0 software.

Results. The study involved 200 women, 183/200 (91.5%) of whom were of reproductive age, on average 33.9 ± 9.6 years old. Higher education had 150/200 (75.0%), besides that 82.0% (164/200) of respondents were married or in cohabitation. In 73.0% (146/200) cases, the respondents had one or more children, being familiar with the perinatal management in the RM. The social distancing measures were respected by 173/200 (86.5%) women, and 51.0% (102/200) of them were at least once in self-isolation. In 99/200 cases (49.5%), patients were tested for SARS-CoV2, in 48.5% (48/99) cases the result was positive; these were monitored according to the COVID-19 protocol of the RM. At the moment, when the survey was carried out, 25/200 (12.5%) women were pregnant at various gestational age, 23/200 (11.5%) women gave birth during the last 2 months, and 19/200 (9.5%) women were planning to conceive, following prenatal recommendations and/or infertility treatment. In all cases, the pregnancy occurred spontaneous, being planned in 17/23

Conclusion. The I-SHARE study found that the COVID-19 pandemic disrupted access to prenatal services due to introducing social distancing and isolation measures. At the same time, due to the increased request of pregnant and postpartum women, the providing of perinatal services through telemedicine was encouraged. This allowed the high level of maternal and child health services to be maintained, preventing perinatal complications.

30. PERINATAL OUTCOMES IN MULTIPLE CESAREAN SECTIONS

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Introduction. Multiple cesarean sections (CS), especially elective CS, without urgent medical indications, are associated in the short and long term with risks for both mother and child. Children born by elective repeated CS are more prone, in the short term, to breathing difficulties (transient tachypnea of the newborn, respiratory distress syndrome) and the need to be admitted to the neonatal intensive care unit. In the long term, increased risks of immune disorders, obesity and asthma have been identified.

Aim of study. The aim of this paper is to evaluate the perinatal outcomes of multiple CC and their incidence according to the number of cesarean births.

Methods and materials. The paper was based on a retrospective case-control study of 352 pregnant women aged 18-40 years, divided into 2 groups, depending on the number of previous cesarean operations. The research was conducted by studying the medical documentation (obstetric observation sheet, newborn record). The data was numbered in Excel tables. To compare the categorical variables, in batches, the χ^2 test was applied. The $p < 0.05$ was considered statistically significant.

Results. It was found that an increased risk of general and severe respiratory morbidity was identified for infants born with elective CS.

Conclusion. The increase of the elective repeated OC rate contributes to the increase of fetal complications due to respiratory morbidity (respiratory distress syndrome, transient tachypnea of the newborn), admission to the neonatal intensive care unit. and increasing the length of hospitalization with significant medical, social and financial impact for families and medical institutions.

31. PERINATAL OUTCOMES IN WOMEN WITH POLYCYSTIC OVARY SYNDROME.

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Introduction. Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders that affects women in reproductive age, with a reported incidence between 6 and 15%. It is a very heterogeneous and complex disorder characterised by amenorrhea or oligomenorrhea, polycystic ovarian morphology and hyperandrogenism with its clinical features as hirsutism, acne. According to the Rotterdam 2003 criteria, PCOS is diagnosed when two of the three following criteria were present: oligo- or anovulation, clinical or biochemical hyperandrogenism and polycystic ovaries. Many women with PCOS have encountered difficulties in achieving a pregnancy due to ovulatory dysfunction. However, there are a few successful treatment options for women with anovulatory infertility, which have made progress in achieving a pregnancy or reducing multiple gestation. Nevertheless, PCOS has been closely linked to maternal, neonatal and perinatal complications. It is associated with increased risk of spontaneous miscarriage, preterm deliveries, gestational diabetes mellitus, hypertensive disease-preeclampsia and a higher caesarean delivery risk.

Aim of study. The purpose of this review was to research articles which reveal the possible perinatal complications in women with PCOS.

Methods and materials. This review study was done by using different specific literature in databases of PubMed, BMC-biomedcentral, NCBI, Circulation Research, Springer. The articles were selected by using Keywords: “polycystic ovary syndrome”, “hyperandrogenism”, “anovulation”, “infertility”, “perinatal complications in women with PCOS”, “insulin resistance in women with PCOS”, “preeclampsia in women with PCOS”.

Results. This study revealed that early pregnancy loss is usually common post conception, at first trimester. There isn’t a well-known reason why it occurs, but several mechanisms can enhance the risk of spontaneous EPL. Such as elevated luteinizing hormone, hyperandrogenemia -elevated the free or total testosterone ratio antagonise estrogen and as a result affect endometrial development and implantation as well as it downregulates the expression of HOXA10 gene, consequently it decreases the uterine receptivity and implantation. Another possible mechanism of EPL could be high plasminogen activator inhibitor-1 (PAI-1) levels which results in impaired fibrinolysis and lead to placental insufficiency through increased thrombosis in the placental bed. Insulin resistance which results in gestational diabetes mellitus is the most described complication in women with PCOS, and it occurs in up to 40%-50% of PCOS pregnancies. Also, an increased BMI could be a great predictor for GMD. Hypertensive disease includes pregnancy induced hypertension as new-onset in pregnancy after 20 weeks of gestation and preeclampsia- a PIH with proteinuria. Accordingly, women with PCOS are more likely to have PIH.

Conclusion. PCOS is obviously associated with adverse perinatal outcomes and that risk increases in the presence of comorbidities such as insulin resistance, increased body mass index and dyslipidemia. There are many factors that contribute to their development and should be taken into consideration, in order to adopt a suitable management. Throughout gestation, a special attention has to be paid to an early establishment of dyslipidemia, hypertension and increased glucose level in blood.

32. PERINATAL RESULTS FOR PATIENTS WITH IN VITRO FERTILIZATION

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Introduction. The method of in vitro fertilization (IVF) and embryo transfer into the uterine cavity is considered one of the most remarkable achievements and a true "technological miracle" of the 20th century, being a great opportunity for couples dealing with infertility in order to conceive a pregnancy. In the last decades, "in vitro" fertilization has become more affordable and is now widely used in medical practice. In the Republic of Moldova, out of the total number of births, about 5% occurred in the patients that undergo IVF. The birth process for these patients often differs from the physiological one, being influenced by the cause of infertility and drug therapy administered during pregnancy.

Aim of study. Analysis of the factors that influenced the course of the pregnancy and the perinatal results of the women who obtained the pregnancy through the IVF procedure.

Methods and materials. The article presents the data of a retrospective study, in which we analyzed the perinatal results of the women who got pregnant by IVF. The study included 500 patients who gave birth between 2016-2020 within IMSP IMC and IMSP SCM „Gh. Paladi ”.

Results. The mean age of the IVF patient was 33 ± 5 years. They had a complicated obstetric history with miscarriages - 15% of cases, medical abortions - 8%, stagnant pregnancies - 8.4% and ectopic pregnancies - 16% of cases. Primary infertility was diagnosed in 58.4%, secondary infertility - 41.6% of cases. Most of the women included in the study had monofetal pregnancy - 61.2%, multiple - 38.8%. The results of the study concluded that most pregnancies were solved within 37-40 weeks in 72% of cases. Premature births occurred in 27.4% of cases. Urgent cesarean section was the way to finish the birth in 50% of cases, followed by planned cesarean section - 36% of cases, and only 14% of pregnant women gave birth naturally.

Conclusion. The results confirm that pregnancy and childbirth for patients who obtained pregnancy through IVF require complex supervision because it is more often complicated by premature birth and urgent cesarean section, which leads to unfavorable perinatal outcomes.

33. PLACENTA ACCRETA-NEW TRENDS IN MANAGEMENT

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Introduction. The prevalence of placenta accreta continues to rise with a negative impact on overall women's health. Frequently, it's incriminated in the occurrence of massive obstetric bleeding (according to literature data, pathological bleeding during placenta delivery and early postpartum is 50-80% of the total number of bleedings) resulting in increased maternal morbidity and mortality.

Aim of study. Elucidation of conservative methods of treatment of placenta accreta to reduce maternal morbidity, mortality and increase quality of life.

Methods and materials. International databases, such as: Cambridge Journals Online, Google Scholar and PubMed, publications from 2016-2021 have been analyzed on the conservative management of the placenta accreta. The search was performed using keywords: placenta accreta, obstetric bleeding, conservative management.

Results. The placenta accreta results from an abnormal implantation, when the chorionic villi attaches to the uterine myometrium or uterine serosa, due to the presence of a defect at the base of the decidua. Dominant risk factors are: scarred uterus, history of segmental-transverse cesarean sections, uterine curettage, embolization or myomectomy. The management of the placenta accreta consists of two main strategies: 1) its identification, favored by assessing risk factors and complementary examinations and, 2) tactics of conduct in the placenta accreta, whose goal is to reduce maternal complications as much as possible. A multidisciplinary team care, immediate access to blood products, intensive care for adults and neonatal and enhanced expertise in complex pelvic surgery are essential in order to increase safe outcomes for mother and child. Four main methods of conservative management are described in the international literature:a) the technique of removal(manual removal)of the placenta; b)leaving the placenta in situ or the expected approach; c) conservative surgery in one step(removal of the acrid area); d) the Triple-P procedure(suturing around the accreted area after resection). These methods have been used alone or in combination, in many cases with additional procedures such as interventional radiology.

Conclusions: Increasing the rate of cesarean section increases the occurrence of pathological insertions of the placenta, resulting in increased maternal-fetal mortality. Prenatal diagnosis is essential, and the management of these clinical cases must be well planned by an experienced multidisciplinary team to reduce the potential for maternal and neonatal morbidity and mortality, and maintain fertility.

34. PREGNANCY AND BIRTH MANAGEMENT IN HIV/ AIDS PATIENTS

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Introduction. Human immunodeficiency virus (HIV) is an infection with a global prevalence and currently no cure or vaccine. If left untreated, the condition progresses to Acquired Immunodeficiency Syndrome (AIDS) which is the end stage of the HIV infection. Women can pass on this disease to the fetus or child during pregnancy, childbirth and through breastfeeding. Vertical transmission occurs 20% before 36 weeks, over 80%- around the time of labor and delivery. An important strategy in preventing the transmission of the virus is realized by counseling, testing pregnant women, providing antiretroviral treatment, cesarean delivery and exclusive artificial feeding of newborns.

Aim of study. The assessment of the diagnostic and treatment methods in HIV positive women and fetuses.

Methods and materials. In order to identify opportune articles, I searched different databases as ScienceDirect, Medscape, PubMed, using the Key words: “Human immunodeficiency virus in pregnancy”, “vertical transmission”, “diagnosis of HIV”, “antiretroviral treatment”, ”management in HIV patients”.

Results. The study highlights that the diagnosis of HIV is based on laboratory tests: anti-HIV antibodies, P24 antigen, HIV DNA test, HIV RNA test, viral culture. Firstly, the detection of anti-HIV antibodies is realized due to standard serologic tests ELISA and Western blot, which have a 99.9% sensibility. EIA is considered a screening test, while Western Blotting being the confirmatory test. All newborns from HIV positive women have anti-HIV antibodies until 18months, that’s why the positive results don’t confirm the infection. Secondly, the P24 antigen can be detected in the blood, but it has a low sensibility in the first months of life. More informative for neonatal infection is HIV DNA test (PCR), necessary to all newborns exposed to HIV, not later than 48h, before ART. Thirdly, the viral culture is a high sensibility test, but it’s expensive and results are done in 2-3 weeks, that’s why it has been supplanted by NAATs. In addition, it is important to control complete blood count, liver and kidney function tests, the

Conclusion. Pregnant women should be diagnosed as fast as possible in order to adopt the relevant management to prevent the transmission of the virus to the fetus. Perinatal HIV transmission is preventable with appropriate maternal HIV screening and early initiation of ART if the screening test is positive. The study highlights diagnostic and treatment methods in HIV positive women and fetuses.

35. PRP (PLATELET RICH PLASMA) IN ASSISTED HUMAN REPRODUCTION FAILURE

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Introduction. Infertility is a global problem with a global incidence of 13%, with a growing trend. Despite technical advances in assisted human reproduction, the success rate remains at most 35%. The success of implantation depends not only on the quality of the embryo, but also on the morphofunctional state of the endometrium. Platelet rich plasma (PRP) is a new model for the thin endometrium. It is freshly centrifuged human blood, which contains a high concentration of platelets. PRP is prepared from the patient's blood and contains many growth factors and cytokines, such as vascular endothelial growth factor (VEGF), platelet-derived growth factor (PDGF), epidermal growth factor (EGF), transforming growth factor (TGF) and many other cytokines that can facilitate tissue regeneration and healing.

Aim of study. Evaluation of the effect of endometrial rehabilitation treatment using platelet rich plasma in women with infertility who have at least one in vitro fertilization failure.

Methods and Materials. The endometrial rehabilitation technique with PRP has been performed in 70 patients with a history of at least one IVF failure and which involves a new IVF procedure.

Results. Intrauterine infusion with PRP stimulated and accelerated the growth of the endometrium (100%), decreased fibrosis, thus decreasing intrauterine adhesions in women with sindrom Asherman (9%), decreased sperm inhibition in endometrial secretion (14%), leading to successful embryo implantation.

Conclusion. Intrauterine PRP treatment increases the rate of pregnancy in infertile women with thin endometrium, as it increases the receptivity and vascularity of the endometrium because it contains growth factors that have positive effects on local tissue repair and endometrial receptivity. PRP has a positive impact on the increase in the number of antral follicles and prevents the inhibition of sperm in the peritoneal tubal fluid.

36. REPEATED CESAREAN SECTION: CLINICAL ANATOMICAL ASPECTS AND PERINATAL OUTCOMES

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Introduction. Cesarean section is the most common practice surgery internationally. The World Health Organisation recommends keeping the incidence of cesarean section below 15%, however there has been a sharp increase in the number of births completed in the abdomen in the last decade. Numerous factors are involved in increasing the rate of cesarean operations that determine and characterise the trends of contemporary obstetrics.

Aim of study. Aimed to provide accurate information to counsel women about the risks of future pregnancies, and compare obstetric outcomes in patients with a single cesarean section and patients with multiple caesarean sections.

Methods and materials. Total 240 women who had cesarean sections were retrospectively reviewed. Of these, 120 had previously had two or more cesarean sections (multiple repeat cesarean section group) and 120 had first cesarean sections (control group).

Results. Once the woman chooses an elective cesarean section, it is known that the rate increases for the next births by cesarean section. The rate of adhesion processes, the time of surgery, ligation of the fallopian tubes is met with a higher incidence in the case of repeated cesarean operations compared to the first cesarean section

Conclusion. The risk of abnormal placentation, visceral injury, adhesion processes, increased with the number of multiple repeat cesarean sections.

37. ROLE OF NEOADJUVANT CHEMOTHERAPY WITH PLATINUM PREPARATIONS IN ADVANCED OVARIAN CANCER

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Introduction. Ovarian cancer is the second most common and the most lethal gynecologic malignancy. Ovarian cancer is the eight most diagnosed and common cause of cancer-related deaths in the women's world. The frequency of this tumour varies by country and ethnicity. Risk factors that contribute to the development of ovarian cancer include genetic factors - mutations in the BRCA1 and BRCA2 genes, family history of breast or ovarian cancer or factors such as - nulliparity, obesity, diabetes, alcohol consumption, early menarche, late menopause, smoking, endometriosis.

Aim of study. Ovarian cancer is a malignant tumor that develops from ovarian tissue, the cells of which form the epithelium of the ovarian lining diet. Treatment of patients with epithelial ovarian cancer includes surgery and chemotherapy. Previously, the basic method to reduce the size of the primary tumor was surgery and the next step being postoperative chemotherapy.

Methods and materials. Surgery and combination treatment with carboplatin and paclitaxel are the standard of care for patients with newly diagnosed disease, although the use of neoadjuvant chemotherapy is increasing. A systematic review of the literature was performed, using the databases Medline, PubMed, Google Scholar to identify relevant articles, with reference to " ovarian cancer", " diagnosis ", "treatment".

Results. Surgery and combination treatment with carboplatin and paclitaxel are the standard of care for patients with newly diagnosed disease, although the use of neoadjuvant chemotherapy is increasing. The most commonly used surgical procedures are hysterectomy, bilateral salpingo-oophorectomy and omentectomy. Nowadays, an alternative and successful to primary debulking surgery is platinum-based neoadjuvant chemotherapy. The main role of chemotherapy agents in ovarian cancer is to prevent cancer cells from replicating, forming new metastases and destroying existing cancer cells. In the case of neoadjuvant treatment, chemotherapy will be performed before surgery. Chemotherapy is given in 6 cycles with an interval of 21 days between them. In this way the patient's body has the opportunity to recover until the next treatment cycle. The drug can be introduced intravenously, intraperitoneally or mixed. The platinum-based agent can be combined with chemotherapeutic preparations called taxanes (plaxitaxel, docetaxel) to treat ovarian cancer.

Conclusion. Standard treatment for ovarian cancer is surgery, with a goal of complete tumor resection, and chemotherapy based on platinum compounds and taxanes. Secondary to this takes place the transition of epithelial tissue into mesenchymal and the migration of the ovarian cancer cells. One cause of poor prognosis following chemotherapy treatment is acquired resistance to platinum preparations. The effect of cisplatin can be potentiated by the Bcl-2 inhibitor ABT737, which in turn induces mitochondrial apoptosis in ovarian cancer. The platinum-based neoadjuvant chemotherapy improves oncological outcomes and survival of patients with advanced ovarian cancers.

38. SEPTIC ABORTION: CLINICAL PRESENTATION AND MANAGEMENT.

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Introduction. The term "septic abortion" refers to a spontaneous miscarriage or therapeutic/artificial abortion complicated by a pelvic infection. Septic abortion remains a leading cause of maternal mortality globally, as result of unsafe abortion techniques. In developing countries, septic shock associated with septic abortion, represent 10% of maternal deaths, despite preventive measures and advances in the treatment of purulent-septic complications in obstetrics. Two major factors contribute to the development of septic abortion: retained products of conception and intrauterine infection. Pathogens causing septic abortion usually are mixed. Symptoms and signs of septic abortion typically appear within 24 to 48 hours after abortion and are similar to those of pelvic inflammatory disease and often those of threatened or incomplete abortion. Treatment of septic abortion is intensive antibiotic therapy plus uterine evacuation as soon as possible. In a systemic review of 65 studies of heterogeneous design, the overall proportion of diagnosed infection after abortion was 0.9 % in more than 46000 patients. Clinical improvement after fluids, antibiotics, and curettage should be seen within 6 hours. If there is insufficient clinical improvement after such treatment, then a hysterectomy may be necessary.

Case presentation. A 37-year-old female with no medical history was brought to the emergency department complaining of abdominal pain, fever 38,4C, oliguria, tachypnea, tachycardia, hypotension for the past 2 weeks. She underwent an induced abortion at 21 weeks gestation. Physical exam reveals diffuse abdominal tenderness, foul-smelling vaginal discharge. She was fully investigated, all the changes in the lab tests pointing to a septic complication (high leukocytosis). Final diagnostic: Septic abortion. Septic shock. Sepsis. MODS. SIRS. AKI. As a final method of treatment, total hysterectomy was performed, and antibiotic therapy was initiated with carbapenems, polymyxins.

Discussion. This case report highlights the significant morbidity in late term abortion and risk of mortality associated with septic abortion and the need for safe and prompt medical care.

Conclusion. Given the importance of timely recognition, prompt surgical source control, and broad-spectrum antibiotics in the effective management of septic abortion, vigilant consideration of this complication is essential in preventing maternal mortality and severe acute medical consequences of septic abortion (septic shock, multiple organ dysfunction, and death) and significant long-term consequences (persistent pelvic pain, chronic PID, infertility).

39. THE CURRENT PRACTICE IN THE DIAGNOSIS OF CERVICAL CANCER

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Introduction. Annually more than 500 thousand women are diagnosed with cervical cancer and more than 300 deaths occur from the disease. Being associated with HPV infections and mainly asymptomatic in early stages, it is a highly preventable form of cancer. Consequently the accuracy of diagnosis and staging is critical to timely and effective treatment.

Aim of study. To explore the current practice in diagnosis of cervical cancer.

Methods and materials. The study was performed based on review of related retrospective research and various scientific materials (articles in specialised journals, monographs, national protocols and standards, articles on the Internet etc.).

Results. Conventional cytology is still largely applied in many countries showing a specificity of 76-98,5%, but a moderate sensitivity (37,8-81,3%). Liquid-based cytology proved a higher detection rate. Dual staining p16/Ki-67, is a complementary cytological method with a sensitivity up to 96%. Visual inspection methods (VIA, VILI) with testing accuracy similar to cytology, are actively used in low and middle income countries. Currently, DNA HPV testing (HC-II, PCR) is the most accurate, being strongly recommended by WHO, with a specificity up to 95,8% and sensitivity of 100%. HPV mRNA testing proved higher specificity (by 1,04). Targeted biopsy assisted by colposcopy remains a golden standard in cervical cancer diagnosis, no therapeutic strategy being implemented without histological confirmation. Other biopsy forms considered are cone biopsy and endocervical curettage. Tumor staging is highly based on modern imaging techniques. MRI (DWI and DCE MRI) is the most sensitive with 94% accuracy (CT – only 76%), especially in assessment of local extension and distant metastases. PET/CT is superior in detecting metastatic nodes. Numerous screening and diagnostic methods are currently under evaluation. AI assisted screening techniques based on automated evaluation of colposcopy or cytology images (Automated Visual Evaluation) or machine learning data-driven diagnosis models (SVM, RF) present high accuracy results (over 90%). DNA methylation is also a promising method, currently under research (detection rate up to 98,3%). Other diagnostic techniques, like next generation sequencing technologies (TEN16, HIVID), fluorescence, reflectance and Raman spectroscopy, have also received great interest.

Conclusion. Cervical cancer diagnosis is based on numerous methods and has been evolving substantially over the recent decades, becoming more efficient. New techniques are under investigation, characterised by higher objectivity and accuracy of the diagnosis process.

40. THE INCIDENCE OF POSTPARTUM ENDOMETRITIS IN WOMEN WHO GAVE BIRTH IN MOLDAVIAN HOSPITAL IN THE PERIOD 2017-2021

Author: Pușcașu Mariane Nicole

Scientific adviser: Olga Cernetchi, PhD, Professor, Head of Department of Obstetrics and Gynecology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Puerperal or postpartum endometritis (PE) has been defined by the World Health Organization (WHO) as a infection of the genital tract occurring at any time between the onset of rupture of membranes or labor and the 42nd day postpartum in which two or more of the following are present: pelvic pain, fever, abnormal vaginal discharge, abnormal smell/foul odor discharge or delay in uterine involution. According to the available dates the incidence of PE is affected mainly by the mode of delivery: vaginal deliveries in 1 to 3%, scheduled caesarean deliveries (done before labor starts) in 5 to 15%, unscheduled caesarean deliveries (done after labor starts) in 15 to 20% cases. There is a paucity of data on the prevalence of postpartum infections in the Republic of Moldova.

Aim of study. The aim of the study was to assess the prevalence of different degrees of postpartum endometritis in women who gave birth in Moldavian hospital, and to determine some risk factors for the incidence of clinically relevant endometritis.

Methods and materials. We performed a retrospective multicenter cohort study that included the patient records of all women giving birth (vaginal delivery or cesarean section) in Municipal Hospital ‘’Gheorghe Paladi’’ and Institute of Mother and Child during the period 2017-2021.

Results. In the analysis were included dates from 60,955 patients' records, the PE were identified in 658 cases (1.07%). Out of a total of 26916 births from the Institute of Mother and Child were recorded 181 cases complicated with PE 75 (41,4%) after vaginal delivery and 106 (58,6%) post cesarean section. In the hospital Municipal Hospital ‘’Gheorghe Paladi’, with unique unit of septic gynecology from total number of 34039 births, 477 (1,4%) cases were established PE. 370 (77,6%) of these cases, were after vaginal birth of and 107 (22,4%) post cesarean section. The qualitative analysis of dates reveals that the majority of infections were mild and resolved with antibiotic therapy; however, in some cases the infection extended into the peritoneal cavity resulting in peritonitis, intraabdominal abscess, or sepsis. Rare patients developed necrotizing myometritis, necrotizing fasciitis of the abdominal wall, septic pelvic thrombophlebitis, or toxic shock syndrome.

Conclusion. Among Moldavian women, postpartum infection incidence was low overall, mostly associated with vaginal birth. A more in-depth analysis is needed to assess the risk factors associated with postpartum endometritis and the profile of patients in order to develop targeted strategies to reduce the incidence of postpartum infections.

41. THE PSYCHOLOGICAL IMPACT OF BREAST CANCER AMONG CANCER PATIENTS.

Author: Albu Nadejda

Scientific adviser: Bacalim Lilia, MD, Associate Professor, Department of Oncology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. According to WHO statistics from 2018, breast cancer (CM) has an incidence of 11.6% among all cancers, accounting for about 6.5% of all deaths worldwide.In the Republic of Moldova, the incidence of breast cancer in 2020 was 28.7 ‰ 00 (n = 1016) and mortality - 13.7 ‰ 00 (n = 486) out of a total of 10462 (567.7 ‰ 00) of patients suffering from this disease. Depression and anxiety are common comorbidities in these patients. There are not enough statistics to show that depression and anxiety are associated with the level of progression of breast cancer or mortality, but nevertheless, there is significant psychological suffering related to cancer that affects 30-60% of women diagnosed with breast cancer.According to studies, depression associated with cancer increases the risk of recurrence or even death. Also, less than 30% of patients in difficulty receive psychosocial care, although the need for psychosocial care plays a key role in the recovery and survival process.According to international studies, patients with breast cancer who received psychosocial care after diagnosis, have better psychosocial health and a higher level of survival compared to patients in the control group.

Aim of study. To study the psychological impact of breast cancer on patients diagnosed in the Republic of Moldova.

Methods and materials. Prospective study that includes a batch of 60 patients with the diagnosis of breast cancer who were hospitalized and treated in the mammalogy department of the IMSP Oncological Institute during 2021.

Results. The patients in our study were over 40 years old in about 92%, and only 8% of them - an age between 31-40 years.All patients had children, 66.6% of whom had 2 children, and 80% of them breastfed.At the same time, all of them had some stressors before enduring the disease, 66.6% had miscarriages, and as many suffered from depression and lack of a stable income.Of all the patients included in the study, 80% had a subjective stress level greater than 7 points out of 10.According to the HADS scale for assessing the level of depression and anxiety, 33.3% of patients had an abnormal level of depression, 6.66% are on the border between normal and abnormal, 26.6% of patients have an abnormal level of depression. anxiety, and 53.3% are on the border between normal and abnormal.

Conclusion. The psychological impact of breast cancer among cancer patients is still poorly studied, however, at least 1/3 of them suffer from some degree of anxiety or depression, and more than half of them are on the verge of normal to abnormal. All patients suffering from this disease regardless of stage, age, treatment, volume of surgery, etc., need a certain level of psychological counseling.

42. TREATMENT OF HIGH-GRADE INTRAEPITHELIAL LESIONS OF THE CERVIX

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Introduction. According to GLOBOCAN in 2018, 527.600 new cases and 265.700 deaths from cervical cancer have been diagnosed worldwide. In the Republic of Moldova, the incidence of cervical cancer is 21.4 per 100,000 women. The risk factor for cervical cancer is persistent HR-HPV infection. HSIL is a squamous cell abnormality associated with HR-HPV. The current management of HSIL is based on surgical treatment, while drug therapy is adjuvant and includes: immunomodulatory, anti-proliferative and antiviral medication.

Aim of study. Evaluation of surgical, antiviral and immunomodulatory treatment in patients with cervical HSIL.

Methods and materials. 94 patients with HSIL of the cervix, treated surgically and with additional antiviral and immunomodulator treatment, were involved in a prospective study, at the IMSP Oncological Institute of the Republic of Moldova, between 2020-2022.

Results. The age of the patients ranged from 25 to 53 years old, the average age was 37.5 years old. Patients with HSIL were treated surgically with LEETZ 94.7% (n = 89), and by total hysterectomy 5.3% (n = 5), adjuvant therapy included: antiviral and immunomodulatory medication. Postoperative histology determined: CIN II - 36.1% (n = 34), CIN III - 54.2% (n = 51) and CIS - 9.7% (n = 9). All patients received antiviral and immunomodulatory therapy after surgery. All patients were monitored by Babeș-Papanicolau test at 6 months and HPV genotyping at 12 months after finishing the treatment. The results of the examination showed that 100% of the respondents determined NILM. HPV was not detected in 96.8% (n = 91), and in 3.2% (n = 3) of respondents the virus was present, of which type 16 was incriminated in 66.6% (n = 2) of cases, and type 18 in 33.3% (n = 1) of cases.

Conclusion. The study found that the treatment of high-grade epithelial lesions of the cervix is combined: surgical, antiviral and immunomodulatory. The Babeș-Papanicolau test detected NILM in 100% of the cases. The presence of HPV virus was determined in 3 cases, and accounted for 94.6% of patients. The types of HPV detected were 16 and 18.

43. VAGINAL BIRTH AFTER CAESAREAN SECTION

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Introduction. Caesarean section is a modern part of today's obstetrics that preserves both maternal and fetal interests. Increasing world wide rates of caesarean section are a global concern since this is now the most commonly performed major surgery around the world, raising the most serious problems of all time not only among professionals but also in the whole society. In Europe, the caesarean section rate is 24%, while in the United States it is 33%. Worldwide the caesarean section rate is 12.4% an average annual increase of 4.4%. In first place is Brazil with 55%. The caesarean section rate in Moldova in 2020 was 19%. Simultaneously with the increase of the number of repeat caesarean, increases significantly the risk of pathological insertion of placenta, placenta accreta, ectopic pregnancy, bladder, bowel or ureter injury, hemotransfusions, prolonged duration of hospitalisation, etc. Primary caesarean section, which accounts for 2/3 of the overall C-section rate, is an important target for reduction as it increases the risk of repeat caesarean section. Vaginal birth after caesarean section (VBAC) could be considered a reasonable and safe option for most women with a single caesarean section in their history. To achieve success, women need professional care in a level II-III perinatal centre. The benefits of VBAC compared to Caesarean section are: lower maternal morbidity, shorter hospitalisation, lower rate of deep vein thrombosis and lower incidence of postoperative complications. One strategy to reduce perinatal and maternal morbidity rates, and to protect medical staff from malpractice, is the management per vias naturales approach in possible cases, as recommended by international protocols.

Aim of study. The aim of the study was to investigate the specific features of the evolution of vaginal birth after caesarean section in the anamnesis.

Methods and materials. Was performed a retrospective, descriptive analysis of all vaginal births in patients with cicatricial uterus in the obstetric unit No. 2 of IMSP SCM 'Gheorghe Paladi' from 2021.

Results. Analysis of clinical trial data showed that during 2021, 3072 births took place in Obstetric Unit No. 2, of which 2474 were vaginal births and 598 by cesarean section. Were analysed 21 medical charts of patients who gave birth vaginally with a caesarean section in their medical history. The following were analysed: patient age, gestational age, parity, comorbidity, course of delivery, complications, volume of hemorrhage, and newborn data. From the total number of vaginal births, it was determined that the average maternal age was 30-34 years (52.38%). Gestational age was found to be at 39-40 weeks (23.80% - 33.33%). It was observed that secundiparity predominated with 42.85% as compared to multiparity. Maternal comorbidities included: gestational hypertension - 14.28%, obesity - 4.76%, anamnestic preterm birth - 4.76% and antenatal fetal death - 4.76%. Of the total number of vaginal births after caesarean section 9.52% were completed by vacuum extraction, the underlying indication being acute fetal hypoxia. Labour stimulation with uterotonics was not required in any patient. The labour analgesia rate was only 19.04%. We can note that the absence of pathological haemorrhage in the third period of labour was 100%. Uterine cavity control was performed in 9.52% of cases, the cause being placental tissue defect. Among the birth canal trauma was determined to be laceration of perineum in 28.57% and vagina in 19.04%, in 33.33% cases the birth proceeded without trauma. The weight of newborns has varied between 2500 and 3700 g, with an average of 3200 g. Perinatal outcomes were good, with newborns scoring 7/8 points (13.63%) and 8/9 points (40.90%) by Apgar score. No cases of uterine scar insufficiency have been registered. Of the total number of vaginal births after caesarean section, has been registered one case of spontaneous birth with bicorionic, biamniotic duplex.

Conclusion. Term pregnancy and spontaneous start of labour are factors that increase the chance of successful Vaginal Birth After Caesarean. Thanks to the implementation in obstetrics practice of the national protocol for the management of vaginal birth after cesarean section, following the criteria of the age, fetal mass, physiological evolution of pregnancy, spontaneous debut of labour, we can choose the tactic of vaginal birth, after informing the patient about the maternal and perinatal risks and benefits, with qualified medical care and an adequate level of perinatological attendance.

VII. Mother and Child. Pediatrics Section.

1. ADRENAL TUMORS IN CHILDREN

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Scientific adviser: Jana Bernic, PhD, Professor, Natalia Gheorghiu Department of Pediatric Surgery, Orthopedics and Anesthesiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Adrenal tumors in children are generally rare. It can be one person from 1,000.000. The most frequent type of adrenal tumor in children is neuroblastoma, with an incidence of 58 from 1,000,000 newborns of registered cases per year, about 20% of neonatal cancers, and about 8% of all childhood cancers. On the second place among tumors of the adrenal gland in children are adrenocortical tumors, which could be developed from latent congenital adrenal hyperplasia. Adrenocortical cancer accounts for 0.5% of all malignancies in children. Pheochromocytomas, which are located in the adrenal gland in children, are rare (10% of all Pheochromocytomas), but in more than 10% of cases, it is bilateral and hereditary. Generally, there aren't known concrete causes of these tumors, thus isn't a known method to reduce the risk of development of adrenal tumors.

Aim of study. Studying the clinical, paraclinical particularities and the results of surgical and pharmaceutical treatment for all types of Adrenal Tumors in children, in order to highlight the most common clinical features and the best option of treatment depending on the type of Adrenal Tumor.

Methods and materials. This study included 13 patients aged 4-11 years with Neuroblastomas and 1 patient with Ganglioneuroblastoma, who were treated in 2018-2021 in the Department of Pediatric Oncology of the Oncological Institute of Moldova. Also the study included 6 patients aged 0-18 years with Neuroblastomas and Pheochromocytomas who were treated in 2019-2021 in the Institute of Mother and Child Health Care.

Results. Patients by gender distribution: 9 girls (45%) and 11 boys (55%). Clinically, the most common of all patients was a palpable mass in the abdomen hard and unmovable. Other clinical features include abdominal enlargement from hepatomegaly due to liver metastases - 1 patient (5%), insignificant weakness 2 patients (10%), and asymptomatic - 17 patients (85%). Of all the patients, only 4 of them have no metastasis (20%), and 16 patients have metastasis in regional lymph nodes, liver, or bones (80%). The diagnosis of adrenal mass was established postnatal in 100% of cases, and after the biopsy: 1 patient has Ganglioneuroblastoma (5%), 1 patient has Pheochromocytoma (5%), and 18 patients have Neuroblastomas (90%). Four patients received surgical treatment of total tumor excision, and one patient with a subtotal ablation. These patients underwent combined treatment and the rest of the patients - adjuvant therapy with Etoposide 30 mg + Carboplatin 150 mg, Doxorubicin 9 mg + Carboplatin 150 mg + Cyclophosphamide 300 mg or Etoposide 30 mg + Cyclophosphamide 300 mg.

Conclusion. Neuroblastoma is the most common tumor from all types of adrenal tumors in children. The treatment is adjusted according to the type of tumor, stage, and eligibility criteria. The prognosis of ganglioneuroblastoma is relatively good, of the Pheochromocytoma also good with the surgical treatment, and the prognosis for Neuroblastoma is reserved. The results and prognosis can be better after combined therapy but on patients without metastasis and major laboratory changes.

2. ANTIMICROBIAL RESISTANCE OF STAPHYLOCOCCUS AUREUS AMONG CHILDREN UNDER FIVE YEARS WITH ACUTE RESPIRATORY INFECTIONS

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Introduction. The human nasopharynx is colonized by a wide array of microorganisms, including Staphylococcus aureus, Moraxella catarrhalis, Haemophilus influenzae, and Streptococcus pneumonia. After the introduction of the Haemophilus influenzae type b conjugate vaccine and the pneumococcal vaccine, S.aureus or methicillin-resistant Staphylococcus aureus (MRSA) remains the major pathogen that causes pneumonia in children.

Aim of study. The aim of this study was to elucidate the epidemiology and antimicrobial susceptibility of S. aureus and methicillin-resistant S.aureus (MRSA) in children under five years with acute respiratory infections.

Methods and materials. A prospective observational descriptive study was carried out within the National project "The impact of immunization on the morbidity and mortality of children with respiratory diseases in the Republic of Moldova"(project code) - 20.80009.8007.08. The nasopharyngeal aspirate technique was performed for the collection of specimens. Antimicrobial susceptibility testing was performed according to EUCAST standards.

Results. A total of 110 specimens collected from children under five years of age, who were admitted with symptoms of acute respiratory infections. The mean age of the children was 16,57 months. Bacteriological examination of 28 nasopharyngeal specimens identified S. aureus as an agent that colonizes the nasopharynx. All 28 children had been vaccinated. In 32.14% of the samples, S.aureus was associated with other microorganisms, such as Moraxella Catarrhalis (14.28%), Streptococcus dysgalactiae (17.85%) and others. (7,14%). S.aureus showed an increased resistance to penicillins (ampicillin – 78% and amoxicillin – 82%), and a high sensitivity to protected penicillins and oxacillin (92,9%). As well, it showed an increased sensitivity to antibiotics from the group of cephalosporins, macrolides, carbapenems, aminoglycosides and tetracyclines (92,9%). Two (7,1%) of the isolates were multidrug resistant, of which 100% were MRSA.

Conclusion. In this study, the nasopharyngeal carriage prevalence of S. aureus was high, with a small proportion of these colonizers being MRSA. The antimicrobial resistance among the isolates was generally low. An ongoing surveillance of antimicrobial susceptibility testing of all S. aureus isolates is crucial for treatment of MRSA, and for developing current and customized national guidelines based on etiological evidence and susceptibility spectrum so that therapeutic decisions will become targeted and effective.

3. ARRHYTHMIA IN CHILDREN WITH TETRALOGY OF FALLOT

Author: Condrea Adriana

Scientific adviser: Stamati Adela, PhD, Associate Professor, Department of Pediatrics, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Tetralogy of Fallot (TF) is the most common cyanogenic congenital heart disease, constituting 7-10% of all heart abnormalities. Early radical correction of the abnormality in children has significantly increased the survival and quality of life of patients. Extensive studies have shown a reduction in early and late post-surgical arrhythmias. At the same time, repaired TF may be associated with significant tachyarrhythmia (30%) or heart block (8-10%). Ventricular tachycardia in TF is rare, but with the risk of sudden death at any age.

Aim of study. Estimation of the particularities and impact of arrhythmias associated with TF in children.

Methods and materials. The retrospective analytical study included all patients with a clinical diagnosis of TF, hospitalized consecutively in the pediatric cardiology service of the Mother and Child Institute for a period of 3 years (2019-2021). The files of children of both sexes, aged between 1 month and 18 years, were analyzed. The diagnosis was established based on anamnestic, clinical and imaging data.

Results. The general group included 40 children diagnosed with TF (mean age 3.57 ± 2.14 years), with a predominance of 28 boys (70%). The general group of patients was divided into 2 study groups: group I-12 patients with TF and arrhythmias (mean age 5.8 years ± 3.4 years) and group II-28 patients with TF without arrhythmias (mean age 2.24 ± 1, 18 years). Each of the groups was analyzed according to surgical treatment (palliative and/or radical correction), respectively being divided into 2 subgroups: subgroup A - repaired and subgroup B - unrepaired. The analysis of the subgroup A (repaired TF and arrhythmias) showed that the children, who underwent radical correction (66.7%), associated different late arrhythmias (time after surgery 4.4 years): bradyarrhythmias, including right bundle branch block (RBBB) in 8 (50%), and 1 case of AV block grade I. At the same time, 3 children (18.75%) were identified with major and combined arrhythmias, who benefited the treatment, respectively: 1- frequent ventricular extrasystole

Conclusion. Heart block is present in about half of children with repaired TF, without clinical impact at the moment. Diverse ventricular arrhythmias are rare, but require antiarrhythmic treatment to prevent sudden cardiac death.

4. BUDD-CHIARI SYNDROME IN CHILDREN-FROM DIAGNOSIS TO LIVER TRANSPLANTATION THROUGH THE PRISM OF A CLINICAL CASE

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Co-author: Gîncu Gheorghe

Scientific adviser: Jana Bernic, PhD, Professor, Natalia Gheorghiu Department of Pediatric Surgery, Orthopedics and Anesthesiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Budd-Chiari syndrome is a pathology in which the obstruction of the hepatic veins takes place, with major transhepatic blood flow disorder, with the subsequent evaluation of the portal hypertension syndrome, cirrhosis, and hepatic insufficiency. Although it is a rare pathology in the child, this congenital malformative disease, even with an adequate treatment does not exclude a reserved prognosis, with a major impact on the child's health.

Case presentation. Patient R.S. 12 years old, presented for the first time in November 2018 in SPNC of pediatric surgery "Natalia Gheorghiu " with main symptoms of general weakness, drowsiness, enlarged abdomen. The patient lost consciousness, which was the reason for consulting the doctor and being hospitalized. Clinical examination reveals an enlarged abdomen with a pronounced vascular pattern, soft palpation, with hepatosplenomegaly, low skin elasticity, pale skin, with multiple vascular stars and petechiae . Signs of free fluid and hepatosplenomegaly were present on the abdominal ultrasound examination. Viral liver markers were negative, biochemical tests indicate a hepatoprive syndrome (proteinemia, increased enzyme activity), hypercoagulation. Liver biopsy shows signs of subacute intrahepatic vascular-intrasinusoidal hypertensive syndrome with dystrophic and inflammatory secondary changes, with sclerotic reactions suggestive of Budd-Chiari syndrome. The undercompensated condition of liver failure was an indication for liver transplantation. For a short period of 14 days the patient was discharged at home with conservative supportive treatment and pre-transplant preparation. Hepatic Transplant was performed after 3 months of diagnosis.

Discussion. The liver transplant followed with an unsatisfactory result, after 2 months postoperatively the death followed. In our case, the patient was diagnosed late at the clinical-evolutionary stage, when the infection was associated with a generalized form of sepsis, followed by post-transplant death, having as causal factors - sepsis, MODS, CID.

Conclusion. Liver transplantation remains the only definitive and effective treatment option in Budd-Chiari syndrome in children, while other treatment methods are useful to maintain normal liver function, especially preoperatively. The sooner the liver transplant is performed, the more favorable your prognosis will be.

5. CHEST MALFORMATIONS IN CHILDREN. LITERATURE REVIEW.

Author: Plămădeală Liviu

Scientific adviser: Gheorghe Gincu, MD, Associate Professor, Department of Pediatric Surgery, Orthopedics and Anesthesiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Chest malformations in children (CMC) can be divided into two types - primary, also called congenital, have a multifactorial etiology, and secondary or acquired: (post-traumatic), iatrogenic and syndromal (due to Marfan syndrome, Ehlers-Danlos syndrome, etc.), all together appear, according to various authors, in 2-7% of the population. Congenital malformations of the chest wall can be classified into common entities such as pectus excavatum (PE) representing 90% and pectus carinatum (PC) - 7%, and rare entities such as sternum cleft, asphyxiating thoracic dystrophy (Jeune syndrome), Poland syndrome and spondylothoracic dysplasia (Jarcho-Levin syndrome), accounting for 3-4% of all cases. Cosmetic defects are the most common causes of referral to a doctor, and in more severe forms there are pathological changes in the cardiovascular and respiratory system, which serve as indications for thoracoplasty.

Aim of study. To provide an overview of current diagnostic and surgical treatment of minimally invasive thoracoplasty.

Methods and materials. We selected the articles published in the period 2016-2021, from the PubMed database, HINARI, according to the following keywords: "Chest wall deformities", "Pectus Excavatum", "Pectus Carinatum", "Procedure Nuss", "Abramson technique".

Results. For preoperative evaluation of the manners of CMC surgery, Rx thoracic, thoracic CT scan, electrocardiograph and color Doppler echocardiography are deemed mandatory by nearly all of the responders, with a proportion of 89-98%, A pulmonary function test is considered to be necessary by 54.12% of the surveyed cohort. Referring to the indications of surgery for PE, a Haller index of >3.25 of thoracic CT scan. Restricted pulmonary ventilation disorder, abnormal in ECG and accompanied with mitral valve prolapse are agreed as indications of surgery . Severe deformity and ongoing deterioration of deformity and severe social-psychological problems from deformity and cosmetic requests. Minimally invasive repair of pectus excavatum using the Procedure Nuss, is the most common and preferred operative correction of pectus excavatum. Variations in intraoperative techniques included sternal elevator (SE) use, the number of bars placed behind the sternum and the use of bilateral stabilization sutures. Minimally invasive repair of pectus carinatum using the Abramson technique using a pectus bar that is placed anteriorly to the sternum. The procedure is less invasive and less risky than a pectus bar inserted for pectus excavatum, but the lateral fixation of the pectus bar in the Abramson procedure remains a challenge.

Conclusion. Placement of multiple bars and SE use are associated with significantly higher odds of certain complications. Minimally invasive repair of PE and PC the patient is discharged usually between the fifth and seventh postoperative day and is seen in the outpatient clinic after 2 weeks, 6 weeks, 3 months, 6 months, and 12 months, with very good results.

6. CHEST MALFORMATIONS IN CHILDREN. SCIENTIFIC RESEARCH.

Author: Plămădeală Liviu

Scientific adviser: Gheorghe Gincu, MD, Associate Professor, Department of Pediatric Surgery, Orthopedics and Anesthesiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Chest malformations in children (CMC) can be divided into two types - primary, also called congenital, have a multifactorial etiology, and secondary or acquired: (post-traumatic), iatrogenic and syndromal (due to Marfan syndrome, Ehlers-Danlos syndrome, etc.), all together appear, according to various authors, in 2-7% of the population. Congenital malformations of the chest wall can be classified into more frequent entities such as pectus excavatum (PE) representing 90% and pectus carinatum (PC) - 7%, and rare entities such as cleft sternum, asphyxiating thoracic dystrophy (Jeune syndrome) , Poland syndrome and spondylothoracic dysplasia (Jarcho-Levin syndrome), accounting for 3-4% of all cases. Congenital CMCs can occur from birth and become evident in childhood or early adolescence, affecting 1 in 400 to 1 in 1,000 children, in boys it is 4 times more common than in girls.

Aim of study. To figure out what is the age group and sex, more often subjected to surgical correction (thoracoplasty) with chest malformations in children and adolescents.

Methods and materials. Retrospective study: 42 operated patients with chest malformations in the Department of Orthopedics, Traumatology and Vertebrology, National Scientific-Practical Centre Department for Pediatric Surgery "Academician Natalia Gheorghiu", IMSP Mother and Child Institute, 2017-2021. The following parameters were analyzed: sex, age, type of chest malformation and type of surgery.

Results. The data of 42 studied patients were as follows: distribution by type of chest malformation - primary PE - 35 (83.33%) patients, PC-6 (14.28%) patients, secondary PE 1 (2.38%) patients. Distribution of patients by sex: PE primary- boys 28 (80.00%), girls 7 (20.00%); PC - boys 5 (83.33%), girls 1 (16.66%); PE secondary- 1 boy. Distribution of patients by age: PE primary- from 6 to 10 years- 2 (5.71%); from 11 to 15 years - 30 (85.71%); from 16 to 18 years - 3 (8.57%) patients. PC- from 6 to 10 years- 1 (16.66%); from 11 to 15 years- 4 (66.66%); from 16 to 18 years - 1 (16.66%) patients.

Conclusion. Most patients with chest malformations were in the 11 to 15 age group. This is due to the active growth during puberty, accompanied by a pronounced manifestation of skeletal deformities. In all groups, the highest number of boys in relation to girls was noted.

7. CLINICAL PARTICULARITIES OF CELIAC DISEASE IN CHILDREN

Author: Plămădeală Violina

Scientific adviser: Ludmila Gasnaș-Bologa, MD, Associate Professor, Department of Pediatrics, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Celiac disease is associated with immune-mediated enteropathy, caused by intolerance to gluten and related proteins, which occurs in people with genetic susceptibility.

Aim of study. Evaluation of the particularities of clinical and paraclinical picture suggestive of diagnosis of celiac disease in children.

Methods and materials. Retrospective study, 40 studies (age 6 months-18 years). Serological confirmation of celiac disease: anti-tTG IgA> 10 g / l; Anti-tTG IgG <3 g / l; Total IgA 0.3-1.2 g / l for age <12 years and 0.8-2.8 g / l for 12-15 years. Laboratory tests; FGDS with duodenal biopsy; USG abdominal organs; radiological examination of the radiocarpal joint. Descriptive statistics, Microsoft Office Excel 2010.

Results. Girls / boys ratio = 1/1; the high incidence of BC 37.5% was identified in the age group 0-3 years; 60% of the lot - represents the typical form of BC; in 35% of patients - BC was confirmed both serologically and histologically. 60% of children have as a risk factor - artificial / mixed feeding plus early diversification; Children who fully comply with the agglutinative diet represent 55.5%, and do not show growth retardation. The average age of diagnosis in patients without physical retardation is 9 months.

Conclusion. (1) Polymorphic clinical picture, depending on the present clinical form and age. Three predominant syndromes were identified: dyspeptic syndrome, pain, and astheno-vegetative syndrome. (2) The importance of early detection of CD has been demonstrated for the initiation of agliadinic treatment in order to prevent complications of the pathology.

8. COMPARATIVE STUDY OF THE SHORT-TERM SURVIVAL RATE AFTER THE RADICAL CORRECTION AND PALLIATIVE PROCEDURES OF THE FALLOT TETRALOGY AND TETRALOGY OF FALLOT WITH DORV

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Introduction. Tetralogy of Fallot (TOF) is found in about 1 in 3600 live births, constituting 5.5 - 9.7% of all congenital heart malformations and is known as the most common cyanotic congenital heart disease. TOF is the most common congenital cyanotic malformation - 50 - 70%. Although the mortality rate in untreated patients reaches 50% by age of 6, currently there are multiple surgical procedures that correct the TOF and ensure a long-term survival and a good quality of life.

Aim of study. The main objective of this study is to compare the early mortality rate of total repair of TOF, TOF with DORV and palliative procedures between other hospitals and Timofei Moșneaga Republican Clinical Hospital.

Methods and materials. This comparative study is based on an evaluation using a retrospective cohort study of 369 patients results of total repair of TOF, TOF with DORV and palliative surgeries from the Database of Cardiothoracic Surgery within the Timofei Moșneaga Republican Clinical Hospital and a literature review of topic related articles selected from PubMed. Between 2002 and 2022, 396 patients diagnosed with TOF underwent a total repair of TOF, total repair of TOF with DORV and palliative shunts at Timofei Moșneaga Republican Clinical Hospital. The articles were selected from PubMed that contains citations for biomedical literature from MEDLINE, life science journals, and online books. Studies that were found to be the most relevant for this comparative study of early deaths in patients with TOF. The statistical analysis was performed using Windows Chart and Excel.

Results. Because of lack of data, the analysis of early deaths of patients operated at Timofei Moșneaga Republican Clinical Hospital can be compared only to the study conducted by Al Habib HF. Analyzing the early death percentages we can conclude that palliative shunts performed at Timofei Moșneaga Republican Clinical Hospital had a lower mortality rate to the ones presented in Al Habib HF study. The early death percentages in palliative procedure of TOF are quite similar in both 3.03% at Timofei Moșneaga Republican Clinical Hospital and 3.22% in Al Habib HF study. Another interesting observation is that early deaths post TOF total repair had a higher mortality rate at Timofei Moșneaga Republican Clinical Hospital, whereas it is the other way in Al Habib HF study.

Conclusion. The short term death rate of patients with diagnosed TOF without any further surgical operation is as high as 50%, but with a total correction of TOF, TOF with DORV or palliative shunt the early death percentage was lowered to 5.05% at Timofei Moșneaga Republican Clinical Hospital, making it a satisfactory outcome. This huge improvement in early survival rate must also have a big impact on later risk of death for adults with repaired TOF. Compared to other studies Park CS, Al Habib HF and Bacha EA the early death outcome results at Timofei Moșneaga Republican Clinical Hospital are satisfactory.

9. DIAGNOSIS AND MANAGEMENT OF ECHINOCOCCOSIS IN CHILDREN

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Introduction. Hydatid cyst is a parasitic disease caused by Taenia echinococcus. The increase in cases of infection with the pathology presented is due to the precarious health education of both adults and children. The diagnosis is based on clinical, imaging investigations (ultrasound, CT with angiography, scintigraphy, MRI), blood analyses. The first-line therapeutic management is surgical intervention.

Case presentation. Patient Z., presented to the emergency room with dyspnea that occurred three days ago and gradually worsens. The clinical examination performed in CNȘP «Natalia Gheorghiu» detects a paravertebral tumor formation on the left side of the thorax, at the intercostal level VII-VIII. Sensitive to palpation. Chest ultrasound, MRI examination revealed a left paravertebral cystic formation, with the invasion of the posterior subcutaneous and intramuscular soft tissues of the thorax. The results confirm the diagnosis of a hydatid cyst. He underwent surgical intervention - echinococcectomy. Patient M., evaluated in CNȘP «Natalia Gheorghiu» by Rx, CT with angiography of the chest – a massive cystic formation 13,0 x 8,0 cm of the left lung, with a clear margin, was detected. Surgical intervention was performed from traditional accesses: thoracotomy, echinococcal cystectomy of the left lung. Postoperative diagnosis: hydatid cyst of the left lung.

Discussion. The clinical cases presented confirm the need and importance of the clinical-paraclinical examination, including the imaging examination to establish a positive diagnosis and therapeutic management.

Conclusion. Based on the imaging aspect by CT with vasography, the diagnosis was specified because once the cystic formations are visualized, the necessary information is obtained about the structure of the tumor-like formations, the liquid content, and its location. CT as a non-invasive method is useful and does not pose any risk to the patient's life.

10. DIAGNOSIS AND TREATMENT OF ABDOMINAL LYMPHANGIOMAS IN CHILDREN

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Introduction. The paper represents a retrospective study which assessed children with abdominal lymphangiomas, benign tumours with the potential local infiltrative growth, during 2017-2020.

Aim of study. Children with abdominal lymphangioma have been diagnosed with: increased size of the abdomen, constipation, abdominal pain, severe-moderate general condition, fever, nausea and vomiting. Complete Blood Count revealed: anaemia due to haemorrhages, ESR and increased rate of leukocytes due to infection. Abdominal ultrasound was the first-line investigation that revealed multiseptated cystic formations with liquid content. CT with contrast material determined the size, location,vascularization of cysts and concretion or compression of the adjacent organs. Histopathological examination confirmed the diagnosis. Surgical treatment in 8 cases was radical and in 2 cases- partial. Intraoperative lymphotropic therapy was performed with Novocaine 0.25% -10-20ml solution, abdominal cavity washing - 5% Aminocaproic Acid solution. In partially resected lymphangioma, Doxycycline was administered intraoperatively and postoperatively, its administration helped to prevent the recurrence of the disease.

Methods and materials. 45 children with lymphangiomas, from whom 10 children (mostly females) aged between 1 month and 12 years with Abdominal Lymphangiomas have been diagnosed. Inclusion criteria: children 0-18 years, abdominal lymphangioma, years 2017-2020, RM. Exclusion criteria: adults, lymphangiomas of other regions. Sampling method, children from CNSP Natalia Gheorghiu.

Results. The number of children diagnosed with lymphangiomas constituted in 2017- (5 children), 2018- (3 children), 2019 and 2020- (1 child). The mean age of children with Abdominal Lymphangiomas was 1-5 years. Of them- 40% presented mesenteric abdominal lymphangioma, 20%- omentum and abdominal wall involvement, 10%- retroperitoneal lymphangioma and the large curvature of the stomach. Recorded complications: infection, haemorrhage, peritonitis, adhesion with ileum and spleen involvement.

Conclusion. 1.Congenital mesenteric abdominal lymphangioma is rare in children, but raises major surgical problems. 2.Preoperative diagnosis is confirmed by clinical, laboratory, imaging examinations, followed intraoperatively, postoperatively by histopathological and sometimes immunohistochemical examinations. 3.The main problem of preoperative diagnosis and prognosis is the lack of early diagnosis and referral one, having a clinical and imagistic reasoning.

11. HYPOTHALAMIC ABNORMALITIES IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS

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Introduction. The effect of inflammation causes delayed growth in children, ranging from mild to severe short stature. Factors responsible for growth retardation in chronically ill children include frequent infections, primary and secondary malnutrition, long-term stress related to being chronically ill or handicapped, and side effects of therapy.

Aim of study. Growth retardation in children with JIA is associated with high levels of the pro-inflammatory cytokines IL-1, IL-6 and TNF-α. To identify the endocrine comorbidities in idiopathic juvenile arthritis aims to prevent and limit the impact of the disease on the child's development. It is insufficient data to elucidate peripheral hormonal resistance in the process of delayed growth in children with juvenile idiopathic arthritis. The aim of our study is to analyze the impact of the autoimmune inflammatory processes on different levels: clinical, laboratory, hormonal disorders such as hypothalamic-pituitary-peripheral features in children with idiopathic juvenile arthritis.

Methods and materials. The study included the data of 90 patients younger than 16 y.o. with the diagnosis confirmed of JIA; we examine them at baseline and follow-up at 6, 12 and 18 months. Inclusion criteria represented admission on the nominal lists from the Rheumatology unit; confirmed JIA diagnosis according to ILAR criteria; age of the patient at the time of enrollment in the study <16 y.o.; voluntary participation; informed consent of parents. The study included observational methods to assess anthropometric data on baseline and in time. Simultaneously, on baseline were assessed hormonal profile on central and peripheral stage. For the first time antipituitary antibodies were assessed through an indirect immunofluorescence method. The study was approved positively by the Research Ethics Committee of the State University of Medicine and Pharmacy "*Nicolae Testemitanu*".

Results. Demographic analysis revealed a mean age of 9.95±0,49 y.o. [CI1.56; 15.95]; average age at disease onset – 4.31±0,46 y.o. [CI 0.51; 10.37]; disease duration in years was 5.73±0.43 [CI 0,04; 14,27]. In 14,58% cases were presented a growth delay. Girls were represented with a ratio of 1.36:1. They are younger at the onset of the disease. Also, girls are thinner and shorter than boy's presentation at baseline. Analyzes by age revealed that children younger than 3-years-old at the onset present the worst parameters for height and weight, as well. Laboratory analysis revealed normal hormonal release at the central level, but with some abnormalities on peripheral control. 17.39% had low insulin growth factor values for age and sex. 3.26% had low levels of growth factor 3-binding protein insulin. One third of patients with growth disorders had low values of STH, but only in 2 cases both STH and FRI-1 were reduced. 15.5% patients of pubertal age revealed abnormal values of serum gonadotropic sex hormones. Subclinical hypothyroidism was diagnosed in 9.27% of patients. Laboratory studies revealed prolactin abnormalities in 6.7% of cases. Serum prolactin abnormalities correlate with disease activity (JADAS score> 25 points in all cases with hyperprolactinemia) and early age of disease onset. No central autoimmune process was detected. All antipituitary antibody tests in stunted children were negative. Thus, the hypothesis of peripheral hormonal resistance could be due to chronic inflammation.

Conclusion. Analyzing growth in relation with age, set some risk factors which can impair the growth process in children. Those are: younger age at onset of the disease and longer duration of the inflammatory process itself. According to disease subtype, we observed that children diagnosed with systemic onset of JIA are the youngest one and, also, those more affected by growth impairment. Further studies to identify correlation with IL1, IL6 and TNFα are still needed.

12. IMPACT OF ULCERONECROTIC ENTEROCOLITIS ON THE DEVELOPMENT OF PULMONARY COMPLICATIONS IN PREMATURE INFANTS

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Introduction. NEC is a medical condition which causes long-term mortality and morbidity in premature infants admitted to neonatal intensive care units.

Aim of study. The incidence of this pathology varies from 5% to 9%, half of these cases are indications for surgery, as a result the newborns are dependent for a long time on mechanical ventilation and are more exposed to develop BPD. It is also known that the risk of developing NEC and RDS is inversely proportional to the term of gestation. Following a frequent NEC phenomenon can be found multiple organ dysfunction and abdominal distension, both of which leading to gas exchange disorder, with increased oxygen requirements, prolonged mechanical ventilation thus contributing to increasing risk for DBP, also affecting intestinal walls, migration of bacteria causing systemic inflammation and induces a dysbiosis of the lung microbiome.

Methods and materials. In order to assess lung complications in newborns with NEC, we performed a retrospective study, for the years 2019-2021, based on 54 premature newborns with NEC in the first month of life.

Results. In this study we observed an incidence of pulmonary complications inversely proportional to gestational age (p <0.005), the most common causes being intrauterine infection - chorioamnionitis, neonatal sepsis, prolonged mechanical ventilation (p <0.001), and associated lung problems - congenital pneumonia (100%), RDS DS (99%) and also pulmonary atelectasis, pneumothorax. Mortality rate was approximately 45% (p <0.001), and BPD was found in approximately 30% of cases (p <0.0001), which was indirectly correlated with gestational age and birth weight.

Conclusion. NEC is a multifactorial condition caused by intestinal ischemia, dysbiosis and a systemic inflammatory response that usually leads to lung inflammation and increases the risk of BPD. This effect is due to the disorder of complex molecular and cellular physiological mechanisms involved in immune defence. At the same time, pulmonary pathology and mechanical ventilation in premature infants can affect the oxygenation of the intestinal walls, disrupt the intestinal microbiome and trigger inflammatory cascades that promote the development of NEC.

13. MANAGEMENT OF PAIN IN CHILDREN

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Introduction. Understanding pain in processing is essential for the management of pain. Pain experienced in childhood may shape future pain experiences in adulthood.

Aim of study. To have an effective assessment of pain management, we should consider adults' perspectives on their children's pain.

Methods and materials. Cross-sectional study based on a 9-question survey accessible online via a google form questionnaire from 21 November 2021 to 25 November 2021, in which parents, both mothers, and fathers in a total number of 127, age range 25-37 years.

Results. Relying on the first question of the questionnaire, "In your opinion, pain in children can be due to," the results shows that 56,7%of those who responded to the questionnaire assumed that the main factor that will lead to their children experiencing pain is an illness, followed by 26,8 % treatment, 12,6 % medical procedures, and 3,9 % pain can be due to fear. The second question ``Do children handle the sensation of pain? A majority of 59,1% of the parents who were submitted to the study declare that ``Yes``, children are capable of handling the pain sensation The third question `` Do infants and children experience pain the same as adults? Given that pain is described as the unpleasant sensory and emotional experience associated with real or perceived tissue injury, 61% of participants in the survey considered that children do not perceive pain in the same way that adults do. The fourth question ``Can behaviour reflect pain?``, 95,3% of the total number of participants answered with ``Yes`` and the rest considered that behaviour will not reflect pain. The fifth question ``Bad behaviour in children is related to pain sensation?`` A percent of 75,6 consider that ``yes`` while 24,4 % ``no`` when kids struggle with their behaviour, it may be detrimental for the entire family. The sixth question `` How often do you see a paediatrician for your children?`` The majority 42,6 % - answer 1/year, followed by 33,6 – every month and the rest 23,8%- only in case of emergency. Generally speaking, a healthy child who is at least two or three years old will need to see their doctor only once a year for a check-up. Regarding question number 7 ``Pain is both a sensory and emotional personal experience? `` 96,8% admitted that yes pain is truly both a physical and an emotional experience perceived and processed by the brain, it is a real health problem as well. Up to question number 8 ``Did you give any kind of pills to your children before doing a blood test?``, the diagram shows that 54,3% of the parents give to their children at least once pills without performing a blood test. The last question for the survey , number 9 ``A behavioural scale that measures infant and toddler pain is FLACC, did you know about it?`` FLACC is a behavioural pain assessment measure for children who are unable to self-report their pain and are nonverbal or preverbal. According to the participants in the study, 63,8% knew about the measurement scale while 36,2% gave a negative answer.

Conclusion. The objective of the questionnaire was to determine how adults interpret children's responses to pain. I intended to better understand the key processes involved in how a parent comes to make a judgment about their child's pain by utilizing an inductive approach to explore parents' experiences. Taking into consideration the answers that each participant offered for the questionnaire we can conclude that parents tended to experience a greater intensity of distress when unable to protect the child from imminent pain such as in acute medical procedures, or if the child has explicit tissue damage or bodily signs of injury. Findings suggested that a parent’s assessment of child pain and distress commences with the parent’s attention suddenly narrowing to the child’s acute behavioural displays of distress.

14. NASOPHARYNGEAL ASPIRATE VALUE IN THE DIAGNOSTIC OF ACUTE RESPIRATORY INFECTIONS IN SMALL CHILDREN

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Introduction. The diagnosis of the etiological agent of acute respiratory infections plays a key role in ensuring the most appropriate and effective therapies for pediatric patients and is fundamental for guiding prevention strategies. In most cases, sputum is not collected for microbiological diagnosis in children. One of the limitations of this diagnostic technique is the young pediatric age, due to the impossibility of the sputum expectoration. An alternative method, widely used to identify viral/bacterial etiology in pediatric respiratory pathology, is the nasopharyngeal aspirate technique, which allows the detection of not only the causative agent in most respiratory infections but also colonisation. Nasopharyngeal aspirates are generally superior to swabs.

Aim of study. Nasopharyngeal aspirate is a diagnostic tool used for the etiological detection of respiratory pathogens; the procedure involves collecting secretions from the nasopharyngeal area using, technically, a suction source. It's a painless technique, applicable to infants and young children. The procedure is simple to perform, it takes a relatively short time, it’s useful in detecting bacterial / viral etiology, carriage and detection of bacterial susceptibility. It is essential to note that colonisation of the nasopharynx is a first step towards the development of respiratory bacterial infections.

Methods and materials. A total of 105 children were enrolled during the study period. Pediatric patients were from ≥ 8 weeks to 5 years, hospitalised within the Mother and Child Institute and the Municipal Children's Clinical Hospital No. 1 from Chisinau, who showed acute respiratory symptoms and who were not given antibiotic therapy previous this hospitalisation. Obtained informed consent, nasopharyngeal aspirates were collected after 72 h after the onset of the first catarrhal symptoms and no later than 7 days after the onset of the acute respiratory episode. Data analysis was performed using the Microsoft Excel 2010 calculation program. Descriptive data were presented as a percentage.

Results. The mean age at presentation was 18 ± 1.27 months. There were 49.52% of boys, with Boy / girl ratio = 0,98 /1. Of the 105 samples analysed, 83 (79%) were positive for bacterial infection. Moraxella Catarrhalis was detected as the predominant bacterial agent for colonisation of the nasopharynx in about 33%. S. aureus was highlighted in 30% of cases, and in 19% of cases S.Dysgalactiae groups C and G were detected. The spectrum of respiratory etiology preventable by vaccination noted S. pneumoniae in 4,2% of cases and H. influenzae in 4,2%, at the same time were noted in small titers, suggesting carrier status highlighting a potential risk of invasive infection.

Conclusion. The nasopharyngeal aspirate technique increases the diagnostic yield of respiratory bacterial etiology. In the Republic of Moldova this technique is not widely used, its implementation as a diagnostic tool would favour both therapeutic management and would contribute to combating the phenomenon of antibiotic resistance.

15. NURSING ADVICE IN THE PROCESS OF NATURAL FEEDING IN THE FIRST YEAR OF LIFE OF CHILDREN

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Introduction. Nurses are the heart of every health center, they provide comfort, compassion and care without a prescription. Nursing is an integral part of the healthcare system. All nurses play a valuable role in facilitating the health of mothers, infants and children by protecting, promoting and supporting breastfeeding.

Aim of study. Determining the role of nursing interventions in the natural feeding process by analysing breastfeeding mothers' knowledge and identifying difficulties in the breastfeeding process.

Methods and materials. The study comprised 2 stages, literature review and a prospective observational study. The research questionnaire consisted of 6 sections, 50 questions in total, 45 closed questions and 5 open questions. The research examined mothers' knowledge of natural feeding and the nurse's ability to intervene when women encounter difficulties.

Results. The questionnaire was completed by 719 respondents aged over 16. The highest proportion of respondents' age is 31-35 years, with 39.1%. The majority of women have completed higher education 85.3%, have given birth naturally 75.2% and exclusively breastfed 74.1%. In 61.80% cases, the medical staff encouraged exclusive feeding and explained how to do it correctly, and in 38.20% it was not. Of the total women (719), the majority were supervised and guided by the nurse - 55%; 13.50% by the doctor; 11.70% by the lactation consultant; 5.50% by the mothers and 14.30% by no one. The process of informing medical staff about correct breastfeeding was useful in 50.9% of cases, very useful in 25.7% and unnecessary in 23.4%. It is appreciable that 81.4% of all women breastfeed their babies for 12 months and more. Also, 86% of all mothers breastfeed their babies on demand. On the other hand, when they faced difficulties in the breastfeeding process out of the total women only 19% turned to the family doctor, 19% to the nurse, 7% to any health centre and 55% did not turn to anyone.

Conclusion. It is the highly educated general nurses who should be with every woman from conception, through pregnancy and after birth. For both mother and child to be well both physically and psychologically, a competent and open person is needed to provide knowledge and be there for them in any situation. The presence of the nurse in a mother's life inspires great confidence in the mother's every action towards the child.

16. POSTOPERATIVE COMPLICATIONS IN CONGENITAL HYDRONEPHROSIS THROUGH LAPAROSCOPIC APPROACH IN CHILDREN. CLINICAL CASE PRESENTATION

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Introduction. Congenital hydronephrosis due to obstruction of the pyeloureteral segment remains one of the most common malformative uropathies. The effectiveness of interventions in the plasty of the pyelo-ureteral junction by video-assisted laparoscopic approach - up to 96% in case of primary stenosis, versus traditional surgical technique - pyeloureteroanastomosis by Anderson-Hynes with 90% efficacy.

Case presentation. Patient B., in 2014 was diagnosed with hydronephrosis of the right kidney gr. III-IV, preoperative pelvis was 39 mm and calyxes – 17 mm. On April 10, 2014, he underwent laparoscopic right pyeloplasty (in the Russian Federation). Postoperatively, on ultrasound examination, the pelvis of the right kidney contracted up to 8 mm, and after a year it dilated up to – 30 mm. Evolutionary ultrasound examination of the urinary system revealed - renal pelvis of the right kidney – 35 mm. and in the lower calyx the calculus 6-7 mm. On dynamic renal scintigraphy, the right kidney is increased in size, the distribution of the radiopharmaceutical is non-uniform, and the function of filtration and secretion of urine is significantly reduced - according to the obstructive type. In the child, an abnormality of congenital development of the urinary system is determined: hydronephrosis gr. III-IV on the right, complicated with kidney stones and chronic pyelonephritis. Nephroptosis gr. I on the right side.

Discussion. Surgical reintervention was performed by „open" approach – lumbotomy on the right – the obliteration of the ureter was found throughout and an advanced adhesion process of keloid type, therefore nephroureterectomy was performed.

Conclusion. By presenting this case we can conclude that in the plasty of the pyelo-ureteral segment by video-assisted laparoscopic approach, complications such as ureter damage and active hemorrhages that are difficult to stop, the formation of an advanced adhesion process can occur.

17. PREMATURE VENTRICULAR BEATS IN SCHOOL-AGE CHILDREN

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Introduction. Premature ventricular beats (PVB) have been described in 40–75% of apparently healthy persons as detected by 24–48 hour ambulatory (Holter) ECG recordings. This decreases in 10% of young children and school-age children and increases in 20% -30% of normal adolescents. Pediatric studies have shown that in some asymptomatic children, an increase in the frequency of PVB can cause ventricular dysfunction and arrhythmogenic cardiomyopathy.

Aim of study. Clinical-paraclinical evaluation of PVB in children with normal structural heart.

Methods and materials. A descriptive analytical study was performed, which included all children of both sexes of school age (7-18 years), hospitalized consecutively in the pediatric cardiology service of the Mother and Child Institute for a period of 3 years (2019-2021). The data of the patient files were analyzed, including the results of instrumental investigations, such as standard 12-lead ECG, Holter ECG monitoring (24 hours), and echocardiography.

Results. The study group included 55 children of both sexes, with a prevalence of boys (62%). From the general group, the vast majority (50 ptc, 90,9%) of children had PVB on a normal structural heart. Analysis of ECG pathways and Holter ECG protocols determined the prevalence of PVB in 16 (32%) children and 7 cases with combined extrasystoles (PVB and premature supraventricular beats, SVPV). It should be noted that in a significant number of patients (15 children) there was a combination of PVB with other arrhythmias, including 5 children with AV block and 1 case with long QT syndrome. Performing the ECG test with effort showed the disappearance or thinning of PVB in most patients, only in 4 children the test induced arrhythmia. Echocardiography performed in all patients in the study confirmed the presence of arrhythmogenic cardiomyopathy criteria in 6 (12%) of cases (dilation of the left or right ventricular cavity > 2 z score, decreased ventricular ejection fraction < 60%). Regardless of the symptoms, both patients with cardiomyopathy and children with frequent, polymorphic and allorhythmia type of PVB or SVPB administered chronic antiarrhythmic treatment, mainly beta-blockers (83.9%) of the 2nd or 3rd generation. Evaluation of patients at 2.5-3 months confirmed the efficacy of treatment by clinical ECG and echocardiographic improvement. No side effects have been reported.

Conclusion. PVB is frequent asymptomatic arrhythmia in school-age children. Some children (12%) may evaluate with ventricular dysfunction or cardiomyopathy. Beta-blockers may be used for symptom control and improve systolic ventricular function.

18. RISK FACTORS AND PULMONARY COMPLICATIONS IN PRETERM NEWBORNS WITH VERY LOW BIRTH WEIGHT AND EXTREMELY LOW BIRTH WEIGHT.

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Introduction. There is no standard definition for neonatal hypotension. In clinical trials it is defined as any value less than the 5th or the 10th percentile for gestational age. In our study, neonatal hypotension is considered to have a mean BP lower than gestational age, which causes hemodynamic disorders and requires treatment.

Aim of study. Neonatal hypotension occurs in approximately 25% of children with VLBW. Gestational age and birth weight are high risk factors for neonatal hypotension.

Methods and materials. In order to assess how it influence the neonatal hypotension and what are the main complications in newborns with VLBW who developed neonatal hypotension, we performed a retrospective study on a group of 125 newborns less than 32 gestational weeks, born at IMSP IMsC, admitted to neonatal intensive unit, for period 2019-2021. Children with congenital anomalies were not included in the study. Subjects were divided into 2 groups - with and without neonatal hypotension.

Results. As a result of the study, we determined that the measures of neonatal resuscitation / medication used, symptomatic patent ductus arteriosus, early neonatal sepsis and chorioamnionitis are closely correlated with the presence of hypotension in the newborn. Also, in children with hypotension, different degrees of IVH were detected, especially III and IV in the subgroup of newborns with VLBW. Mortality rate was quite high (65%), and most survivors developed BPD.

Conclusion. Neonatal hypotension is a multifactorial condition, with a high risk of death and disability. It is inversely proportional to the term of gestation and birth weight and is very closely correlated with intrauterine infection, especially early onset sepsis and chorioamnionitis.

19. THE EFFECTS OF PEDIATRIC GRAVES DISEASE ON THE CARDIOVASCULAR SYSTEM

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Introduction. Graves disease (GD) is the most common cause of hyperthyroidism in pediatric patients. Incidence density increases during childhood, with a peak incidence of 0.48 cases per 100.000 persons for boys and 3.01 cases per 100.000 persons for girls, aged 10 – 14 years. It is a very rare cause of thyrotoxicosis in children younger than age 5 years. The most common association with childhood GD is a history of other family members with thyroid disease.

Aim of study. The mechanisms of hyperthyroidism leading to cardiac disease are diverse with effects on cardiac contractility, vascular and cardiac electrophysiology. The purpose of the study is to point out the clinical effects of GD on the cardiovascular system in childhood and adolescent period, also to identify the laboratory and imaging particularities of the disease.

Methods and materials. The study includes 14 selected patients admitted to the pediatric endocrinology department of the IMSP ICM (Public Medical Sanitary Institution Scientific Research Institute of Mother and Child Health Care) during the years 2018 – 2021. 4 boys and 10 girls aged 11 – 17 years were analyzed. The research was based on the clinical examination of the patients and on the results of laboratory and instrumental investigations.

Results. In this study has been determined 4 (28,5%) cases with a history of family members with thyroid disorders. Because GD leads to hyperactivity of the sympathetic nervous system that affects cardiovascular hemodynamics, it was reported in 13 cases (92,8%) tachycardia, the most common ECG abnormality, and patients subjectively reported palpitations. Hypertension was identified in 4 (28,5%) cases, predominantly demonstrating high systolic blood pressure, as a result of low vascular resistance. Intraventricular conduction delay in the form of incomplete right bundle branch block was present in 2 (14,2%) of patients. The hyperthyroidism status is expected to trigger shortened cardiac repolarization and can predispose to ventricular arrhythmia, that is why 2 patients (14,2%) presented the early repolarization syndrome on ECG. Diagnosis of GD is straightforward in a patient with biochemically confirmed thyrotoxicosis – elevated levels of free thyroxine and/or triiodothyronine, identified in 14 (100%) cases and suppressed TSH levels – 14 (100%) cases. GD is an immune – mediated disorder that results from the production of thyroid – stimulating immunoglobulins by stimulated B lymphocytes and therefore had been evaluated on the level of thyroid antibodies to 8 patients. It was determined that 4 (57%) of 7 cases presented positive antithyroglobulin antibody, 6 (75%) of 8 cases – positive thyroid peroxidase antibody, and 3 (100%) of 3 cases – positive thyrotropin receptor antibody. A hypervascular and hypoechoic thyroid gland at ultrasound was identified in 8 (100%) of 8 cases.

Conclusion. The cardiovascular system is a major target of thyroid hormones action. Therefore, thyroid dysfunction causes remarkable cardiovascular derangements. As a result, thyroid status should be systematically investigated in patients with GD, in order to avoid complications.

20. TRACHEAL BRONCHUS IN CHILDREN - A CONGENITAL BRONCHOPULMONARY MALFORMATION WITH CLINICAL SIGNIFICANCE

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Introduction. The tracheal bronchus (BT) is a rare congenital tracheal abnormality, defined as the presence of an ectopic bronchus that comes from the lateral wall of the trachea. Most cases are asymptomatic and occasionally diagnosed by advanced chest imaging techniques. BT is usually associated with other congenital abnormalities, such as congenital heart disease, pulmonary vascular abnormalities, respiratory tract abnormalities, or chromosomal abnormalities (1). There are 3 types of BT: type I originating at the middle and lower junction of the trachea, type II - in the lower third of the trachea and type III has a BT resulting from the tracheal wall near the level of the carina, giving the appearance of trifurcated carina (3). During endotracheal intubation, it can lead to atelectasis, the association of an infection and poor ventilation, which would lead to lung collapse (2).

Aim of study. Computed tomographic (CT) evaluation of the chest in children with congenital malformation - tracheal bronchus.

Methods and materials. Computed tomographic (CT) evaluation of the chest in children with congenital malformation - tracheal bronchus. The current study included 14 children with congenital malformation - tracheal bronchus, confirmed by CT of the rib cage. The average age of children is 3.5 ± 4.5 / 3.6 years with a range of 5 months to 15 years. The study included 6 boys (42.9%: 95% CI 17.7-71.1) and 8 girls (57.1%: 95% CI 28.9-82.3). Pulmonary CT was performed using Toshiba Aguillion Prime 80 Slices. The statistics were processed by Epi Info 7.2, Microsoft Excel.

Results. Tracheal bronchus was found in all children with an emergency on the right side. In 3 children (21.4%: 95% CI 4.7-50.8) the malformed bronchial segment has a medium onset of trachea, in 2 children (14.3%: 95% CI 1.8-42.8) .) in the lower segment, and in most cases - 9 children (64.3%: 95% CI 35.1-87.2) near the tracheal bifurcation, resulting in the trifurcated appearance of the trachea Children with this malformation presented children with bronchopulmonary changes infiltration pneumonia at 3 (21.4%: 95% CI 4.7-50.8), interstitial changes with the appearance of frosted glass in 2 cases (14.3%: 95% CI 1.8-42.8), segmental infiltrations with atelectatic component - 4 children (28.6%: 95). % CI 8.4-58.1), and pulmonary fibrosis in 3 children (21.4%: 95% CI 4.7-50.8). Other congenital malformations (azygous venous lobe, Fallot tetralogy, common arterial trunk, doubling of the brachiocephalic vein) than tracheal bronchus were detected in 3 children (21.4%: 95% CI 4.7-50.8).

Conclusion. The tracheal bronchus is a congenital malformation of the right side of the trachea. This bronchial malformation is clinico-imaged by bronchopulmonary changes with pneumonic infiltration, fibrotic changes with matte glass imaging, segmental atelectasis and fibrotic changes, and some children are associated with other congenital malformation.

21. TWISTED OVARIAN CYST

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Introduction. Although the last decades have allowed the creation and development of techniques and methodologies for the early diagnosis of intra-abdominal tumours in newborns, this fact remains in the developmental stage.

Case presentation. - Patient T, female, born at - 37-38 s / g, by emergency cesarean intervention - uterine haemorrhage (premature rupture of the placenta), with weight - 3162 gr. Intrauterine at 27-28 weeks of gestation, the ultrasound examination determined an intra-abdominal cystic formation measuring 86 * 68 mm, clear contour, liquid content. At birth the patient is stable, sc. Apgar 8/9 p., Bloated abdomen, symmetrical, soft to the touch, a large formation is delimited, without peritoneal signs, meconium stool present. On the second day of life the child presents accusations - bloating of the abdomen, periodic restlessness, objective - with accentuation of the vascular pattern and edema in the lower floor. On palpation the abdomen is intensely painful throughout, especially in the hypogastrium on the right, where on deep palpation a formation with dimensions of 6.0 - 5.0 cm, clear, mobile contour is appreciated. On radiography of the abdomen - volume formation on the left abdominal flank, with sub gastric extension.

Discussion. To improve the early antenatal diagnosis of intra-abdominal tumours in newborns with correct surgical leadership.

Conclusion. Ovarian cysts in newborns are rare conditions. Imaging diagnosis allows you to determine the optimal time for surgery.

VIII. Ophtalmology and Optometry Section

1. ASTIGMATISM MANAGEMENT IN CATARACT SURGERY

Author: Codrean Rata

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Introduction. The main goal in cataract surgery is to achieve high visual functions. According to the literature, about 50% of people over the age of 50 have undergone such an intervention. Among the consequences of cataract surgery, the most common is residual astigmatism of about 1.0 diopter (D). Also, 22% of patients have a pre-existing astigmatism that exceeds 1.50 D. Pre-existing astigmatism can be corrected intraoperatively by the technique of perilimbic relaxation incisions or by implantation of the toric IOL. Placing the incisions along the steep meridian results in a flattening of the cornea and a reduction in astigmatic power. The benefits of perilimbic incisions are the safety of the procedure, the reduction of over 4D astigmatism, high visual acuity and low cost. Implantation of the toric IOL provides predictability of refractive results in the postoperative period and excellent visual results.

Aim of study. Studying ways to correct astigmatism in cataract surgery.

Methods and materials. Publications and thematic studies were reviewed from Pubmed and (PMC) US National Library of Medicine from 2010-2021.

Results. According to the study of 30 patients (Nino Hirnschall, Vinod Gangwani, Alja Crnej, John Koshy, Vincenzo Maurino, Oliver Findl) and the study of the same subject with involvement of 517 patients (626 eyes) and according to the research (Jonathan C Lake, Gustavo Victor, Gerry Clare, Gustavo Jm Porfírio, Ashleigh Kernohan, Jennifer R Evans), patients with toric IOL perform better than those with perilimbic incisions. In the early postoperative period there was a small difference in astigmatism between the two groups, favoring the implantation of the toric IOL. The evaluation of postoperative results at 6 months did not show statistically significant differences between the two groups.

Conclusion. 1. Toric IOL implantation for patients with pre-existing astigmatism cataract surgery offers a higher change of success, compared to the technique of perilimbic relaxation incisions. 2. Further studies are needed to estimate the economic effects of these two procedures.

2. CAPSULAR CONTRACTION SYNDROME WITH SECONDARY INTRAOCULAR LENS DISLOCATION ASSOCIATED WITH PIGMENTARY RETINOPATHY

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Introduction. Capsular contraction syndrome (CCS) is recognized as a postoperative complication of cataract extraction with centripetal constriction and capsule fibrosis. Extreme capsular phimosis and fibrosis affect the visual axis, followed by significant visual disability, pseudophacodonesis, and in-the-bag dislocation of intraocular lens (IOL). CCS can be caused by a number of factors: intraoperative factors – small size anterior continuous curvilinear capsulorhexis (ACCC), IOL material and design; pre-existing ocular pathologies - high myopia, chronic uveitis, pigmentary retinopathy, closed-angle glaucoma, etc.

Case presentation. We present the case of a 61-year old male with pigmentary retinopathy and high myopia from childhood who developed CCS after 9 years from cataract surgery with phacoemulsification both eyes at the distance of 9 months. All surgical procedures were uneventful with the ACCC size - 5.5-6 mm and with implantation in-the-bag of monobloc hydrophobic IOL with 2 haptics in the right eye (Alcon) and monobloc hydrophilic IOL with 4 haptics (Bausch) in the left eye. The patient's complaints were: gradual vision loss in both eyes at far and near distance, night blindness and narrowing of the peripheral visual field. The clinical examination showed: VA= OD / OS = 0.01/0.01 ; at biomicroscopy - OU iridodonesis, pupil deformation with IOL subluxation and the presence of haptics in the anterior chamber, phimosis and capsular contraction. The patient underwent surgery on both eyes - IOL reposition with scleral fixation of one of the haptics and iridoplasty (OS) with an interval of approximately 2 months. Postoperative VA = OD / OS = 0.2 / 0.1-0.2.

Discussion. In pigmentary retinopathy (PR) the intraocular microenvironment is exposed to the chronic inflammatory reaction, produced by retinal degenerative tissue that is suspected to be one of the main causes of capsular contraction syndrome even if the surgery was performed successfully. Another important cause of CCS is considered to be material and design of the IOL chosen in retinal pathology which is supposed to be an important factor to influence the clinical outcomes of cataract surgery. More recommendation in the literature specialty suggests hydrophobic acrylic implant because it produces a lower incidence of epithelial lens adhesion and proliferation than hydrophilic acrylic lens. The same in the literature was reported in the cases with less incidence of CCS in implantation of IOL with more haptics.

Conclusion. 1. In this reported case, the predisposing factors for SCC were the pre-existing ocular factors such as pigmentary retinopathy and high myopia. 2. CCS has developed in both eyes regardless of the type of IOL material and design.

3. CORNEAL ULCER ASSOCIATED WITH RHEUMATOID ARTHRITIS

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Introduction. The aim of the study was to evaluate the efficacy of the application of the amniotic membrane in the perforated corneal ulcer of rheumatic genesis. It has been established that amniotic membrane coating in corneal ulcer of rheumatic genesis is a safe and effective method in ophthalmic emergencies and allows subsequent Keratoplasty to improve visual acuity.

Case presentation. A 72 y. o man presented to our clinic with left eye pain, redness, foreign body sensation. In 2015 perforated corneal ulcer covered with amniotic membrane. Now Visus OS= 1/100. The central area adjacent to the leukoma - Fluorescein test +, which is why I later advocated the application of a therapeutic lens.

Methods and materials. Publications and thematic studies were reviewed from Pubmed and (PMC) US National Library of Medicine from 2010-2021.

Results. The study showed an improvement in visual acuity in patients with peripheral perforated corneal ulcer (from 3 / 10-5 / 10 in preoperative to 4 / 10-8 / 10 in postoperative) and in patients with paracentral perforated corneal ulcer (from at 1 / 10-3 / 10 at 4 / 10-6 / 10), while in patients with centrally perforated corneal ulcer, visual acuity remained the same (1 / 200-1 / 100). In 3 patients with centrally perforated corneal ulcer, perforating keratoplasty was performed 1 year after amniotic membrane application. After removal of the corneal sutures, visual acuity increased to 3 / 10-5 / 10.

Conclusion. Amnion membrane coating in corneal ulcer of rheumatic genesis is a safe and effective method in ophthalmic emergencies and allows subsequent keratoplasty to improve visual acuity.

4. IMPLANTATION STEPS OF THE ANTIGLAUCOMATOUS SHUNT WITH VALVE. EXPERIMENTAL STUDY

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Introduction. Antiglaucomatous shunt with valve represents a device for controlling intraocular pressure (IOP). This drainage device is made from polymethyl methacrylate (PMMA), a biocompatible material with ocular tissue. It is almost 4.0mm, with an external lumen of 3.5mm and an internal of 1.0mm. The shunt has a valve that removes excess aqueous humor (AH) from the anterior chamber (AC) depending on the IOP, 2 spur-like extensions to prevent extrusion and an external disc.

Case presentation. The filtration surgery was done on New Zealand rabbits, under general and local anesthesia.

Discussion. A limbal-based conjunctival incision is performed to get exposure to the sclera. A scleral flap is formed at 12 o'clock with a 2/3 from its thickness. At the base of the flap is made a 1.5mm incision with the implantation of the antiglaucoma shunt with valve. The shunt is placed in the AC with avoidance of getting contact between the device, cornea, and iris. The scleral flap is sutured and the conjunctiva is closed with the surgeon's suture of choice.

Conclusion. The technique of implantation is a simple one, that allows being performed with minimal damage to the eye tissue and exclusion of complications such as hypotony, erosion, and extrusion of the implant.

5. IRIS CYST: A RARE POSTOPERATIVE COMPLICATION

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Introduction. For the first time iris cyst was diagnosed by Mackenzie in 1830. It was a post traumatic iris cyst located in the eyeball's anterior chamber (AC). Cysts can form in different parts of the iris and ciliary body. They are not common and can be a challenge for clinicians in terms of diagnosis and treatment.

Case presentation. The 45-year-old patient was diagnosed with a secondary endothelial cyst. Comorbidities: insulin-dependent diabetes for over 18 years. Clinical diagnosis: OD-Iris cyst, RDP, Avitria, Artiphakia, OS- RDP, Panretinial photocoagulation. In 2018, the patient underwent 2 surgeries: a Pars Plana Vitrectomy and a Cataract extraction with IOL. During a routine check-up in December 2021 (3 years after surgery), an AC cyst was found located at OD in the temporal quadrant of the iris. During the 3 months, we observed the growth of the cyst. AV OD=0.2bc0.5. PIO OD=26 mmHg(Maklakov). Biomicroscopy-OD sac-like pocket of membranous tissue that contains transparent fluid and corneal adhesion in the temporal area of the iris with the extension from the chamber angle up to 1mm from the pupillary edge. The UBM exam (gold standard) showed an ovoid volume formation measuring 0.36x0.15mm, growing in the AC with transparent contents and uniform walls. The increase in the volume of the cyst and the increase in ocular pressure were indications for surgical treatment-Excision of the cyst. We performed a paracentesis of the AC with the subsequent detachment of the cyst from the cornea with viscoelastic and excision of the cyst from the iris with intraocular scissors. Postoperative period without complications. The patient needs to follow up for a long time.

Discussion. An iris cyst is an epithelial-lined space that involves a layer of the iris. The etiology of secondary iris cysts is surgical or ocular trauma. They can be implantation cysts, drug-induced, uveitic, tumour-induced, parasitic, or associated with systemic disorders. The diagnosis is based on the slit-lamp exam and UBM or AS-OCT. The differential diagnosis includes iris nevus, Lisch nodules, melanoma, iris pigment epithelium adenoma, metastatic iris lesions, and intraocular tumours. Complications can include obstruction of the visual axis, mechanical corneal decompensation, glaucoma, recurrent iritis, cataract, vitreous hemorrhage, scleral cyst formation. Treatment is performed for secondary glaucoma or pupil blocked. Treatment options are available from simple observation to fine-needle aspiration (±intracystic injection of alcohol), laser (argon, Nd: YAG) or surgical excision. After treatment, 40% of patients can relapse.

Conclusion. UBM investigation helps to differentiate the types of eye neoformations and to put together a clinical diagnosis. The progress in the volume of the cyst and the increase in ocular pressure were indications for surgical treatment. Because of the high risk of relapse, it’s important to monitor the patient's dynamic.

6. MODERN METHODS OF EXAMINATION IN DIABETIC RETINOPATHY

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Introduction. Diabetic retinopathy is one of the most common microvascular complications of the retina in diabetes and can progress asymptomatically until there is a clear loss of visual function. These include micro-aneurysms, bleeding, exudates and macular edema that occur during diabetes for at least a few years. Modern examination methods are: optical coherence tomography, fundus photography and contrast angiofluorography. In 2020, more than 95 million adults in the world's diabetic population had various forms of RD. The existence and use of a unique classification, internationally recognized by both ophthalmologists, endocrinologists and therapists is mandatory in ensuring a unanimous diagnosis, a complementary and effective treatment of the pathology. To achieve this goal it is necessary the interaction of doctors of different specialties, diabetic retinopathy and diabetes being a multisystemic, multifactorial pathology.

Case presentation. Between September 2021 and February 2022, in the Clinical Department of Ophthalmology of the Municipal Hospital "Holy Trinity" were studied 55 patients with diabetic retinopathy and analysed the methods of investigation to determine the most relevant diagnosis among the existing ones.

Discussion. Out of a total of 55 patients, 32 cases (58.18%) were women and 23 (41.81%) were men. After the OCT examination, we had 69.09% (38 patients) with RDNP, 23.63% (13 patients) with RDP, and at 7.24% (4 patients) we did not detect semen of diabetic retinopathy. The majority of patients (58.18% - 32 patients) were aged between 50 and 59 years, and of these 75% (24 cases) were with RDNP and 25% (8 cases) were with RDP. After biomicroscopic examination of FO, we had 61.81% (34 patients) with RDNP, 32.72% (18 patients) with RDP, and at 5.45% (3 patients) we found no signs of diabetic retinopathy. The majority of patients (52.72% - 29 patients) were aged between 60 and 75 years, and of these 79.31% (23 cases) were with RDNP and 20.68% (6 cases) were with RDP. After the AFG examination, we had 54.54% (30 patients) with RDNP and 43.63% (24 patients) with RDP, and at 1.81% (1 patient) we found no signs of diabetic retinopathy. The majority of patients (58.18% -32 cases) were aged between 51 and 59 years, and of these 68.75% (22 cases) were with RDNP and 31.25% (10 cases) were with RDP.

Conclusion. Optical coherence tomography (OCT) is a non-invasive, non-contact, modern method of early detecting diabetic retinopathy and remains the most relevant method of detecting early signs in the development of diabetic retinopathy. Angiofluorography remains a gold-standard method for detecting vascular changes in diabetic retinopathy. Photography of the fundus has the advantage of creating a permanent and dynamic record of diabetic retinopathy.

7. NEW PERSPECTIVES ON GLAUCOMA TREATMENT

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Introduction. Glaucoma disease, the silent thief of sight, is a neurodegenerative disease, characterized by a progressive optic disc cupping, a loss of retinal ganglion cells and a visual field damage, representing as the second leading causes of irreversible blindness worldwide. Treatment and regular checkups can help slow or prevent vision loss, especially if catching the disease in early stages. Glaucoma is treated by lowering eye pressure (intraocular pressure) and regulating balance between aqueous formation and drainage system.

Aim of study. Investigation perspective points of views on glaucoma disease of standard surgical treatment vs XEN Gel stent.

Methods and materials. Data collection from published 51 abstracts and articles found on Pubmed for a period of 5 years (2017-2022) and the medical book Minimally Invasive Glaucoma Surgery – "Practical Guide", helped us to compare the changes in the anterior structure of the eye and IOP after trabeculectomy versus XEN Gel Stent implantation.

Results. Recently, the approach of glaucoma treatment became the gold standard focus on MIGS (minimally invasive glaucoma surgery). The XEN Gel Micro stent is a subconjunctival micro-invasive glaucoma surgical device developed to improve the predictability and safety profile of glaucoma surgical procedures. The stent is a hydrophilic tube composed of a porcine gel cross-linked with glutaraldehyde with good stability and biocompatibility with minimal tissue reaction that reduces the complications and the time of healing in the postoperative period. The baseline mean corneal endothelial cell density in the trabeculectomy group was representing a cell loss of 2.1% compared with XEN Gel Stent group [Ali Olgun, 2020]. Usually, the surgery is undergone combined XEN + cataract extraction (phacoemulsification) which has a better influence on IOP (intraocular pressure). The median IOP reduction was 17.7% [Cosme Lavin-Dapena, 2021] after XEN Gel Stent and a significant reduction in the number of ocular hypotensive drugs. Also, Xen reduces IOP and the number of medications in eyes with failed trabeculectomy [Ayesha Karimi, 2018]. The top priority of glaucoma treatment is to decrease the IOP and prevent obstruction drainage. Nowadays, MIGS surgical procedures manage the balance between aqueous formation and drainage, reduce IOP that shows promise for better safety and excellent results in glaucoma treatment. Trabeculectomy caused more endothelial cell damage than XEN Gel Stent implantation in the follow-up period. The device significantly reduced both IOP and the amount of ocular hypotensive medications while maintaining a good safety profile.

Conclusion. Xen Gel stent seems to be a viable, effective, and safe option for glaucoma surgery even in comparison with trabeculectomy. Anyway, it should be considered the type of glaucoma, patient profile and safety.

8. NOVELTIES IN THE STUDY OF MICROCIRCULATION AT THE LEVEL OF THE BULBAR CONJUNCTIVA

Author: Șeremet Aristia

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Introduction. The bulbar conjunctival microcirculation is a terminal vascular network of the blood vessels covered by a semi-transparent membrane, located above the white sclera. This easy-to-observe site allows real-time, in-vivo and non-invasive measurements, which can reveal indicative information about microvascular function and architecture under different conditions, both physiological and pathological.

Aim of study. The study of microcirculation in the bulbar conjunctiva is an objective and non-invasive approach, which can be complementary in patients with various pathologies (diabetes, sickle cell anemia, etc.) to assess the functional and structural adaptation of microcirculation in these pathological conditions.

Methods and materials. A search of the PubMed Central and Google Scholar engines was performed, using the keywords „microcirculation", „bulbar", „conjunctiva". Only articles in English were selected. The time period covered was from January 1, 2015 to March 1, 2022.

Results. It is noteworthy that in the last decade there has been substantial progress in the options for studying and observing microcirculation. Evidence-based medicine has shown that changes in the microcirculation of the bulbar conjunctiva can be quantified, and can help to monitor systemic pathologies. It can also be stated that the study of microcirculation can be extensively applied in the investigation of multiple pathologies to highlight the link between conjunctival microcirculation and systemic pathologies.

Conclusion. Studying the microvascular changes and their correlation with evolutionary aspects of different pathologies can highlight biomarkers useful for diagnostic or stage evaluation. Taking into account the accessibility of the method, research in this field will open new perspectives given the currently limited number of conclusive studies in this field.

9. OCULAR MANIFESTATION IN DIABETES

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Introduction. The International Diabetes Federation estimated the global population with diabetes mellitus to be 463 million in 2019 and 700 million in 2045. Diabetes can cause the following eye diseases: diabetic retinopathy, cataracts, glaucoma, uveitis, cranial nerve palsies that can lead to diplopia, retinal vascular disease and diabetic papillopathy. People suffering from diabetes should have regular eye-screening.

Case presentation. P.I., a 43-year-old man presented to our clinic with decreased visual acuity, severe ocular pain, photophobia and excessive tearing OUt. Clinical examination showed VA OD/OS =hand movement/0(zero). Intraocular pressure measurement (by Maklakov): OD-25mm.Hg OS-17mm.Hg. Slit-lamp biomicroscopy: OU-palpebral edema, “red eye”, corneal edema, endothelial precipitates, hypopyon, iris edema, pupillary exudates, the lens and the “eyegrounds" can't be examined. B-Scan examination revealed: OUt- retinal detachment, severe vitreous opacity, choroidal thickening. Diagnosis: community-acquired pneumonia - bilateral, severe pneumonia presenting with slight temp evolution, acute respiratory distress, panuveitis, sepsis and tuberculosis suspect. Primary “mixed” cardiomyopathy (hypertensive, dysmetabolic), HTA type 2, diabetes mellitus type 2 (LADA) imbalance. Surgery: “anterior segment surgery” and administration of an intraocular injection Aksef 1mg (intracameral use) OUt and evisceration OD. Then, the patient was di

Discussion. Diabetes can lead to visual loss.

Conclusion. 1) Endocrinological screening and treatment of the diabetic patient is essential. 2) Diabetic patients require regular ophthalmological examination to prevent visual loss. 3) Panuveitis can cause blindness and visual disability to patients with diabetes due to decompensated diabetic disease.

10. OUTCOME PREDICTION OF ANTI-VEGF THERAPY IN AGE-RELATED MACULAR DEGENERATION

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Introduction. Age-related macular degeneration (AMD) is one of the leading causes of irreversible blindness in adults over 50 years old. At present it has no cure. In advanced AMD stages, the patient has no ability to perform basic activities such as reading, recognizing faces, and driving. The global prevalence of AMD is expected to increase to 288 million by 2040. This review article comes with useful information on the anti-VEGF effects in various clinical situations, bringing real benefit to the clinical activity. It aims to study the factors that predict the evolution of AMD in order to understand the therapy response.

Aim of study. Age- related macular degeneration is a very frequent, acquired retinal pathology that causes loss of central vision. There are specific therapeutic methods used in each stage of the pathology. In contrast to the atrophic (dry) form, exudative (wet) form of AMD requires inhibitors of the vascular endothelial growth factor (anti-VEGF remedies). Treatment is applied in some specific patterns. The analysis of the factors involved in the variability of the pathological process response to anti-VEGF treatment allows the development of an algorithm for stratification of patients with AMD.

Methods and materials. PubMed, NCBI and SCOPUS databases were used to find relevant information on the topic, using the next keywords: age-related macular degeneration, anti-VEGF, predictive factors. We studied 50 of 175 articles.

Results. AMD outcome depends on age, sex, genetics, environmental, clinical and social factors. This important clinical factors could help us to give some prognosis about disease evolution under treatment. Very often, the clinician can predict from the beginning what the subsequent evolution of the pathology will be.

Conclusion. The analysis of the factors involved in the variability of the pathological process response to anti-VEGF treatment allows the development of an algorithm for stratification of patients with age-related macular degeneration.

11. RETINOSCOPY - THE METHOD OF DIAGNOSIS IN OPTOMETRY

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Introduction. The article describes the importance of the method of retinoscopy in the diagnosis of refractive abnormalities in preschool children and adolescents. In particular, retinoscopy is mentioned as a method of diagnosis in refractive anomalies and in some cases difficult to diagnose: Amblyopia, cataracts in children and adults. In the modern world, the development of medical technologies has made great strides forward. Nowadays, medical devices make it possible to diagnose certain diseases at an early stage, which allows us to carry out the treatment quickly and punctually. Ophthalmology and optometry are no exception. To quickly identify dioptric deviations in eye development, an optical device - the retinoscopy - was developed. With its help, refractive errors such as astigmatism, myopia and farsightedness, amblyopia, and cataracts can be identified.

Aim of study. To inform how important it is to use the different methods of retinoscopy proposed in the literature, in order to facilitate the activity of the optometrist in office in cases of diagnostic difficulty.

Methods and materials. This method was performed on young children, preschool, schoolchildren, adolescents and adults with hearing and speech impairment. Retinoscopy allows the examiner to investigate the quality of the optical environment of the eye (cataract diagnosis), to detect refractive abnormalities in the case of amblyopia (when the subjective method is not possible).

Results. With the help of techniques and methods of examining the eye with the retinoscopy we can detect certain physiological properties (accommodative reserves) and eye abilities that are dependent on age (Presbyopia), which is important for computer users.

Conclusions. The method is proposed to be used by optometrists in difficult cases of diagnosis by using autorefractometry and subjective methods.

12. THERAPEUTIC TENDENCIES OF UVEITIC GLAUCOMA

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Introduction. Uveitic glaucoma, also known as inflammatory glaucoma, is a type of secondary glaucoma, one of the most serious complications of intraocular inflammation. It develops in uveitic eyes with increasing intraocular pressure (IOP) and affects the optic nerve, damaging it till blindness if left untreated. 20% of patients with chronic uveitis are at the onset point of glaucoma. As the incidence of uveitis is rising worldwide, the number of uveitic glaucoma is also increasing. Uveitic glaucoma treatment should be personalized for each patient,it aims at the administration of antiglaucomatous remedies, performing surgeries when indicated and applying new therapeutic trends. This article will be useful for the clinician to help a patient with inflammatory glaucoma. It aims to elucidate the key treatment aspects. Being a review article, it will be helpful for making a good therapeutic decision. It is our duty to preserve visual functions at the best possible level and improve patients' quality of life.

Aim of study. Uveitic glaucoma leads to a drastic and irreversible decrease in visual acuity, to the invalidation of young, able to work patients. That is why the social impact of inflammatory glaucoma is considerable. Therapeutic approaches are varied and depend on the cause of eye inflammation, the most common being systemic diseases. In this case, interdisciplinary cooperation with fellow rheumatologists becomes imperative, they should prescribe all the necessary remedies to control systemic inflammation, and we as ophthalmologists will indicate antiglaucoma remedies and / or other necessary therapies. We will closely monitor the progress of the disease in order to keep as much as possible good visual functions of the patient.

Methods and materials. We studied uveitic glaucoma in PubMed, NCBI and SCOPUS databases using keywords: inflammatory glaucoma, uveitic glaucoma, eye inflammation, uveitis. 78 articles were found. We studied 30 of them, which contained relevant information for achieving our goal.

Results. The treatment of uveitic glaucoma is difficult, long way and strictly individualized process. It depends on the pathology that determines its appearance and development. The main directions of treatment are: treatment of the causative systemic disease, control of eye inflammation and antiglaucoma therapy. Systemic disease will be treated in collaboration with specialists, eye inflammation will be treated with anti-inflammatory remedies and glaucoma with antiglaucoma remedies. In about 25-30% of cases, antiglaucoma therapy fails and surgery will be needed such as: laser iridotomy, trabeculectomy, non-penetrating glaucoma surgery, implantation of aqueous humor drainage devices, etc.. Recently, the medical community has shown interest in implementing biological therapy, and studies are being done in this direction. New therapeutic trends could have a favorable effect on the control of the glaucoma process in the eyes with uveitic glaucoma.

Conclusion. Uveitic glaucoma can develop only in eye that has had a history of uveitis, and intraocular pressure must be increased. A specific and personalized approach, with the application of necessary therapy is the basis of an armed struggle against the disabling consequences of the disease.

13. TRANSCONJUNCTIVAL BLEPHAROPLASTY

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Introduction. Initially titled in 1818 by Graefe, blepharoplasty is currently one of the most commonly performed aesthetic procedures but is still regarded as a technically challenging operation that requires a thorough understanding of the anatomy and function of the eyelids.The goals of lower eyelid blepharoplasty are to correct the characteristic signs of aging that occur in the periorbital region, including excess eyelid skin, lid laxity, and orbital fat malposition.Transconjunctival blepharoplasty allows access to the orbital fat through an incision through the lower conjunctiva and the capsulopalpebral fascia without any disturbance to the skin and orbicularis muscle of the lower eyelid. This approach avoids violation of the lower orbital septum, which can lead to less postoperative retraction of the eyelids, scleral spectacle and changes in the shape of the opening, which can complicate the transcutaneous approach. Transconjunctival blepharoplasty is indicated in the case of excess infraorbital fat, which gives the appearance of bags under the eyes of cyanotic shade, affecting the patient's image. It is also indicated in patients with infraorbital fat in combination with moderate laxity of infraorbital skin tissue. Dry eye exposure is a risk of any surgical manipulation of the upper or lower lids. Patients who have undergone corrective vision procedures such as laser in situ keratomileusis (LASIK) or keratotomy have an increased risk of dry eye problems and should be cleared for further surgery by their refractive eye surgeon. Patients wearing contact lenses pose a particular risk when blepharoplasty is considered. Eyes may dry out as a patient ages, and this process is often hastened by chronic contact lens use. Additionally, eyelid surgery such as blepharoplasty, canthopexy, or other lid altering procedures may subtly affect the curvature of the cornea, making use of contact lenses uncomfortable or even dangerous. Patients should discontinue the use of contact lenses weeks before surgery and not restart use for several weeks postoperatively to allow healing without any eyelid manipulation.The purpose of lower eyelid blepharoplasty is to rejuvenate the lower eyelid while maintaining a natural, unoperated appearance. Successful lower eyelid blepharoplasty depends on knowledge of anatomy and surgical techniques, accurate preoperative analysis, and attention to detail. Common problems of the lower eyelid, such as malarial descent, tear deformity, pseudo-herniated fat, eyelid laxity and changes in skin texture, as well as dermatochalasis and festoons should be recognized.

Aim of study. Exposition of a narrative synthesis of contemporary literature and patient study.

Methods and materials. In order to achieve the stated objective, the initial search of the specialized scientific literature, identified by the search engine Google Search and from the PubMed and Medscape databases, as well as the analysis of the statistical data at the TerraMed Private Hospital or. Chisinau, 2018-2021. The criteria for selecting the articles included the cross-conjunctival method of approaching the lower eyelid, indications, contraindications, beneficial methods.For the advanced selection of bibliographic sources, they were applied by filters: 2018-2021. After a preliminary analysis of the titles, original articles, editorials, articles of narrative synthesis, systematic and meta-analysis were selected, which contain relevant information and contemporary concepts about transconjunctival blepharoplasty, topographic anatomy, indications, contraindications, surgical description. The information from the publications included in the bibliography was gathered, classified, evaluated and synthesized, highlighting the main aspects of the contemporary vision on transconjunctival blepharoplasty. In order to minimize the risk of systematic errors (biases) in the study, through searches of the databases were performed to identify a maximum number of publications relevant to the purpose of the study. Only studies that meet the inclusion criteria were evaluated. We also analyzed both research that shows a positive result and research that does not show a beneficial effect on the intervention.

Results. For the collection of the study group, I collected information about the patients who underwent the transconjunctival blepharoplasty operation, 2018-2021, TerraMed private hospital. According to the 2018-2021 study years, 26 transconjunctival blepharoplasty surgeries were performed in order to remove the excess of ptotic adipose tissue from both lower eyelids.

Conclusion. Transconjunctival blepharoplasty allows the removal of excess fat from under the eyes, by making an incision inside the lower eyelid, this hides any scars and results in a look as natural as possible. Analyzing the results obtained from the study performed on patients who underwent transconjunctival blepharoplasty, we conclude that the age of the patients who go to the surgeon to remove excess ptosis adipose tissue of the lower eyelids demonstrates the importance not only of aesthetic but also eye comfort.

IX. Pharmacy Section

1. ABSORPTION MECHANISMS OF SOFT PHARMACEUTICAL FORMS THROUGH THE SKIN

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Introduction. Ensuring optimal therapeutic action in a soft pharmaceutical form depends heavily on selecting the vehicle and penetration potentiators, substances that facilitate their penetration through the skin layers. Human skin functions as an efficient barrier and protector when in impact with the environment. In order for medicinal products to reach the deep layers of the epidermis and dermis or the systemic circulation, they must be penetrated in the first stage.

Aim of the study. The study and the analysis of the factors that influence the absorption of topic medicamentary forms through the skin.

Methods and materials. Bibliographic sources were analyzed using PubMed, Pharmatech, Pharmaceutical-technology and others.

Results. Due to low permeability of the skin, only a small quantity of medicinal substances are truly absorbed, therefore only very active substances can have a general action after topic administration. The penetration of the medications in and through the skin can be realized in two ways:1. through pores – the walls of the hair follicles (transfollicular) and less through the sweat glands; 2. transepidermal – crossing epidermis. One of the factors that influence the penetration of medications administered topically is the excipient or its basis used in formulation of the medicinal product, thus influencing the bioavailability and the pharmacological actions of the pharmaceutical form. Since the skin is considered a lipid membrane, results that liposoluble substances can penetrate the skin. The absorption of fat is very reduced and the penetration is favored to liposoluble substances, stratum corneum can be capable to absorb amphiphilic substances that can get to vascularized zones of the skin. Hydrophilic medications can penetrate the skin only if hydration is produced to the skin. The hydration occurs after applying fat bases or hydrocarbons that prevent evaporation, but at the same time a rise of the temperature is produced and a skin maceration. At the basis of O/W type of emulsion the mechanism is different, because a fast water evaporation happens from the emulsive system, making the ointment layer to become porous and allow the water from the skin to evaporate. Hydrogels do not produce hydration, but if in the formula are humectants like glycerine, there is a risk of skin dehydration. In dermatological treatments it is intended for the medication to penetrate the skin, but does not get to blood flow, even though this fact cannot be controlled in all cases.

Conclusion. A number of substances that increase medication absorption have been studied, which means temporary increase of skin's permeability, nevertheless, there are some restrictions on using them due to skin irritation or toxicity.

2. AGRIMONY AND CHICORY- SOURCES OF PHENOLIC ACIDS

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Introduction. Phenolic acids are found in a wide range of products in the plant kingdom, including medicinal plants, known as chemical compounds with antioxidant properties that function as free radical scavengers and reduce the harmful impact of oxidative damage on health.

Aim of the study. Quantitative determination of phenolic acids in the aerial parts of Agrimoniae herba (Agrimonia eupatoria L.fam. Rosaceae) and Cichorii herba (Cichorium intybus L fam. Asteraceae).

Methods and materials. The aerial parts of Agrimony and Chicory were harvested in the flowering phase from the collection of Scientific and Practical Centre for Medicinal Plants of *Nicolae Testemitanu* SUMPh, during the flowering period (2021). The vegetal products were ground with a laboratory mill to a fine powder. The quantitative analysis of phenolic acids was determined through 3 methods by Metertech UV/VIS SP 8001 spectrophotometer.

Results. Both plants have been studied in research projects for their antioxidant, hepatoprotective and antibacterial properties. Agrimony (A. eupatoria) is used for antibacterial, antiviral, and anti-inflammatory property, due to the chemical compounds such as tannins, phenolic acids (p-coumaric acid, various caffeoyl-quinic acids), polyphenol compounds, triterpenoids, flavonoids. Chicory (C. intybus) is a vegetal product that stimulate digestion, detoxify the body, and decrease the cholesterol through the cichoriin, bitter principles, latex, inulin-type fructans and phenolic acids (caffeic acid, mono- and dicaffeoylquinic acids, including chlorogenic acid (12-17%) and other phenol-carboxylic acids (protocatechuic, p-hydroxybenzoic, isovanillic, p-coumaric). The spectrophotometric analysis performed with Arnow reagent (518 nm), according to the European Pharmacopoeia, shows the total phenolic acids, equivalent in caffeic acid with 3.67 mg/g for Agrimony and 1.48 mg/g for Chicory. Our experimental results denote a higher content of hydroxycinnamic acid in Chicory for the method performed in extractive solutions obtained with 30% ethyl alcohol, equivalent in chlorogenic acid (13.22%) and the for the method with ethyl alcohol 20% of the extractive products, equivalent in caffeic acid (10, 93%), followed by Agrimony for these 2 methods with 3.78% and 3.10% respectively. For the last 2 methods, the optical density of the extracts was read at 325 nm.

Conclusion. Our results provide that extracts of aerial parts of A. eupatoria and C. intybus, species from the collection of SPCMP of *Nicolae Testemitanu* SUMPh can serve as sources of phenolic acids.

3. ANALYSIS OF LOCAL DIETARY SUPPLEMENTS ASSORTMENT ON THE PHARMACEUTICAL MARKET IN THE REPUBLIC OF MOLDOVA.

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Introduction. A trend that has been on a steady rise over the last decade is the growing demand for dietary supplements in the Republic of Moldova. To stand out in the supplement industry, it's extremely necessary to offer true authentic value to the customer, especially in today's saturated marketplace. Thus, to promote these products, specific mixed marketing strategies to apply are advocated. Supplement marketing is the key to reinforce a company's market position and to differentiate it from the competition.

Aim of study. To analyze the local supplement market and to determine a list of marketing strategies of exploring supplement brands for local pharmaceutical companies.

Methods and materials. The list of notified food supplements and the list of those registered in the Republic of Moldova, provided by National Agency for Public Health (ANSP) were analyzed. Also, we were evaluating the product assortment of "VitaPharm-Com" company, accessing its site. Obtained data were mathematical processed.

Results. Dietary supplements may be placed on the pharmaceutical market from the Republic of Moldova only if they correspond with the provisions of Law no.306 from 30.11.2018 on food safety and of sanitary Regulation on food supplements, approved by Government Decision no. 538 from 02.09.2009. Dietary supplements obey notification and registration procedures, as set out in points 28 - 39 of previously mentioned Regulation. At present, there are 1966 notified products and 1912 registered products on the supplement market. Among the registered products, the share of local supplements represents 7,58% (n=149), and among those notified – 7,85% (n=150). Local manufacturers of food supplements are in number of 14, among them 6 manufacturers have in assortment both registered and notified products. The largest local food supplements manufacturer is the company "Vitapharm–Com" SRL, owning 32,44% from supplement market, follow by the companies "Farmaco" SA – 15,05%, "Depofarm" SRL – 12,37%, "Carbolemed" SRL – 12,04%, the rest of companies have market shares below 10%. Further were analyzed VitaPham-Com's portfolio, which include well-established products in immunology, cardiology, neurology, endocrinology, hepatology, pneumology, hematology, rheumatology and gynecology.

Conclusion. Vitapharm–Com is a leader in manufacturing food supplements in the Republic of Moldova, based on range analysis of their products were recommended tips to complement its marketing effort to strengthen brand profile.

4. ASSESSMENT OF THE IMPACT OF TEMPERATURE ON THE VISCOSITY OF THE COMBINED EAR DROPS

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Introduction. In the development of ototopic formulations, physicochemical factors such as solubility, viscosity, tonicity, surfactant properties, preservatives, impregnation capacity, ceruminolytic and diffusion activity play a very important role. Thus, auricular drops may contain excipients to adjust viscosity, adjust or modify pH, increase solubility of active substances or stabilise the preparation. The viscosity of a topical formulation is important because of the effect it has on the ability to effectively release the active substances at the site of administration. Temperature is a key factor in maintaining the stability, bioavailability and efficacy of auricular drops. Temperature variations in the process of storage and use of the ototopical pharmaceutical form can influence its physical parameters.

Aim of study. To study the influence of temperature on the viscosity values of combined isohydrofural and methyluracil ear drops.

Methods and materials. The Fungilab Smart R rotary viscometer was used to investigate the viscosity. The viscosity of the droplets was determined at 10 rotational speeds at temperatures of 25 and 37°C.

Results. Optimal viscosity ensures prolonged contact time with the ear surface and prevents droplet leakage. The choice of solvent in the process of ear drop development is reasoned by the type of treatment and application site. In the case of infection of the external auditory canal, the use of non-aqueous solvents is recommended. The investigated formulation contains PEG-400 and propylene glycol, the latter has advantages, being less hygroscopic and poorly oxidizable, retains preservative properties at 15% concentration. The viscosity of the auricular drops was evaluated at temperatures of 25°C (t. at storage) and 37°C (t. at the administration site). The viscosity values at shear rate 0.3 RPM were: at 25°C - 27.247 P·102; at 37°C - 25.151 P·102. By plotting the rheograms of the dependence of viscosity and shear stress on shear rate, the non-Newtonian and pseudoplastic character of the droplets was demonstrated (viscosity of liquids decreases with increasing shear rate).

Conclusion. It was determined that at a concentration of 60% PEG-400 and 20% propylene glycol, the values of viscosity and shear stress at the lowest shear rate decrease with increasing temperature, but remain within acceptable limits to ensure optimal contact time with the ear surface.

5. AVAILABILITY AND IMPACT OF INFORMATION ON MEDICINES ON COMMUNITY PHARMACY SITES FROM MOLDOVA

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Introduction. Currently, the growth of the self-medication phenomenon is facilitated by the possibility of over-the-counter procurement of medicines, their widespread advertising on television, broadcasting unverified information on the Internet about diseases and their treatment, lack of time to see a doctor, etc. One of the most important factors contributing to the self-medication process is ordering medications online from community pharmacy websites without consulting a specialist. In this case, it is not excluded that the patient may commit several errors in the administration of drugs such as incorrect use of doses, inattention and non-compliance with the administration according to meals (until or after), compatibility of administered drugs, procurement of drugs in wrong doses and quantities, confusion of drug names or medicinal substances etc.

Aim of study. Assessing the current situation of the availability of medicines on the websites of community pharmacies in the Republic of Moldova and its impact on the rational use of drugs and patient safety.

Methods and materials. In order to elucidate the opinions of specialists and the population regarding the current situation of purchasing medicines through the websites of community pharmacies and its influence on the rational use of medicines and patient safety, two types of questionnaires were developed: a) pharmacists; b) the population. 200 electronic questionnaires were completed using Google Forms.

Results. The results of the questionnaire show that 51% of respondents have already ordered medicines online, of which 53% are satisfied with their order of medicines. Moreover, 14% of those surveyed have never ordered medicines from community pharmacy websites, however they intend to do so in the near future. Only 33% of respondents are not willing to order medicines online. And most importantly, 83% of the population do not have information about the consequences of drug abuse.Among the most common reasons for buying medicines from community pharmacy websites among patients are: the more affordable price for medicines (80.7%); time saving (68.8%); convenience of delivery (60.4%); wide range of pharmaceuticals and medicines (44.5%); ease of searching for the necessary medicines (46.5%).

Conclusion. Our survey found that the vast majority of patients do not have information about the potential complications of drug abuse and, as a result, do not develop a clear idea of the influence of self-medication on patient safety. Analyzing the data and the answers obtained, we can say that the vast majority of the population resorts to ordering drugs online, without consulting a doctor or pharmacist, thus risking the possibility of erroneous medication.

6. CAROTENOID CONTENT IN THE ONOETHERA BIENNIS L. SPECIES

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Introduction. The species *O. biennis L.*, the common Evening-primrose, family Onagraceae, is a biennial herb, with its native center in North America and later it has conquered the Eurasian areas. It is found in the natural light habitats of the Republic of Moldova and frequently is cultivated as a decorative plant. This species has been introduced in the collection of Scientific and Practical Centre for Medicinal Plants of *Nicolae Testemitanu* SUMPh. The aerial parts, flowers and fruits of this species are plant products with a broad spectrum of natural chemical compounds, used in phytotherapy as anti-inflammatory and antioxidant remedies.

Aim of study. Determination of carotenoid content in aerial parts and flowers collected from the common Evening-primrose plants grown in the SPCMP collection.

Methods and materials. The plant products (aerial parts and flowers) were harvested in the flowering phase, vegetation periods of 2020-2021 and were conditioned according to the requirements of the technical normative documentation. Total carotenoids were determined by spectrophotometric method at Metertech UV/VIS SP 8001 spectrophotometer. The dried biological material was ground in a mortar, extraction was carried out in 2 extractants (95% ethyl alcohol and hexane) in a water bath for 60 min. The optical density of the extracts was read at 470 nm for estimation of carotenoid content. Contents were expressed as mg% FW.

Results. The experimental obtained data, denote that, for all the Evening-primrose aerial part and flowers analyzed, the extraction of carotenoids in 95% ethyl alcohol was more efficient than in hexane. Analysis of the obtained data shows that total carotenoids in recalculation to β-carotene vary in the analyzed plant products from 21.032 to 30.027 mg% in 95% ethyl alcohol and from 1.935 to 7.411 mg% in hexane extractant. The highest values recorded in both extractants were reported for the aerial part – 30.027 mg% in 95% ethyl alcohol and 7.411 mg% in hexane, comparative with the content in flowers (respectively) – 21.032 and 1.935 mg%. The data obtained on the carotenoid content of *O. biennis* serve as an argumentative support for further phytochemical research, which would be the basis for the cultivation of this species and the use of plant products for phytotherapeutic purposes.

Conclusion. Ethyl alcohol 95% is much more efficient for the extraction of carotenoids obtained than hexane from O.biennis plant products. The aerial parts of *O. biennis* grown in collections have a much higher content than flowers and could serve as sources of carotenoid plant products.

7. CLASSIFICATION OF DIRECTIONS OF ACTIVITY OF THE PHARMACEUTICAL CONTROL SYSTEM.

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Introduction. The activity of the pharmaceutical control system (FCS) is multiaspectual and multidimensional. For these two reasons, in order to carry out an in-depth study of the FCS, it is necessary to systematize the dimensions of the activity of this system, which would allow the assessment of the quality for each direction of activity as well as the quality of the entire system.

Aim of study. The argumentation of the principles of classification for the directions of activity of the pharmaceutical control system.

Methods and materials. The legislative and sub-legislative acts (Government Decisions, Order of Ministries, Regulations, Instructions, Standards, etc.) of the Republic of Moldova in the fields of pharmaceutical activity, pharmaceutical control activity, medical control, state control served as research material. The methodology - systemic approach, methods used: analysis and synthesis, content analysis, logical analysis, functional decomposition, classification matrix.

Results: Following the study, it was argued the need to apply two basic criteria for classifying the directions of activity of the pharmaceutical control system: Criterion I - by subsystems (S / S) of the pharmaceutical system: S / S of regulation, coordination and control; S / S of drug manufacturing; S / S of wholesale distribution of medicines; S / S of retail distribution of medicines (community pharmacies and pharmacies of medical institutions); S / S of drug quality control. Criterion II - according to the content of the control performed: verification of the legality of the pharmaceutical activity (founding and location of the pharmaceutical units, practice of the pharmaceutical activity, manufacture of medicines, placement of medicines on the pharmaceutical market, etc.); verification of the quality / conformity of the pharmaceutical act (compliance with the activities carried out with the rules of good practice, quality of the pharmaceutical services provided, compliance with ethical - deontological norms, etc.); verifying compliance with the rules of quality assurance and accessibility of medicines and other pharmaceutical products (storage, assortment of products, correct price formation, quality of internal pharmaceutical control, etc.).

Conclusion: The principles were argued and the classification of the directions of activity of the pharmaceutical control system of the Republic of Moldova was elaborated. Based on the developed classification, the program for assessing the quality of pharmaceutical control was issued with the application of the collective expertise method. Research is still continuing.

8. COMPLEMENTARY AND ALTERNATIVE MEDICINE FOR RESPIRATORY TRACT INFECTIOUS DISEASES

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Introduction. Upper respiratory tract disease (UPTD) is a major public health problem and a leading cause of morbidity and mortality worldwide. The highest risk are young children, the elderly, the chronically ill and those with a suppressed or compromised immune system. Viruses are the predominant cause of respiratory tract diseases and include RNA viruses such as respiratory syncytial virus, influenza virus, parainfluenza virus, metapneumovirus, rhinovirus and coronavirus.

Aim of the study. Research on the clinical picture and medication of upper respiratory tract disorders.

Methods and materials. The study included the analysis of medical records and the collection of information on the symptoms and medication of upper respiratory tract disorders.

Results. Gender prevalence indicates the predominance of the disease among males (70%) over females (30%). Most affected are people included in the age ranges: 30-39 years (31.6%), 40-49 years (26.6%) and 50-59 years (18.3%). Most patients come from rural areas: 41 patients out of a total of 60 included in the study, which represents 68.3%, the rest of the patients come from urban areas - 31.7%. Analyzing the distribution of patients after employment, we note that more frequently suffer from diseases of the upper respiratory tract studied, patients who have a job (65%). They are frequently subjected to risk factors predisposing to the development of pathologies. The subjective symptoms reported at admission were: rhinorrhea (36.6% of the total number of patients), headache (33.3%) and upper airway obstruction (25%). The treatment is aimed at restoring the vital functions of the body (oxygen therapy, administration of etiopathogenetic, symptomatic and prophylactic treatment: antibiotic therapy to suspect the association of bacterial infection, analgesics-antipyretics to confirm hyperpyrexia, administration of antiviral treatment,

Conclusion. The pathology of the upper respiratory tract presents an important medico-social problem due to the high incidence during the seasonal period and the unfavorable epidemic situation during the pandemic period of the last years, caused by the Covid-19 virus. A special role is given to the administration of antibiotics, the emphasis being on avoiding their administration in possible situations and antibiotic resistance prophylaxis. The effectiveness of the associated treatment of upper respiratory tract diseases has been demonstrated by shortening the hospital stay, discharging from the hospital with improving the health of patients and preventing clinical relapse (recurrence of symptoms) by following the recommendations of the otolaryngologist. Contrary to international recommendations for combating antibiotic resistance, the study highlighted the widespread use of antibiotic therapy in the treatment of researched diseases; this is all the more worrying as chemotherapeutic preparations are used in high doses over long periods of time and in the pharmacotherapy of COVID-19.

9. CONCEPTS OF MOBILE PHASE SELECTION IN DEVELOPMENT OF AN HPLC METHOD OF ANALYSIS

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Introduction. Chromatography is the separation of analytes from a mixture using a stationary phase, into which the analyte is retained and a mobile phase that transports them through the column. The drug substances have different chemical affinity for the phases, those with a greater affinity for the mobile phase will elute earlier than those with a less affinity. The solvents used for the mobile phase, and the ratio in which they are used are very important as it can be tuned to change the relative analyte affinity and hence the retention time and selectivity of the separation.

Aim of study. To highlight the concepts of selection of mobile phase in development of an HPLC method of analysis.

Methods and materials. The electronic databases that were used: Medline, While, Scopus and Springer. The information was searched by using the keywords: "HPLC solvents", "mobile phase solvents", "acetonitrile" and "methanol". Also, the search was conducted by using printed pharmaceutical and chemical journals. 78 bibliographic sources were eligible for our study.

Results. It is considered that the solvent selection in development of a new HPLC method is perhaps the most commonly overlooked parameter, although the importance is major. Typically acetonitrile or methanol would be selected as hydrophobic solvents and would be mixed with water in different proportions for obtaining the highest resolution of separation. The separation process is influenced by many factors and using the only acetonitrile or methanol may not be enough. The solvents are selected by taking into account characteristics such as viscosity, refractive index, noncorrosiveness, toxicity, miscibility, transparency, reasonable price, commercial availability etc. To choose the most efficient solvents for the mobile phase, it should respect some rules: (1) the mixture of solvents of the mobile phase must be miscible. For example it have to avoid the mixture of acetonitrile with cyclopentane, cyclohexane, heptane, hexane, octane and pentane or the mixture of methanol with cyclopentane, cyclohexane, heptane, hexane. Water can be mixed with tetrahydrofuran, *i*-propyl-alcohol, methanol, ethanol, dioxane, dimethylformamide, acetic acid, acetonitrile, acetone; (2) mobile phase depends on both the choice of organic solvent and its concentration – it has been observed that on lowering the concentration of organic solvents the retention time increases; (3) buffered mobile phase should be used when the analyte contains acidic or basic moieties and a buffer should never be used outside 1.0 pH units around its pKa; (4) the mobile phases must be filtered through a 0.45 or 0.2 μm membrane filter and degassed.

Conclusion: The solvent selection in development of a new HPLC method is a difficult process, but a very important stage. There is a choice among hundreds of solvents for different applications of HPLC and to select the most efficient solvents for the mobile phase, it should respect the main rules.

10. COUNSELING OF PEDIATRIC PATIENTS IN COMMUNITY PHARMACIES.

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Introduction. Community pharmacy is an important part of the healthcare system, which serves a large part of the population of the Republic of Moldova, 21.6% of this population are children. Among these, the number of children living with a chronic health condition who take prescription drugs regularly, has grown substantially over the past several decades. In addition to chronic disease medications, approximately 70% of children have taken drugs to treat an acute condition. Direct communication with pediatric patients improves their adherence to treatment, helping to prevent drug errors, as well. Although children up to the age of 7 may be involved in treatment counseling, they are most often neglected by pharmacists.

Aim of study. To identify acceptable ways to increase the frequency of child counseling by community pharmacists by studying the interaction of community pharmacists with pediatric patients and their parents/ caregivers.

Methods and materials. The observational study was conducted over a period of 14 days in community pharmacies in Chisinau, aiming to obtain information on: how often children accompany their parents/caregivers to pick up their prescription; how often children and parents/caregivers are counseled by pharmacists; which pharmacy staff members interacted with the family; the characteristics of the drugs dispensed; wait time; how many questions the child or caregiver asked the pharmacy staff. Additional details such as the child's age, gender, and medication information were obtained from the prescription.

Results. 86 cases of dispensing of drugs prescribed to children were analyzed. Most drugs were dispensed during the week (83,72%). 53,48% of prescribed drugs were for chronic diseases, in addition, in 69,76% of cases drugs for acute conditions were additionally prescribed. It has been estimated that direct communication between the pharmacist and the child takes place approximately 30% of the time, even if 90% of pharmacists dispense drugs to children on a daily basis. In addition, only 14% of parents reported receiving advice from a pharmacist when they were given a new medication. The most common indications for acute conditions were for infections (26,74%), of these: antibiotics – 13% and antiallergics – 9%. 70.93% were for chronic conditions, of which for attention deficit disorder – 23,25% and depression – 9,30%. Children were accompanied by their parents in about 32% of cases, and only about 2% of the children were counseled directly by the pharmacist.

Conclusion. These data show that, although the opportunities for counseling children are limited, pharmacists rarely advise children even when they are present at the pharmacy. As further studies, which would identify acceptable methods of increasing the frequency of child counseling by community pharmacists are needed, the study will continue.

11. CURRENT TRENDS IN THE DEVELOPMENT OF ANTI-INFLUENZA DRUGS

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Introduction. In recent years, humanity has been facing one of the most dangerous diseases - Coronavirus, which has caused high morbidity and mortality. On 30 January 2020, WHO declared the COVID-19 outbreak a Public Health Emergency of International Concern. A number of treatment regimens were developed and each included anti-influenza drugs from neuraminidase inhibitors and a nucleoprotein inhibitor. Unfortunately, the RNA genome of influenza virus constantly mutates, which reduces the effectiveness of the drugs. There has been a need to develop new antiviral drugs.

Aim of study. To evaluate the current trends in the development of anti-influenza drugs.

Methods and materials. Electronic databases: Medline, Cochrane, Embase and Springer were accessed using "antiviral drugs", "influenza", "anti-influenza drugs" and "viral pandemics". Also, the search was conducted by using printed pharmaceutical and chemical journals. 112 bibliographic sources were eligible for our study.

Results. An increased interest in antiviral drugs has been highlighted during influenza pandemics, such as Spanish flu caused by H1N1 virus in 1918, Asian flu by H2N2 virus in 1957, Hong Kong flu by H3N2 virus in 1968, bird flu by H5N1 and H7N9 viruses in 2003 and 2013, respectively, as well as swine flu by H1N1 virus in 2009. Amantadine was the first anti-influenza drug, licensed in the 1960s and is a derivative of adamantine, which was used in influenza pandemics from 1957 and 1968. However, the use of adamantine antivirals has been limited in the past decade due to a high resistance developed by almost all influenza strains. From 1999-2000 became available neuraminidase inhibitors, which also are used in current medical treatment of A and B influenza. Until 2009 neuraminidase inhibitors were the only antiviral drugs, then a new class was developed - polymerase inhibitors. Antiviral drugs currently used in clinical practice of influenza have some disadvantages such as low lipophilicity and oral bioavailability (zanamivir < 5%). To solve the problems, some changes have been made in the chemical structure of antivirals: (1) esterification of carboxylic group to ester prodrugs improved the oral bioavailability (oseltamivir 35%), (2) esterification of highly hydrophilic guanidinium group and incorporating an aromatic moiety (1-hydroxy-2-naphthoic acid), (3) modification of the guanidine group to acylguanidine by attachment of lipophilic acyl substituent, (4) substitution of carboxylic group with bioisoesteres (hydroxamic acid, sulfinic acid, boronic acid).

Conclusion: New influenza strains and drug resistance, low lipophilicity and oral bioavailability of antiviral drugs continue to be the main problems in current therapy of influenza, which can be sort out by development of effective anti-influenza drugs, especially focusing on using congeners and conjugates of the existing neuraminidase inhibitors.

12. DEVELOPMENT OF A CONCEPT REGARDING THE SAFETY OF THE COMMUNITY PHARMACIST.

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Introduction. Daily, the pharmacist is subjected to stressful situations, caused by various reasons, including direct interaction with the patient, either for consultation or the release of drugs prescribed by the doctor. Thus, the environment created at work, sometimes represents an area of risk and insecurity, and the term "professional burning" is more and more common among pharmacists.

Aim of study. The aim of this paper is to investigate the environment and conditions of activity of the pharmacist, with the assessment of the factors that condition the professional burning and the development of a new concept regarding the safety of the community pharmacist.

Methods and materials. Assessment of bibliographic data on the safety of the Community pharmacist at work, evaluation of the working conditions and opinion of pharmacists by using the questionnaire, interview, and visit to the workplace to collect qualitative and quantitative data.

Results. The assessment and analysis of the bibliographies shows the following data: the survey reveals that 61.2% of pharmacists report that they face stress and verbal and / or physical abuse at work, this being the highest rate of exposure to psycho-emotional health. Emotional exhaustion is most often reported through two statements such as "I feel emotionally exhausted at work" and "I feel tired at the end of the working day." This phenomenon is found in pharmacists who work more than 40 hours a week. In 2018, a study conducted by *Zinurova* and *DeHart* assessed the experience of resident pharmacists regarding individual stressors during the work schedule. An average score was obtained by those who had a schedule of less than 60 hours per week and a high score for those who had more than 60 hours per week. A similar study conducted by *Le* and *Young* in 2017, shows the presence of anxiety, dysphoria and depression of those who work more than 60 hours a week. In order to assess the stress factors in community pharmacies in the Republic of Moldova, a study similar to the subsequent development of recommendations for reducing burnout was initiated.

Conclusion. Stress and psycho-emotional stability can affect the work of the community pharmacist. In order to ensure favorable working conditions, it is necessary to develop the concept of pharmacist safety at work, to set up internal rules and operational procedures to deal with unpredictable situations.

13. EFFECTIVENESS OF TRANSDERMAL PATCH USE COMPARED TO OTHER PHARMACEUTICAL FORMS

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Introduction. The detailed study of the interaction of transdermal patches with the human body is the key moment for the development of a new therapeutic era, since the technology of preparation is the main factor on which the efficacy of any drug depends. Due to the multiple adverse reactions to the administration of tablets and other pharmaceutical forms, modern technologies present a new transdermal patch drug form to the pharmaceutical.

Aim of study. To highlight the advantages and efficacy of the use of transdermal patches in relation to other pharmaceutical forms (tablets, injectable solutions).

Methods and materials. Bibliographical sources such as NCBI, PubMed and others were analysed, as well as research and observation methods were used, by means of a questionnaire in which more than 100 people responded, including patients, teachers, students and pharmacists.

Results. Transdermal patch is an adhesive, transdermal pharmaceutical form in which the active substance penetrates the skin and reaches the bloodstream. They do not have a high popularity among patients, compared to tablets. Advantages include non-invasive, painless administration, reduced frequency of adverse reactions and avoidance of the first hepatic passage.Of those surveyed, the majority had used for the first time transdermal patches from the analgesic class containing active ingredients extracted from medicinal plants: capsaicin, L-menthol, eucalyptus oil, camphor and others. Of the synthetic substances diclofenac sodium is used, while no respondent used opioid analgesic. The majority of patients confirmed that the transdermal patches that they had used were been bought abroad,because according to the State Nomenclature of Medicines of the Republic of Moldova it contains a small assortment, the most common being contraceptives with levonorgestrel and preparations with opioid analgesic-fentanyl. Compared to the transdermal patch, tablets have several disadvantages, among which the mucosal irritation and/or increased acidity, furthermore unstable concentration of the drug leads to increased frequency of its administration and to the occurrence of adverse reactions, low bioavailability compared to the transdermal patch. In turn, injectable solutions present an invasive, painful pharmaceutical form that requires qualified medical personnel.

Conclusion. The transdermal patch is one of the most convenient pharmaceutical forms used by the patient. Rapid therapeutic effects and no side effects in therapeutic doses. The use of transdermal patches is possible in unconscious patients or patients who have contraindication to per os administration.

14. ELECTROPHORESIS – REHABILITATION THERAPY IN POST-COVID TREATEMENT

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Introduction. Currently, in medical practice, there are many physiotherapeutic procedures that help to accelerate the recovery and rehabilitation process of internal organs diseases. One of the most efficient treatments with a beneficial effect on a patient's conditions is the electrophoresis. It has a therapeutic effect due to the penetration of medicine through skin and mucous membranes. The essence of electrophoresis is reduced to the fact that the drugs enter the tissues in the form of charged particles through the intercellular spaces, sweat ducts, and sebaceous glands. Thus, physiotherapy is a field of medicine that, both alone and in combination with other treatment methods allows the treatment of a huge range of diseases.

Aim of study. The study of rehabilitation services, analysis of electrophoresis services and physiotherapeutic procedures based on gender, conducted in the University Center for Medical Rehabilitation (rehabilitation department) in order to select the most frequent rehabilitation methods (procedures), in complications after coronavirus infection (Covid-19).

Materials and methods. The materials for this study include the medical and pharmaceutical bibliographic sources, as well as the registries on the provision of medical services in the University Center for Medical Rehabilitation of SUMPh "*Nicolae Testemitanu*". The study used materials from the period 01.01.2021 to 31.12 2021, in which 838 primary patients requested medical assistance (female-572; male-266), benefited from the consultation of the rehabilitation specialist, and were prescribed recovery treatment through kinesiotherapy, massage, and physiotherapy.

Results. Based on the fact that the years 2020-2021 were pandemic years, a very large number of the population suffered from coronavirus infection (Covid-19), and the demand in rehabilitation centers increased due to post-covid complications. Thus, the University Center for Medical Rehabilitation conducted an analysis of the provided medical services, the physiotherapeutic method - electrophoresis being the most effective method prescribed by the rehabilitation specialists. The share of electrophoresis for 2021 proved to be twice as high as in previous years. According to the registry presented during 2021, 37,373 procedures were performed: kinesiotherapy - 13,393; massage- 7,075; physiotherapy- 16,905. The records of the number of medical services provided in outpatient care during 2021 show a total of 40,993 out of which: nervous system pathology - 15,205; locomotor system pathology- 23,695; respiratory system pathology- 2,093.

Conclusion. A study on the provision of rehabilitation services was conducted in the University Center for Medical Rehabilitation from Chisinau in order to select the most frequent methods (procedures) for post-covid patients' recovery.

15. GENETICALLY MODIFIED PLANTS AS PERSPECTIVE SOURCE OF BIOPHARMACEUTICALS

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Introduction. The scientific community is constantly looking for new sources of natural chemical compounds in order to elaborate effective remedies for early diagnosis and treatment of incurable diseases inherited from the previous century. Today, genetically modified plants (GMP) serve as a new source of chemical compounds used for this purpose.

Aim of study. Evaluation of the specialised bibliography and highlighting of GMP as biopharmaceutical sources.

Methods and materials. The profile literature and database (about 60 sources from PubMed, Google Scholar platforms) on GMP were evaluated and analysed.

Results. The evaluation of the modern researches denote that GMPs are used as biofactory for the new biopharmaceuticals (enzymes, recombinant proteins, monoclonal antibody, peptides, antisense oligonucleotides, hormones recombinant proteins, monoclonal antibodies and immunomodulating drugs). The list of GMP species and bioproducts obtained from them have been elucidated: Helianthus annuus – somatotropin hormone which is used in nanism and rapid muscle growth; Solanum tuberosum – lactoferrin-multifunctional protein with antimicrobial activity; S. lycopersicon – α-antitrypsin human protein used in liver cirrhosis, glycoprotein for Rabies virus, vaccine for respiratory syncytial virus; Zea mays – gastric lipase enzyme in chronic pancreatitis (the used target is endocrinology, immunology and virology that become a reality for producing harmless drugs, oral vaccines and tumour antigens). Species Nicotiana tabaccum has been established as a model transgenic system for molecular farming and is mostly used in pharmaceutical protein research with therapeutic and prophylactic applications in genetic disorders, cancer, HIV, hyperparathyroidism and neuronal affections. Recombinant proteins obtained by the transgenic route have an applicative character in: chronic inflammatory conditions (Protein C); blood substitute (Haemoglobin-α and -β); thrombosis (humanised Hirudin), antitrypsin in the case of surgical transplantation. The main focus is generation of edible cheap vaccines and easily administered ones that could provide mucosal immunity against infectious agents causing deaths of millions of children.

Conclusion. This rapid increase in the number of new biological compounds reflects fast progress in molecular biology and genetic engineering, highlighted by the success of the human genome project that, in turn, will help to identify a lot of additional opportunities for represent new opportunities in the early and accurate diagnosis as well as in effective and successful treatment of difficult diseases.

16. HELICHRYSUM SPECIES IN THE FLORA OF THE REPUBLIC OF MOLDOVA WITH PHARMACEUTICAL POTENTIAL

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Introduction. Plants of the genus *Helichrysum* (Asteraceae) are known as everlasting flowers and are widely used in traditional medicine around the world due to the variety of secondary metabolites that plants of this genus produce.

Aim of study. The evaluation of spread of g. *Helichrysum* in the world and of the Republic of Moldova flora, especially of species with pharmaceutical potential, according to the scientific literature data.

Methods and materials. Were evaluated the literature and database of *Helichrysum* species, their chemical composition and pharmacological activity.

Results. The Asteraceae family comprises 1600 genus and 23000 species in the world flora and the g. *Helichrysum* includes 600 species distributed mainly in Europe, Asia, North America in dry forest areas. The name of the *Helichrysum* comes from the Greek *helios* - sun and *chrysos* - gold, from the fuzzy leaves of the golden-coloured sheath. In the Republic of Moldova only one specie *H. arenarium* (L.) Moench- (popularly known as everlasting, occurs sporadically on the cliffs of the right bank of the Nistru River, in the landscape reserve "Climăuții de jos", in the Steppe Hills steppes, on the limestones of Naslavcea, in the steppe sector, with a declining population due to collection, being a vulnerable species. Many research works focus on the investigation of constituents such as phenolic compounds, flavonoids, phytosterols present in the flowers of *H. arenarii*, where it is indicated that the most important group of compounds responsible for pharmacological activity are flavonoids (naringenin-5-O-glucoside or helichrysin A, kaempferol, quercetin, luteolin, apigenin). Due to the fact that *H. arenarium* is well known in folk medicine and widely used, it is classified as an endangered species in several European countries. In the collection of the Scientific and Practical Centre for Medicinal Plants *Nicolae Testemitanu* SUMPh is introduced sp. *H. italicum* (Roth) G. Don., rich in phenolic compounds and essential oils (α-cadren, α-pinene, geranyl acetate, limonene, nerol) with cholagogue, antimicrobial and anti-inflammatory properties.The species is also used in the cosmetics industry (perfumes) due to its characteristic odor due to the content of essential oils.

Conclusion. The present study contributes to increasing knowledge about the spread of g. *Helichrysum* in the world and the Republic of Moldova flora, which can serve as a starting point for future investigations on species (*H. arenarium and H. italicum*).

17. IDENTIFICATION AND DOSAGE OF SAPONINS IN THE AERIAL PARTS OF AGRIMONY AND CHICORY

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Introduction. The current direction of development of the pharmaceutical industry is the obtaining and use extracts from plants, therefore the Scientific Practical Center in the Field of Medicinal Plants (SPCFMP) of *Nicolae Testemitanu* SUMPh is studying plants as a potential source of local raw material for natural medicinal formulations.

Aim of study. Identification and dosing of saponins in the aerial parts: Agrimoniae herba and Cichorii herba.

Methods and materials. The aerial parts of Agrimonia eupatoria L., and Cichorium intybus L. were collected in the flowering period, from the collection of SPCFMP of *Nicolae Testemitanu* SUMPh, according to the pharmaceutical monograph recommendations. In order to be used for extraction, the dry vegetal products were grinded with a laboratory mill to a fine powder. The dry extracts have been obtained through fractional maceration and concentrated using rotative evaporator Laborata 4011. The quantitative analysis of saponosides was realized by Metertech UV/VIS SP 8001 Spectrophotometer, at wavelength of λ 540, according to the vanillin-sulphuric acid assay.

Results. Agrimony (A. eupatoria, fam. Rosaceae) is a perennial herbaceous plant known since the time of the ancient Egyptians. Several non-clinical studies reported the benefic effects of its extracts, such as antibacterial, antiviral, neuroprotective, and anti-inflammatory properties, due to the chemical compounds such as polyphenol compounds, tannins, phenolic acids, triterpenoids, flavonoids (rutin, quercetin, kaempferol, luteolin, and apigenin), essential oils, and saponins (α-amyrin, ursolic acid, euscapic acid). Chicory (C. intybus, fam. Asteraceae) is also a perennial medicinal plant with a long tradition of healthcare, its vegetal products stimulate digestion, detoxify the body, and decrease the cholesterol and glucose level in blood through cichoriin, arginine, choline, chicoric acid, bitter principles, latex, inulin-type fructans, tannins, flavonoids and saponins (a-amyrin, a-lactucerol, taraxerone). Saponosides represent the secondary products of plants' metabolism and are noted for their multiple biological and pharmacological activities: antimicrobial, antiviral, anti-inflammatory, anticancer, antioxidant and immunomodulatory. By thin layer chromatography (TLC) the presence of saponosides in the aerial parts of the mentioned vegetal products was determined with an Rf=0.32, compared to standard saponin. Phytochemical analysis by the spectrophotometric method according to the vanillin-sulphuric acid test of the aerial parts revealed the presence of saponosides with a saponin concentration of 371.053 mg/L for Agrimoniae herba and 216.191 mg/L for Cichorii herba.

Conclusion. The need for a chemical study of A. eupatoria and C. intybus species from the SPCFMP collection of *Nicolae Testemitanu* SUMPh was established in order to use the aerial parts as sources of saponosides and new pharmaceutical forms.

18. IRON-CHELATING ACTIVITY OF POLYPHENOLIC EXTRACTS OF SOME PLANTS FROM THE REPUBLIC OF MOLDOVA

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Introduction. Haemochromatosis is a condition of iron accumulation in the body to a toxic level, caused by a genetic disorder of the proteins involved in regulating iron absorption or due to multiple iron transfusions in chronic anemia. This condition is associated with numerous health problems: heart failure, cirrhosis of the liver, fibrosis, diabetes, arthritis, infertility, and cancer. Plants rich in polyphenolic compounds could act as sources of natural chelators, as they have a greater ability to chelate with metallic iron, forming soluble, stable complexes that can be excreted.

Aim of study. Determination of the chelating activity of some medicinal plants to find alternative sources for the treatment of diseases caused by excess iron.

Methods and materials. The polyphenolic extracts were obtained from plant material of plants introduced into the cultivation in the Republic of Moldova: Origanum vulgare ssp. vulgare L., O. vulgare ssp. hirtum (Link) Ietswaart, Hyssopus officinalis L., Hypericum perforatum L. The total phenolic contents of dry extracts were quantified using the Folin-Ciocalteu method. The chelating effect on ferrous ions was determined according to Dinis et al. (1994) method with few changes. Ferrozine can quantitatively form complexes with Fe^{2+}. However, in the presence of chelating agents, the complex formation is disrupted with the result that the red color of the complex is decreased. The absorbance of the analyzed samples was recorded at 562 nm against the blank, EDTA (ethylenediaminetetraacetic acid) was used as a positive control.

Results. Polyphenolic extracts were obtained with 70% ethanol by fractional maceration with agitation from vegetal products (Hyperici flores, Origani herba, Hyssopi herba) collected from the collections of the IGPhPP and the SPCFMP. The ethanolic extract of Hyperici flores is characterized by a high level of phenolic compounds 105,918 mg GA/g, and in the ethanolic extracts obtained from the aerial parts of the studied aromatic plants the total polyphenol content varies between 39,056-68,500 mg GA/g. The results showed that H. perforatum flowers extract (45,7%) and extract from O. vulgare ssp. hirtum (39,2%), O. vulgare ssp. vulgare (37,3%), H. officinalis (32,5%) aerial parts had lower iron-chelating activity compared to EDTA (99,03%) – standard iron chelator.

Conclusion. In this study, all extracts showed different metal chelating activity, but the extract from the flowers of H. perforatum showed the greatest activity and can be considered as an effective source of chelating iron for further research.

19. LIPOSOMES AS A VACCINE TRANSPORT SYSTEM- CURRENT AFFAIRS AND PERSPECTIVES

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Introduction. A vaccine is a biological preparation that provides active immunity, acquired to a certain infectious disease. A vaccine usually contains an agent similar to a pathogenic microorganism and is often made from weakened or inactivated forms of the microbe, its toxins or one of its surface proteins. Extensive research in the field of pharmaceutical sciences has led in recent decades to the development of innovative systems for the release of active ingredients, suitable for enrich the treatment possibilities that are in charge of the pharmacothermal dyspozition.In this respect, it pot mention the systems of transport and release to the target of tip micro- and nanoparticula, microemulsions, liquid crystals, liposomes, etc.

Aim of study. Studying and systematizing literature data on the use of pharmaceutical nanotechnologies in the formulation of vaccines and elucidating the advantages of these forms.

Methods and materials. Bibliographic sources were analyzed using the NCBI platform, PubMed, DrugBunk, Pharmatech, Pharmaceutical-technology, etc.

Results. Liposomes are spherical vesicles with colloidal dimensions (from 20 nm to 10 μm), consisting of a double layer of surfactant molecules. In recent years, nano-technologies, bio-technologies and systems of transport and target disposal are extremely frequently used in almost all fields of activity.The use of nanotechnology in medicine, and more precisely in the transport and cession to the target of active compounds is in full evolution.The transport and cession of drugs and the development in the pharmaceutical field in the context of nanomedicine should be regarded as the science and technology of complex systems at nanoscale Any vaccine falls into the category of nanomedication, the size of a bacteria varies between 200 and 2000 nm, the size of a virus varies between 20 nm and 250-400 nm. The above mentioned advantages justify the objectives pursued by the use of the liposomes as medicinal vectors: prolongation of the release time of the crowned active substance, protection of the active trade, protecting the patient from toxic effects, the possibility of intracellular release of active molecules, liposomes with target cells.

Conclusion. Nanomaterials are currently used as vectors for acellular vaccines. Due to its properties, some nanostructures provide an additional immune response. Due to its properties, nanoparticles make it possible to administer vaccines to categories of patients who are in the risk zone (such as immunocompromised patients). Due to its properties, vaccines combined with nanomaterials are obtained more easily, faster, making it possible to release the vaccine to the market in a shorter term and in greater quantity.

20. MANAGEMENT OF PATIENTS WITH HYPOTHYROIDISM

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Introduction. Hypothyroidism (HT) is a clinical, biochemical syndrome, characterised by a deficiency of thyroid hormones with a negative impact on the function of vital physiological systems and metabolic processes in the body. The SARS-CoV-2 coronavirus uses the angiotensin-2 converting enzyme to enter the thyroid and pituitary cells and can trigger a "cytokine storm". Thyroid hormone replacement therapy with levothyroxine is the standard treatment for the condition.

Aim of study. Research of the clinical signs and medication of hypothyroidism.

Methods and materials. The study included 50 patients with hypothyroidism, hospitalised in 2021.

Results. Gender prevalence indicates the predominance of the disease among females (88%) over males (12%). Most cases of illnesses are registered at the age of 30 (21%) and increase with age (66%). The most common symptoms are: fatigue (28.5%), cold limb syndrome (89.4%), increased body mass (48.1%), hoarse voice (20.2%) and dry skin (22.4%), symptoms variation being related to the age and gender of the patients. Standard treatment is long lasting, recommends replacement therapy with levothyroxine, liothyronine, or a combination of these, and is given in relation to the serum level of thyroid-stimulating hormone (TSH10>mIU/L), starting with a lower dose and increasing every 4-6 weeks until the normalisation of the TSH level. The pathogenic and symptomatic treatment consists in the pharmacotherapy of complications that occurred following the illness, targeting vitally important physiological systems and metabolic processes of the organism.

Conclusion. Thorough monitoring of thyroid gland function and thyroid hormone levels leads to the installation of euthyroidism, with improvement of patient health and subclinical HT prophylaxis and prevents the development of "cytokine storm" in case of SARS-CoV-2 virus contamination.

21 MECHANISMS OF THE ANTIGLAUCOMA EFFECT OF ANGIOTENSIN CONVERTING ENZYME INHIBITORS

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Introduction. Angiotensin converting enzyme inhibitors (ACE inhibitors) have recently attracted attention as a new class of drugs for the treatment of glaucoma. ACE inhibitors have been shown to lower intraocular pressure (IOP) in patients with intraocular hypertension or open-angle glaucoma due to both systemic and local haemodynamic effects.

Aim of study. Aim of study was to analyse the beneficial effects of ACE inhibitors in the treatment of glaucoma and the mechanisms to prevent the progression of retinal ganglion cell degeneration.

Methods and materials. The articles in the PubMed database were selected and analysed according to the keywords "renin-angiotensin system", "glaucoma", "angiotensin-converting enzyme". Possible mechanisms for the influence of ACE inhibitors on the evolution and progression of glaucoma have been specified.

Results. The hypothesis of the involvement of prostaglandins in the ocular hypotensive effect of ACE inhibitors has been proposed. It has been found that inhibiting prostaglandin synthesis has blocked the IOP-lowering effect. ACE inhibitors are inhibitors of kininase II and thus prevent the inactivation of bradykinin, elevated levels of which promote prostaglandin synthesis, and some prostaglandins, especially PGF2α, increase the uveoscleral flow of aqueous humour. Bradykinin has a protective action against the neurotoxicity of glutamate by bradykinin B2 receptors in retinal neurons. Thus, ACE inhibitors are able to prolong the half-life of bradykinin, and long-term treatment with ACE inhibitors has increased plasma levels of bradykinin. Inhibition of bradykinin breakdown may increase superoxide dismutase activity and may modulate nitric oxide production by inactivating reactive oxygen species and inhibiting various pro-oxidative mechanisms in the vascular system. Decreased angiotensin II, observed during ACE inhibitor therapy, may have beneficial effects on vascular function by decreasing vascular production of superoxide anions. Angiotensin converting enzyme inhibitors by lowering Ang II levels had beneficial effects on vascular tone and influenced other pathophysiological actions such as proliferation and migration of smooth muscle cells and pericytes, glucose uptake in retinal pericytes, expression and potency of endothelial growth factor on angiogenic activity, stopping or delaying damage to the blood-retinal barrier and preventing retinal neovascularization.

Conclusion. Angiotensin converting enzyme inhibitors can influence the progression of glaucoma by decreasing the level of angiotensin II and increasing that of bradykinin with favourable hemodynamic changes in the retina, inhibiting pro-oxidative mechanisms and activating antioxidants, preventing endothelial and vascular dysfunction, preventing angiogenesis.

22. MEDICINES USED IN TUBERCULOSIS THERAPY

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Introduction. In 2020, an estimated 10 million people fell ill with tuberculosis (TB) worldwide. Tuberculosis is a disease caused by the infection with the bacillus *Mycobacterium tuberculosis*, also called Koch Bacillus (BK). Tuberculosis is transmitted through the air from one person to another therefore it most commonly affects the lungs but also can attack other parts of the body, such as the kidney, spine, and brain. Nowadays, TB, including its drug-resistant forms, continues to be the main health problem in the world. The treatment of tuberculosis relies on several antituberculosis drugs administered in combination to achieve medicines synergy and to prevent drug resistance. New antituberculosis drugs and regimens are urgently needed to improve cure rates for people with drug resistant TB (currently around 50% globally).

Aim of study. The research is aimed to analyze bibliographic data of antitubercular drugs used as first-line and second-line medicines to find alternative drugs.

Methods and materials. Theoretic systemic research, dates and information analysis based on international facts: PubMed, Medline, Environmental Issues & Policy Index, Google Academic etc.

Results. TB can be cured with the first-line drugs combination taken daily for several months such as: Isoniazid (isonicotinic acid hydrazide, or INH with a structural similarity to that of pyridoxine), Pyrazinamide (a synthetic analogue of nicotinamide), Rifampicin (a semisynthetic macrocyclic antibiotic with a large lipid-soluble molecule produced from Streptomyces mediterranei), Ethambutol (a water-soluble, heat-stable compound) and Streptomycin (an aminoglycoside antibiotic). If the patients with tuberculosis are resistant to the combinations of the first-line drug or intolerant then it is necessary to turn to the combinations of second-line drugs, such as: Prothionamide, Ethionamide, Rifabutin, p-Aminosalicylic acid, Cycloserine, fluoroquinolones: Ofloxacin, Lomefloxacin, Levofloxacin; Kanamycin, Capreomycin. The second-line drugs are called reserve drugs treatment. The combinations of two-, three-, four- and five-medicines is used to achieve antitubercular medicines synergy, prevent drug resistance, provide more reliable control over the intake of medicines, reduce the risk of overdose and of individual anti-tuberculosis drugs, is convenient for use in the hospital and, especially, in outpatient settings.

Conclusion. Unfortunately, second-line drugs may have more side effects than the second-line drugs. Thus, the notion of "quality of life", which is quite common and has shown practical value in various diseases, is being used to evaluate the effectiveness of tuberculosis treatment.

23. MICROSCOPIC RESEARCH OF CASSIA OCCIDENTALIS (L.) LINK SPECIES

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Introduction. The species C. occidentalis with common name Coffee Senna, family Fabaceae, native to the tropical and subtropical regions of America, today is widely cultivated in different regions of the world. This species has been introduced in the collection of IGPhPP of the Republic of Moldova in 2018. For pharmaceutical application of the medicinal plant products, the modern complex of biological research, including the microscopic one, is needed.

Aim of study. Highlighting the anatomic specific parameters of the plant organs based on the microscopic study.

Methods and materials. Biological materials of C. occidentalis species were harvested from IGPhPP collection during the vegetative period of 2021 year. About 300 micrographs obtained on 50 cross-sectioned and 150 superficial micropreparations were analysed in Mikos optical microscope coupled with computer software.

Results. The results of the micrographic analysis of cross and superficial views allowed to distinguish: histological zonation on the cross-section of root and stem (periderm, cortex and central cylinder with open collateral vascular bundles, established after secondary growth), pericarp of the pod fruit (epi-, meso- and endocarp); anatomical type of leaf blade – dorsoventral (the palisade parenchyma is on the adaxial side of the blade and the spongy parenchyma on the abaxial one) and amphistomatic with para- and anisocytic stomata, which are more on the abaxial epidermis. Microscopic analysis allowed the elucidation of specific anatomical parameters for each organ: vascular bundle sheath with polygonal calcium oxalate crystals and druses in stem, leaf blade and rachis parenchyma, only druses in fruit pericarp and only vascular bundle sheath with polygonal crystals for root. Large, multicellular, brownish glands on stem, rachis, leaf blade and fruit epidermis. Unicellular (sometimes multicellular), long and slender, but rarely occurring, non-glandular trichomes are characteristic for stem, fruit, leaf rachis and blade epidermis. The conical mamelous protuberances are specific for petal epidermis. All organs of the plant contain anthraquinone, as a result of positive chemical reaction (reddish staining) with 3% NaOH, but with a different gradient, most pronounced in seeds than in fruit, leaves and stems.

Conclusion. Multifactorial and comparative microscopic study of the organs of the Coffee senna plant C. occidentalis allowed to elucidate the specific anatomical parameters for each organ that will serve as a structure indicator to determine with certainty the medicinal plant products and taxonomy of the plant species.

24. MODERN MANUFACTURING TECHNOLOGIES AND MEDICINAL SUBSTANCES IN SOFT CAPSULES

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Introduction. Most soft gelatin capsules are made of gelatin, which due to its physical properties makes it an ideal excipient for processing in the machine with rotating molds. There are a large number of factors that determine the selection of soft capsules as a drug release system. But the main reason why soft capsules are selected as the most appropriate dosage form is to increase the absorption of the drug compared to other pharmaceutical forms.

Aim of study. Highlighting modern technologies in the manufacture of soft capsules and assortment of medicinal substances encapsulated in flexible capsules.

Methods and materials. The bibliographic sources were analysed: NCBI platform, PubMed, DrugBunk, Pharmatech, Pharmaceutical-technology and others

Results. The hermetically sealed soft gelatin capsules are made in one piece and can be filled with liquids, semi-solids and even solids. Newly discovered molecules of active substances have a generally hydrophobic tendency and are therefore poorly soluble in aqueous systems. In this case, for oral administration, it is more difficult to formulate a water-soluble active substance in the form of a product from which it is completely released and well absorbed into the body. a liquid preparation that contains the active substance in liquid form and can be encapsulated. However, due to economic, technological or patient-dependent difficulties, soft capsules are manufactured in relatively small quantities worldwide. We differentiate several processes for the manufacture of soft gelatin capsules: by immersion (immersion), by pressing (stamping); and by dripping. One of the most widely used methods today is the method of pressing, which involves pressing or compressing a certain amount of wrapping product between two sheets of gelatin in a machine that welds the capsules to the edges and at the same time cuts them (device called capsule). The most commonly used encapsulation products are: volatile oils, esters, alcohols and organic acids, vitamin D and analogues, estradiol and other hormones, carbicol, water-soluble vitamins associated with fat-soluble ones, moisture-sensitive substances such as enzymes, antibiotics, fish, gaiacol and others. For example, in the State Nomenclature of Medicines of the Republic of Moldova we find the following soft gelatin capsules Hidroferol 0,266mg, Gofen 400, Vitamin E, Vamelan, Avodart® and others.

Conclusion. The absorption of the drug substance from the soft capsules increases, compared to its release from a solid form (powders or tablets), which is very important from a therapeutic point of view. Patients prefer soft capsules because they are easy to swallow, do not taste unpleasant and have pharmaceutical elegance: modern, new, attractive appearance. Manufacturing methods in industry are automated and in continuous flow, with high efficiency. The assortment of medicinal substances encapsulated in flexible capsules is large and with a wide spectrum of action in the treatment of various diseases.

25. OPPORTUNITIES FOR COMMUNITY PHARMACISTS IN EVALUATING OTC MEDICATIONS USE AMONG OLDER ADULTS.

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Introduction. The WHO data denote that every country in the world is experiencing growth in both the size and the proportion of older persons in the population, and the Republic of Moldova is no exception. It is a priority for the pharmaceutical field to take into account the particularities of drug therapy for older patients in order to minimize adverse effects and maximize potential benefit. Recent data demonstrate the increasing use of over-the-counter (OTC) drugs among elderly, but there are limited reports on the actual use of these. Pharmacists represent the most trusted source of information about OTC medications and are able to apprise their potential harmful effects.

Aim of study. To assess the community pharmacists attitudes on the elderly patient-associated characteristics of OTC medications use and to identify practical recommendations for pharmacists in preventing harmful effects of these agents.

Methods and materials. A 28-items questionnaire was provided to community pharmacists. To describe the pharmacists attitudes on OTC drugs use in the elderly were used the Likert scale questions. Obtained data were statistically processed.

Results. 112 questionnaires were included in the statistical analysis. Pharmacists that work in a community pharmacy in the urban area (78,6%) more than 10 years (48,2%) and hold the II category (31,3%) were prevailing in the analyzed group. Majority (n = 68, 60.71 %) of the respondents considered that elderly patients used OTC medications. More than 50% of respondents partially agree with the affirmation that elderly patients use OTC drugs at specialists' recommendation (doctors, pharmacists or other medical professionals). Most reported that the elderly patients ask questions about required OTC drugs (n=72, 64,29%), but in more than 50% cases they didn't remember the provided information or did not follow the pharmacist's recommendations. Respondents partially agree (n=65, 58,04%) with affirmation that elderly patients have appropriate knowledge about OTC drugs and disagree more than 50% with adequate knowledge about side effects, drug interactions etc. 53,5% of respondents indicated they totally agree with the necessity of medication safety tips for older adults provided in community pharmacy and more than 65% support that the quality of geriatric pharmaceutical care depends on the abilities of pharmacists obtained in continuous professional training.

Conclusion. The survey identified various aspects of OTC drugs use in the elderly and highlighted the opportunities for pharmacists to ensure the appropriateness of medication use in the elderly by individualized education.

26. PHARMACEUTICAL ASSISTANCE OF TREATMENT WITH ANTIBACTERIAL DRUGS

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Introduction. Adverse reactions to antibacterial preparations are responsible for over 140,000 emergencies, about half of which are due to reactions to antibiotics.

Aim of the study. Analysis and evaluation of antibiotic complications in hospitalized patients in 2019-2021.

Methods and materials. For the present study, the consumption of antibiotics was evaluated for a period of three years (2019–2021), in the Institute of Emergency Medicine (IMU) and in its main subdivisions, which record a higher consumption of antimicrobial drugs.

Results. In Moldova, the consumption of antibiotics per 1,000 inhabitants is an intermediate one and constitutes 21 defined doses. The highest consumption is in the beta-lactam and penicillin group of 7.5 DDD, followed by other beta-lactams with 3.2 DDD, and the third place belongs to fluoroquinolones with a consumption of 2.7 DDD per 1,000 inhabitants. The consumption of antibiotics in the IMU, compared to most hospitals in European countries, and others is intermediate and is 64%. The consumption of beta-lactams and penicillins (ampicillinum, amoxyciline, amoxicillinum + clavulanic acid) in the IMU is about five times lower than the average in the other hospitals presented, and that of other beta-lactams (cephalosporins of generation I cefalexin, cefazoline, generation II cefuroxime, cefachlor, generation III cefotaxime, ceftazidime, ceftriaxone, cefixime, cefoperazone, cefoperazone + sulbactam, carbapemen meropenem, imipenem + cilastatin) invers, are about twice as much. In the hospital 76% of patients used antibacterial drugs from the group of macrolides and cephalosporins. One of the indicators of the quality of the rational use of antibiotics is related to the ratio of parenteral and enteral pharmaceutical forms. Thus, the rate of consumption of antibacterial drugs with enteral form increased in the IMU, in the period 2019–2021, from 14.1% to 25.2%, and that with parenteral form decreased from 85.9 to 74, 8 or 11.1%. In most hospitals around the world, the rate of consumption of parenteral forms, compared to enteral, is about 50%. Regarding the incidence of drug side effects reporters, the majority - 85.19% of cases were reported by medical workers, 7.94% - by patients, 6.49% - pharmaceutical companies and medical representatives, and pharmacists – 0,36%.

Conclusion. Pharmacists should be the most accessible healthcare providers who can help patients with the best recommendations for the use of antibiotics and the prevention of possible complications during the treatment.

27. PHARMACOTHERAPEUTIC ASSISTANCE IN CHILDREN'S CONVULSIVE SYNDROME

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Introduction. Epileptic syndromes in young children are one of the main causes leading to disability and mortality in the Republic of Moldova. According to statistical data, psychoneurological disability constitutes 70% of the total number of disabled children.

Aim of the study. Studying the evolution and pharmacotherapeutic assistance of convulsive syndrome in children in the Republic of Moldova.

Methods and materials. Forty- seven cases of convulsive syndrome were analyzed in children hospitalized in the Neurosurgery Department of the Mother and Child Institute, during the years 2020-2021. The established indices were analyzed by the analytical method with computer processing

Results. Regarding the risk factors, it should be noted that the most common seizures are triggered in infants and young children by falls at different levels (bed, chair and falls at the same level, are mainly caused by lack of supervision) - 23% ; in preschoolers - trauma (12%); in children aged 7-10 - traffic accidents and traumatic injuries by blunt objects (35%); in older children - falls and blows with blunt objects in sports games (30%). It should be noted that in children in the first year of life, due to the predominant functioning of the brainstem structures, tonic seizures are usually noticed, while the clonic component of the crisis is formed at an older age. More than 20 medicines are used to treat various types of epilepsy in children. Essential medicines include: adrenocorticotropic hormone (ACTH), acetazolamide, benzobarbital, bromide, valproic acid, vigabatrin, gabapentin, diazepam, carbamazepine, clonazepam, lamotrigine, midazopam, nitrazepam, fenrazepam t-etymab and so on Diazepam (seduxen) and midazolam (dormikum) are the main drugs for the treatment of all forms of status epilepticus. Based on the study, we found that diazepam 5 mg / ml sol is most commonly used. inj. (61%) and diazepam 10 mg / 2.5 ml sol. rectal (46%); magnesium sulfate, 250 mg / ml - 5 ml sol.inj. (27%), clonazepam 0.5 mg, comp. (22%); phenobarbital, 100 mg comp. was administered singly or in combination with the nominated preparations with a frequency of 56% of cases.

Conclusion. In the study, it was found that the most commonly used groups of drugs in convulsive syndrome with the exception of anticonvulsants were: antiedematous preparations (47%), anxiolytics (41%), analgesics (39%), antibacterials (68%) and brain protection (31%).

28. PHARMACOTHERAPY OF COMORBIDITIES IN HIV/AIDS

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Introduction. AIDS is an infectious and communicable disease caused by a virus (HIV), which, when it enters the body, acts on the immune system, gradually reducing its capacity for action, until destruction. Most people with AIDS have comorbidities, which accelerate the progression of the disease and lead to worsening health. The most common opportunistic infections according to the WHO are: tuberculosis (TB), bacterial infections, pneumocystis pneumonia (PPC), herpes infection, candidal esophagitis, cryptococcal meningitis, toxoplasmosis. According to the Ministry of Health, in the Republic of Moldova there are 12,784 people infected with HIV/AIDS, of which 9,913 are alive, and annually, 250 people die due to this disease.

Aim of study. To analyse the pharmacotherapy of comorbidities in HIV/AIDS.

Methods and materials. Analysis of HIV/AIDS comorbidity treatment regimens indicated in the National HIV/AIDS Clinical Protocol. Analysis of the therapeutic indications collected from the medical records of 50 patients with HIV/AIDS who have comorbidities, hospitalised in the Hospital of Dermatology and Communicable Diseases.

Results. Following the analysis of the medical records of the hospitalised patients, it was observed that each of them has at least 1 or 2 opportunistic HIV/AIDS infections. The most common are tuberculosis (TB) seen in 17 patients (34%), pneumocystis pneumonia (PPC) seen in 23 patients (46%) and herpes infection seen in 39 patients (78%). Treatment is approached individually depending on the stage of HIV/AIDS, the stage of the opportunistic disease and the compatibility of the drugs. Pharmacotherapy of tuberculosis patients is performed according to the standardised treatment regimen with: Isoniazid + Rifampicin + Pyrazinamide + Ethambutol + Streptomycin. In patients with immunodeficiency, herpes disorders can be more severe and persist for a long time, it is possible to spread the infection, it is treated with: Acyclovir 400 mg or Famciclovir 250 mg or Valacyclovir 1 g/7-10 days. In severe forms the doses are increased. Bacterial pneumonia in HIV-infected immunocompromised patients is more common and more severe. The most common pathogen is Streptococcus pneumoniae. The first-line antibiotics indicated for the treatment of bacterial pneumonia are: Amoxicillin + Clavulanic Acid (Amoxiclav/Augmentin) 625 mg or Clarithromycin 500 mg or Azithromycin 500 mg.

Conclusion. HIV remains a major public health problem affecting millions of people worldwide. HIV/AIDS is a lifelong chronic disease with no known cure, and so people living with HIV/AIDS (PTHS) need to be medically monitored for the rest of their lives. The evolution of HIV/AIDS infection is very variable and unpredictable, due to the large number of potential complications.

29 POLYPHENOL EXTRACTION FROM AERIAL PARTS OF *GALIUM VERUM* L. BY DIFFERENT TECHNIQUES

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Introduction.The genus *Galium* L. (fam. Rubiaceae) includes more than 600 species in the world flora, of which 45 species in the European flora and 28 species in the Romanian one. Among them, there are 20 species identified in the Republic of Moldova flora - *G. verum* is considered the most valuable in chemical compounds due to its content of iridoids, polyphenols, flavonoids, essential oils and tannins.

Aim of study. Investigation of extraction methods of polyphenol compounds from aerial parts of *G. verum* for optimization of polyphenol extraction techniques in research products.

Methods and materials. The herbal products *G. veri herba* were harvested from the spontaneous flora of the Republic of Moldova in the Bugeac steppe (2021), throughout the blooming period. The plant was identified by botanists from the Botanical Garden of the ASM and have been processed in agreement to recommendations for the purposes of chemical studies**.** Polyphenol compounds from *G. veri herba* were extracted with 60% ethanol solution for 30 min at 80°C, respecting the ratio of 1:10 (5 g of product in 50 ml of 60% ethanol solution) for all technical methods: water bath extraction, ultrasound assisted extraction and magnetic stirring extraction. Total phenolic contents (TPC) *w*as determined by the Folin-Ciocalteu method with gallic acid as reference substance.

Results. Extraction of polyphenolic compounds from *G. veri herba* was carried out taking into account parameters influencing ultrasound-assisted extraction: sonication time, amplitude, solvent and particle size that depends on the destructive effects of ultrasonic waves. The extraction mechanism involves diffusion through cell walls and washing out the cell contents, in this order the cavitation effects of these waves facilitate the extractable compounds release. The high temperature increases solubility, diffusivity and pressure, which helps the waves penetrate the tissue and transport the contents in a variety of solvents. Extraction of polyphenolic compounds performed at different ultrasonic amplitudes from 50 to 100% shows a maximum TPC content (29.21 mg/g) at 80% amplitude, followed by the magnetic stirring method (28.17 mg/g) and water bath extraction (27.56 mg/g).

Conclusion. The diversity of phenolic compounds found in vegetal products makes it difficult to develop a universal extraction method. In the case of *G. veri herba* the optimal method of polyphenol extraction is ultrasound-assisted extraction.

30. RISK MANAGEMENT - COMPONENT OF THE PHARMACEUTICAL QUALITY SYSTEM

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Introduction. In the pharmaceutical field, quality management is very important, and risk management is a valuable component of an effective quality system. It involves anticipating hazards and controlling risk through a process of awareness, reduction and review of risks. By applying risk management methods, this research presents the risk of errors in the activities of community pharmacies.

Aim of study. Research and demonstration of the usefulness of risk management strategies in optimizing the activity of the pharmacy and evaluating the impact of risk management in the provision of quality services by community pharmacies.

Methods and materials. The causes that may lead to medication errors in community pharmacies have been identified using the Ishikawa diagram, the potential risks of errors have been analyzed and evaluated by applying the risk hierarchy method and the relationship diagram, highlighting activities in the pharmacy during which medication errors may occur. In order to establish the activities carried out by the pharmacist and to assess the causes that may lead to the risks of errors in the community pharmacy, brainstorming was used as a technique to stimulate creativity.

Results. A number of 46 potential risks of medication errors were identified, of which 17 are present in the activity of dispensing medicines, 12 risks of errors in the activity of receiving medicines, 9 causes of errors in the activity of ordering medicinal products and 8 causes of errors in the activity of storing medicines. By applying the risk classification technique, values of probability of occurrence of risks and severity of the result for each risk were obtained, which provided a two-dimensional picture of the risks. The potential risks of error were highlighted using the relationship diagram. This resulted in the following risks, which had a higher score, for which urgent measures should be taken to minimize the risk: wrong release of medicines (score 9, extreme risk); erroneous counseling of the patient (score 6, high risk); release of the wrong amounts of drugs or expired drugs (score 6, high risk).

Conclusion. The results of this study provide the basis for further research in order to develop a Risk Management Plan in the community pharmacy. The causes that can lead to errors in the pharmacy have been highlighted and quantified by highlighting pharmaceutical activities, during which risks of errors may arise. The work has practical utility, and the results of the research can be applied by pharmacies, contributing to the improvement of their performance.

31. SPECTRUM OF ACTIVITY, PHARMACOLOGY AND CLINICAL INDICATIONS OF ANTIFUNGAL AGENTS

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Introduction. Fungal infections have shown an increase in recent decades. Continued advancement of medical science offers life-saving treatment options for a variety of hematologic, oncologic, and rheumatologic conditions. Immunosuppression, a common therapeutic side-effect, predisposes patients to invasive fungal infections, which are escalating in prevalence. The development of effective, well tolerated antifungals has lagged behind the advances of antibacterial therapy. An antifungal agent is a drug that selectively eliminates fungal pathogens from a host with minimal toxicity to the host. Bacteria are prokaryotic and hence offer numerous structural and metabolic targets that differ from those of the human host. Fungi, in contrast, are eukaryotes, and consequently most agents toxic to fungi are also toxic to the host. Furthermore, because fungi generally grow slowly and often in multicellular forms, they are more difficult to quantify than bacteria.

Aim of study. The research is aimed to analyze bibliographic data of antifungal drugs used as remedies for chronical and/or systemic fungal infections, their toxicity and fungal drug resistance.

Methods and materials. Theoretic systemic research, dates and information analysis based on international facts: PubMed, Medline, Environmental Issues & Policy Index, Google Academic etc.

Results. Drugs for systemic antifungal treatment include the following: Amphotericin B (and its lipid formulations); Various azole derivatives (fluconazole isavuconazole, itraconazole, posaconazole, and voriconazole); Echinocandins (anidulafungin, caspofungin, and micafungin); Flucytosine. Amphotericin B, an effective but relatively toxic drug, has long been the mainstay of antifungal therapy for invasive and serious mycoses. However, newer potent and less toxic triazoles and echinocandins are now often recommended as first-line drugs for many invasive fungal infections. These drugs have markedly changed the approach to antifungal therapy, sometimes even allowing oral treatment of chronic mycoses.

Conclusion. With the advent of the polyenes, azoles, and fluorocytosine, previously fatal infections can be treated now. However, as modern medicine continues to extend life through aggressive therapy of other life-threatening diseases such as cancer, there is an increasing population at risk for opportunistic fungal infections. Such patients represent a special challenge because they often are left with little host immune function. Therefore, chemotherapeutic agents should be fungicidal and not just fungistatic. The search continues for fungicidal agents that are nontoxic to the host.

32. STRESS IN THE PROFESSIONAL ACTIVITY OF THE PHARMACIST

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Introduction. Stress-sickness of the XXI century, which is becoming more common among pharmacists in the community pharmacies, is a major risk factor for the health and for the quality of pharmaceutical care. The main stress factors of the pharmacists in the community pharmacy are factors related to: the profession and the activity performed; workplace relationships; the role in the organization; career development factors; factors that affect the organizational climate. Stress effects can be grouped into 5 broad categories: subjective (anxiety, aggression, indifference, fatigue), behavioral (disorders, alcohol/coffee abuse, predisposition to mistakes), cognitive (mental blockages, decreased attention, decreased ability to make rational decisions).

Aim of study. Analysis of stress factors which affect the pharmacist's activity.

Methods and materials. For this study were used the following materials: the WHO guidelines and scientific papers with the analysis of the stress problem at work. Also, Sociological questionnaires of pharmacists and pharmacists-laboratories from the Republic of Moldova were realized.

Results. The consequences of stress are multiple and have serious consequences for health and professional activity. 80% of respondents mentioned that stress in the Republic of Moldova is a major problem among pharmacists, 70% are affected by overtime work established by law, 69% are affected by the behavior of superiors, 73,7% of the answered people the accumulation of stress factors and physical and psycho emotional: exhaustion reduce the quality of pharmaceutical care. Most pharmacists and laboratory pharmacists are affected by the fact that the fulfillment of the sales plan affects their professional autonomy, this representing about 85%.

Conclusion. Stress at work is a major risk factor among pharmacists in the community pharmacies in the Republic of Moldova and in order to reduce the consequences of stress, the rules of good pharmaceutical practice, strict compliance with labor laws, and ensuring a favorable environment for work must be implemented.

33. THE ASPECTS OF CONTEMPORARY TREATMENT OF THROMBOPHLEBITIS

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Introduction. Thrombophlebitis is, more precisely, an inflammation of the wall of a vein and the formation of blood clots that can lead, over time, to total or partial obstruction of the affected vein and cause embolism (sudden clogging, usually with a clot, of a vessel of blood). Epidemiological data indicate a frequency of about 160 cases per 100,000 population each year, and a frequency of fatal pulmonary embolism per 100,000 population - 60 cases. The symptoms of thrombophlebitis do not appear immediately, but after a certain period of time. In some cases, the first and only manifestation is pulmonary embolism, which, according to some research, occurs in 1.3% of patients and is a major cause of early death in the postoperative period (0.3-1.0% deaths in surgery).

Aim of study. Modeling a general direction and contemporary concepts in the administration and monitoring of the specific treatment of thrombophlebitis.

Methods ad materials. The observation and the indication sheets of 45 patients were studied and analyzed, hospitalized during 2021 in the VASCULAR SURGERY section of IMSP Republican Clinical Hospital "Timofei Moşneaga".

Results. Thrombophlebitis is manifested in most cases among women (65%), while among men only 35% of the 45 investigated. Prevalence by age reflects an increase in the frequency of cases with age and starts at 19-30 years - 15%, a decrease in the age range 31-40 years - 5%, a major increase in the years 41-50 years - 30 % and 51-60 years - 35%, and certified offspring after 60 and 70 years respectively - 15%. This can be determined by the neglect of risk factors and the advancement of age, which is characterized by loss of vein properties, slowing of post-traumatic repair processes, the presence of metabolic disorders - obesity, diabetes. It is observed that 32 patients underwent surgical treatment - safenectomy, the main groups of drugs administered in most cases are: nonsteroidal anti-inflammatory drugs - 87%, antimicrobial medication - 80%, phlebotonic and opioid analgesics - 65%, anticoagulant and antiplatelet therapy - 37%. Due to the potential complications and associated diseases, a wide range of symptomatic remedies have been indicated in order to prevent and exacerbate the installed conditions.

Conclusion. Early diagnosis of thrombophlebitis and its associated conditions allows the initiation of treatment and the reduction of the adverse evolution of the process, preventing the occurrence of complications. The principles of thrombophlebitis treatment consist of: balanced diet, medication of etiopathogenic factors (pathogenic, symptomatic therapy and surgical treatment based on the severity of the disease), prevention and treatment of complications, social adaptation of patients and quality of life and treatment.

34. THE DISSOLUTION TEST OF SODIUM SALICYLATE FROM SEMI-SOLID FORMULATION

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Introduction. The pharmaceutical dissolution test plays a key role in drug development and is used during the formulation stage for quality control testing and is an essential tool for estimating bioavailability. For the active pharmaceutical ingredient (API) that has an increased solubility, it is expected not to raise bioavailability issues, especially if the pharmaceutical form allows the active substance to dissolve rapidly within the expected physiological pH range after administration of the product. Dissolution test is listed in several Pharmacopeia: European, British, US and others, as a quality procedure both for solid and semi-solid formulation like suppositories.

Aim of study. This study aimed at the formulation by an optimised technology of suppositories with sodium salicylate and determination of its availability using in vitro dissolution testing.

Methods and materials. Suppositories were prepared in series by two methods: hand rolling with the use of cocoa butter and by casting method with semisynthetic glycerides, both with addition of 2% polymer gel of sodium alginate. For the dissolution rate study, the Erweka dissolution tester, in the medium of purified water, by paddle method was used. The dosing was performed photocolorimetrically at 525 nm wavelength, based on the colour reaction with iron chloride. All reagents were chemically pure.

Results. Sodium salicylate is an analgesic and antipyretic drug from the group of salicylic acid derivatives. It is prescribed for acute rheumatism, exudative pleurisy, non-rheumatic arthritis, gout, neuralgia, myalgia, etc., moreover it is also studied biopharmaceutical as a hydrotropic agent. Many medical protocols indicate long-term use of salicylates for children in single doses from 0.1 to 0.5 and for adults from 0.5 to 1.0. In order to avoid the mostly local side effects on the stomach, it is practised to prescribe them rectally. Suppositories are semi-solid pharmaceutical forms, which contain unit doses of one or more active substances which at room temperature are solid and melt at body temperature. For the study, according to the prescribed dose, suppositories with average mass of 2.0 gr were formulated on cocoa butter and semi-synthetic glycerides with and without dispersion of sodium salicylate in 2% gel of sodium alginate. The results of sampling at 10, 20, 30, 45 and 60 minutes, showed a good release and dissolution of the sodium salicylate from cocoa butter suppositories (57%). The addition and dispersion of API in the natural polymer, based on polysaccharides, sodium alginate gel of 2%, increased the dissolving rate of sodium salicylate to 61%. For the semisynthetic glycerides the dispersion method did not statistically influence the dissolution % of the API.

Conclusion. As a result of the study, suppositories were prepared on lipophilic excipients with cocoa butter and semi-synthetic glycerides with and without addition of polymer. The in vitro dissolution study showed that in determining the quality profile and bioavailability prediction of the semi-solid product - suppositories containing sodium salicylate - it will depend on the nature of the excipients and adjuvants used in formulation.

35. THE MANUFACTURING TECHNOLOGY AND THE BIOAVAILABILITY OF MEDICINAL SUBSTANCES FROM CAPSULES

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Introduction. The original purpose of taking medicinal substances in capsules was to mask the unpleasant smell and taste of drugs. Today, however, it prevails that the bioavailability of drugs in hard capsules is significantly superior to other solid forms for oral use (tablets, powders, etc.).

Aim of study. The aim of the research is to present modern methods of manufacture of operculated capsules, their advantages and the factors which determine the bioavailability of medicinal substances in the operculated capsules.

Methods and materials. Bibliographic sources were analysed using NCBI platform, PubMed DrugBunk, Pharmatech, Pharmaceutical-technology and others.

Results. Operculated capsules are hard-coated capsules, also called hard capsules, gelatinous capsules with a cap or gel. The capsules are solid pharmaceutical preparations, consisting of a hard coating, consisting of two prefabricated cylindrical parts, opened at one end and with the other rounded and closed ends. The active substance, generally in solid form (powder or granules) is introduced into one of the two parts, then the second merges with the first. High bioavailability compared to other solid preparations (tablets,¬ drops, pills) derives from the fact that gelatin walls break and dissolve rapidly, resulting in rapid release of active substances. Advantages of the capsules include: simple formulation, which allows the control of possible incompatibilities and the avoidance of them; easy and fast manufacture with superior precision of dosage in modern technologies; masking the bad taste and smell of some medicinal products. One of the technological methods of manufacture of capsules is immersion which is carried out within a specified time-frame and speed. Immersion of the pine bars in gelatin solution takes place by simultaneously immersing pin molds at a temperature of 22°C in gelatin solution at a temperature of 50-55°C, and on the surface of each pin a thin thread of gelatin is formed, so it has the shape of the capsule body. The breaking and the dissolving of gelatin, and as a result the bioavailability of medicinal substances within it, will depend on the following factors: 1. nature of gelatin (Type A or B); 2. pH of the liquid medium, which can have influence on the dissolution of both: the walls and the solid contents; 3. wetting the contents of the capsule; 4. avoiding the interaction of gelatin-medicinal substances within the capsule, which may result in a reaction which may ¬extend the time of opening of the capsule; 5. storage of capsules.

Conclusion. Operculated capsules are one of the most convenient and light pharmaceutical forms used by the patient. The capsule production technology is completely automatic, modern equipment has optical scanners that detect visual imperfections and reject those ones. The bioavailability of the operculate capsules is among the highest but depends on the active substances and excipients. Operculated capsules are widely distributed globally with high efficacy and minor side effects.

36. THE PHARMACOGENETICS ASPECTS OF NEBIVOLOL

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Introduction. The pharmacokinetic and pharmacodynamic properties of β-blockers depend on the variation in genes that contribute to a wide variability of the response between patients. Nebivolol is a cardioselective third-generation β–blocker that is metabolised primarily by the liver by CYP2D6, a metabolic pathway that is under polymorphic genetic regulation. Nebivolol is marketed as a racemic mixture of D- and L-enantiomers. D-nebivolol is responsible for the selective β1-adrenergic receptor antagonism and L-nebivolol for the vasodilatory effect.

Aim of study. The aim of this study is to describe the pharmacogenetic factors affecting nebivolol metabolism and response and to determine the role of CYP2D6 phenotypes on the efficacy and tolerability of nebivolol.

Methods and materials. A bibliographic study was performed with the selection and analysis of 25 scientific bibliographic sources from Pubmed databases and journals on the pharmacogenetic characteristics of nebivolol and their influence on pharmacokinetic parameters and pharmacodynamic effects.

Results. Nebivolol is primarily metabolised by the liver by CYP2D6, including the N-dealkylation, hydroxylation, oxidation and glucuronidation. Both aromatic hydroxylated and alicyclic oxidised molecules are pharmacologically active metabolites, while the N-dealkylated metabolite and glucuronides are inactive metabolites. The bioavailability is 12 % in extensive metabolizers and 96 % in poor metabolizers. The half-life of nebivolol is about 10 hours in extensive metabolizers and 30–50 hours in poor metabolizers. Nebivolol reduced significantly the blood pressure of hypertensive subjects characterised either as poor or extensive metabolizers for CYP2D6. The use of nebivolol in hypertensive patients with a genetically impaired CYP2D6 metabolism appears to be as safe and efficient as in those with a normal metabolic capacity. The vasodilatory action of nebivolol has been attributed mainly to the presence of the L-enantiomer and as being dose dependent. In the hypertensive patients with the poor metabolizers phenotype had plasma levels of L-nebivolol up to 15-fold higher than those of extensive metabolizers, but is not associated with an acute or pronounced fall in blood pressure nor with particular toxicity. The β-blocking activity of nebivolol, which has been ascribed mainly to the D-enantiomer, was found equipotent between the parent drug and the metabolite. The genetic defect CYP2D6, the accumulation of the parent drug in plasma, is likely to compensate for the low formation of active hydroxylated metabolites.

Conclusion. Polymorphisms in the gene encoding CYP2D6 significantly influenced the metabolism of nebivolol, but not its antihypertensive efficacy and tolerability. The similar clinical response between extensive metabolizers and poor metabolizers could be explained by the contribution of active hydroxylated metabolites of nebivolol to its antihypertensive actions in extensive metabolizers.

37. THE TOTAL CONTENT OF HYDROXYCINNAMIC ACIDS IN SOLIDAGO VIRGAUREA L.SPECIES

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Introduction. According to the recent bibliographic data, Solidago virgaurea L. (European goldenrod) contains various groups of biologically active substances, including the hydroxycinnamic acids, among them the most important are caffeoylquinic derivatives due to which the plant demonstrates a broad spectrum of therapeutic activities, such as antioxidant, anti-inflammatory, immunomodulating, antibacterial, antiviral, etc.

Aim of study. Spectrophotometric determination of total hydroxycinnamic acids in vegetal products of S. virgaurea species from the Republic of Moldova spontaneous flora.

Methods and materials. Plants of S. virgaurea species harvested from the Landscape reservation Trebujeni in the flowering period served as vegetal material. Before the extraction, the plant material was dried at room temperature. The dry extracts have been obtained through a fractional maceration method and afterwards have been concentrated using the Laborota 4011 rotative evaporator. The content of total hydroxycinnamic acids was performed by a spectrophotometric method, using the Arnow reagent described in the European Pharmacopoeia 6th edition and French Pharmacopoeia, 2007. The optical density was measured at Metertech UV/VIS SP 8001 spectrophotometer at wavelength of 518 nm.

Results. The total hydroxycinnamic content (THC) was performed according to a spectrophotometric method, using the Arnow reagent (10 g sodium nitrite and 10 g sodium molybdate made up to 100 mL with distilled water) and 8.5% sodium hydroxide solution. The absorbance of the test solution was measured immediately at 518 nm against blank. The percentage THC was calculated and expressed as caffeic acid, according to the following expression: (%)=A×200/m×300, where A is the absorbance of the test solution at 518 nm and m is the mass of the herbal drug, in grams. The results of the THC in different vegetal products (leaves, aerial parts and flowers) of S. virgaurea species indicate the following data: the highest percentage of hydroxycinnamic acids was determined in the flowers of European goldenrod (0,78%), followed by the aerial parts (0,66%) and on the last place are the leaves (0,52%).

Conclusion. The assay of total content of hydroxycinnamic acids in different vegetal products of S. virgaurea species from the spontaneous flora of the Republic of Moldova demonstrates that all vegetal products contain significant amounts of hydroxycinnamic acids, but the flowers are placed on the forehead.

38. THE USES OF ROYAL JELLY AS A NATURAL TREATMENT REMEDY

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Introduction. In some European countries, such as France and Belgium, royal jelly is already considered a food. The same is true in other countries, such as Uruguay, where it is sold in stores, under the authorization of the State Office of Food Science. It is true, that is not necessary to consume in large quantities. The reservoir of vitamins, minerals, trace elements, amino acids, enzymes, royal jelly is a perfect choice. Being a bee product with the most complex and various actions on the body, royal jelly contains almost all nutrients needed by the body being the only natural source of 10-HDA acid and acetylcholine, essential nutrients, being unfeasible to synthesize.

Aim of study. Study and analysis of national and international bibliographic sources regarding the benefits and uses of royal jelly as a natural product in traditional treatment.

Methods and materials. Bibliographic sources were analyzed using PubMed, Publons, Scopus and others databases.

Results. Royal jelly is a secretion made by young nurse bees working in the hypopharyngeal glands, and is used in the feeding of queens, both in their larval and adult state. Royal jelly has a major component of fatty acid, namely 10-hydroxy-trans-2-decenoic acid (10H2DA), being used as a traditional medicine and as a dietary supplement in the past to treat many diseases. In Japan, for example, it has been shown that under the action of royal jelly, new neurons, oligodendrocytes and astrocytes are differentiated from nerve stem cells (Shoei Furukawa et al.). In other words, the old theory of traditional medicine that neurons and other nerve cells cannot regenerate has been overturned. Furthermore, royal jelly is perhaps the most powerful stimulant of stem cells. This miraculous elixir is used in the treatment of various diseases, namely: inherited genetics; in degenerative diseases; in maintenance treatment; in malignant diseases; a natural remedy for patients with type 2 diabetes; a solution for regulating blood sugar; respiratory disorders; dermatological problems; disorders of the peripheral nervous system; ophthalmic pathology; diseases of the internal organs. The phenolic compounds, namely flavonoids in royal jelly carry antimicrobial, antifungal, anti-inflammatory, and wound-healing benefits.

Conclusion. Royal jelly positively regulates the body's antioxidant status. Royal jelly differs slightly from other useful bee products. This product has gained value due to its composition and delicate effect on the body. The correct and regular use of the product ensures not only the general strengthening of the body, but also the elimination of quite serious pathologies.

39. TOPICAL PREPARATIONS USED IN THE TREATMENT OF PSORISIAS

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Introduction. Psoriasis is a condition of the immune system that is manifested by the rapid growth of new cells in the skin. Immune cells release defective signals that cause the formation of new skin cells in just a few days, instead of weeks, as normal, so the body does not have the ability to integrate excess cells, and they accumulate on the surface of the skin and form lesions. In the Republic of Moldova, psoriasis accounts for about 4-6% of all skin conditions.

Aim of study. Study and analysis of national and international bibliographic sources regarding the treatment of psoriasis as well as documentation of the assortment of topical pharmaceutical forms prepared in the University Pharmaceutical Center "Vasile Procopisin".

Methods and materials. Analysis and study of the magistral prescription of common topical pharmaceutical forms in the treatment of psoriasis in the University Pharmaceutical Center "Vasile Procopisin".

Results. Psoriasis is a disease that requires a complex approach. In fact, it is so complex that scientists are still studying what happens when a patient faces this condition. It is known that the immune system and genes play a key role, by studying them, the researchers found that in the case of psoriasis, T cells (a type of white blood cell that fights bacteria and viruses) trigger an incorrect reaction in skin cells. The treatment in case of psoriasis is a complex one, both systemic and topical, involving the use of corticosteroids, keratolytic agents, vitamin D analogues, topical retinoids and, in severe cases, antimetabolic, immunomodulatory medication ,etc. In addition to conventional pharmacological therapies, other forms of therapy may be used, such as UV therapy, stress management , therapeutic use of climatic factors , and more. Mild cases can be alleviated with the use of ointments and moisturizers. When the area covered by the lesions is less than 5% of the total body surface, the specialists indicate prescriptions for the use of pharmaceuticals with local action. Therefore, in the University Pharmaceutical Center "Vasile Procopișin" in the Republic of Moldova according to medical prescriptions, soft pharmaceutical forms containing salicylic acid and sulfo-salicylic acid of 1-5% are prepared , sometimes in combination with corticosteroids frequently used in the treatment of mild forms of psoriasis.

Conclusion. Psoriasis is a chronic skin disease that can be successfully treated with special medical treatments. The study demonstrated the effectiveness of topical pharmaceutical forms prepared in the pharmacy according to medical prescriptions. In the Vasile Procopisin University Center, the most used prescriptions were selected and analyzed in the treatment of psoriasis in order to optimize their preparation technology.

40. VARIATION OF THE PH OF COMBINED ANTIFUNGAL EAR DROPS IN CONDITIONS OF HIGH HUMIDITY

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Introduction. The pH of the external auditory canal in healthy people ranges from 5,0 to 7,8, while the pH of the external auditory canal affected by otitis is higher, ranging from 7,1 to 7,8. Recent studies show local changes in the pH of the external ear canal from acidic to alkaline in patients with chronic external otitis, demonstrating that the acidic pH of the external ear canal plays a protective role against infection. Thus, this parameter is extremely important for otologic pharmaceutical forms, and maintaining stable pH in the process of using ear drops is a condition for successful treatment. Hydrolytic stress through exposure to increased humidity is one of the parameters determining stability under accelerated conditions.

Aim of study. To study the influence of humidity on the pH values of ear drops combined with econazole, ciprofloxacin and volatile basil oil.

Methods and materials. pH meter Consort C 861, Belgium, was used for the determinations. The open pack pharmaceutical form was stored in an exicator over water for 48 hours at 250C.

Results. Most ototopic preparations have a pH of 3-4, because bacterial growth is inhibited at this level. Pharmacopoeial requirements stipulate limits between 5,0 and 7,0 for ear drops. In the investigated pharmaceutical form, pH corrector was used: phosphate buffer solution containing monosodium phosphate/disodium phosphate, pH=6,0. The results obtained after exposure to humidity for 48 hours, determined in triplicate, show that the pH of the formulation does not tend to major oscillations from the initial value (5,3), being equal to 5,35; 5,29 and 5,34.

Conclusion. It was determined that humidity does not influence the pH of the combined ear drops, which demonstrates that the buffer system has the ability to maintain the constant value of the medium to ensure the optimal effect.

X. Stomatology Section

1. ACTUAL PRINCIPLES IN THE PREPARATION AND OBTURATION OF DENTAL CARIES

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Introduction. Dental caries continues to be the dental disease with the highest overall incidence. This aspect requires the study and continuous development of new methods for diagnosis, prevention and treatment of dental caries. The scientific and technological progress of the last decade has contributed to the improvement of the properties of existing adhesive systems and, eventually, to the improvement of the techniques used in the treatment of dental caries. Currently, doctors prefer modern methods for preparing carious cavities so as to conserve as much as possible healthy dental tissue. This fact corresponds to the high requirements of patients in cosmetic dental restorations, both functionally and physiognomically. The medical approach in the treatment of dental caries requires the application of the concept of minimally invasive surgical therapy, the internal and external contour of the preparation being influenced by the volume of the lesion.

Aim of study. Evaluation of aesthetic and functional preservation methods of caries-affected teeth and treated according to modern medical standards.

Methods and materials. In this study, 14 patients aged 20-45 years, including 6 women and 8 men, were examined and treated. After the clinical and paraclinical examination, at 2 patients the clinical diagnosis of superficial caries was established, at 11 patients the clinical diagnosis of moderate chronic caries was established and at one patient - deep caries. Class I, II and III carious cavities were diagnosed (according to the Black classification). Sable Seek caries indicator, Calcimol LC liner and Clearfil AP-X ES-2 light-curable nanohybrid composite was used to ensure an effective treatment. The therapeutic conduct based on the principles of the ”Free design” technique for the preparation of carious cavities was used. The defect-oriented principle, the principle of less preparation, the principle „Keeping enamel without dentin support“ and the principle „Repair the restoration without a total change“.

Results. The patients who underwent the treatment of morpho-functional and aesthetic restoration of the caries-affected teeth, by the method of free design, with composite materials according to the newest technologies, presented satisfactory results at the dynamic monitoring stages.

Conclusion. The preparation of carious cavities based on the free design technique reduces the number of work steps, the duration of the operation, the possibility of further complications and meets current biomimetic medical standards.

2. ACUTE AND CHRONIC LYMPHADENITIS IN ORO-MAXILLOFACIAL REGION IN CHILDREN

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Introduction. Lymphadenitis represents one of the most frequent causes of patients' addressing to the department of paediatric maxillofacial surgery. In order to make a correct diagnosis there is a need for various clinical and paraclinical examinations. A detailed anamnesis should be required from the child's parents, followed by the head and neck region examination so as to identify infectious processes of the scalp, some sources of inflammation or infection in the teeth, oral mucosa and the tongue. The palpation of lymph nodes aims to estimate their size and consistency,as enlargement in a short time may suggest a malignant process. Among paraclinical methods ultrasonography, MRI and fine needle aspiration biopsy are widely used. Ultrasonography is a propitious imaging tool for visualising the number, layout, margins, size and the morphology of the lymph nodes in peripheral lymphadenopathy, while computed tomography and MRI are more useful in assaying thoracic and abdominopelvic cavities, their certainty being predicted by the size of the lymph node. Fine needle aspiration biopsy is helpful in diagnosing reactive hyperplasia, infections, lymphomas, and metastases.

Aim of study. To learn the disease prevalence by gender and the key investigations indenting to make a judicial diagnosis**.**

Methods and materials. In this research, using the program Microsoft Excel there were statistically analysed patients admitted to the department of paediatric oro-maxillofacial surgery of the Republican Clinical Hospital for Children "Emilian Coțaga" during 3 years, between 01.11-2018- 01.11.2021. Thus, during this period, 300 patients were hospitalised, 166 were boys (55%) and 134 girls (45%). The type of interventions performed on these patients was also analysed. The data were presented in a bar chart and pie chart.

Results. Out of the total number of hospitalised patients, boys prevail (55%) and out of the operations performed to treat them, there were performed 128 incision and drainage interventions of deep abscess of the soft tissues, followed by 81 incision and drainage interventions of the skin and subcutaneous tissue, and 64 of them didn't undergo any surgery.

Conclusion. An efficient treatment of patients with cervical lymphadenitis is carried out using a range of clinical and paraclinical examinations. Ultrasonography, MRI and fine needle aspiration biopsy are the methods of primary choice.

3. BILATERAL TEMPOROMANDIBULAR ANKYLOSIS. CASE REPORT.

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Introduction. Temporomandibular joint (TMJ) ankylosis represents the impossibility of mandibular movements due to bone consolidation between mandibular condyle and the glenoid cavity of the temporal bone. This pathology creates important morpho – functional and aesthetic difficulties and has a significant impact on life quality.

Case presentation. A 28 years old patient was admitted to the Department of OMF surgery, Emergency hospital with the diagnosis of bilateral temporomandibular bone ankylosis. She was clinically and paraclinically examined. The surgery called ”TMJ arthroplasty, using a reconstructive plate and an artificial Titanous condyle” was performed.

Discussion. The postoperative period evolved favourably. Postoperative, the degree of the opening mouth estimated 3 cm, free and painless mandibular movements. 6 months later, at the check up visit, the decrease of the opening mouth was to 1 cm. Also, limited mandibular movements were followed. The radiologic exam revealed a bone consolidation around the artificial Titanous condyle.

Conclusion. Being a biocompatible material, the artificial Titanous condyle needs a protection barrier, which would limit its bone integration (biocompatible acrylic resins, nearby soft tissue flaps).

4. CHEMILUMINESCENCE AND TOLUIDINE BLUE AS DIAGNOSTIC TOOLS IN EARLY DETECTION OF LEUKOPLAKIA

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Introduction. The recognition and management of premalignant disorders, and the understanding of their potential progression to oral cancer will minimize the morbidity and mortality, from treatment and will have a direct effect on patient survival. Estimates of the prevalence of oral potentially malignant disorders suggest an overall figure of between 2 to 3%, with the vast majority appearing clinically as leukoplakias, and usually presenting on the floor of the mouth, ventro-lateral tongue and buccal mucosa. Clinical examination alone cannot differentiate between dysplastic and non-dysplastic leukoplakia, and may confound the degree of dysplastic change. Although histologic examination of tissue from a biopsy is the gold standard for diagnosing oral cancer, chemiluminescence and toluidine blue are principal strategies to conventional examination used to assess the patient's lesions at risk of malignant transformation.

Methods and materials. A total of 10 patients with clinical appearance of premalignant lesions were included from the outpatients attending Dental clinic Nr. 2, USMF "N. Testemitanu", Chisinau. Among the subjects, minimum age was 18 years and maximum was 65 years, with a mean age of 40.7 years, and the majority (37.7%) of them belonged to the fourth decade of their life. The gender ratio among the observed patients tilted in favour of men. All clinical presentations of PMD disease had been new, with untreated oral mucosal lesions confirmed on provisional, incision biopsy diagnosis. Patients with a previous history of oral cancer or pre-cancer, those presenting with widespread multi-focal potentially malignant disease, and patients who had previously undergone radiotherapy treatment for a head and neck malignancy were excluded. These patients were subjected to conventional oral examination followed by toluidine blue staining and chemiluminescent examination with Microlux DL and biopsy for histopathological confirmation.

Results. Of the 10 lesions examined 4 were defined as clinically benign. While 6 were defined as suspected lesions (premalignant or malignant). Furthermore, 2 out of the total 3 negative lesions to toluidine blue staining were histologically benign lesions while 6 out of the 7 staining toluidine blue positive were histologically defined as precancerous or cancerous lesions. The floor of the mouth and the lateral tongue (30%) were the most frequently involved site, followed by buccal mucosa (20%), the gingiva (10%) and alveolus (10%). Histological examinations revealed that 2/10 were benign lesions and 8/10 were precancerous or cancerous lesions, including leukoplakias.

Conclusion. Chemiluminescent light and staining with toluidine blue can be used as a general oral mucosal examination system and may in particular improve the visualization of potentially premalignant lesions. Although it is an easy, safe, minimal time consuming, and noninvasive protocol, it has only adjunctive utility and it does not replace biopsy for the diagnosis of leukoplakia.

5. CHRONIC GENERALIZED PERIODONTITIS, MEDIUM FORM. DIAGNOSIS AND TREATMENT

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Introduction. Periodontal disease is a chronic inflammatory disease of the periodontium associated with a dysbiotic microbial biofilm that affects the supporting tissues around the teeth, leading to the destruction of mineralised and non-mineralised connective tissues. Chronic periodontitis is one of the most commonly encountered periodontal diseases, which is characterised by its degree of severity and is the main cause of tooth loss and is considered one of the greatest threats to oral health.

Aim of study. Assessment of the prevalence of periodontal disease and in particular of chronic generalised periodontitis, its mean form in different populations, risk factors and its association with systemic diseases. Discuss strategies and measures for diagnosis and treatment of periodontal disease based on the literature.

Methods and materials. The following search engines for scientific information were chosen: PubMed, Scopus, Web of Science, The Cochrane Library, LILACS, OpenGrey și Google Scholar. Keywords such as periodontal disease, chronic periodontitis were used to select articles. The search engine results displayed a number of 135 articles according to the keywords entered, from these articles were selected in which were described: periodontal disease, epidemiology of periodontal disease, risk factors, systemic implications of chronic generalized periodontal disease in various diseases and treatment methods. Twenty-five patients (8 men and 17 women) aged 30-50 years, diagnosed with chronic generalized periodontitis, medium form with development of a treatment plan were included in the given study. For an objective evaluation of the condition of periodontal tissues, the following diagnostic and treatment procedures are recommended: oral hygiene, removal of dental calculus, selection of hygiene products and training in their implementation, closed and open periodontal curettage, flap surgery and guided tissue regeneration, regenerative drug therapy.

Results. Significant improvement, disappearance of unpleasant odour and taste from the oral cavity, absence of bleeding and pain and a gradual cessation of tooth mobility.

Conclusion. Chronic generalized periodontitis, middle form is a pathology that can be detected in both young and old people. The term "chronic generalized periodontitis" refers to a disease of a degenerative-dystrophic nature. During the pathological process, the alveolar process, the bone structure, undergoes considerable changes. At the same time, periodontal tissues are affected. Currently, the disease is a serious dental problem. This is due to the fact that chronic generalized periodontitis is difficult to treat. Key words: periodontal disease, chronic periodontitis.

6. COMPLEX APPROACH IN THE TREATMENT OF DENTO-MAXILLARY ANOMALIES, SKELETAL FORMS

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Introduction. Contemporary orthodontics has evolved significantly over the last decade due to the use of modern techniques which have allowed the orthodontist to approach the treatment of complex cases more efficiently. Depending on when the patient is referred to an orthodontist, the complexity of orthodontic treatment can range from the prophylactic methods to the combination between orthodontic and surgical methods. The treatment technique is determined by the patient's age, the malocclusion severity, the patient's accusations and the cephalometric analysis.

Aim of study. Evaluation of methods of diagnosis and treatment plan of dento-maxillary anomalies through complex approach

Methods and materials. For this study were selected 9 patients (4 boys and 5 girls), aged between 11 to 31 years, with dento-maxillary anomalies. The patients were selected according to: age, type of malocclusion by Angle and cephalometric parameters. The treatment of skeletal forms of malocclusion requires an early and interceptive treatment, in order to reduce the severity of the malocclusion. The treatment is based on growth changes with functional devices and extraoral forces, but after skeletal growth is finished, surgical and camouflage methods for the malocclusions treatment are used.

Results. Following the study, according to the distribution by sex, the prevalence of females was 56% and the presence of males in 44%. According to the criterion of distribution by age, the patients from the group with 16 -31 years predominate in 67%, followed by those from group number 2 which represent 33% with the age between 11 and 15 years. Following the radiological examination- teleradiography and the cephalometric study, the results were divided based on Tweed's triangle. Thus, analyzing the FMA angle, a prevalence of the normodivergent growth type was obtained in 5 cases, followed by the hypodivergent growth- 3 cases and the hyperdivergent growth present only in 1 case. The assessment of the position of the lower incisors in relation to the bone base is made according to the IMPA angle and we obtained in 4 cases retroclined and proclined incisors, and only in 1 case the incisors were positioned within the norm. Analyzing the FMIA angle dates to assess the location of the mandibular incisor in the facial diagram, in 4 cases the incisors were inclined and in 5 cases they were retroclined, and in none of the cases they were not positioned within the norm. According to the cephalometric study, especially after the Steiner analysis, which indicates the type of anomaly: dento-alveolar of skeletal. Following the ANB angle analysis, we determined a prevalence of skeletal class III- 45% and 44%- the presence of skeletal class II, within the norm being only 11%. Complex orthodontic treatment was used in 6 out of 9 cases, representing 66%.

Conclusion. 1. From the data of the performed study, the correlation between the severity of dento-maxillary anomalies was established according to the analyzed cephalometric parameters (FMA, SNA, SNB, ANB). 2. The treatment methods selection is based on the severity of the ANB angle (2±2). Patients with values of the ANB angle that are exceeded by 6 from the normal value, are often rehabilitated by orthodontic and surgical treatment, with gnathosurgery elements.

7. DENTAL DISCOLORATIONS. MODERN METHODS OF TREATMENT

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Introduction. Dental discoloration is a clinically visible deviation from normal tooth colour and is one of the most common causes for patients to resort to cosmetic treatment. They can affect a tooth, a group of teeth or the whole dentition, the teeth, in turn, being partially or totally affected by dischromy. The frequency of dental discolorations is constantly increasing: on the one hand due to the high rate of pathologies accompanied by discomforts (fluorosis, hypoplasia, caries etc.), environmental pollution and foods with multiple dyes, and on the other hand−due to the permanent increase of the aesthetic needs of the population. They can be differentiated according to etiology, location, appearance, severity and treatment possibilities.

Aim of study. Identify the causes that lead to dental discoloration; study of clinical manifestations and methods of treatment of dental discolorations.

Methods and materials. In this paper, we used the following search engines: Google Scholar, PUBMED, Medline.com, Science Direct, Pure, SSRN, Scirus, Trip Database. Keywords such as: discoloration, dental, hygiene, methods were used to select articles. The results of the search engines displayed a number of 64 articles according to the keywords entered. To achieve this goal, 12 patients with dental discoloration, aged between 18 and 65 years, were selected and examined. In order to achieve the proposed objectives, patients with dental dischromy of different etiologies were selected, examined and treated, the vast majority presenting discoloration following the consumption of various foods. In the treatment of patients was used professional oral hygiene, professional teeth cleaning with Air-flow system, professional teeth whitening.

Results. The results were positive, as patients noticed changes in aesthetics and said that even self-confidence increased.

Conclusion. Dental discolorations serve as a major cause of change in aesthetics and the patient's smile. They can occur as a result of exogenous, endogenous and iatrogenic factors. Until recently, the treatment of dental discoloration consisted only of orthopedic treatment (restoration, crowns, veneers, etc.) and, therefore, it was necessary to prepare healthy dental tissues, as well as to remove dental deposits with polishing with various professional pastes. The appearance of different whitening systems, based on hydrogen peroxide or urea, can change the colour of the teeth without radical treatments.

8. DENTAL NUMBER ANOMALIES

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Introduction. Dental number anomalies are a part of dental system anomalies, represented by hypodontics and hyperdontics. Dental number anomalies are one of the most important problems of dentistry, because the frequency of patients with these pathologies continues to rise up. Hypodontia is a congenital absence of teeth,whereas hyperdontia is defined as an excessive quantity of teeth in dental arches in temporary or permanent dentition. All the symptoms find its manifestation at the occlusal-articular level and influence the physiognomy, phonetics and mental health of the patient.

Aim of study. To study the etiology, frequency and clinical manifestations of dental number anomalies.

Methods and materials. The study is based on the analysis of a group of patients suspected of having a dental anomaly between 5 and18 years old. Collected personal data were recorded in an observation sheet, followed by the clinical examination and the results of biometric analysis and a model study. The panoramic radiography confirmed the diagnosis of hypodontia or hyperdontia.

Results. According to the results of the panoramic radiography, 7 patients with hyperdontia were confirmed in both jaws, the most common supernumerary tooth was mesiodense. The gender ratio is 1,33:1 for boys.10 patients were diagnosed with hypodontia, located in the jaw; the most commonly missing teeth were the second upper lateral incisors, followed by the second upper premolar; the gender ratio was 2.3:1 for girls. In 3 patients there was detected a delay of tooth eruption. Out of the total number of patients 41.17%, the dental anomaly of number is inherited from parents and 29.41% were associated with other dento-maxillary anomalies. The model study determined that in 35% of patients the length and the width of the upper dental arch was reduced, and in 40% of patients the edentulous spaces were displaced due to dental migration creating several interdental spaces.

Conclusion. The resulting data indicate that there is a gender difference in the prevalence of hypodontia and hyperdontia. The etiology is multifactorial, involving genetic regulation and environmental factors. If it is not solved in time, the pathology will develop much more severely in the permanent dentition. Thus, prophylaxis and predicting methods of number anomalies are essential in dentistry.

9. DENTAL RESTORATIONS. INSTRUMENTATION, TECHNIQUES.

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Introduction. Currently, one of the most reliable methods of restoring hard dental tissue defects are direct aesthetic dental restorations with composite materials. Composites can be used to restore the tooth, restoring its natural and functional appearance while maintaining its structure. This type of treatment includes: changing the shape or colour of the teeth by removing defects of different etiology and location.

Aim of study. To study the existing information about materials and instruments used in this type of treatment "dental restorations".

Methods and materials. Ten search engines for scientific information were chosen: Google Scholar; Medline.plus, PUBMED, ScienceDirect, ScopusPreview, Medline.com, Cochranelibrary, Directory of Open Access Journals, Open Science Directory, Trip Database. Keywords such as: restorations, dental, composite materials were used to select articles. The results of the search engines displayed a number of 52 articles according to the keywords entered, from these it was selected the articles, in which methods, instruments, and composite material used in this type of treatment Direct dental aesthetic restorations were described. In the given study 10 patients were included (4 male and 6 female), aged between 25 and 35 years old, according to the place of residence 6 patients come from rural areas, and 4 from urban areas, diagnosed with dental caries, dyschromia, dysmorphic teeth, cracks, coronal fractures, with the development of a treatment plan. The direct dental restorative techniques used in the treatment of patients

Results. Was a positive one with achieving the desired shape, natural colour, and with maintaining function, all of which brought back the harmonious smile, confidence in the patient.

Conclusion. In order to achieve quality aesthetic dental restorations, it is necessary to respect the aesthetic parameters: height of the face, length and mobility of the lip, symmetry, incisal plane, posterior incisal plane, buccal corridor, lower lip, upper lip, asymmetry and colour of the lips, smile appearance, shape, texture, position and colour of the tooth, overall image. The indications for aesthetic restorations in patients requiring this type of treatment are: dental crowding, overflow fillings, hypoplasia, fluorosis, dyschromia, diastema, exposed dentine, surface defects, dental caries, dental crown fractures, abrasions, attrition, erosions, to improve facial appearance, to restore the functions of the dental apparatus, mastication, phonation, smile. Key-words: dental restorations, aesthetic smile, instrumentation, techniques, layering.

10. DENTAL TRAUMA AT DIFFERENT AGES OF CHILDREN

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Introduction. Traumatic injuries are not only a global health risk but are also considered among the serious social problems. An important category is dental trauma, accounting for a large proportion of health problems in children and adolescents. These injuries are more common among children aged 0-6 years and among older children aged 10-12 years.

Aim of study. The main purpose of this study is to highlight the age period most commonly affected by dental trauma.

Methods and materials. A retrospective study of the children who attended the M.I. "Chisinau Municipal Stomatological Centre" in the period 2020-2021 was conducted. The study aimed to analyse the results of dental traumatic injuries and their management in children up to 16 years of age. Records of patients who suffered dental trauma from 2020 to 2021 were evaluated for age, gender, etiology, type of injury and management. Children were divided into three groups - primary (0-5 years), mixed (6-11 years) and permanent dentition group (12-16 years). Dental trauma was assessed by Ellis and Davey classification of dental fracture along with other associated injuries.

Results. A total record of 47 children aged up to 16 years (mean age 11.27 ± 3.31 years) comprising 32 (69%) male and 15 (31%) female children with a total of 75 injured teeth (67 permanent and 8 primary) was analysed.

Conclusion. The majority of dental trauma cases were recorded in the permanent dentition group 53 cases, followed by the mixed dentition group 18 and primary 4 cases.

11. DETERMINATION OF DEVIATION COEFFICIENT OF MASTICATORY MUSCLES IN FIXED IMPLANT-SUPPORTED RESTORATION USING SURFACE ELECTROMYOGRAPHY

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Introduction. Electromyography is often used to assess the changes in the masticatory system due to different restorations including implants. Changes can be noticed both in the muscular activity and interactions between muscles in the same patients. However, many indicators are individual and cannot be compared, which in the end lead to the loss of useful data for the clinician.

Aim of study. Comparative evaluation of deviation coefficient in implant-supported restoration and dentate patients.

Methods and materials. The study was based on 63 patients (33 women and 20 men) that were divided in two groups. Dentate patients were the control group (33 subjects) and the edentulous ones with full-arch implant restorations (30 subjects) were the study group. A total of 204 two-piece dental implants have been placed and loaded with immediate provisional prostheses. The surface electromyography was performed with evaluation of muscle electrical activity as well as mean deviation coefficient out of the 6 parameters (PocTa, PocMM, Bar, Impact, Tors and Asym). Statistical analysis was done in R-Studio using variations of the Wilcoxon test.

Results. Statistical analysis has shown that both groups had a deviation from the normal range provided by the device. The study group had a mean deviation of 21,4 % and control one of 20.5%. Per to per comparison didn't reveal any statistical differences between groups in all six deviation coefficients as well as in mean one ($p>0.05$).

Conclusion. Fixed implant supported restoration provided an immediate equilibration of muscle activity similar to the dentate subjects. Despite the fact that implant-retained prostheses were new to the patients and there were no adaptational periods, that did not create any interferences in muscle function.

12. DIAGNOSIS AND ENDODONTIC TREATMENT OF CHRONIC FIBROUS APICAL PERIODONTITIS

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Introduction. The diagnosis and treatment of chronic apical periodontitis are among the most important components of dental pathology. The periodontium is a complex anatomical structure of conjunctive origin, distributed between the internal hard lamina and the radicular cementum and is in direct connection with the alveolar bone and the pulp through the apical foramen, and with the periosteum and gums through the dental margin.

Aim of study. To determine the effectiveness of the mechanical treatment and therapy combined with lubricants and irrigation solutions with antibacterial action.

Methods and materials. 12 patients aged 35-50 years, seeking prosthetic care, were subjected to endodontic treatment. The patients were examined clinically and paraclinically. The teeth showed signs of chronic fibrous apical periodontitis. Endodontic treatment in chronic fibrous periodontitis involved the use of antiseptic medication associated with the mechanical treatment and the therapy combined with antibacterial irrigation solutions and lubricants in order to neutralize degraded organic substances.

Results. The results obtained after an effective root canal treatment were analyzed at the first visit by using clinical and paraclinical tests (radiography), as well as in the follow-up post-therapy rehabilitation of patients at intervals of 3 months, 6 months, 12 months, by monitoring the clinical and radiovisiography parameters.

Conclusion. Endodontically treated teeth, according to radiographic data, showed uniformly filled canals without any gaps.

13. DIAGNOSIS AND TREATMENT OF LIPOMA IN THE ORAL AND MAXILLOFACIAL REGION. CASE REPORT

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Introduction. Lipomatous soft-tissue tumours are frequently seen neoplasm, characterised as soft, painless, encapsulated masses. In the Oral and Maxillofacial region these tumours account for 1-4.4%. Of interest is the lack of complaints for this type of tumour which is favourable for the tumour's growth with delayed addressing the specialist. Common sites are: parotid region, submandibular, tongue. Diagnosing a lipoma doesn't present difficulties because of classical clinical presentation, also the treatment is ordinary consisting in tumour excision.

Case presentation. Patient AN, women, 42 years was diagnosed with solitary lipoma localised in the lateral cervical left region. The diagnosis was established after the clinical and paraclinical examination: ultrasonography, magnetic resonance imaging. The treatment performed was a typical excisional procedure consisting of future incision marking, after the incision the dissection of the tissues were performed and the tumour was exposed with the excision of lipoma. The closing was performed by layered suturing the tissues and a drain was placed. No complication was noted during the rehabilitation period.

Discussion. Patients suffering from lipoma tumours localised in the oral and maxillofacial region present interest for the surgeons because of the complex morphofunctional and esthetic characteristics (complex vascularization and innervation, high esthetic demands from patients). The tumours are slow growing with predominantly superficial localization (subdermal), but cases of deep localization were also reported (intermuscular, subfascial). Another specificity is the tumour dimension, which varies from small (<3cm), medium (4-6cm) and big sized (7-10cm). Tumours don't grow more than 10cm, but rare cases are reported of giant lipoma that are bigger than 10cm. The treatment tactics depend on the size and lipoma localization, in cases where it has a small size and superficial location the treatment is ordinary unless it has large proportions and deep location.

Conclusion. Lipomatous tumours have an easy diagnosis and treatment with few adverse consequences for patients. Because the rate of growth is low the treatment can be postponed for a period of time, but it was demonstrated that morbidity is directly proportional with dimension and tumour depth.

14. ESTHETIC ASPECTS IN THE TREATMENT OF CLASS V CARIOUS LESIONS

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Introduction. Dental caries is considered one of the social problems. The gum around the tooth neck promotes the stagnation of microorganisms, eventually turning into plaque. The small thickness of the enamel at the level of the dental neck, 2.0 mm, makes this area much more vulnerable to various factors, such as incorrect brushing, neglect of oral hygiene or excessive consumption of carbohydrates, causing acid formation and demineralization of the already thin enamel. Direct restorations with a high aesthetic result please not only the patient but also the dentist, demonstrating the ability to choose the right material and its shade as well as the ability to model and restore morphologically the tooth.

Aim of study. To analyze the esthetic parameters in the treatment of class V carious lesions by Black`s classification.

Method and Materials. A study was performed on a sample of 7 patients - 5 women and 2 men, aged between 30 and 55 years, diagnosed with class V carious lesions by Black. The treatment of dental caries was performed according to the therapeutic stages corresponding to the carious lesion class. A major importance was given to the choice of the color of the nanohybrid composite, thus rendering a high aesthetics to the tooth. In the treatment of cervical caries, the stages of the clinical and paraclinical examination of the patients under study were observed, using the following materials: gingival retraction cord, rubber dam, 5th generation adhesive system, nanohybrid (polymerizable) photopolymerizable composite filling material.

Results. All patients had class V caries in the vestibular area. Of these, there were 3 carious lesions in the front region and 4 in the lateral one. There were 3 superficial carious lesions and 4 medium ones. Following the treatment, a high aesthetics of the tooth neck area affected by dental caries was obtained. The necrotic and pigmented dentin was completely removed to prevent the composite color from changing (erroneous results), because the composite has a certain transparency. An important step is to undercut the enamel edges, the purpose of this step being to allow a high adhesion of the composite and to avoid the appearance of microcracks between the composite and the enamel. In addition, undercutting reduces the visibility of the boundary between the dental tissue and composite. The study revealed that the theoretical and practical knowledge of the dentist about the anatomy and morphology of the teeth is paramount, the choice of the treatment method being also very important. The choice of the color of the filling material, the type of filling material, good tooth insulation, and the use of gingival retraction cord are very important too. In order to avoid the injury of the gum and dental-gingival junction, the retraction cord was used; thus the gingival tissue remained intact.

Conclusion. The clinical study showed that it is very important to obtain esthetic fillings in case of carious lesions of the tooth neck and not only, because patients have high requirements for an aesthetic smile. The carious lesions of the tooth neck have a high frequency. Poor dental hygiene and incorrect brushing are among the main causes. In order to obtain highly esthetic results in placing cervical fillings, it is very important to choose both the type of filling material and its color. Isolation of the tooth affected by the oral environment is of major importance in order to avoid the penetration of gingival fluid and saliva during the treatment, thus reducing the adhesion of the composite to the cavity.

15. EVALUATION OF THE RESULT OF SURGICAL ORTHODONTIC TREATMENT IN DENTO-MAXILLARY ANOMALIES CLASS III ANGLE. CASE REPORT

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Introduction. Dento-maxillary anomalies (DMA) are common and create an inferiority complex for patients. In severe abnormalities, rehabilitation includes a combined surgical orthodontic treatment that restores the morphology of the jaws, facial aesthetics and functions of the stomatognathic system. The surgical phase of the orthognathic treatment includes risks and benefits, which must be discussed and explained to the patient in order to sign an informed agreement. Together with the doctor, the optimal treatment method is chosen according to the patient's wishes but also taking into consideration the anthropometric norms.

Case presentation. Patient Z.M., 23 years old, with the diagnosis of dento-maxillary anomaly class III Angle with mandibular prognathism, addressed with aesthetic and functional chief complaints, in order to perform the second phase of the orthognathic treatment, after finishing the orthodontic decompensation phase. The treatment plan and making of surgical guidelines were accomplished due to thorough examinations : photostatic examination, orthopantomography, cone beam computed tomography, teleradiography, intraoral scanning, study models and digital planning programs. There has been performed a bimaxillary orthognathic surgery, le Fort 1 segmental osteotomy with advancement of the upper jaw combined with a bilateral sagittal split osteotomy (BSSO) and lower jaw distalization. Intermaxillary immobilization in a presurgically determined position using surgical splints. The recovery period went according to the operational trauma, without any complications

Discussion. Postsurgically, we noticed an improvement in facial aesthetics which are supported by the values of skeletal and soft tissue cephalometric indices and an amelioration of the functions of the stomatognathic system, as a result of restoring the correct position of the jaws and obtaining a physiological occlusion

Conclusion. Orthognathic treatment is a safe method of treating patients with dento-maxillary anomalies, which improves their daily lives. The benefits of the surgery greatly outweigh the risks, which in turn can be enhanced by the use of modern virtual planning techniques such as anatomical models and osteotomy guidelines.

16. FIT OF SCREW - RETAINED FIXED PARTIAL DENTURE IN PARTIAL EDENTULISM

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Introduction. There are many ways to treat partially edentulous patients. In the last few decades, dental implants have become a valuable option for prosthodontic rehabilitation. The use of endosseous dental implants to replace natural teeth lost to periodontal disease, trauma, or complication of dental caries has become a predictable form of prosthetic treatment. A lot of research studies have demonstrated that implant prostheses represent a predictable and successful restorative solution for these cases. Passive fit of an implant framework is one of the mechanical parameters expected to influence the longevity of an implant prosthesis.

Aim of study. To review the published literature for investigating the accuracy of fit of screw-retained fixed partial denture fabricated using different methods of manufacturing.

Methods and materials. A comprehensive electronic search was performed through PubMed (MEDLINE). The following keywords were combined: “fixed prosthesis”, “implant,” “framework,” “fit,” “accuracy,” “fitting surface,” “bridge,” and “screw - retained.

Results. A total of 30 articles were considered for review. After article selection, the relevant information from each article was extracted. From the selected studies, several implant framework fabrication methods were identified: conventional casting of metal alloys; sectioning and reconnection through soldering (the sectioned framework is indexed and reconnected with fused solder), CAD/ CAM, which involves fabricating the implant framework by means of computer numeric controlled milling; spark erosion, used to refine the fitting surface of the framework and framework bonding to a prefabricated abutment cylinder, where the framework body is constructed with space to accommodate a prefabricated cylinder and resin bonding is used to attach the framework body to the cylinders

Conclusion. No method of manufacturing is ideal for fabrication of screw-retained fixed implant frameworks in all aspects. Casting of metal alloys generally does not provide an acceptable implant framework fit unless additional treatment is performed. The benefit of soldering is unclear and perhaps replaced by laser welding. Spark erosion, CAD/CAM, and framework bonding to prefabricated cylinders have great potential to overcome significant inaccuracies produced by the fabrication procedure and provide implant frameworks with excellent fit. CAD/CAM provides better results.

17. IMMEDIATE IMPLANT PLACEMENT IN POSTERIOR SIDES OF THE MANDIBLE

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Introduction. Due to the development and progress of oral implantology and its methods, the early implant-prosthetic rehabilitation became a primary objective of the specialists. Thus, the immediate implant placement comes with certain benefits in the posterior areas, due to decreasing the terms of rehabilitation and number of surgeries. However, anatomical features do not allow placing an implant into a fresh extraction socket in a desirable position in all cases.

Case presentation. The evaluation of immediate implant placement in lower molar region using drilling through the roots. The study focused on a clinical case of immediate implant placement in the region of first lower molar. After clinical and paraclinical evaluation of the patient, the presence of the tooth with total crown lesion was determined, which did not allow rehabilitation by restorative techniques. CBCT analysis reflected the presence of a septum of insufficient size to allow the implant site preparation within its limit. The drilling process was performed through the furcation in order to avoid the slipping of the drills into one of the mesial or distal sockets, and the extraction of the roots was performed after it. In this way, the roots played the role of drilling guide. After the insertion of the implant and socket grafting, its position was radiologically evaluated in relation to the initially established plan.

Discussion. The procedure for using interradicular drilling consisted of the following stages: infiltrative anesthesia, removal of softened dentin remnants from the tooth surface, separation of roots, antiseptic treatment with Chlorhexidine 0.05%, drilling according to the protocol recommended by the manufacturer through the root separation area, the deep probe evaluation of the socket, syndesmotomy and roots extraction, the curettage of the apical regions and the antiseptic processing, insertion of the implant with the hand-piece at 30 RPM and the verification of its positioning, implant stability appreciation using Periotest device. Due to an insertion force greater than 30 Ncm, the application of the healing abutment does not present risks for the integration of the implant and also presents a mechanical protective barrier of the peri-implant space. X-ray evaluation relieved an implantation in accordance with the established initial plan.

Conclusion. In some clinical situations, the drilling of the implant site before root extraction can be considered a good option to achieve a desired implant position between mesial and distal sockets, especially when the septum has a reduced dimension.

18. IMPLANT-PROSTHETIC REHABILITATION OF EDENTULOUS PATIENTS WITH ANGULATED IMPLANTS

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Introduction. The edentulous prosthetic field with severe atrophy creates impediments to the desired surgical and prosthetic treatment. To overcome these shortcomings, the Fast and Fixed method of implant-prosthetic rehabilitation was proposed, which uses the available bone substrate for the insertion of implants in the anterior maxillary sectors and the possibility of their immediate loading with fixed temporary dentures, later replaced by permanent ones. The multitude of clinical situations still makes it difficult to choose this method.

Aim of the study. Evaluation of the particularities in implant-prosthetic rehabilitation of edentulous patients by the Fast and Fixed method.

Methods and materials. The study included 37 patients (21 men and 16 women), aged 35-73 in the period 2017-2020 with a diagnosis of total edentulous or potential edentulous total uni or bimaxillary with severe atrophies in the lateral areas. 216 Sky Bredent implants have been inserted. The temporary fixed dentures were later replaced with permanent fixed prostheses with implant support by the Fast and Fixed method. Evaluation criteria: fixed morpho-functional and aesthetic rehabilitation, comfort, rehabilitation time.

Results. In 32 cases the primary stability was ≥35 N/cm postimplantation offering the possibility of immediate loading with fixed temporary acrylic dentures. Patients presented at regular follow-up visits. The surgical stage took place without any peculiarities. During the osseointegration period, 4 temporary prosthesis fractured after 3 months, being immediately reconditioned. After 6 months of osseointegration, the patients were evaluated: the condition of the tissues, the contour and configuration of the dental arches, cheeks, lips; functional and aesthetic aspect; the conditions for maintaining oral hygiene, and patients who did not wear temporary dentures underwent second surgical stage. The rehabilitation of all patients was performed with definitive fixed prosthetic constructions: metal-ceramic (26) and metal-composite (17), bimaxillary being rehabilitated 6 patients. At 1 year after loading, 5 patients had tartar deposits on the surface of the final works, at 2 years the fracture of the ceramic plywood was det

Conclusion. Fixed implant-prosthetic rehabilitation by the Fast and Fixed method is a viable solution for edentulous patients with bone deficiency in the lateral maxillary areas demonstrated according to the evaluated criteria. The indications for the use of the method as well as the long-term estimation require continuous study.

19. INDICATIONS AND CLINICAL-TECHNOLOGICAL FEATURES OF PROSTHETIC TREATMENT OF CORONARY DENTAL LESIONS WITH MINIMALLY INVASIVE ZIRCONIUM OXIDE CROWNS

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Introduction. Coronary dental diseases are some of the most common pathologies of the stomatognathic system, and the methods of treatment by coating with crowns are the most effective methods of morpho-functional restoration (D. Bratu, R. Vissbaun, 2003). The application of artificial crowns in the vast majority of cases necessarily requires the preparation of hard coronary tissues, especially when applying contemporary technologies for the construction of metal-ceramic, all-ceramic, zirconium oxide constructions.

Aim of study. Determination of indications and clinical-technological features for making zirconium oxide crowns coated partially with ceramic by the stratification method.

Methods and materials. 8 patients between 23-55 years old were examined clinically and paraclinical with coronary dental lesions of the teeth situated in the frontal sector of the dental arches at both jaws previously treated. Were selected patients with orthognathic occlusion with minimal, medium, deep, and end-to-end coverage. Patients were examined clinically-instrumentally, radiologically and the models were studied visually and in the articulator. The assessment of the boundaries of the preparation areas was determined visually, and in the parallelograph, depending on the thickness of the hard tissues and the degree of incisal coverage. The position of the teeth on the arch, the static and dynamic occlusal reports were the main arguments that contributed to the miniinvasive preparation of the hard tissues of the teeth subjected to prosthetic treatment. The crown carcasses were made of zirconium oxide by milling, and the ceramics were deposited by the layering method.

Results. The study performed through the clinical and paraclinical examination of the selected patients offered us the possibility to prepare the crowns of the treated teeth, by covering them with mini-invasive zirconium crowns partially covered with ceramics vestibular or vestibulo-occlusal. The process of minimally invasive preparation of vital and devitalized teeth is argued by a minimum sacrifice of dental hard substance with biological, physico-chemical, mechanical protection and ensuring the aesthetic appearance.

Conclusion. The determination of indications for making zirconium oxide crowns partially coated with ceramic by stratification depends on the variety of occlusion, the thickness of the hard tissues, their size (volume and height) and their fragility, and not least the technological possibilities and wishes of the patient.

20. LATERAL WINDOW DESIGN FOR SINUS LIFT PROCEDURE

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Introduction. The sinus lift procedure, followed by immediate or delayed implant placement, is a common way of managing severe bone atrophy of the edentulous posterior region of the maxilla. A variety of osteotomy instruments such as rotary handpieces, piezosurgery devices and lasers, as well as methods of sinus mucosa elevation such as using curettes, balloon-assisted or hydraulic technique are available nowadays. However some of these devices are highly expensive or require special training. This report's purpose is to display an example of an efficient, safe and affordable technique of lateral sinus lift window preparation.

Case presentation. A 45 years old female patient with partial edentation of maxilla was admitted for implant treatment. During radiological examination, insufficient vertical bone height was determined, therefore lateral sinus lift was decided to be performed. The surgery was done under local anesthesia. After the traditional flap mobilization, an elliptical shaped window was prepared using round burs connected to straight handpiece and constant saline solution irrigation, until the Schneiderian membrane started to be visible. Using sinus curettes, through a tapping technique, the bone window was mobilized and the sinus membrane was elevated. After the placement of the alloplastic graft, the implant osteotomy was prepared and the endosteal implants were inserted.

Discussion. The preservation of the bony lateral window and elevation along with the sinus mucosa provides a better initial mechanical stability of the bone graft material as well as enhances bone regeneration, increasing the chances of successful osteo-regenerative processes.

Conclusion. Performing the elevation of the Schneiderian mucosa along with the bony window as described in this case is easier, faster, minimizes the risk of mucosa perforation and reduces the postoperative stress.

21. MORPHOFUNCTIONAL AND AESTHETIC RESTORATION OF FRONT TEETH WITH FLUID COMPOSITE MATERIALS. ANALYSIS OF THE AREAS OF INTERACTION OF COMPOSITE-HARD DENTAL TISSUE

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Introduction. The development of new technologies continues to improve the ability of the scientist, the manufacturer and the clinician to measure more efficiently and therefore to create a more ideal composite. However, the continuous search for an ideal restorative material, which is similar to the structure of the tooth, is resistant to masticatory forces, has physical and mechanical properties similar to that of the natural tooth, and has an appearance similar to natural dentin and enamel. As the mechanical properties of a restorative material approximate those of enamel and dentin, the longevity of the restoration increases.

Aim of study. Study of the areas of interaction "composite-hard dental tissue" in the comparative aspect of the adhesion of fluid vs hard composite materials, using electron microscopy of dental grinding.

Methods and materials. In this study, it was proposed to analyze the adhesion of fluid and hard composite materials to the interaction with dental tissues. During the experiment, 16 preparations were made. The patients, after consulting the dentist-orthodontist, decided to perform dental extractions. At the first visit, the affected areas of the hard dental tissues were imitated in the areas of the tooth package 14, 24, 34, 44, in the same stage the dental restorations were performed. Teeth 14, 44 were restored with fluid composites, and teeth 24, 34 were restored by hard composite materials. Preparation of dental grinds and their analysis under an electronic microscope.

Results. The analysis of the dental grinding of the interaction area between the composite materials and the hard dental tissues showed that the adhesion of the fluid composites vs hard ones is clearly superior.

Conclusion. The most recent studies evaluated on state-of-the-art fluid composites have shown that fluid composite materials are designed to provide better mechanical, physical, optical and aesthetic properties than many other universal composites.

22. ORAL HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH DIFFUSE CONNECTIVE TISSUE DISEASES

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Introduction. Health-related quality of life (H-RQoL) is an individual's perception of their position in life in the context of the culture and value systems in which they live, regarding both positive and negative elements in relation to their goals, expectations, standards and concerns. within five dimensions: physical and material, social and emotional wellbeing, development and activity.

Aim of study. Oral health-related quality of life (OHRQOL) is "a set of multidisciplinary elements that reflects people's comfort when they eat, sleep, and engage in social interaction, self-esteem, and oral health satisfaction". Moreover, OHRQOL is associated with functional, psychological, and social factors, the sensation of pain or discomfort.The Aim of study was to assess the affinity of oral health-related quality of life with health-related quality of life and their interaction in patients with diffuse connective tissue disease.

Methods and materials. A descriptive study was conducted selecting patients in a group of 21 subjects with diffuse connective tissue diseases. The quality of life was quantified by SF-8 (Short Form) in 8 domains and OHRQOL - in 7 domains with 14 questions. Although, were evaluated pain and fatigability by VAS, PGA and MDGA

Results. Data analyzed reveal the predominance of women (85.71%) in the study group, with a female to male ratio of 7: 1. The mean ± SD quality of life SF-8 physical and mental was 41,77 ± 15.76 and 56,90± 11.61 points, respectivily with wide variational interval - from 9.2 to 74.6 points. The pain by VAS was 62.50 ± 5.72 mm with wide variational interval - from 43 to 80, fatigability 60,5 ± 6,23 (range 40-74), PGA 53,0± 11,72 (range 30-66), MDGA – 51,33± 5.76 (range 40-70). The next scoring OHRQOL intems were social functional limitation (1p), physical pain (3p), psychological discomfort (5,14 p) and physical disability (2,23p), psychological disability (1,57p), social disability (2,75p) and disability (4p). The strongest correlation of domain of oral HR QoL was found with SF-8 physical status (r=0.64), followed by VAS fatigability (r=0.59) and MDGA (r=0.57). Within OHRQOL the data showed that psychological discomfort closely correlated with psychological disability (r=0.56) and life dissatisfaction correlated with social disability (r=0.42). Physical state correlation data with OHRQOL domains have been closely correlated with social disability and functional incapacity (r=0.53). At the same time SF-8 mental status has been correlated with psychological discomfort (r=0.43), followed by psychological disability (r=0.39). Correlation of OHRQOL questionnaire indices found close correlation between psychological discomfort and social disability.

Conclusion. Oral health-related quality of life and health-related quality of life assessment should be seen as complementary and can be used together to improve mutual understanding of patients' QOL status as well as partnership in disease management. At the same time, PGA and MDGA can be useful tools in assessing the activity of systemic diseases, as they have a low risk of misclassifying an inactive disease and can capture the health aspects of patients that adversely affect their well-being and treatment outcomes.

23. PARTICULARITIES OF ALTERNATIVE METHODS OF IMPLANTS PLACEMENT USING ALL-ON-4 AND ALL-ON-6 CONCEPT

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Introduction. Total edentulism remains an important challenge in oral implantology due to the consequences of teeth extractions which lead to bone and mucosa atrophy, sinus pneumatization and others. All these aspects create difficulties for implant-prosthetic rehabilitation because of the increased number of surgeries and terms. The development of alternative methods based on the All-on-six/four concept allow the specialist to restore the integrity of dental arches in short terms, with a less invasive approach.

Aim of study. Evaluation of the particularities of the implant-prosthetic rehabilitation of the patients by the All 4 and All 6 technique.

Methods and materials. The study was based on 18 patients, 5 men and 13 women aged between 40 and 72 years (mean age 57,36 ± 6,52 SD) rehabilitated using All-on-6/4 methods. Six patients had complete edentulism (4 in maxilla and 2 in the mandible) while 12 patients had partial edentulism (3 at the level of maxilla, 4 in the region of mandible, and 5 at both jaws) and periodontal compromised teeth. All the patients were clinically and paraclinical (CBCT) examined, and the treatment plan was performed. The following parameters were analyzed: length of the lip, smile line, position of the future incisal margin, prosthetic space, prosthesis angulation upon the alveolar ridge, bone density, number of implants and angulation, type of antagonists, necessity of bone reduction, surgical results related to the preoperative plan, bone evolution and complications during integration period. A total of 109 implants were installed (diameter of 4mm and higher and 8 to 14mm length).

Results. After evaluation of the treated cases, the most important role was played by the preoperative planning (esthetical, functional, and surgical aspects). The necessity of bone reduction influenced both esthetical results and implants length, angulation and distribution. The drilling protocol was correlated to bone density (32 implants inserted using under-preparation) to achieve a minimum of 35-40 Ncm, especially in the posterior tilted implants. The risk related to the primary stability of implants and bone density was higher in those patients who had stable and fixed antagonists. At 9 implants, due to the lack of stability, a deviation from initial plan was made by increasing the implant diameter and their angulation. In 4 cases, bone fenestration was made in tilted implants due to the curvature of the mandible. To minimize the loading risk, all the restorations were made with a metallic frame. At 6 months postoperative, in patients with poor hygiene, peri-implant bone loss was bigger than expected and implant platforms were slightly above the bone at 6 months post-prosthetic (in 8 implants). The prosthetic complications were present in 2 cases (composite fractures at the level of cantilevers).

Conclusion. The implant-prosthetic rehabilitation using All-on-6/4 concept led to good results in short terms and with minimal trauma. However, there are a lot of factors that may influence the success of such rehabilitations at the level of planning, surgery, and prosthetics. A significant disadvantage is the dependence of all the structures from each implant. Since these rehabilitations often include bone reduction and artificial gum and teeth, such procedures should be chosen as the last option, and not the main one.

24. PARTICULARITIES OF DIAGNOSIS AND TREATMENT OF THE DENTAL KERATOCYST. CLINICAL CASE

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Introduction. The odontogenic keratocyst (KO) is classified as a developmental odontogenic cyst, located in the oro-maxillo-facial region with a frequency of 10% of the maxillary cysts. It has aggressive behaviour and a high recurrence rate. The asymptomatic evolution favours the increasing into considerable dimensions, so patients are turning to specialists in the late phases of the disease. The high recurrence rate of KO and its morphopathological features can cause severe complications. Early diagnosis is still difficult to establish due to the particularities of its evolution, the lack of patient's information and sometimes superficial examination.

Case presentation. The patient, IM, m/51 years old, was hospitalised at the Emergency Hospital in the OMF Surgery Department with the diagnosis of Keratocyst in the region of the left mandible branch during 25 to 28 October of 2017, based on the clinical and paraclinical examination: OPG, CBCT. The patient's treatment included preoperative planning, spotting the edges of the cyst with respect to neighbouring anatomical formations, marking osteotomy landmarks, reconstructing the osteotomy segment by adapting and positioning the Titan artificial condyle reconstructive plate. The surgery was performed under general anaesthesia, by external approach: the incision itself, the acute and blunt preparation until the exposure of the mandibular branch with the formation, was performed: block resection with disarticulation of the condyle and mandibular branch, arthroplasty with reconstructive plaque and artificial condyle from „Titan". Hemostatic control followed, suturing and application of blade-type drainage. The operative piece was sent for morphopathological analysis. Block resection with disarticulation of the condyle and mandibular branch, arthroplasty with reconstructive plaque and artificial condyle from Titan.

Discussion. Histopathological analysis confirmed the primary diagnosis. The postoperative period was typical. Complications were not determined post-treatment. The degree of opening of the mouth was 3-4 cm postoperatively, the movements of the jaw free, painless. The radiological examination revealed a restoration of the continuity of the mandible. The patient was monitored immediately postoperatively and dynamically at regular annual follow-up visits for 5 years. Patients diagnosed with KO are of interest due to its localization in areas of vital anatomical importance and slow asymptomatic evolution. The treatment tactic is influenced by the evolution phase and the size of the formation. In the case of small unilocular KO, the surgical treatment is less invasive, while in large multilocular forms the intraoperative trauma increases, which can lead to harmful consequences and complications for the patient.

Conclusion. Early diagnosis and early addressing to a specialist will prevent patients from radical laborious interventions and possible complications.

25. PARTICULARITIES OF DIAGNOSIS AND TREATMENT OF THE MEDIAL CERVICAL CYST. CLINICAL CASE

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Introduction. Medial cervical cysts are present in about 7% of the world's population. They arise due to the activation of the cystic transformation of some remnant embryonic epithelial inclusions in the thyroglossal canal. The medial cyst is an embryological vestige that is formed because of the failure to close the thyroglossal canal, which extends from the caecum foramen to the location of the thyroid gland in the cervical region. The thyroglossal duct usually regresses by the 10th week of intrauterine life. If a portion of the duct persists, then the secretion from the epithelial tissue may result in the formation of the median cyst. To avoid complications (growth in volume, superinfection, malignancy, etc.), many authors recommend removing the formation as soon as possible.

Case presentation. The 21-years-old patient complained of aesthetic disorders and the presence of a voluminous swelling located in the middle cervical region of the hyoid bone. At the time of examination, the swelling had a soft consistency, was partially mobile and the covering skin was clinically unchanged. The patient did not experience pain during the palpation. On USG, a well-circumscribed anechoic oval structure was highlighted, and on MRI examination, the swelling was hyperintense on T2-weighted imaging and hypointense on T1-weighted imaging. Laboratory tests showed no pathological deviations. Following the paraclinical examination, clinical diagnosis of medial cervical cyst was confirmed. A surgical intervention such as "swelling excision" was recommended. The histopathological investigation confirmed the preoperative diagnosis, highlighting characteristic aspects of the pathology: the cyst wall was made of fibrous tissue lined with squamous epithelium.

Discussion. Ultrasonography is the method of choice in the case of medial cervical cysts through which the anatomical structure can be visualized with the help of high frequency sound waves, to create images of the examined region. Nuclear Magnetic Resonance Imaging is a medical imaging technique that uses a strong magnetic field, radio waves that provide better information about the deep extension of the cyst, its size, precise location and relationship with adjacent structures. The treatment of choice is “Sistrunk” surgery in which a portion of the hyoid bone is removed. The postoperative period passed without any particularities, no complications were observed.

Conclusion. Early diagnosis will reduce the increase in volume of the medial cervical cysts by preventing superinfection, malignancy.

26. PARTICULARITIES OF IMPLANT-PROSTHETIC REHABILITATION IN THE AESTHETIC ZONE OF THE UPPER JAW

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Introduction. Oral implantology is one of the dental sciences that is developing at a very fast pace. As a result of the development of social media, the emergence of new beauty trends, and the accessibility of information across all social channels, patients have greater demands and expectations for treatment outcomes beyond human biological limitations. Implant-prosthetic rehabilitation in the aesthetic zone faces particular challenges and difficulties determined by these new standards in the modern world.

Aim of study. To study and determine the peculiarities of bone atrophy and implant rehabilitation of the aesthetic zone in the upper jaw and to determine the optimal method of implantation in the aesthetic zone.

Methods and materials. In this study we used research methods and analysis of national and international existing literature on implant-prosthetic rehabilitation in the aesthetic zone of the maxilla. IBN, Google Scholar and PubMed platforms were used to search for articles. Thirteen clinical cases of patients who visited the University Dental Clinic No. 2 with single tooth edentulous in the aesthetic zone of the upper jaw were also analyzed.

Results. Following the analysis of the articles and the patients who visited the clinic, immediate and delayed implantation were considered as treatment options. In both cases the implant survival rate was 95%. On average, marginal bone loss was 0.56 mm for immediate and 0.67 mm for delayed implants. Each method has its own indications, and by understanding tissue biology correctly we can distinguish when one method or the other would be preferred.

Conclusion. There is no difference in the long-term integration of the implant in the aesthetic zone. In the case of both immediate and delayed implant placement the osseo-integration rate is 95%. However, due to the presence of bone resorption mechanisms that are activated following extraction, it is better for the patient to receive immediate implantation, within the limits of bone quality of the implant site and the general condition of the patient.

27. PARTICULARITIES OF PLANIFICATION OF CAST DENTURES IN CLASS II KENNEDY EDENTATION OF MAXILLA

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Introduction. The evaluation of the factors that determine the stability of the cast denture în the terminal unilateral partial edentations of maxilla and the optimization of the use of means of stabilisation with direct and indirect action.

Aim of study. The aim of the planification of a cast denture is to ensure the mechanisms of stabilisation in the base of the particularities of the partial edentulous prosthetic field and the morpho-pathophysiology of the dento-maxillary apparatus.

Methods and materials. A database was created on the support of observation files of 7 (4 m., 3 f.) patients, aged between 52 and 71 years with terminal unilateral partial edentations of maxilla, without essential clinical signs of parodontal disease. All patients were examined by clinical instrumentation and paraclinical methods and treated with partial cast dentures.

Results. The results of clinical instrumentation and paraclinical examination of all the patients from the study lot ascertain the presence of an unilateral terminal dental breach of the maxilla. On those, in 2 situations has been constatated the loss of 3 consecutive teeth, in 3 situations – the loss of 4 teeth and in 2 situations – the loss of 5 consecutive teeth. In 4 clinical situations was found the presence of dental breach on the opposite hemiarcade, in 2 situations, on the opposite hemiarcade where found teeth with different coronal lesions, in one situation, on the opposite hemiarcade was not found any morphological changes. The results of the clinical examination at the time of the probe of the future prosthetic construction in the oral cavity, immediately after the treatment and after 2-3 months after the application of the prosthesis in the oral cavity have proven that rigorously respecting the clinical and technical algorithm of planning the construction of a cast denture in II class Kennedy edentulous patients on maxilla ensured the fixation and stabilisation of the dental prosthesis on the prosthetic field.

Conclusion. The displacements of the terminal unilateral partial cast dentures on maxilla are complex. Electing and emplacing the elements of support and stabilisation with direct and indirect need an evaluation of the particularities of the dental field and the biomechanics of the future prosthesis.

28. PERIIMPLANT SOFT TISSUES MANAGEMENT IN CASE OF DEFICIENCY OF THICKNESS AND WIDTH OF KERATINIZED TISSUE AT THE STAGE OF DENTAL IMPLANTS UNCOVERING. CLINICAL CASE

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Introduction. Mucogingival surgery in the case of keratinized soft tissue deficiency is indicated to optimize the volume of the peri-implant soft tissue to reduce the risk of further complications (peri-implantitis, mucositis, peri-implant recession). A number of surgical methods for peri-implant soft tissue management are proposed, which makes it difficult to choose the optimal one for specific clinical situations.

Aim of the study. Evaluation of surgical methods for peri-implant soft tissue management.

Methods and materials. Clinical case presentation, patient F / 39 year old was rehabilitated with an implant-prosthetic in the dental clinic "Omni Dent" in the period 2021-2022. The patient had a deficiency of width of the keratinized soft tissue (LGK) as well as the thickness of the keratinized soft tissue (GGK). The stage of mucogingival surgery was decided to be performed after implant osseointegration. At the stage of uncovering the implants 14, 15, 24, 36, 3 mucogingival surgical methods were used: 1) at the level of the implants 14, 15 the apical positioned flap technique; 2) at the level of the implant 25 the pouch roll technique; 3) at the level of the implant 36, the free gingival graft from the palate. Study criteria: keratinized soft tissue width, thickness, trauma morbidity, complications. Dynamic monitoring 2-14 days, one month and 3 months - postoperatively.

Results. The patient was monitored postoperatively in dynamics to evaluate 3 methods performed simultaneously comparing them according to the proposed criteria. Method 1: preoperative LGK - 3 mm, postoperative LGK - 6 mm; GGK pre- 1.5 mm, GGK post- 3 mm; moderate edema; moderate pain; difficult and long time to perform. Method 2 LGK pre- 4 mm, LGK post- 7 mm; GGK pre-2 mm, GGK post-4 mm; edema, insignificant pain; simple and short time to perform. Method 3 LGK pre- 3 mm, LGK post- 8 mm; GGK pre-2 mm, GGK post-4 mm; moderate edema; moderate pain in the donor and recipient area; difficult and long time to perform. Postoperative complications were not present. The choice of methods used in the study should be based on the analysis of several criteria and individualized to the clinical case despite the advantages and disadvantages.

Conclusion. The technique of rotating flap (method 2) proved to be the method with the best results according to the established criteria, being followed by the technique of free gingival grafting from the palate (method 3), a good result but with more sacrifice. The last method with the apical positioned flap (method 1) did not show high efficiency obtaining minimum thickness difficult work and long time to perform, it is a method that requires a higher training and precision to perform.

29. PRE AND POSTSURGICAL MORPHOLOGICAL EVALUATION OF THE TRUE CLEFT PALATE, IN TWO STAGE PALATAL PLASTY.

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Introduction. Maxillofacial fissures are the most common form of congenital malformations of the face and the maxillofacial region. These forms of malformations may vary from simple shapes to particularly non-specific forms. The cleft lip and palate are characterized by anatomical and functional disorders. In unilateral total splits, anatomical disorders are characterized by bone deformities. The upper jaw is divided into two segments by the fissure that passes on the upper lip, alveolar and hard palatal process and soft palatal region. The clinical manifestations of these forms of malformations appear with severe aesthetic facial deformities and functional disorders that can lead to a chain of clinical diseases that endangers even the vital functions of the child.

Methods and materials. Six patients with total palatal splitting were examined. There were impressions and obtained study gypsum models during preoperative to the primary stage of plasty and postoperatively to the secondary stage of plasty of the hard palate.

Results. According to the measurements and calculations, we came to the conclusion that the two-stage plasty, only with passive therapy of separation of the nasal cavity from the oral cavity with the help of palatal plates, has a displacement efficiency of the splitting segments of 46%, while one-stage palatal plasty with active preoperative nasal-alveolar molding with intermaxillary traction has a closure value of 76% (after Elcin).

Conclusion. Two stage hard palate plasty adapts the soft tissues to remove the recurrence of the dehiscence of cleft edges of the hard palate.

30. PREVENTION OF DENTAL DISEASES IN CHILDREN

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Introduction. Professional and individual oral hygiene are the main components of the prevention of dental diseases and the main indicators of dental health of the population. Prevention of oral diseases at an early age is important, special attention should be paid to teaching children to conduct independent oral care. Also, children should know what a later visit to the dentist can lead to.

Aim of study. The aim of the study was to determine the level of awareness of primary school children about the need for a healthy lifestyle and rules of oral hygiene and to teach children oral care skills. The objective of the study was also to assess the residual level of knowledge of children about the prevention of dental diseases.

Methods and materials. In our research, we conducted a survey of preschool children. The object of the study: 1. Individual and professional oral hygiene. 2. Preschool children. Research methods: 1.study of references; 2.analysis of references; 3.comparative method; 4.method of generalisation. This study was conducted on the basis of a children's educational institution Nursery-garden No. 49 of Balti city on a total of 20 children 6-7 years old. To conduct the study, a questionnaire was formulated, consisting of 5 questions and allowing to identify the level of knowledge of children regarding the rules of maintaining dental health and oral hygiene. Special attention was paid to the basics of proper nutrition in maintaining dental health. The children were presented a list of foods and beverages that pose a threat both to the condition of the teeth and to the body as a whole.

Results. After the survey, it turned out that most of the children did not use the services of a dentist and did not do professional oral hygiene. Thus, the main cause of almost all diseases of the oral cavity, especially caries, is poor individual hygiene, as a result of which a large amount of soft plaque accumulates on the teeth and in the interdental spaces, which is an ideal food for bacteria.

Conclusion. The dental health of children is characterised by a fairly high prevalence of dental diseases, among which carious lesions of the teeth predominate, as well as an insufficient level of oral hygiene. The health of the teeth and gums of preschool children directly depends on proper oral hygiene. The importance of daily hygiene procedures is difficult to overestimate. So, the statement of hygienists that one of the most effective and at the same time simple ways to prevent dental diseases is proper and regular dental and oral hygiene is more relevant than ever.

31. PRINCIPLES OF ORTHODONTIC TREATMENT PLANNING IN ANGLE CLASS I MALOCCLUSION

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Introduction. Angle class I, also known as neutrocclusion, is the most common form of malocclusion. This dento-maxillary anomaly is characterized by a normal antero-posterior intermaxillary relationship, the presence of misaligned teeth, with or without minor skeletal changes.

Aim of study. Research for an optimal method of diagnosis and development of an effective treatment plan for Angle class I malocclusion.

Methods and materials. The study is based on data collected from 20 patients with frontal dental crowding. Each patient was diagnosed by performing the clinical and complementary examination - photostatic examination, analysis of study models, orthopantomography and teleradiography. An individualized treatment plan has been established to treat this malocclusion. Two types of treatments depending on the severity of the crowding were chosen. The patients were divided into 2 groups: Group I: fixed orthodontic treatment. Group II: orthodontic treatment with removable aligners.

Results. For group I, consisting of 12 patients, with a moderate degree of frontal crowding, the orthodontic treatment with fixed adhesive system lasted about 1.5 years. Whereas for group II, consisting of 8 patients, with a mild crowding, they wore detachable devices for up to 12 months. Following the analysis of the preliminary and final results of the treatment in the total group of 20 patients, changes of dento-facial parameters were observed. In group I patients, fixed orthodontic treatment had an efficiency of 90%. The 10% errors are due to the lack of systematic presentation to the orthodontist. In group II patients, the use of removable systems was 70% efficient. The 30% errors represent the patient's neglect to follow the special regimen established by changing the aligners every 2 weeks.

Conclusion. Over the last few years, it has been proven that removable orthodontic appliances allow for predictable results related to mild-degree crowding of teeth in Angle class I malocclusion.

32. PROSTHETIC-ORTHODONTIC REHABILITATION IN CHILDREN

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Introduction. Premature loss of primary teeth is a key factor in the progression of dento-maxillary anomalies, because it blocks the occlusion, the basic functions and maxillary growthing. Prosthetic-orthodontic rehabilitation in children is a common aim of preventive orthodontics and includes the space maintainers devices, following the functional occlusion principle.

Aim of study. The aim of this study is to identify types of space maintainers according to proper clinical cases.

Methods and materials. This study included 18 children (between 3-12 years) with a partial edentulous situation. For the rehabilitation of these areas, according to types of edentulous situations, it was used following space maintainers: fixed and removable, functional and non-functional. The study was realised at Orthodontic Department Patients were selected and are included in the study according to the orthodontic situation. The study complied with ethical requirements, therefore requesting the written consent of the parents or the legal representative of the children.

Results. The most frequent edentulous situation was viewed in the lateral area and in mixed dentition. That's why for the rehabilitation and for space maintenance in this area, removable and fixed space maintainers were used. The more extensive is edentulism, the more removable and functional space maintainers are applied, because they realise the functions of the stomatognathic system.

Conclusion. Choosing the type of a prosthetic-orthodontic construction is needed to follow the biofunctional principle. All the details of space maintainers will allow pulp and apex maturation, physiologically resorption of temporary teeth and prevent retention and the bone growthing.

33. REHABILITATION OF SEVERE ATROPHIC MAXILLA USING ZYGOMATIC IMPLANTS. CASE REPORT.

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Introduction. Although zygomatic implants represent an effective and predictable solution for the rehabilitation of edentulous patients with severe atrophy of the upper jaw, it is also accompanied by a series of difficulties, such as surgical access and intraoperative ergonomics, the presence of important anatomical structures with increased risk of injury with subsequent complications, etc. Extensive analysis of anatomical conditions and careful preoperative planning is required to optimize and obtain predictable results, thus increasing the indications of the given method.

Case presentation. In this case report a 54-year-old male patient was treated in the dental clinic SRL“OMNI DENT” between January and February 2022. The patient had the following complaints: lacking teeth, mastication, phonation and aesthetic disorders. After thorough clinical and paraclinical examination (OPG, CBCT), the diagnosis was established: severe atrophy of the upper jaw class C-h (Misch) in the anterior area and SA-3 and SA-4 (Misch) in the posterior areas. All treatment options were then discussed and evaluated together with the patient. The first option was to perform several bone grafting procedures and delayed implant placement using standard protocol. The second option included immediate rehabilitation through alternative implantation according to the "Quad Zygoma" protocol. The patient excluded the first method, as being more traumatic, long-lasting and with an unpredictable result, thus opting for the alternative method, which offers the possibility of immediate rehabilitation, with a reduced trauma and prediction.

Discussion. The method used allowed us to reduce the total number of surgeries and to reduce the patient's rehabilitation time. The number of implants was also significantly reduced, reducing the number of retentive areas, facilitating the hygienic maintenance of the prosthetic construction. Another considerable advantage is the possibility to immediately benefit from a proper aesthetic and functional result without additional trauma.

Conclusion. The use of zygomatic implants in conditions of severe atrophy has proven to be an effective solution with predictable results.

34. RETENTION OF CAD/CAM MILLED DENTURE BASES IN COMPLETE DENTURES

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Introduction. CAD/CAM (Computer - aided Design / Computer - aided manufacturing) complete dentures have increased in popularity and a wide variety of systems are currently available. This new technology offers rehabilitation of complete edentulous patients by manufacturing a milled denture by 2 - 3 average appointments, from taking impressions by intraoral scanner or laboratory scanner of master cast till the fixation of the complete denture.

Aim of study. To analyze the existing literature research on CAD/CAM complete dentures and to determine their retention over the conventional dentures.

Methods and materials. A comprehensive review of the literature was done through MEDLINE and PubMed database for research articles with keywords “CAD/CAM complete dentures vs conventional denture”, “complete digital dentures vs conventional complete dentures”, “computer-engineered complete dentures”, “complete milled dentures”, The inclusion criteria for selection were clinical studies, laboratory technical research papers, case reports, and review articles with a comparison between CAD/CAM and conventional processing techniques for complete dentures fabrication.

Results. The electronic research through MEDLINE and PubMed resulted in more than 150 titles in the English language literature, and 10 were relevant to determine the advantages of CAD/CAM against conventional dentures. CAD/CAM technology offers: 1) accuracy of marginal fit and occlusal contacts; 2) retention and stability of denture base; 3) high esthetics; 4) decrease of human factor; 5) reduced number of visits. According to 14 sources, an in vitro evaluation and comparison of biocompatibility, mechanical properties, and surface roughness of a pre-polymerized PMMA resin for CAD/CAM CDs and a traditional heat-polymerized PMMA resin, biocompatibility was assessed. The tested CAD/CAM and heat-polymerized resins were equally biocompatible; CAD/CAM resins demonstrated improved mechanical properties (higher elastic modulus, ultimate strength, and toughness); higher roughness of the CAD/CAM resin specimens. Acrylic resin denture bases undergo dimensional changes during polymerization. Injection molding techniques are reported to reduce these changes and thereby improve physical properties of denture bases. The analysis of literature revealed the fact that CAD/CAM has better retention and biocompatibility treatment for complete edentulous patients and it offers the possibility to minimize the number of visits for this group of patients is the greatest advantage.

Conclusion. The analysis of literature showed that CAD/CAM technology has large prospects in modern dentistry due accuracy and post manufacture process shrinkage. The quality of CAD/CAM milled dentures surpasses the quality of conventional complete dentures. So, there is improvement at the branch of digital prosthodontics and much more precision.

35. THE CONSEQUENCE OF AN ERROR IN THE INTERPRETATION OF THE RADIOLOGICAL DIAGNOSIS PRIOR TO THE PREPARATION FOR ORAL IMPLANTOLOGY. CASE PRESENTATION

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Introduction. X-ray studies are an important component in the examination of patients before, during and after implantation. The tasks of X-ray examination are to correctly assess the state and parameters of the proposed implantation site in order to avoid unforeseen situations during surgery and postoperative complications, as well as timely detection of changes in the position of the implant and the state of the surrounding parts of the dento-alveolar system when observed in dynamics.

Case presentation. Patient E.F., 44 years old, non-smoker, with no chronic conditions, came in 6 months ago with complaints of chewing difficulties due to the absence of lateral teeth. After a clinical and paraclinical examination, including X-ray methods (OPG, CBCT), the established diagnosis was: secondary partial edentulism of the mandible, class II in the Kennedy classification, due to caries and its complications.

Discussion. In order to help the patient, it was decided to insert two implants in the area of missing teeth 3.6 and 3.7, with a preliminary CBCT. The next day following implantation, the patient came in complaining about a lack of sensitivity in the area of the third quadrant. The immediate x-ray examination revealed the localization of the dental implant directly in the lumen of the mandibular canal. On the same day, the implant was removed from the lumen of the mandibular canal, a consultation and treatment with a neurologist was scheduled. 6 months after surgery, good dynamics are observed, the function of the damaged nerve is restored.

Conclusion. After injury, complete regeneration of the nerve is possible in the absence of prolonged exposure to the traumatic agent. Therefore, it is imperative to diagnose the possible complications as quickly as possible, with the subsequent initiation of the corresponding treatment which is aimed at restoring the anatomical integrity and functional viability of the inferior alveolar nerve.

36. THE DIVERSITY OF SEALANTS USED IN DENTAL CARIES PROPHYLAXIS

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Introduction. Tooth decay affects both temporary and permanent teeth, in some cases within a short time after eruption. The sealing of dental fissures and pits is one method of preventing tooth decay. It isolates areas susceptible to carious processes from the effects of local cariogenic factors and creates optimal conditions for complete mineralisation. Sealants create protection for insufficiently mineralised areas of the tooth by preventing microorganisms from coming into contact with them. Today's market offers a wide range of sealants used for sealing. There is the dilemma, which product to choose.

Aim of study. The main purpose of this study was to evaluate the sealants used for sealing dental pits and fissures.

Methods and materials. The bibliography was selected from The Cochrane Library, PubMed, Embase Electronic databases using the keywords: sealant, caries prophylaxis in children, sealed teeth and study duration of at least one year. Twelve sources, published between 2011-2021, were relevant to our research.

Results. The following sealants were nominated in the study: Concise White Sealant (3M), Fissurit FX (Voco), Delton, Delton DDS, Delton Plus (Dentsply), Helioseal, Helioseal F, Cavifil (Vivadent), Estiseal LC (Heraeus Kulzer), Seal-Rite (Pulpdent), Ultra-Seal XT Plus (Ultradent), Dyract Seal - compomer (Dentsply DeTrey), CIS, CIMR and RDC flowable.

Conclusion. The most frequently nominated sealants in the study were: Fissurit FX, Delton, Helioseal.

37. THE IMPORTANCE OF ULTRASONOGRAPHIC EXAM IN DENTISTRY

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Introduction. Ultrasonography is a fundamentally new, non-invasive diagnostic method in dentistry. It is an alternative technique to MRI, CT, or radiography when the patient's general condition does not allow their use. Advantages of USG are: being biologically inoffensive, safety, speed of obtaining information, absence of contraindications, wide availability and reduced cost. Ultrasonography is useful to confirm the clinical diagnosis in cervical lymphadenitis, sialadenitis, Sjögren's syndrome, post traumatic pathologies of blood vessels and extracranial nerves, tumours of soft tissues and temporo-mandibular joint disorders.

Aim of study. Studying the role of ultrasonography in dentistry and the anatomical-image features of the most common dental problems to increase the effectiveness of diagnosis and treatment.

Methods and materials. A search for articles on the usage of diagnostic ultrasound in dentistry was carried out within the BMC database.

Results. 182 articles corresponding to the selection criteria were screened for applications of echography in the oral-maxillo-facial region. It clearly shows that this method of imaging examination is not ignored and that it registered progress. We determined that echographic examination is effective in visualising the position of the articular disk, joint effusion and bone abnormalities in the evaluation of temporomandibular joint disorders. Some studies referring to the clinical usefulness of the ultrasound in the diagnosis of Sjögren's syndrome, sialadenitis, lymph node metastases, tongue carcinoma and periapical lesions.

Conclusion. The application of ultrasound in the oro-maxillo-facial region represents a radiation-free method of rapid preliminary diagnosis to exclude clinical suspicion. However, positive results should be confirmed by MRI. Ultrasound underestimates the extent of the disease, but can provide accurate information about the pathological nature of the lesions, which is important in predicting the treatment result.

38. THE USE OF INLAYS IN RESTORATIVE DENTISTRY

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Introduction. Caries and complications of it is the most common dental disease in the world, which leads to the destruction of the hard tissues of the teeth, to the violation of occlusion, development of deform-ities and other complications. After endodontic treatment, restoring the anatomical shape and function of the affected teeth, especially the lateral ones, with composites is not always effective since the amount of remaining hard tissue and occlusal surface area are significantly reduced. In such situations it is more expedient to use methods of orthopedic dentistry in the form of various types of microprostheses - inlays (I.F. Valeev, 2004; N.G. Abolmasov et al. 2007; V.V. Matrosov, 2021).

Aim of study. To determine the relevance of the use of inlays in modern dentistry. To carry out a comparative characterization of dental prosthetics with inlays and alternative methods of treatment.

Methods and materials. For searching and analysing available literature on the subject- treatment of dental hard tissue defects and the comparative characteristics of various methods of restoration, was used Internet information search databases: CyberLenincka - 46 scientific articles (11 sources selected); Rus-sian State Electronic Library - 143 sources (6 sources selected). A total of 17 sources were select-ed for study, including protocols, recommendations, monographs, articles.

Results. A review of the literature on inlay treatment methods showed: 1. The most common method of restoring defects in the crown of teeth, is the "direct method", with the use of various restorative materials. However, studies show that despite the improvement of dentistry, the issue of marginal adhesion of filling materials remains relevant, indicating the low quality of tooth restoration (D. A. Nikolaev, 2015; A. A. Shuraev, M. M. Badrutdinov, 2017). 2. Most authors highlight that the best material that meets the given quality criteria for restoration is ceramic. 3. During the studying of the literature on the topic of research, it was revealed a lack of information about the using technique, rules, step-by-step description of planning and preparation of hard dental tissues for inlays.

Conclusion. Treatment of teeth with inlays is very relevant, due to the number of indications and advantages of this method of treatment over the "direct" method of restoration. The most adequate method of treatment with teeth with elevated IDOST (index of destruction of the occlusal surface of the tooth according to V.Y. Milikevich, 1984) is the inlay, as it is able to minimise the drawbacks that are available with restorative composites.

39. THE USE OF THE SURGICAL GUIDES FOR IMPLANT-PROSTHETIC REHABILITATION IN THE AESTHETIC AREA

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Introduction. Placing a dental implant to replace a central maxillary incisor can be a challenge in many ways. Many factors need to be considered in order to generate an optimal treatment plan. An important aspect is the degree of soft and hard tissue atrophy that often requires augmentation and bone grafting procedures. At the same time, correct implant positioning represents one of the main challenges from biomechanical and esthetical points of view. In this context, the anterior zone could be crucial for early rehabilitation of the patient due to the particularities of teeth positioning.

Case presentation. The case study focused on a 32-year-old patient who was clinically and para-clinical (CBCT) examined, at which was established the D3 (by Misch) bone density, for the following planning of implant-prosthetic treatment. Previously, the bone addition procedure was performed. In order to achieve a good result, the examination was performed with the prosthodontist. Following the conventional impression and the virtual planning of the cast model, the stereolithographic model was obtained (scanned in the laboratory) and superimposed on the CBCT, after which the surgical template for partial drilling was made (using 3D printer ASIGA Pro 3D). The surgery was performed using partial drilling through the surgical guide followed by osseous densification in free hand mode (Versah Drills system) and installation of the implant followed by immediate screw retained restoration.

Discussion. A single missing central incisor is often the most difficult surgical and prosthetic challenge due the ambition to obtain good aesthetics, but also the difficulties for the surgeon to make the ideal direction of osteotomy. In the research it was proposed to place the implant in axial position, which allows the use of a screw retained restoration (hiding the fixation screw channel in palatal side) as well as to obtain an axial loading. An important role is also played by the accuracy of the guide and checking of its fitting with the teeth. The postoperative result evaluated on the CBCT as well as in the oral cavity showed the implant in the desired position, according to the preoperative plan.

Conclusion. Guided surgery allows us to obtain predictable results related to implant position. The use of this technology requires additional experience due to the risks that occur both in the planning stage and in the positioning of the guides in the oral cavity.

40. THERAPEUTIC MANAGEMENT OF ACUTE FOCAL PULPITIS

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Introduction. The dental pulp represents the central tissue of the tooth, with a significant importance on the integration of the dental hard tissues in the complex system of the organism, through its dentinogenesis, nutritive, protective, sensitive and barrier function. The harmful action of many etiological factors such as tooth decay, trauma, cavity preparations, metal fillings without pulp protection, prosthetic works in over-occlusion and the toxic action of antiseptic solutions lead to rapid depletion of cellular potential and the installation of pulp inflammation. Pulpitis acts destructively on adjacent tissues, and in the absence of proper treatment leads to periodontitis and tooth loss, negatively affecting the functionality of the stomatognathic system and quality of life. Therefore, the medical tactics in the selection of appropriate treatment methods, as well as their subsequent practical application represent decisive steps in the correct management of the pulpitis.

Case presentation. A 37-year-old patient presents with spontaneous acute pain, intensified at night and located at the level of the tooth 15. The painful crisis lasts 10-30 minutes, then alternates with a painless period of several hours. The objective examination reveals a carious cavity with soft dentin and food debris, sharp pain on probing at one point of the cavity floor and painless percussion. At the paraclinical examination: electroodontometry 18-25 mkA, intense and prolonged pain at the thermal tests, and at the radiological examination a deep carious cavity is detected, which does not communicate with the pulp chamber.

Discussion. Based on the clinical and paraclinical examination, the diagnosis of acute focal pulpitis at the level of the tooth 15 was determined. In this situation, when the evolution of the inflammation is more than 24 hours, both coronal and root pulp are affected and the electroodontometry indicates values of 18-25 mkA, the recommended therapeutic methods no longer aim at preserving the pulp, but at preventing the occurrence of pulpal and apical complications. Respectively, the therapeutic method of choice is pulpectomy: 1) Troncular and infiltrative anesthesia with Septanest 1:100000 1,7 ml; 2) Rubber dam isolation; 3) Preparation of the carious cavity and pulpotomy; 4) The landmark and the widening of the root canal orifices; 5) Pulpectomy; 6) Determination of working length; 7) Permeability and mechanical preparation; 8) Medicinal and antiseptic treatment; 9) Drying of the root canal; 10) Root canal filling; 11) Radiological control; 12) Isolating obturation; 13) Permanent filling.

Conclusion. Early and correct diagnosis of acute focal pulpitis is essential in determining a treatment plan with superior effectiveness. The treatment of acute focal pulpitis by the method of vital extirpation and qualitative filling of the root canals provides excellent results, preventing complications and guaranteeing the success of endodontic treatment over time.

41. TREATMENT OF PARTIAL EDENTULOUS PATIENTS WITH PARTIAL REMOVABLE DENTURES

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Introduction. The number of partially dentate adults is increasing, and many patients will require replacement of missing teeth. Although current treatment options also include removable partial dentures (RPDs) which can have advantages and are widely used in clinical practice. However, a significant need exists to advance materials and fabrication technologies because of the unwanted health consequences associated with current RPDs. Metal-based and acrylic partial dentures constitute the treatment of choice in many cases of prosthetic rehabilitation. Loss of teeth and using a removable denture significantly affect patient's quality of life.

Aim of study. To assess the current state of and future need for prosthetics such as RPDs for patients with partial edentulism, highlight areas of weakness, and outline possible solutions to issues that affect patient satisfaction and the use of RPDs and to determine and compare OHRQoL of all-acrylic and flexible RPD wearers at baseline and after use of dentures.

Methods and materials. The data on treatment for partial edentulism were reviewed and summarized with a focus on currently available and future RPD designs, materials, means of production, and impact on oral health. Data on patient satisfaction and compliance with RPD treatment were also reviewed to assess patient-centered care. Three types of partial removable dentures were evaluated: partial removable denture with metallic framework, partial acrylic removable denture and flexible partial denture. Study was done using a cross-over design, involving 30 patients with Kennedy class I and II edentulism. Patient recruitment and review were done over an eight-month period in the Department of Stomatological propaedeutics "Pavel Godoroja", *Nicolae Testemitanu* SUMF. OHRQoL (oral health related quality of life) was assessed with the oral health impact profile-14 questionnaire. Data were analyzed using descriptive and multivariate analysis at a significant level of $p < .05$.

Results Design, materials, ease of repair, patient education, and follow-up for removable partial denture treatment all had a significant impact on treatment success. Almost 40% of patients no longer use their removable partial denture within 5 years because of factors such as sociodemographic, pain, and esthetics. Research on RPD-based treatment for partial edentulism for both disease-oriented and patient-centered outcomes is lacking. At baseline, there was a difference in mean OHRQoL scores with age; scores reduced from 12 ± 10 to 5.5 ± 6.5 after using the all-acrylic denture and 4 ± 5 with the flexible denture.

Conclusion. Future trials should evaluate new RPD materials and design technologies and include both long-term follow-up and health-related and patient-reported outcomes. Advances in materials and digital design/production along with patient education promise to further the application of RPDs and improve the quality of life for patients requiring RPDs. Partial edentulous patients were more satisfied with the flexible RPD than the acrylic resin RPD. There was improvement in the OHRQoL of patients with use of flexible partial dentures. Therefore, thermoplastic materials are possible alternative RPD base materials in patient management.

42. TREATMENT STRATEGY IN CASE OF POST-EXPLANT ALVEOLAR RIDGE DEFECT IN THE REHABILITATION OF PATIENTS WITH PERI-IMPLANTITIS.

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Introduction. Peri-implantitis is a complication in implant-prosthetic rehabilitation that causes morphological, functional, aesthetic and psychological disorders, inducing the formation of a "vicious circle" of successive diseases. Thus, early rehabilitation and the establishment of proper conduct is a key objective. Depending on the severity, the implant may be preserved or explanted. The effectiveness of these two surgical attitudes is currently the subject of heated discussion. Often, as in our case, explantation is performed resulting in a massive bone defect, which highlights a deficit of soft and hard tissue with an extensive area of diffuse inflammation in the vicinity of the vascular-nervous bundle. These problems present real challenges in subsequent rehabilitation.

Case presentation. The ST patient, f / 50 years old, addressed to the SRL "Omni Dent" clinic with complaints of mobility and pain in the lower right arch. At the clinical and paraclinical examination, was established the diagnosis of “Peri-implantitis in the region of the blade-type implant inserted in the right mandible at level d. 44-47”. The implant was removed with the absolute indication for explantation which is the presence of grade III mobility in association with chronic inflammation and an extensive bone defect. After careful curettage and physiological solution irrigation, the defect was augmented with KP-3LM synthetic addition material. After 4 months, the replantation with conventional implants was performed. Analysis criteria: extension of the bone defect, appearance of soft tissues and three-dimensional characteristics of the alveolar ridge pre- and postoperatively; the quality of the regenerated implant site and the possibilities to redo implant-prosthetic rehabilitation.

Discussion. Clinically hyperemia, edema, purulent discharge, probing depth ≥5 mm, mobility and radiological peri-implant transparency on the entire implant surface were present. Both explantation and post-operative tissue regeneration run without complications (wound dehiscence, peri-osseous hematoma, exposure of the addition material, superinfection of the enlarged area). A generous bone amount was obtained in both widths and density (D2). Implant insertion was performed with torque ≥ 35 Nm. Peri-implant infection did not develop, post-operative anesthesia was maintained in the right chin region and disappeared after 3 months.

Conclusion. In extensive peri-implant defects the optimal solution may be explantation, which allows to arrest the bone resorption process as well as local and systemic spread of bacterial infection. Large cavities can be regenerated with synthetic addition materials to obtain favorable conditions for further treatment.

43. USE OF TOOTHPASTE DEVIT C IN DEVITALIZED PULP EXTIRPATION

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Introduction. Pulp inflammation caused by local and general pathogens is one of the most common emergencies in dentistry, which, if not diagnosed correctly and not treated in time, leads to an increased risk of developing periodontal complications. The dental pulp is a connective tissue that has the ability to protect itself from various pathogens. In pulp diseases, treatment is performed in several visits, devitalized pulp extirpation being a surgical method of treatment that removes the entire dental pulp (coronal and radicular) by desensitizing it by chemical means.

Aim of study. To study the particularities of use and action of the paraformaldehyde-containing paste Devit C on the dental pulp.

Methods and materials. The stages of clinical and paraclinical examination of the patients were applied in devitalized pulp extirpation in several visits, using the following materials: slow-acting paraformaldehyde-containing paste, artificial dentin, root canal filling materials.

Results. The study revealed the benefits of using devitalizing paste Devit C in the treatment of pulp diseases. An algorithm has been developed for the diagnosis and treatment of the patients treated by the above-mentioned method.

Conclusion. The clinical study highlighted the positive and beneficial impact of the devitalizing dressing. The use of the paraformaldehyde-containing paste Devit C in devitalized pulp extirpation in several visits offers comfort both to the doctor and the patient.

44. VITAL PULP EXTIRPATION IN THE TREATMENT OF PULP INFLAMMATION

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Introduction. Inflammatory reactions in the dental pulp occur when pathogenic microorganisms in the decayed dentin reach the dental pulp. The invasion of microorganisms triggers pulp inflammation, which can vary in pain, extent and intensity. Vital pulp extirpation carried out under local anesthesia is performed in one visit and entails the complete removal of the coronal and radicular pulp after desensitizing it with anesthetic substances.

Aim of study. To determine the effectiveness of the endodontic treatment of the dental pulp by the method of vital pulp extirpation.

Methods and materials. 10 patients aged 35-45 years, with signs and symptoms of acute pulpitis were examined clinically and paraclinically. In association with the complex clinical examination, the method of vital pulp extirpation was applied under anesthesia in a single visit, which is an effective and qualitative method of treatment.

Results. The study revealed the benefits of the dental pulp treatment in a single visit under anesthesia, vital pulp extirpation being used for endodontic treatment of pulp inflammation.

Conclusion. Pulp treatment in one visit, using the surgical method of vital pulp extirpation under local anesthesia is an effective and qualitative complex therapeutic solution of endodontic treatment and restoration of the morpho-functional integrity of the tooth on the dental arch for a long time. The treatment is widely accessible and applicable among patients. Keywords: Acute pulpitis, endodontic system, dental crown lesion.

XI. Surgery Section.

1. ACUTE APPENDICITIS IN ELDERLY PATIENTS

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Introduction. Acute appendicitis (AA) is the most common abdominal surgical emergency. In the lifetime, about 8,6% of men and 6,7% of women will develop AA. Although AA is typical for young people, due to global increase in life expectancy, there is a higher incidence of the disease in the elderly. The literature review shows that the incidence of AA in the elderly is about 5-15%. AA also is associated with a higher rate of complications and mortality in the elderly because of accompanying comorbidities.

Aim of study. To reveal the particularities of clinical course and surgical treatment results of AA in the elderly patients.

Methods and materials. The clinical evolution and results of the surgical treatment were studied in 189 patients with AA treated in the surgery clinic IMSP SCM „Sfanta Treime" during 2019-2021. The patients were divided into 2 groups according to age: I. control (<65 years) and II. study (>65 years). The role of various factors (age, gender, time from symptoms onset to hospitalization, comorbidities etc.) was analysed as prognostic elements ot the AA complicated forms evolution. The ASA risk score and the Charlson comorbidity index were assessed in all patients. Postoperative complications were analysed according to the Clavien-Dindo classification. Statistical processing was performed using the Fisher-Student with $P<0.05$ and 95% probability of certain prognosis.

Results. Out the total 189 patients, AA was developed in 14 patients >65 years with an incidence of 7,4%. According to age and sex, there was a predominance of women in group II (n=9; 64,3%) compared to group I (n=76; 43,4%). The ASA score was in direct correlation with age, in group I predominating ASA I (n=148; 84,6%), while in group II the ASA III (n=8; 57,1%) was prevalent. Similarly, the rate of patients with onset of symptoms >48 hours was correlated with age 23,4% (n=41) in group I and compared to 64,3% (n=9) in group II. The majority of patients in the control group didn't have comorbidities or had compensated comorbidities (Charlson Index 0-1), while in the study group could be observed the predominance of moderate and severe comorbidities (Charlson Index 3-4). Complicated AA (gangrenous, perforated, periappendicular abces, infiltrate etc.) was found more frequently in the elderly (71,4% vs 18,3%) compared to the young. Also, the rate of postoperative complications was significantly higher in the elderly (35,7%) than in the young (5,1%).

Conclusion. AA in elderly patients continues to be a difficult surgical problem. Elderly patients usually request late to the doctor, additionally having associated comorbidities and atypical clinical manifestations, which often causes complicated forms of AA and high postoperative morbidity.

2. ACUTE COMPLICATIONS IN PATIENTS WITH CROHN'S DISEASE

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Introduction. Crohn's disease (CD) is a chronic, transmural, and segmental inflammatory disease of the gastrointestinal tract that can cause damage to the oral cavity up to the anus, being preferentially located in the terminal ileum. The prevalence of Crohn's disease is increasing, most often occurring between the ages of 16 and 40, but may also develop in older ages with an equal incidence in women and men. The etiology of Crohn's disease is unknown; however, numerous causes have been reported, such as genetic and infectious causes, immunological disorders, food, environmental and chemical factors, but no causes have been fully elucidated. Clinically, common symptoms include diarrhea, abdominal pain, rectal bleeding, fever, weight loss, and fatigue. CD has a chronic progressive evolution with severe remissions and exacerbations, as well as intestinal and extraintestinal complications.

Aim of study. To carry out a contemporary literature review and to elucidate the common acute complications of patients with Crohn's disease.

Methods and materials. Several articles over a period of ten years from the PubMed database have been reviewed.

Results. Complications in patients with CD are as follows: stenosis, fistulas, perforations, abscesses and obstruction. Intestinal stenosis is among the most common complications, due to narrowing of the intestinal lumen caused by fibrosis and edema. It manifests by intense colicky and intermittent abdominal pain. Fistulas are another complication of Crohn's disease, which are often blind and result in abdominal abscesses, which manifest as palpable, painful pseudotumors, fever and hyperleukocytosis. They can be enteroenteric, enterogastric, enterovaginal, enterocutaneous, enterovesical, and perianal. Perforations rarely occur as a complication, because in CD the inflammation extends from the submucosal layer to the serous one, thus forming adhesions with the intestinal loops. Abscesses occur in 20-40% of patients and are due to the transmural damage to the intestinal wall. The symptoms are localized and include pain, fever and a palpable mass.

Conclusion. Complications in patients with Crohn's disease develop as the disease progresses and in cases of extensive localization of the pathologic process.

3. ANABOLIC-ANDROGENIC STEROIDS AND MALE REPRODUCTIVE HEALTH

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Introduction. Anabolic-androgenic steroids (AAS) are natural or synthetic versions of testosterone. Because testosterone increases muscle mass, endurance and performance, AAS can be misused by athletes and bodybuilders to help build muscle, reduce body fat, or gain strength and endurance in an attempt to rapidly increase athletic performance. Anabolic steroids may harm male fertility in the same way that testosterone does: by interfering with the hormonal signals that are needed to produce sperm. The physiological functioning of the testicles is essential for male fertility and the development of male secondary sexual characteristics. In men, the primary goals of the testicles can be summarised as: 1) testosterone production and 2) spermatogenesis.

Aim of study. Infertility is a worldwide problem that ranges from 2.5% to 12%. In 50% of cases, infertility problems come exclusively from men. The use of androgenic anabolic steroids (ASA) is estimated at 1% to 5% worldwide, being on the rise, regardless of long- term side effects. According to some data, the quality of human sperm has deteriorated by 50% - 60% in the last 40 years probably also due to the use of anabolic substances.

Methods and materials. This study is a systematic review of publications of the last 10 years on the selected theme using Google Academic, PubMed and Scopus electronic databases with combinations of keywords and MeSH terms (e.g. ‘male infertility’ OR ‘male reproductive function’ AND ‘anabolic steroids’; ‘steroids’). In total, 490 articles were identified, 104 articles met the inclusion criteria. Of these, 73 reports were included in our research.

Results. From 30 publications analysed were established that excessive use of anabolic steroids and other performance-enhancing substances can endanger male fertility. The use of these substances deteriorates sperm quality, affecting both sperm count and the proportion of mobile and normal sperm that are below WHO standard values. From 18 publications it was determined that the effect of anabolic androgens on reproductive function depends considerably on the preparations used, the doses and the period of use. Hormone tests that describe testicular function show typical abnormalities. Another 11 publications analysed were established that in a substantial number of users, sperm examinations showed a complete absence of sperm. Also, in 14 publication was determined AAS suppress the hypothalamic–pituitary–gonadal (HPG) axis by inhibiting feedback, resulting in decreased synthesis of both folliculostimulating hormone (FSH) and luteinizing hormone (LH), consequently, decreases intratesticular testosterone, cause male infertility. It also has a negative impact on sexual function.

Conclusion. The AAS impact on male fertility is one of the least reported. The immediate cessation of the use of the AAS should be encouraged. Lack of awareness of the long-term adverse effects on fertility was the main factor in regretting the use of AAS in men with anabolic / steroid-induced hypogonadism.

4. APPENDICEAL INTUSSUSCEPTION – A DIAGNOSTIC AND THERAPEUTIC SURGICAL PROVOCATION

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Introduction. Appendicular intussusception (AI) is a rare and unexplained phenomenon characterized by appendix segment telescoping into itself or into the cecum causing acute abdomen syndrome. It was first described by McKidd in a 7-year-old boy in 1858. Since then the literature on it has been confined to a few case reports and very small cases series, in totally 280 cases being reported till now.

Aim of study. Searching for specialized literature and analysis of demographic characteristics (age and gender), clinical features and optimal treatment options in case of AI.

Materials and methods. Examination of publications from PubMed and Google Scholar Search according to the following keywords: „appendiceal AND intussusception", „appendix AND intussusception", and „appendix AND intussuscepted" with identification of 89 cases of AI reported during the period 2008-2020. Additionally, Chaar CI et al (2009) paper on the topic was included in the evaluation list, representing a comprehensive review of the English literature on AI and presenting 191 cases described for the period 1858-2007.

Results. The incidente of AI in adults accounts for about 80% of all cases, most frequently the pathology being diagnosed in middle-aged females (72.2%). Although it does occur in children (20%) too; however, in this case it seems to be slightly more common in males (63%) younger than 10 years of age. The pathophysiology of AI remains unclear; several etiologies have been described, namely, anatomical variations (fetal-type cecum, mobile appendix and mesoappendix, wide appendicular lumen relative to the distal portion) and pathological conditions of the appendicular wall (tumors-27.5%; endometriosis-22.1%; inflammation-20.7%). The signs and symptoms of AI are variable and range from asymptomatic to those suggestive for acute appendicitis, including severe pain in the right lower quadrant of the abdomen, nausea, vomiting, diarrhea or constipation, anorexia. Several radiological and endoscopic preoperative examinations seem to be useful in AI detection: barium enema, ultrasound of the right iliac fossa, computed tomography, magnetic resonance imaging, colonoscopy or diagnostic laparoscopy. Treatment options (conservative management, minimally invasive approach, surgery) differ significantly depending on underlying pathological condition, benign or malignant. In addition, spontaneously reduced appendiceal intussusception cases have also been reported in the literature.

Conclusion. AI is a rare pathological entity which in most cases presents clinically appendicitis-like symptoms; however, it should be taken into consideration when assessing the patient with right lower quadrant abdominal pain. In addition, due to these differences in operative management it is imperative that the practicing surgeon be aware of this rare but benign and resectable diagnosis.

5. APPROACHING WAYS TO OPTIMIZE ANESTHETIC RISK MANAGEMENT.

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Introduction. Despite the use of ASA risk for preoperative determination of anesthetic risk, the issue of insufficient assessment of vital body functions and possible perioperative complications remains relevant. The number of complications remains high, due to insufficient anesthetic risk assessment using ASA risk for all types of patients and taking into account years factors (age, obesity, functional measures, assessment of skills, fragility, nutritional status, sensory deficit, etc.).

Aim of study. Assessing the true indices of anesthetic risk, mortality and morbidity by applying new principles of anesthetic risk assessment, evaluating new scores and presenting groups of scores that will more accurately predict possible risks and perioperative complications.

Methods and materials. In order to achieve the purpose and objectives of the research, a cohort study (retro-prospective) of analytical type is planned. Data will be taken from patient observation sheets that will be planned for scheduled surgery. At the request of the group of authors, the Medical Information and Communication Technologies Service of IMSP IMU writes the parameters, without specifying personal data.

Results. Evaluation of the pre-anesthesia examination sheet with the highest percentage of prediction of the anesthetic risk that would replace the current one and adding in the pre-anesthesia examination the factors that can optimize the determination of the anesthetic risk (obesity, age, biological type, functional measures, aptitude assessment fragility, nutritional status, sensory deficit, etc.).

Conclusion. The practical application of the formulated recommendations allows to optimize the management and to improve the risk prediction index. The results of the study will be implemented in the Anesthesiology and Resuscitation Clinic of IMSP IMU.

6. ARTIFICIAL INTELLIGENCE IN SUBDURAL AND EPIDURAL HEMATOMAS.

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Introduction. Subdural hematoma (HSD) and epidural hematoma (HED) are neurosurgical emergencies that require medical supervision and surgical treatment to be removed. Imaging diagnostic techniques such as Nuclear Magnetic Resonance (NMR) and Computed Tomography (CT) are used to highlight subdural and epidural hematomas, which produce high-quality images and details of the affected brain structures that allow surgery to be planned. Enhancing (NMR) and (CT) imaging with the application of engineering and artificial intelligence techniques, such as neural networks (ANN), vector support machines (SVM), and deep learning algorithms, provides complex computer vision with an optimal rapid diagnostic system that allows physicians to increase the accuracy of diagnosis and treatment.

Aim of the study. Description of the application of artificial intelligence in the diagnosis and treatment of subdural and epidural hematomas.

Materials and methods. A systematic search of the literature in major databases such as Hinare, PubMed, NCBI was performed using the keywords "artificial intelligence", "subdural hematoma" and "epidural hematoma", of which 268 studies out of 2870 were found that have used artificial intelligence (AI) algorithms in diagnosis, surgical treatment, postoperative evaluation, and intraoperative care.

Results. Artificial intelligence techniques applied to improve NMR and CT imaging in subdural hematomas (HSD) and epidural hematomas (HED) have been listed.

Conclusion. Artificial intelligence (AI) at this time and in the future will be able to provide new opportunities for diagnosis, treatment, and risk avoidance during surgery.

7. ASPECTS OF SURGICAL TREATMENT TACTICS IN ACUTE PANCREATITIS

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Introduction. Acute pancreatitis (AP) has an annual incidence of 15-36 per 100,000 general population. About 20-30% of them will develop moderate or severe AP. AP denotes mortality of 46-70% of cases in its destructive forms, raising this issue to the priority rank. Thus, multiple questions about surgical tactics remain unsolved in these patients.

Aim of study. To study the incidence, etiology, clinical course, and possibilities of minimally invasive surgical methods in order to improve the treatment outcomes of patients with AP.

Material and methods. The results of the medical-surgical treatment were analyzed in 97 patients with AP treated in the Municipal Hospital "Sfânta Treime" surgery clinic. The severity of AP was assessed according to the Atlanta classification. The volume of pancreatic destruction was estimated according to the Balthazar score. Patients were stratified into 4 groups: 1- focal: lesion volume <30%; 2-massive: 30-50%; 3-subtotal: 50-80% and 4-total: >80%. The BISAP score was used to identify patients at increased risk of in-hospital mortality. Surgical treatment methods included: I - ultrasound drainage of fluid collections; II - laparoscopy, lavage and drainage of the abdominal cavity; III - laparotomy with necrosectomy and drainage.

Results. The age distribution of AP showed a predominance in the groups of 30-40 years (28 patients, 28.9%) and 40-50 years (34 patients, 35.1%). Gender ratio – 76 males/21 females. Alcohol was the most common etiological cause (58 patients, 59.8%), followed by biliary pancreatitis (34 patients, 35.1%), and in 8 cases (5.1%) idiopathic AP. Of the 97 patients, severe AP form was established in 38 (39.2% of cases), of which in 4 cases (10.5%) with focal necrosis <30% and 34 (89.5%) cases with necrosis of parenchyma >30%. The BISAP score <3 was determined in 3 patients with destructive pancreatitis, in the other 35 cases being >3. Minimally invasive techniques in 43 (44.3%) cases contributed to the recovery of patients, representing the basic surgery, especially in focal or massive AP. In total and subtotal AP, these methods, combined with intensive care, represented stages of surgical treatment, contributing to the stabilization of the patient. Minimally invasive interventions led to the location of the necrotic focus and its delimitation, therefore improving the intraoperative conditions for subsequent open surgery. This tactic reduced the incidence of septic complications from 21.9 to 13.1% and diminished mortality from 26.7 to 18.3%.

Conclusion. The combined minimally invasive techniques present an alternative in the treatment of destructive AP, a final treatment method for a limited pancreatic lesion or a stage of complex surgical treatment.

8. ASSESSMENT OF THE COMPLICATIONS FOLLOWING GASTRECTOMY FOR GASTRIC CANCER: AN OBSERVATIONAL RETROSPECTIVE STUDY

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Introduction. As surgery remains the main treatment option for gastric cancer, the incidence of postoperative complications following radical gastric resections should become an index which assesses the surgical outcome. The purposes of this study were to retrospectively analyse all postgastrectomy complications according to severity using Clavien–Dindo classification and to identify risk factors related to postoperative complications.

Aim of study. Most studies about complications after gastric cancer surgery have been performed without consideration of the severity of each complication. Therefore, we aimed to assess this gap in our knowledge by studying patients with resectable gastric cancer.

Methods and materials. The data of 122 consecutive patients who underwent radical gastric resections have been collected retrospectively. The postoperative complications were graded according to Clavien-Dindo classification. Statistical analysis was performed using the Chi-square test and ANOVA test. A p value of <0,05 was considered significant.

Results. The incidence of postoperative complications was 82,8%. The numbers of grade I, II, III, IV and V according to Clavien-Dindo were 25 (18%), 33 (25, 77%), 58 (45,31%), 8 (6,85%) and 6 (4,75%), respectively. Patient-related variables, like age (p=0,468577), ASA score (p=0,27), sex (p=0,52), TNM staging (p=0,81), Charlson Comorbidity Index (p=0,65) and operation – related variables, like lymph node dissection (p=0,131) and the extent of resection (p=0,23), weren't found as risk factors, whereas multiorgan resections had an important impact over the postoperative outcome (p=0,0027) and previous abdominal resections (p=0,05).

Conclusion. Our results show that the postoperative outcome following open gastrectomies is mainly influenced by the multiorgan resection and previous abdominal resections.

9. BILATERAL RETINOBLASTOMA IN CHILDREN

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Introduction. Retinoblastoma is the most common intraocular malignancy affecting children. The incidence of this disease varies by country from 3.4 to 42.6 cases per million live births. Retinoblastoma usually affects young children with the highest incidence in patients under 4 years of age. Retinoblastoma has no sex. About 60% of retinoblastoma cases are unilateral and 40% are bilateral. The most common causes are mutations of germinal or somatic origin. Retinoblastoma does not spread from one eye to another. When both eyes are affected and / or several tumors form, each tumor is born from a single retinal cell. All bilateral retinoblastomas are caused by genetic errors in the RB1 gene that can be inherited from a parent or can occur during the early development of the embryo. Bilateral retinoblastoma can develop an average of three tumors or can vary up to 14 tumors in both eyes. The risk of growing a new tumor decreases significantly after the age of three.

Aim of study. Genetic counseling should be offered to every parent with a child with retinoblastoma and patients with a family history of retinoblastoma. An analysis of the child's personal and family history and direct and indirect molecular studies should be performed by the geneticist. The risk of transmission depends on family history and the type of retinoblastoma. In the case of hereditary retinoblastoma, the risk of transmission is 50%. In the case of unilateral, unifocal, non-familial retinoblastoma, the risk of transmission is 5%. Genetic analysis in affected children may include the following molecular tests: Direct search for a constitutional mutation in the RB1 gene performed on constitutional DNA. The rate of mutation detection is very high in hereditary forms. No preferential mutations or "hot spots" have been identified in the RB1 gene. Indirect demonstration of the allele carrying the mutation in cases of family history. This test consists of identifying intragenic or RB1 flanking markers common to all affected family members. Tumor loss assessment of heterozygosity. This technique requires tumor material and allows the determination of the allele that remains and carries the mutation.

Methods and materials. The research was descriptive-observational, which was based on various scientific studies conducted in various countries on bilateral retinoblastoma in children.

Results. Indices such as the incidence and risk factors in the development of bilateral retinoblastoma in children have been studied, as well as methods of prophylaxis of bilateral retinoblastoma in various scientific studies.

Conclusion. Retinoblastoma involving both eyes occurs in 1/3 of patients, and is accompanied by a germline mutation RB1. Genetic testing determines the risk of retinoblastoma, and 50% of babies at genetic risk are born with already formed tumors. Children with bilateral retinoblastoma have a lifetime risk of second cancer, which is increased by radiation exposure. These patients should avoid radiotherapy, computed tomography and x-rays whenever possible and receive genetic counseling as adults so that they understand their risks and potential risks to their children. Children born to a parent with a history of retinoblastoma, especially bilaterally, should be tested for this cancer shortly after birth, as early detection of this cancer greatly improves the chances of treatment.

10. BILIO-PANCREATIC TRANSPAPILLARY ENDOSCOPIC INTERVENTIONS IN PREGNANCY

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Introduction. Bilio-pancreatic transpapillary endoscopic interventions are elective for the management of pregnant patients with clinical and paraclinical data of bile duct obstruction. Choledocholithiasis in pregnancy, as a rare complication is being rarely reported - 1 case for 1200 births.

Aim of study. Demonstrate the safety of bilio-pancreatic transpapillary endoscopic interventions in pregnancy and highlighting the possibility to use radioscopy. Presenting clinical experience in the management of choledocholithiasis in pregnancy. Evaluation of the application of endoscopic retrograde endoscopic retrograde cholangiopancreatography – (ERCP) in pregnancy.

Methods and materials. Retrospective-prospective study with evaluation of six pregnant women who underwent ERCP. Evaluation of the results of preoperative investigations and post-procedural results. In all patients, the pelvis was protected with lead shielding, and the fetus was monitored by a gynecologist-obstetrician.

Results. The mean age of the patients was 29 years (24-34 years). The average gestation term was 15.6 weeks (6-22 weeks). In 5 cases (83.3%) ERCP was done and only one non-radiant technique applied. The findings of transpapillary endoscopic interventions were stones in the common bile duct (n = 3), Oddi sphincter stenosis (n = 3). All patients underwent endoscopic sphincterotomy and in one case biliary stenting was performed (plastic prosthesis-8.5 FR). In 2 cases (33.3%) a repeated procedure was needed. In one case it was necessary to replace the stent, due to the afunctionality (4 months) and the impossibility of resolving choledocholithiasis, due to the large stones. Subsequently, after delivery, the patient underwent open surgery with choledochotomy and choledocholithectomy. In only one case the patient developed post-ERCP pancreatitis. In one case the patient underwent laparoscopic cholecystectomy during pregnancy. Average hospital stay - 5.1 days. All infants born to date had Apgar scores> 8, and ongoing pregnancies are uneventful.

Conclusion. Endoscopic retrograde interventions on biliary and pancreatic ducts in pregnancy, regardless of the chosen technique: radiant (ERCP) or non-radiant are safe and methods of choice for approaching pregnant patients who require decompression of the bile and pancreatic tract. Post-procedural complications have been demonstrated independent of the type of procedure, however, it should be limited to therapeutic indications with additional intra-procedural safety measures.

11. BIOLOGICAL SKIN TISSUE ENGINEERING FOR WOUND DRESSINGS

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Introduction. Modern and smart dressings are becoming more and more sought after. Their values consist not only in a protective barrier but also in a beneficial environment for healing, biocompatibility, self-dissolving, the possibility of realising therapeutic agents, minimal human involvement, that would actively support the healing process of wounds. Dressings with extracellular matrix, hydrogel, collagen are an example of such innovative products that facilitate wound healing, providing an humid environment in which cells can thrive, while the wound can still breathe and exudate can be self-drained.

Aim of study. To create the tissue engineering, decellularized extracellular sheets, sponges, hydrogels from the porcin derma, small intestinal submucosa, for the wound dressing.

Methods and materials. For one year period, from the pigs' tissues, were obtained: decellularized extracellular matrix from dermis; collagen suspension from dermis; hydrogels from dermis; decellularized scaffolds from mucosa and submucosa of small intestine; collagen suspension from mucosa with small intestine submucosa; hydrogels from the mucosa with small intestine submucosa. Extracellular matrices from skin and intestine were obtained by decellularization with 4% sodium deoxycholate, 0.1% sodium dodecyl sulphate solution, 0.25% Trypsin, sodium hydroxide, Triton X-100. Collagen extraction was performed by treating with 0.1 M NaOH and 0.5 M acetic acid containing porcine pepsin. Preparation of the hydrogel was performed in HCl solution with porcine pepsin. The products obtained were compared with non-treated native tissue samples. Tissue evaluation included examination of the decellularized samples with hematoxylineosin and DNA quantification assays. For the morphological evaluation H&E staining was performed.

Results. Histological examination has not revealed any presence of cells in tissues, decellularized in accordance with the protocols. More than 99% of the nucleic acids were removed from the decellularized bovine matrix.

Conclusion. Regenerative medicine is advancing from a wound healing approach based on obtaining smart dressings. Hydrogels, sponges, foils, collagen can play a key role in wound care and facilitating the tissue engineering strategies, acting as a scaffold for stem cells and carrier, source of bioactive molecules and drugs.

12. CLINICAL OUTCOMES OF ENDOVENOUS LASER TREATMENT (EVLT) FOR PRIMARY CHRONIC VENOUS INSUFFICIENCY

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Introduction. Endovenous treatment, in particular thermal ablation, has become the preferred approach in the management of primary chronic venous insufficiency (CVI). Moreover, endovenous laser treatment (EVLT) is recommended by current guidelines as a first choice curative option for varicose veins.

Aim of study. The purpose of the study was to assess the early and long-term clinical results of EVLT applied for varicose veins of the lower limbs.

Methods and materials. The study was conducted at the Chair of General Surgery nr.3, SUMPh "*Nicolae Testemitanu*" (Chisinau, Republic of Moldova), and included 88 patients with primary CVI. Female patients accounted for the vast majority – 79.54% (n=70); while the age of the subjects ranged from 22 to 72 years, median value – 41 (25%-75% IQR 30-56) years. Seven (7.95%) patients were hospitalized with bilateral varicose veins, the study group thus comprising 95 limbs. Nine (10.22%) subjects had active venous leg ulcer. The primary etiology of CVI was confirmed in all patients by duplex scanning. Incompetence of great saphenous vein was diagnosed in 85 (89.47%) cases, small saphenous vein demonstrated pathological reflux in 6 (6.3%) cases, while incompetence of both saphenous veins has been identified on 4 (4.2%) limbs. EVLT was performed under local tumescent (n=40; 45.45%), spinal (n=27; 30.68%) or general (n=21; 23.86%) anesthesia. In 69 (72.63%) cases endovenous access was achieved by ultrasound-guided puncture in the upper third of the calf. In another 26 (27.36%) cases was practiced high ligation with subsequent retrograde passage of the bare-tip laser fiber towards the distal sense. Thermal ablation was done using diode laser, the energy being emitted in a continuous or pulsed regime. In 67 (70.52%) cases EVLT was associated with stab avulsion of varicose tributaries. Early clinical outcomes were evaluated one month postoperatively. Long-term results were assessed over 5 up to 12 years after endovenous treatment, median value – 8 (25%-75% IQR 7-10) years. Patient satisfaction, changes in the venous clinical severity score (VCSS), rate of leg ulcer healing and frequency of recurrent varicose veins were considered as endpoints.

Results. Eighty-four (95.45%) patients expressed their satisfaction with the treatment outcome. In the early postoperative period there was one local wound complication and 6 (6.31%) cases of isolated thrombophlebitis of tributaries. Mean VCSS was found to decrease compared to preoperative level: 3±2.51 versus 7.12±4.11 points ($p<0.0001$). Healing rate of venous leg ulcers was 100%. During the follow-up period only 2 (2.27%) patients returned with recurrent varicose veins.

Conclusion. EVLT for primary chronic venous insufficiency ensures a good immediate and long-term clinical outcome, being associated with a high rate of patient satisfaction and a low percentage of postoperative complications.

13. CLINICAL PARTICULARS OF PATIENTS WITH NEUROFIBROMATOSIS TYPE 1 TREATED AT THE ONCOLOGICAL INSTITUTE

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Introduction. Neurofibromatosis type 1 (NF1) is an autosomal dominant disease caused by a spectrum of mutations that affect the NF1 gene on chromosome 17q11.2 and one of the most common human genetic diseases (90%), with a prevalence of one in 3,000 births, without any predilection for sex or race. The expressiveness of the disease is extremely variable, with manifestations ranging from mild lesions to several complications, functional disorders and tumors.

Aim of study. To analyze the clinical features of optimizing the diagnostic-curative management of patients with Neurofibromatosis type 1(NF1) addressed to the Oncological Institute.

Methods and materials. This study was performed at the Oncological Institute of the Republic of Moldova. The research was of observational–descriptive type, conducted during the years 2017-2020 and the patients included in the study were diagnosed with Neurofibromatosis type I or Recklinghausen's disease.

Discussion. The results of the study determined that out of the total number of patients with 18 NF1 hospitalized for surgical treatment in the Department of Skin Tumors, Melanoma and the locomotor system, 7 (38.8%) of them were from de novo healthy families and 11 (61.1%) were from families with NF1 present. In all 18 cases, patients were treated surgically forcutaneous and subcutaneous neurofibroids. And 12 (66.6%) of 18 patients were treated repeatedly for existing skin manifestations. According to the studies conducted, we determined that the vast majority of patients opted for removal >2 outbreaks making up a total of 15 (83.3%) cases, fewer cases were with the removal of 1 outbreak 3 (16.6%) and 2 outbreaks 4 (22.2%) cases. All patients opted for surgical treatment for aesthetic reasons and fewer cases due to pain, especially on the move. We evaluated that, along with the skin manifestations, these patients had other manifestations of the disease. Malignancies in our study were not determined, and treatment was limited to symptomatic postoperatively. In all cases, most manifestations were present in group 2, both clinically and paraclinical, where more than 2 pathological manifestations were present at the same time. Osteoarticular manifestations made up 15 (83%), of which with scoliosis with/ without kyphosis 7 (38.8%), with osteoporosis 4 (22.2%) and stature retardation 4 (22.2%), with predominance in the group 2 study with patients from families with NF1. Endocrine manifestations accounted for 6 (33.3%) cases, from 1-3% cases in patients showed clinical and paraclinical signs neuropsychic 1 (5.5%), cardiovascular 2 (11.1%), digestive 3 (16.6%).

Conclusion. Comparing our own results with other results in the literature, we found that cutaneous manifestations in our research are as common as 95-100% of cases and malignant tumors in our study were not highlighted. The diversity of the clinical manifestations of this disease determines us to analyze this group of patients in more detail, as well as requires the consultation of several specialists - oncologists, family doctors, surgeons, ophthalmologists, neurologists, traumatologists-orthopedists, therapists, endocrinologists, geneticists, pediatricians, for the treatment of clinical manifestations as well as the improvement of the lifestyle of these patients.

14. COLONIC DIVERTICULOSIS COMPLICATED WITH COLOVESICAL FISTULA

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Introduction. Diverticulosis is a clinical condition in which multiple sac-like protrusions (diverticula) develop along the intestinal wall. Though diverticula may form at weak points in the walls of either the small or large intestines, the majority occur in the large intestine (most commonly the sigmoid colon). In diagnosis and treatment, important aspects are the complications of diverticulosis: diverticulitis, abscess, fistula, bleeding, bowel obstruction, free perforation or peritonitis.

Case presentation. We present a 63 year-old female patient who presented with hypogastral pain, especially in the left flank, constipation and rectal hemorrhage in small amounts. Laboratory showed RBC-3,1x 1012/l; HGB- 118 g/l; WBC-12,6x109/l; HCT-0,50 L/L; ESR-28 mm/h. Urinalysis showed RBC- 2-3 hpf; WBC- 12-14 hpf; mucus, bacteriuria +++. Cystoscopy showed a colovesical fistula (was thought of a neoplastic genesis). Irrigoscopy showed colonic diverticulosis, colovesical fistula and a subocclusional tumor like mass at the level of sigmoid colon. Biopsy was taken at rectoromanoscopy- there were no atypical cells in the histological material. On September 18th 2021, underwent surgery with block resection of recto-sigmoid intestine and a small part of urinary bladder which was attached to tumor like mass of sigmoid, a termino-terminal rectal-sigmoid anastomosis was performed, restoration of the defect of the urinary bladder. In order to avoid possible dehiscence of the anastomosis, a biluminal ileostomy was installed. After surgery, histopathological exam of tumor-like mass showed signs of an inflammatory process caused by diverticulitis. The postoperative period passed without complications. On December 20, the patient was hospitalized again for reconstructive ileo-ileal surgery and the closure of the stoma by latero-lateral anastomosis that were performed. The post-reconstruction period passed without particularities. 7 days after the operation, the patient is discharged in a satisfactory condition.

Discussion. Colovesical fistula was caused by an inflammatory process of the colonic diverticulosis. Evolutionary - it went on like a malignant tumor with concretion in the bladder. Cystoscopy and irigography also suggested a tumor with bladder enlargement. The volume of the intervention was based on the intraoperative situation (there were premises to consider this process as an inflammatory one - which was then confirmed histomorphologically); The intervention was performed shortly after hospitalization (40-44 hours), due to a partial intestinal obstruction (clinical, irigographic).

Conclusion. Complications of colonic diverticulosis such as internal colovesical fistula requires an individual curative diagnostic approach. Purulent-septic complications can be solved or prevented only by surgery, which provides for the block removal of the affected sector of the colon and bladder.

15. COLORECTAL CANCER: ASPECTS OF DIAGNOSIS AND SURGICAL TREATMENT

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Introduction. Colorectal cancer is currently the most common neoplasm of the digestive tract and the third most common cause of cancer mortality worldwide.The Methods for diagnosing colorectal cancer show that 20% of patients with this disease have distant metastases, and another 25% are prone to further metastasis. Among colorectal cancer screening tests, colonoscopy is currently considered the most sensitive and specific method of diagnosis. However, double-contrast computed tomography, nuclear magnetic resonance and transanal ultrasonography are also important in clinical practice, being considered as methods of screening and evaluation of surgical tactics.The first-line treatment is surgery that involves complete excision of the tumor, restoration of the digestive tract through the application of anastomosis, and mandatory lymph dissection of adjacent lymph nodes. For patients with concomitant diseases and major anesthesiological risk, laparoscopic treatment is the first-line intervention.

Case presentation. A woman, 66 years old, addresses the following causes: constipation alternating with diarrhea, flatulence, and pain in the region of the left lateral flank. The colonoscopy revealed a diffuse, infiltrative exophyte process with circular stenosis of the sigmoid colonic lumen, of a hard consistency, with insignificant hemorrhage after taking the biopsy. Histopathologically, a moderately differentiated invasive adenocarcinoma of the colon was determined. The diagnosis of sigmoid carcinoma, stage II-III,T3-4NxM0, complicated with partial intestinal occlusion was established.Intraoperatively, a massive circular tumor was detected, lasting 8x9 cm, overgrown with the loops of the small intestine and the posterior wall of the uterus. Regional lymph nodes enlarged in size. The surgery was limited to the segmental excision of the sigma with the transanal application of the end-to-end anastomosis. Postoperative histopathological examination determined G2 adenocarcinoma, T3N0M0, with inflammatory infiltrate in adjacent organs. The monitoring for 3 years postoperatively did not establish loco-regional and metastatic recurrence data.

Discussion. The purpose of the discussions is to describe and interpret the data of the clinical case in relation to the already known specialized data. The variability of clinical cases but also of diagnostic and treatment techniques highlights the need for comprehensive, prospective, randomized studies to minimize the aggressiveness of the neoplastic disease.

Conclusion. Colorectal cancer remains a high-risk pathology in people over the age of 45. Screening by colonoscopy, CT and MRI, but also transanal EUS are the methods of choice in the diagnosis and early detection of colorectal cancer.Tumor ablation and lymph dissection are the main stages of surgery.

16. COMBINED SURGICAL TREATMENTS IN CUTANEOUS MALIGNANT MELANOMA

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Introduction. Malignant melanoma is a form of malignant cancer of the melanocytic system that is most commonly located in the skin, they are one of the most aggressive and unpredictable developments of all forms of skin cancer. MMC is a current problem in clinical oncology, due to its biological characteristics, aggressive evolution and early metastases. MMC represents 95% of all melanomas, causing the worst prognostic problems, with a diverse location (in the eyes, ears, gastrointestinal tract, oral mucosa, genitals). MMC is not the most common type of cancer, but its incidence is growing faster than any other type of cancer. MMC is found worldwide with a frequency of 1% of all human malignancies, producing 0.75% of malignancies.

Aim of study. The aim of the study was the comparative analysis of surgical methods for the treatment of patients diagnosed with Cutaneous Malignant Melanoma in the Department of Skin Tumours, Melanoma and the Locomotor System, for the correct approach and optimization of the surgical treatment of patients with this disease.

Methods and materials. This study was performed at the IMSP Oncological Institute of the Republic of Moldova. The research was descriptive-transversal and was conducted during the years 2003-2020 and the patients included in the study were diagnosed with Malignant Cutaneous Melanoma.

Results. We studied 60 cases of patients diagnosed with various clinical forms of Cutaneous Malignant Melanoma and who were treated surgically by various methods. According to the analysed studies, the treatment methods performed according to the traditional surgical method, the vacuum excision method and the cryodestruction method with tumour excision in malignant melanoma, we established that the excision margin of the performed methods plays an important role in recurrences. The excision margin of the tumour, according to the 3 studied methods, will be achieved after the Clark invasion level. Thus we established that according to the classical surgical method in the level of invasion Clark I will be 1 cm from the edge of the tumour, in level II Clark- 2 cm, in level III Clark 3 cm, in level IV Clark 3.5 cm, and level V Clark 5 cm from the edge of the tumour. At the same time, the shape of the ulcerated or nonulcerated tumour and the location of the tumour will be taken into account. If the postoperative defect is severe, treatment will be combined with autodermoplasty. In the case of the method of cryodestruction of the tumour and subsequent excision, it will be performed for MMC with Clark I and II - 1.5 cm, Clark III and IV - 2 cm, Clark V - 3 cm. For the vacuum excision method that was applied only to ulcerated forms, the edge of the excision was at Clark I-1.8 cm, Clark II-2 cm, Clark III-2.5 cm, Clark IV-3 cm, Clark V - 4 cm (figure 2). It was found that recurrences after classic surgical treatment were often developed for MMC in stage IV and V with an index of 3.5% and 3.6%. Level III MMC invasion after Clark relapses accounted for 1.6% of cases. No levels of recurrence were detected for levels I and II after Clark.Another analysis, according to various studies, on determining the time of wound regeneration found that according to the classic surgical method wound regeneration occurs between 10-14 days, which is the fastest and in the case of cryodestruction of tumour with tumour excision wound regeneration is 20 -30 days, which is the slowest regeneration time. In the case of vacuum-excision of the tumour, regeneration lasted between 16-18 days postoperative.

Conclusion. The surgical treatment method combined with MMC cryodestruction is effective compared to the classic method by the additional effect of destroying the tumour, it can be done in 2 steps, and the result of the method is to reduce the number of recurrences by 2% -4% compared to the classic method. The method can be applied in various clinical forms of MMC, but with a better result for non-ulcerated forms. % cases of recurrence for level I and II of Clark invasion, achieved in a time, with regeneration of 18-20 days, can be performed in any ulcerated form of MMC, requiring expenses for the application of devices of different sizes. The comparative study of the surgical treatment methods performed between various studies determined that they can be applied in any clinical form of MMC, including the ulcerated one, compared to the vacuum-excision method which is indicated and performed only in the ulcerated form of MMC. According to the excision margin of the tumour and recurrences, it will increase with the size of the tumour, the ulcerated shape and the Clark level of invasion, and studies show that the excision margin and recurrences are lower in combined treatment methods compared to conventional surgery. The fastest regeneration of the wound was determined by the classic surgical method of 10-14 days compared to the combined surgical methods of 16-30 days. Combined surgical methods are more effective but require longer treatment time and costs.

17. COMPARATIVE CLINICAL ASPECTS OF UNILATERAL VS BILATERAL ACUTE MUMPS ORCHITES

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Introduction. Mumps is a contagious disease worldwide caused by the Mumps virus (MuV). In addition to the typical painful parotids in infected men, orchitis is the most common extra-salivary inflammation and an important etiological factor of male infertility caused by mumps. The data about evolution of the clinical manifestations in the acute phase of mumps orchitis is limited, thus making it more difficult to define the pathological mechanisms with a significant impact on post-mumps testicular dysfunction. Is not clear which of the unilateral or bilateral mumps orchitis disrupt the testicular function, that is why this study is focused on comparative data from mumps orchitis clinical evolution.

Aim of study. Although mumps is a vaccine-preventable disease, sporadic outbreaks have occurred worldwide, even in highly vaccinated populations. In the Republic of Moldova vaccination of children 12 months old against Mumps was started in 1983. Second vaccination at 7 years was introduced in 2000. At the end of 2007 – beginning of 2008 it was an epidemic with 29,357 of mumps infections, 2/3 of infected were vaccinated with 1 dose, 1/3 – unknown status, just 4% with known 2 dosages.

Methods and materials. A retrospective record review of the case files of 203 patients (15 to 44 years old; mean age 20 years) with unilateral (148 patients) and bilateral mumps orchites (55 patients) admitted to infectious diseases department between end of 2007 and 2008 was done. The following clinical manifestations were analyzed: testicular swelling, testicular pain, scrotal hyperemia and fever. The data on the time of onset and duration of maintenance of symptoms in unilateral and bilateral mumps orchitis were compared.

Results. Testicular swelling was reported in the first 3 days, first 10 days and after 10 days of disease in 13 patients (23.63%), 50 patients (90.9%) and 5 patients (9.09%) respectively in those with bilateral orchites vs 34 patients (23.28%), 129 patients (88.35%) and 17 patients (11.64%) respectively in those with unilateral orchites (2 patients did not present testicular swelling). Testicular pain at 3, 10 and after 10 days of parotitis: 9 patients (16.36%), 50 patients (90.9%) and 5 patients (9.09%) respectively in bilateral vs 32 patients (22.53%), 124 patients (87.32%) and 18 patients (12.67%) respectively in unilateral (in unilateral group 6 patients - no testicular swelling). Scrotal hyperemia has been occurred in the first 7 days in 39 patients (70.9%) with bilateral vs 85 patients (60.71%) in unilateral (8 patients with no scrotal hyperemia in unilateral group). Fever at 3, 10 and after 10 days of parotitis: 29 patients (59.18%), 47 patients (95.91%) and 2 patients (4.08%) respectively in bilateral (6 patients – with no fever) vs 76 patients (55.07%), 128 patients (92.75%) and 10 patients (7.24%) respectively in unilateral (10 patients – with no fever).

Conclusion. Testicular swelling, pain and scrotal hyperemia have no significant differences on the time of onset, with an average duration of symptoms of 8.5 days in bilateral orchites vs 7.2 in unilateral mumps orchites. The time of onset of fever was found in the first 3 days of parotitis in more than a half of the patients, with an average duration of 3.5 days in bought groups.

18. COMPARATIVE RESISTANCE TRENDS OF COMMON URINARY PATHOGENS AT 2 YEARS DISTANCE IN THE SAME POPULATION

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Introduction. Urinary tract infections are some of the most common infections in human medicine, affecting a large patient population (around 150 million cases/year) to various extents, irrespective of age and gender. Among the reasons underlying this increased mortality associated with antimicrobial resistance, it should be mentioned that the high levels of antibiotic resistance strongly contribute to initial inappropriate empiric antibiotic treatments and the subsequent delay in the implementation of adequate treatments. The assessment of local data on the prevalence and resistance is essential to evaluate trends over time and to make adjustments to the empirical treatment protocol.

Aim of study. Empirical treatment and prophylaxis of urinary tract infections at this stage is based on old principles that guide us to the use of first-line antibiotics and second-line, third-line antibiotics, etc. Due to the long and uncontrolled use of antibiotics according to these principles, the use of first-line antibiotics often has a statistical efficacy of less than 30%. Regular evaluation of antimicrobial resistance trends should be done in order to adjust the first-line preparations according to the highest rate of efficacy.

Methods and materials. A retrospective record review of data collected from laboratory results of 1299 patients admitted to the Urology Department of Republican Clinical Hospital in 2019 vs 1250 patients in 2021 was done. It was selected and compared the highest incidence bacteria commonly found in bought groups: Escherichia Coli, Klebsiella pneumonia, Proteus Mirabilis and Pseudomonas aeruginosa. The isolates were analyzed for susceptibility and resistance to main antimicrobial groups and agents used for urinary tract infection treatment.

Results. A total of 221 (17%) vs 154 (12.32%) of 4 selected bacteria was found in the 2019 group and in the 2021 group. From selected bacteria, Escherichia Coli were reported in 43.43% vs 39.61%, Klebsiella pneumonia 33,48% vs 37.01%, Proteus Mirabilis 12.66% vs 12.34% and Pseudomonas aeruginosa 5.88% vs 11.04%. In the 2019 group the Escherichia Coli, Klebsiella pneumonia and Proteus Mirabilis susceptibility to Fosfomycin was 92.7%, 63.51% and 89.28 respectively. In the 2021 group was found significant reduced susceptibility to Fosfomycin in Escherichia Coli (62.9%) and Klebsiella pneumonia (43.1%) but significant increase in Pseudomonas aeruginosa (94.5%). Pseudomonas aeruginosa sensitivity changed in time for Amikacin, Carbapenems and Cephalosporins with 76.92% vs 86.6%, 61.53% vs 33.3% and 53.84% vs 46.6%, respectively. Klebsiella pneumonia with the lowest susceptibility to Cephalosporins (29.72% vs 13.7%), Fluoroquinolones (27.02% vs 25.4%) and Nitrofurantoin (18.91% vs 31.3%) – those antibiotics that are most commonly used as prophylaxis and empirical treatment. The highest sensitivity of selected bacteria was found to Amikacin in bought groups with 75% and 80.53% respectively.

Conclusion. Comparative data showed statistically significant changes over time in bacterial susceptibility to commonly used antibiotics. Two analyzed groups from the same population at two years distance showed low efficacy of empirically used antibiotics as treatment and prophylaxis (Cephalosporins, Fluroquinolones and Nitrofurantoin). In this respect, we consider that the choice of empiric antibiotic therapy should be selected based on local susceptibility profiles. From this specific study, we can conclude that Amikacin should be considered as the first chosen antibiotic for empirical and prevention treatment in this specific population.

19. COMPLICATED FISTULIZING CROHN'S DISEASE IN A HIGH-RISK PATIENT

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Introduction. Crohn's disease (CD) is a type of inflammatory bowel disease (IBD) with symptoms that may include abdominal pain, diarrhea, fever and malnutrition. Fistulizing Crohn's disease represents one of the most severe complications in CD, with an increase in its frequency of diagnosis.

Case presentation. We report the case of a 39-year-old woman known with grade B Los Angeles esophagitis, duodenal ulcer, hiatal hernia, previous H. pylori gastritis, diagnosed with ileal Crohn's disease (specific endoscopic aspect and confirmed histopathology result) in early 2020. Three months after her diagnosis and the initiation of the specific treatment (corticotherapy), the patient presented with severe abdominal pain, 7-8 stools/day, with mucus and blood, and the presence of fecaluria. MRI examination shows inflammatory changes in the terminal ileum, several entero-enteral fistulas, and the presence of an abscess at the level of the fistula located between the ileum and the urinary bladder. Treatment with Metronidazole was initiated for 10 days, with an improvement in the paraclinical assessment. The patient underwent surgery with evacuation of the abscess, right hemicolectomy with terminal ileostomy, segmental sigmoid resection, suture of the urinary bladder and drainage of Douglas and parietocolic space. Two months later following up MRI revealed a calcified liquid collection in the parietocolic space and ileocolic anastomosis was performed. The evolution of the patient requires a treat to target approach which will include early initiation of biological treatment with Infliximab after the surgical recovery process.

Discussion. Differential Diagnosis should be made with ulcerative colitis, in which fistulas are also a known complication, but happening less common.

Conclusion. This case illustrates the importance of close follow-up after surgery in patients with fistulizing Crohn's disease, as well as the significance of biological treatment in the management of complications in high-risk patients. A close follow-up can help to detect early recurrence and prevent further fistula development and abscess formation.

20. CONGENITAL ANATOMO-TOPOGRAPHIC ANOMALIES OF THE COLON. DIAGNOSTIC AND CURATIVE DIFFICULTIES.

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Co-author: Draganel Andrei

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Introduction. With an increased frequency and a seemingly benign clinic, the disorders of bowel transit and evacuation are considered by most parents and even doctors as a "trivial" biological phenomenon and, unfortunately, is neglected. Chronic, long-term evolution of the disease slowly causes dysbacteriosis, obstructive enterocolitis, endotoxicosis, secondary changes of the colon, etc.

Case presentation: We present the case of a 5-year-old girl, who suffers from constipation since neonate. In the dynamics, the constipation acquired a chronic character with abdominal pain, difficulties of bowel evacuation, formation of the impacted feces and soiling. All the symptoms of functional decompensation forced the parents to consult the doctors: pediatrician, neuropsychologist, endocrinologist. Formulating the diagnosis without performing a complex examination and argumentation of the etiopathogenesis of the disease indicated a symptomatic treatment, without effectiveness, which prompted the visit to the surgeon with the following complaints: constipation with bowel obstruction, soiling, flatulence.

Discussion. The patient underwent the subsequent examinations: profilometry of anal canal, ampulotonometry with balloon expulsion test, electromyography of external anal sphincter, histomorphological investigation of full-thickness rectal biopsy. The result was diagnosed as a combined congenital anomaly of the colon: dimensional deviation.

Conclusion. Early objective diagnosis of anatomo-topographic malformations of the colon, with subsequent radical treatment has a major socio-economic value by reducing the duration of palliative preoperative treatment; decrease the rate of secondary complications; reducing the complexity of surgery; diminution of the rate of postoperative functional disabilities and respectively of the duration of the post-op functional recovery period.

21. CONTEMPORARY METHODS OF INTRAOPERATIVE NAVIGATION IN BRAIN TUMOUR SURGERY.

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Scientific advisor: Vasile Galearschi, MD, Associate Professor, Department of Neurosurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Contemporary methods of intraoperative navigation in brain tumour surgery are investigations that allow the neurosurgeon to obtain information about the lesion, the distance to it, and its relationship with adjacent structures.

Aim of study. To provide information about the advantages and disadvantages of the methods that are currently used in intraoperative neurosurgery.

Methods and materials. Galearschi V 2012 Metode Contemporane de reperaj in tumorile cerebrale (46-52) Pubmed.ncbi.nlm.nih.

Results. Computed tomography is a method that has the advantage of a higher anatomical resolution than USG, better visualisation of bone and calcified structures and faster imaging time than the MRI and is suitable to visualise bone destruction, hyperostosis, erosion or penetration. A disadvantage would be that the images obtained are only in the axial incidence, plus the images of the posterior fossa are limited as a result of bone artefacts. This method poses an increased risk of X-ray exposure and is only practised in specialised clinics. Ultrasonography as a method has gained confidence primarily due to its lack of invasiveness, plus it has a higher affinity for cystic formations than CT and MRI, it provides real-time data on intraoperative dislocation of brain anatomical structures and as a price-profit it is a cost-effective method. But some aspects may be disadvantageous because USG may fail to differentiate low-grade astrocytomas, plus it would require acoustic coupling, and imaging is limited by limited lateral resolution. MRI is considered a top investigation in neurosurgical screening because it has a number of advantages, such as early detection of brain tumours, allows a clearer picture of neuro-anatomical components, a very good view in case of cerebral edema, allows highlighting tumour boundaries, and the differentiation of the vascular structures from the bone artefacts, it allows to obtain images of very good resolution in a very short period of time. A major disadvantage would be that the availability of the use of this method is low, and its use is allowed only in specially equipped centres.

Conclusion. A conclusion based on these methods notes that neuronavigation development is accelerating, knowledge of these techniques is very important and necessary but the best, accessible and useful methods remain the eyes and knowledges of the neurosurgeon.

22. CRYOTHERAPY IN THE TREATMENT OF SUPERFICIAL FORMS OF SKIN CANCER

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Introduction. Basal cell carcinoma is a malignancy of non-melanocytic skin that arises from the basal cells of the epidermis or from follicular structures. The European Dermatology Forum, the European Dermato-Oncology Association and the European Organization for Research and Treatment of Cancer recommend as a first-line treatment for low-risk superficial basal cell carcinoma - topical treatment and destructive approaches (cryotherapy, laser ablation) with a rate of 94-99% recuperation, and complete surgery for high-risk basal cell cancers. Post-treatment patient monitoring is very important because the risk of recurrence at 5 years is 41%.

Case presentation. The patient X, 80 years old, was diagnosed with multiple basal cell carcinoma of the frontal, retroauricular and thoracic regions, stage II, T3N0M0. Cryosurgical treatment of the tumor was performed within the limits of oncological safety 3 times every 5 minutes. After 5 years the patient addresses repeatedly with a formation on the posterior skin of the left hemithorax and in the left temporo-mandibular region. He was hospitalized at the Oncological Institute of the Republic of Moldova in the section "Head and neck tumors" where he was diagnosed with a giant ulcerated basal cell carcinoma of the skin of the back of the left hemithorax T2N0M0 and basal cell carcinoma of the skin of temporo-mandibular left region with concretion in cellulo-adipose tissue, muscles and perineural- T3N0M0. The patient underwent surgical treatment in full volume, in 2 phases: electroexcision of the tumor of the face with plasty with mandibular flap and excision of the skin and tissue lesions. The postoperative period was satisfactory, the wound regenerated for the first time.

Discussion. The purpose of the discussions is to describe and interpret the data of the clinical case in relation to the already known specialized data. According to the results of the present study, one or two cryotherapy sessions should be effective and safe for the tumors of the skin.

Conclusion. Patients with multiple basal cell carcinomas are prone to both previous tumor recurrence and the development of new basal cell carcinomas. The literature is quite variable in relation to the recurrence rates of basal cell carcinomas, reporting rates between 10% and 67%. The latency period between surgery and recurrence can vary from two months to two years, occurring frequently in the first six months.

23. DECELLULARIZATION PROCEDURES OF THE ELEMENTS OF THE UMBILICAL-PLACENTAL COMPLEX

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Co-author: Bodrug Hemei Maria

Scientific adviser: Viorel Nacu, PhD, Professor, Department of Anatomy and Clinical Anatomy, Head of Laboratory of Tissue Engineering and Cellular Culture, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Due to its antifibrotic, anti-inflammatory and immunomodulatory properties, DAM (Decellularized amniotic membrane) has been used in multiple medical applications for over 100 years. Multiple decellularization methods that include combinations of physical, hemical, and enzymatic treatments are studied to ensure maintaining the structural and chemical integrity of the ECM (extracellular matrix) corresponding to the original tissue.

Aim of study. To evaluate the decellularization of the elements of the umbilical-placental complex, by various methods and to characterize the decellularization effect obtained.

Methods and materials. Amniotic membranes were manually separated, under sterile conditions, from three human placentas. A total of four decellularization procedures were used: 1% Triton X-100 solution; Triton X-100 1% solution + Ultrasound; 0.5% Dodecyl Sodium Sulfate (SDS) solution; 0.5% SDS solution + Ultrasound,. Evaluation was done after 5 hours and 24 hours. DAM morphology was assessed by hematoxylin and eosin (H&E) staining.

Results. Histological images confirm that decellularization of AM with 0.5% SDS solution for 24 hours had a more aggressive influence on the structure of AM. Decellularization of AM with Triton 1% solution after 24 hours shows incomplete decellularization of AM. In the batch in which decellularization was performed with SDS 0.5% and SDS 0.5% solution + Ultrasound, already after 5 hours, the cells were completely removed, without affecting the structure of the ECM of AM.

Conclusion. The method of decellularization with 0.5% SDS solution is more suitable for AM decularization and can be performed in only 5 hours, the use of ultrasound did not have a significant effect on the obtained results.

24. DIAGNOSIS AND TREATMENT OF GASTRIC CANCER WITH PYLOROSTHENOSIS. RETROSPECTIVE STUDY.

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Scientific adviser: Nicolae Ghidirim, PhD, Professor, Department of Oncology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. It is well known that oncological pathology occupies a leading place in global mortality. In the Republic of Moldova, in 2020, according to the data of the National Agency for Public Health of the Ministry of Health, Labour and Social Protection, mortality due to malignant tumors are on the second place, representing 14.6%, preceded by cardiovascular diseases, which represent 56.3%. In the Republic of Moldova gastric cancer is also a major medical problem, but it can be seen that in the last five years it has a declining trend and ranks fourth in the oncological structure. The pyloroanthral location represents 50-60% of gastric cancer location.

Aim of study. The main purpose of this study is to highlight the main methods of diagnosis and treatment of gastric cancer with pylorosthenosis.

Methods and materials. The retrospective study was performed on a group of 128 patients, who were hospitalized in the gastrology department of the Oncology Institute of the Republic of Moldova during March 2016- September 2021.

Results. This study found that gastric cancer with pylorosthenosis more often affects men (87 men-67.9%), about 2 times more than women (41 women-32 %). The age of the patients is variable, from the youngest patient at the age of 32, to the oldest at the age of 87, but still most are in the 50s and 70s. The main complaints of patients with gastric cancer with pylorosthenosis proved to be the following: pain in the epigastric region, weakness, loss of appetite, nausea accompanied by postprandial vomiting and weight loss. The main investigations that were used to confirm this diagnosis were: fibroesophagogastroduodenoscopy, stomach radiography, abdominal CT and, of course, the histological examination, which in most cases revealed Adenocarcinoma. Billroth 2 subtotal gastric resection was most often performed as a method of treatment, and in advanced cases anterior gastroenteroanastomosis was performed on the omega loop followed by Braun-type enteroenteroanastomosis.

Conclusion. It is worth mentioning that for an efficient and early diagnosis of gastric cancer with pylorosthenosis we need the accusations and the objective examination of the patients, plus the technical investigation to confirm this diagnosis. And as a method of treatment, the Billroth 2 subtotal gastrectomy is most often performed.

25. DIAGNOSTIC OF URINARY BLADDER TUMORS

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Introduction. The most frequent type of bladder cancer in adults is the one derived from transitional cells. The main method of treatment is selected according to the extensiveness and aggressiveness of the tumor. It was estimated that approximately 70% of all new cases of bladder cancer are non-muscle invasive, and the other 30% are muscle-invasive. Therefore, the gold standard in the treatment of the superficial form of bladder cancer is the TURBT, followed by additional type of therapy in order to reduce its recurrence, while the muscle-invasive form requires cystectomy in addition with chemotherapy. Despite this, urinary bladder cancer remains to be a healthcare burden because of its high rate of recurrence and a poor prognosis in those who develop metastases. That's why, some novel endoscopic techniques associated with the early detection of urinary biomarkers can significantly improve the results of diagnosis and treatment.

Aim of study. Evaluation of the utility of different diagnosis techniques which offer a wider understanding of the urothelial lesions and may provide an improved cancer control.

Methods and materials. This information is based on a literature review from the electronic database of PubMed for the terms " molecular markers in bladder cancer", "novel endoscopic diagnosis for bladder cancer", and Sciencedirect.

Results. Comparing cytology, the most popular noninvasive test for the diagnosis of bladder cancer, with 4 most available urinary biomarkers-Hemoglobin Dipstick, BTA Stat, NMP22 BladderCheck, and Immunocyt, showed the following results in sensitivity: cytology -48%, BTA Stat-61%, Hemoglobin Dipstick-51 %, NMP22-58%, Immunocyt-62%, but the specificity of cytology was higher: cytology-86%, BTA Stat-78%, Hemoglobin Dipstick-58 %, NMP22-85%, Immunocyt-79% . When combining cytology with urinary biomarkers the results for sensitivity and specificity were: cytology+ Hemoglobin Dipstick-85%/57%, cytology+ BTA Stat-91%/ 78%, cytology+NMP22-94%/84%, cytology+ Immunocyt-90%/78%. The same with novel endoscopic techniques, being compared with the standard white light cystoscopy: fluorescence cystoscopy which is performed by administration of a photosensitizing agent and using a blue-light endoscopy showed a better identification of papillary and flat bladder lesions. The same with optical coherence tomography, which offers information about the tumor invasiveness. Narrow band imaging provides information about the vascularization of abnormal tissue, this way defining the limits of the urinary bladder tumor.

Conclusion. According to the following results, the best combination, showing the highest sensitivity and specificity in detection of bladder cancer compared to other techniques is cystoscopy+ NMP 22 test. Also, new endoscopic techniques like: photodynamic diagnostic, narrow band imaging, confocal laser endoscopy, optical coherence tomography improves the sensitivity for the detection of bladder tumors. These techniques help in the earlier detection, offer more information about the limits, the invasiveness of the tumor and a better understanding of the treatment approach, also predicting the response to the systemic chemotherapy and immunotherapy.

26. DIASTATIC PERFORATION OF CECUM AS A RESULT OF OBSTRUCTED COLON

Author: Linga Danu

Scientific adviser: Sergiu Revencu, MD, Associate Professor, Department of Surgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Acute intestinal obstructions in the colon are mostly caused by colon cancer. Evolution can be complicated by ruptures and diastatic perforation of the cecum.

Aim of study. The aim of the study is to present the surgical solutions of rare cases of diastatic cecum perforations.

Methods and materials. There are 5 presented cases in which, on the installed occlusive background, diastatic ruptures with perforation of the cecum colon had occurred, 3 men and 2 women with an average age of 52.7 years. Plain abdominal radiography shows pneumoperitoneum associated with hydro-aeric levels in 3 cases and in 2 cases hydro-aeric levels on the check colon greater than 10 centimeters

Results. Indications for surgery were diffuse peritonitis (3 cases) and acute intestinal occlusion (2 cases). Occlusive tumor was located on the sigmoid colon in 2 cases, on the recto-sigmoid segment in other 2 cases and in one case on the descending colon. Surgeries performed: a) Right hemicolonectomy associated with Hartmann's rectosigmoid resection with ileostoma and transversostoma b) Right hemicolonectomy with Hartmann's descendeto-sigmoid resection with ileotransversostomy. Postoperative evolution without deaths

Conclusion. 1. Diastatic cecum perforation is a serious evolutive complication of colonic tumor processes under the condition of ileo-cecal valve being functional 2. The operative act must solve the occlusive cause and the diastatic perforation of the cecum colon, performed by optimal resections of the colon with the preservation of an intermediate colon segment and must have a visa for oncological resolution 3. The postoperative quality of patient's life is acceptable, taking in consideration an afterward restore of the intestinal transit

27. DIBUCELL ACTIVE BIODEGRADABILE DRESSING IN TREATMENT OF CHRONIC VENOUS ULCERS – A SERIES OF CASES

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Introduction. Venous trophic ulcers are a common clinical entity, affecting 0.3% - 1% of the adult population, being associated with a significant reduction in quality of life. Most studies note the predominance of females, the ratio of women:men ranging from 1,5:1 to 10:1. The treatment is lasting, often with low efficacy, a high recurrence and requires a multidisciplinary approach.

Case presentation. A prospective study was conducted on 5 patients with venous trophic ulcers, associated with hypertension, treated in Septic Surgery Department (IMU) during 2021. Patient selection criteria: active venous ulcer, adults>18 years, administration of topical treatment. The treatment with DibuCell Active was performed according to the scheme proposed by the manufacturer without any other local treatment. The dynamics of epithelialization of the ulcers and duration of treatment was analysed. The surface dynamics of ulcers was evaluated by using computerised analysis of digital images according to the ImageJ program.

Discussion. According to the duration of treatment and the size of the ulcer, the patients were divided into: I lot (ulcer<5cm2) complete epithelialization in 20 days – 2; II lot (ulcer - 5-10cm2) complete epithelialization in 30 days – 2; III lot (ulcer >10cm2) complete epithelialization in 90 days – 1.

Conclusion. The new therapeutic approach in the control of chronic venous ulcers - the biodegradable dressing DibuCell Active has a major effectiveness by increasing epithelialization and reducing the duration of treatment. Also, the biodegradable dressing DibuCell Active, minimises the trauma of the newly formed granules and ensures an optimal environment for increase of the healing.

28. EARLY POSTOPERATIVE COMPLICATIONS IN PATIENTS WITH TETRALOGY OF FALLOT

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Scientific adviser: Anatol Ciubotaru, PhD, Professor, Head of Course of Cardiac and Vascular Surgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Tetralogy of Fallot (TF) is the most common cyanotic congenital heart malformation, with a wide variety of morphological forms. Depending on the morphological form, the clinical manifestations and the hemodynamic condition of the patient, it is decided the surgical treatment type: staged or radical correction first and the type of radical correction.

Aim of study. Different surgical approaches for radical correction have been used to release RVOT obstruction and spare the pulmonary valve (PV) function: application of transannular patch, enlargement of the RVOT with preservation of the valve and application of monocusp valve. The aim of the paper is to present the most common early postoperative complications in patients with TF, and to compare their frequency depending on the surgical tactic approached.

Methods and materials. List of the most common early postoperative complications in patients with TF found in the recent specialized medical articles. Retrospective analysis of a group of 96 patients, operated in the Cardiac Surgery clinic of SCR „T. Mosneaga", from 2015 to 2020. They were separated into subgroups depending on the surgical tactics approached: staged (group A) - 37 patients, radical correction first (group B) - 35 patients. According to the type of radical correction: application of transannular patch – group I - 48 patients, preservation of the valve – group II - 25 patients, application of monocusp valve - group III - 5 patients. The data were analyzed to highlight the most common early postoperative complications in each subgroup, time spent in ICU, lethality rate. Exclusion criteria from the study - patients who underwent only the installation of anastomosis without subsequent radical correction (N = 24).

Results. During articles review, the following most common early postoperative complications were found and included in this study: pleural effusion, arrhythmias, pericarditis, ascites, MODS, septic complications, hemorrhages. The remaining RVOT gradients and postoperative pulmonary valve regurgitation were also recorded. Following the analysis of the research data, a higher prevalence of early postoperative complications was determined in the group of patients who underwent radical correction with transannular patch application compared to groups II and III. No significant differences were determined between groups II and III. Duration of stay in ICU was longer in group I - average of 9 days, compared to groups II and III - average duration 6 days. The lethality is also higher in group I - 8 patients (16.6%) vs 2 patients (6%) in groups II and III. When comparing the transvalvular gradients at the level of the pulmonary artery, a higher gradient (average 18.4 mm Hg) was determined in group II vs average gradients of 11.2 mm Hg and 13.2 mm Hg in groups I and III, while higher degree of regurgitation was observed in group I vs. groups II and III.

Conclusion. Radical correction of Tetralogy of Fallot shows good early results, with a survival rate of 92%, compared to 68% at the beginning of the development of surgical correction tactics. Patients who have undergone radical correction with preservation of the pulmonary artery valve have excellent results with minimal residual regurgitation, compared to those who undergo transannular radical correction. The application of synthetic monocusp valves shows good early results, but requires long-term evaluation to assess its subsequent functionality.

29. ENDOSCOPIC TREATMENT WITH HO:YAG LASER AT THE PATIENTS WITH CHRONIC LITHIASIS NONBACTERIAL PROSTATITIS.

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Scientific adviser: Vitalii Ghicavii, PhD, Associate Professor, Department of Urology and Surgical Nephrology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Prostate lithiasis is among the final stages of the chronic inflammatory process of the prostate (chronic prostatitis). This stage is usually characterized by a decreased activity of the inflammatory process. In some patients, prostate lithiasis might cause bladder outlet obstruction. The treatment of prostate lithiasis is a significant issue of modern urology since it is widely occurring especially in older and senile men.

Aim of study. The aim of the study is to determine the endourological treatment by application of laser method (Ho:YAG) for after bladder obstruction caused by the consequence of chronic lithiasis nonbacterial prostatitis.

Methods and materials. In the study were included 30 patients, consulted and treated in the urology department of the PMI Republican Clinical Hospital "Timofei Moșneaga"- the clinical base of the Department of Urology and Surgical Nephrology of the State University of Medicine and Pharmacy "*Nicolae Testemitanu*". For 30 patients diagnosed with prostate stones, a consequence of nonbacterial CP, with difficult micturition (after bladder obstruction), with symptoms of urinary disorders or pelvic pain for at least 3 months, during 6 months, requiring as a treatment method endoscopic surgery. Transurethral resection as a method of treatment, was performed by the Ho: YAG 2.0 m laser, the operating mode with a pulsating energy of 2.3 J and a frequency of 8 Hz, the maximum irradiation power was 18.4 W. The laser incisions were made at 5 and 7 o'clock of the conventional quadrant with the resection of the tissue with fibrosis with local lithiasis. In order for objective assessment of surgery treatment on the clinical efficiency, changes in patient symptoms (IPSS score, quality of life index - QoL) and objective parameters (maximum urine flow rate (Qmax), residual urine volume, and preoperative prostate volume (TRUS-P) at 1, 3 and 12 months after surgical treatment.

Results. The average duration of the surgery was 69 min., the duration of the laser enucleation of the fibrosis tissue was 48 min., the duration of the fragmentation of the enucleated tissue was18.3 min. During the 12 months of surveillance, it was established that the mean IPSS value significantly improved from 23.2 ± 2.57 points at the beginning of the research to 8.57 ± 0.48 points after the intervention. The median quality of life (QoL) parameter also changed from 4.83 ± 0.51 points to 1.5 ± 0.14 points. The maximum urinary flow speed (Qmax) improved from 9.08 ± 1.8 ml / s before surgery to 19.93 ± 0.06 ml / s after surgery. The average value of residual urine decreased considerably after surgery (94.8 ± 47.4 ml versus 15.25 ± 9.6 ml). The frequency of Ho:YAG laser postoperative complications was generally low. The following complications were found intraoperatively: perforation of the prostate capsule - 1 case, damage to the walls of the bladder neck during fragmentation of tissue - 1 case, hemorrhage - 1 case, damage to the urethral opening - 1 case, incomplete perforation of the bladder in the triangle area - 2 patients. Among the postoperative complications, in one case was orchiepididymitis. Urethral stricture was 1.6%, and sclerosis of the urinary bladder neck - 3.3%.

Conclusion. Ho:YAG laser enucleation of the prostate is an effective surgical method for treating BO caused by chronic lithiasis nonbacterial prostatitis, with significant restore of micturition and is accessible for all categories of patients. Advantages of this method of treatment are the small volume of intra- and postoperative blood loss, without the need for blood transfusions, and decreased the time of catheterization of urethra.

30. ERECTILE DYSFUNCTION. CONTEMPORARY CONCEPTS OF TREATMENT.

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Introduction. There are currently a variety of treatments available with ongoing research. These options focus on the etiology and improvement of erectile function.

Aim of study. The aim of this study is to highlight the advantages of the three types of contemporary treatments.

Methods and materials. Or studied several articles by keyword: low-intensity extracorporeal shock wave therapy (Li-ESWT), stem cell therapy (SCT), and platelet-rich plasma (PRP). The International Erectile Function Index (IIEF) was considered to be the main measure of outcome. Other indices used were peak systolic velocity and intracorporeal pressure.

Results. The Li-ESWT study included a randomised study, 2 prospective cohorts, 2 meta-analyzes. The IIEF saline improved to 3.43 norm (reference range 1.99-6.4). The authors concluded a short-term improvement in erectile function with Li-ESWT. SCT studies included 4 standard cases and one open case. Venous and cavernous, intraperitoneal SCT injections improved erectile function in animals. Three studies (n = 7-9) showed that 85-99% and 25-44% of patients regained erectile function and the ability to penetrate. Two studies (n = 11-17) showed the IIEF score of all patients improved after SCT. Literature review for PRP treatment included 3 animals, 1 retrospective cohort study, and one prospective cohort study. Animal studies have shown that rats with cavernous lesions treated with PRP have improved their erectile function. A retrospective study in men showed an increase of up to 4.4 in the IIEF score. In the prospective one, where the group was 75 people, the improvement of the top systolic velocity (P = 0.0045) and the IIEF score (P = 0.05) with the PRP treatment were demonstrated.

Conclusion. This review reveals limited publications for the contemporary treatment of erectile dysfunction, but it is still necessary to elucidate all types of therapy (Li-ESWT, SCT, PRP).

31. ESTIMATION OF CEREBRAL CONCENTRATIONS OF FENTANYL IN THE LIGHT OF THE SHAFER PHARMACOKINETIC MODEL, ACHIEVED DURING GENERAL INTRAVENOUS ANAESTHESIA PERFORMED BY INTERMITTENT BOLUS: PROSPECTIVE, CONSECUTIVE, EXPERIMENTAL STUDY

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Introduction. Total intravenous anaesthesia (TIVA) is induced by the pharmacodynamic interaction between opioid analgesics (eg. fentanyl) and hypnotics (eg. propofol) in the brain. The depth of the anaesthesia is calibrated according to the intensity of the surgical stimulus, which is variable during the operation. Respectively, it is necessary to frequently adjust the doses and the rate of administration of intravenous anaesthetics, in order to obtain those cerebral concentrations (Ces), which will counterbalance the effects of surgical stress. Target controlled infusion (TCI) techniques according to a pharmacokinetic algorithm (PK / PD) have significantly improved the performance of modern anaesthesia. To date, 3 PK / PD models for fentanyl have been developed: Shafer, Scott, and Hudson.

Aim of study. The study aimed to reflect, for the analgesic component of TIVA, the accuracy of the achievement and the possibility of maintaining over time a cerebral concentration (Ces) of fentanyl, adapted to the surgical procedure (exp.), compared to the values recommended in the literature (L). The brain concentrations (Ces, ng / mL) of fentanyl, achieved in TIVA, administered manually, were retrospectively simulated through the prism of the PK / PD Shafer model.

Methods and materials. Informed, written agreement. Ethical authorization of the study. Prospective, consecutive enrollment of 15 patients (ASA I-II), beneficiaries of gynecological celioscopic interventions. Retrospective simulation (Shafer) with TIVA Trainer software of exact doses and timing of fentanyl administration in real TIVA. Descriptive statistics (mean and standard deviation) were performed with GraphPad Prism 8 software.

Results. Age: 31.2 ± 4.9 years; body weight: 75.3 ± 15.0 kg; BMI 26.8 ± 4.7 kg / m2. Duration of the intervention: 36.0 ± 11.4 min; duration of anesthesia 59.0 ± 13.4 min. Total peranesthetic consumption of propofol 620.0 ± 193.9 mg, fentanyl - 400 ± 100 mcg. Ces results obtained (Shafer) at key moments: intubation (exp: 0.2 ± 0.1 ng / mL vs L: 6.0-8.0 ng / mL), incision (exp: 0.2 ± 0.1 ng / mL vs. L: 3.0-6.0 ng / mL), base operating time (exp: 0.8 ± 0.7 ng / mL vs. L: 3.0-5.0 ng / mL), end of intervention (exp: 1.0 ± 0.9 ng / mL vs. L: 3.0-5.0 ng / mL), extubation (0.7 ± 0.7 ng / mL vs. L <2 .0 ng / mL), transfer (0.5 ± 0.6 ng / mL vs. <2.0 ng / mL).

Conclusion. (1) The pharmacodynamic interaction between fentanyl and propofol is deeply synergistic; Lower doses of fentanyl are required to balance low- and moderate-intensity surgical stress. (2) Manual administration, with an intermittent bolus of fentanyl under general intravenous anaesthesia, appears to result in lower brain concentrations of fentanyl than recommended in the literature, but no clinical signs of underdose have been observed during the anaesthetic process. (3) To ensure the guaranteed optimal brain concentrations of fentanyl depending on the intensity of the surgical stress, it is necessary to specifically monitor nociceptive trafficking (ANI index) and administer anaesthetics using TCI technology.

32. EVALUATION OF CLINICAL AND BIOLOGICAL FEATURES IN PATIENTS WITH LIVER CIRRHOSIS IN THE LIVER TRANSPLANT PROGRAM.

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Introduction. Liver transplantation is an important treatment for patients with acute liver failure and end-stage liver disease. We aimed to evaluate this waiting list to reduce the risk of mortality through prognostic scores.

Aim of study. Comparative analysis of demographic and clinical characteristics of patients within the liver transplant waiting list.

Methods and materials. A cohort, descriptive, retrospective clinical study was conducted in 2013-2021 within the transplant program in the Republic of Moldova, aged> 18 years. The following parameters were assessed: demographic data, etiology of liver disease, waiting time, MELD score and survival data.

Results. During this period, 186 patients were included in the waiting list for liver transplantation. Only 51 patients (27.4%) were transplanted (32 men, 19 women, with a mean age of 46 years), while 63 (33.9%) died (38 men, 25 women, with a mean age of 48 years) during the waiting period. With the etiology of HBV + HDV 25 patients (38.5%). The MELD score was significantly higher in the group of 17.24 deaths compared to 13.64 active people. The waiting time for those who died was 7 months, compared to those who were active for 20 months.

Conclusion. Careful monitoring and re-evaluation of candidates at regular intervals can improve the success of the transplant program and the overall outcome of the patient.

33. FREE FOREARM PERFORATOR MINI FLAPS IN FINGERS RECONSTRUCTION

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Introduction. The reconstruction of fingers' soft tissue defects remains challenging. The optimal reconstructive treatment should be simple, reliable, cost effective, and provide pliable, sensitive, and cosmetically similar tissue allowing adequate function. A free flap of appropriate size may provide an ideal surgical solution.

Aim of study. The aim of the study was to compare the outcomes of fingers' reconstruction using free arterialized venous flap (AVF), superficial palmar branch of the radial artery (SUPBRA) flap, dorsal radial perforator flap (DRAP), and dorsal ulnar artery perforator (DUAP) flap harvested from the same donor area.

Methods and materials. During 6 months 4 types of free flaps from the same extremity for the coverage of fingers' defects were performed, with small/moderate soft tissue lack (1 AVFs, 3 SUPBRA flaps, 1 DRAPs, and 1 DUAP flaps). Standardised assessment of outcomes was performed, including duration of operation, objective sensory recovery, cold intolerance, time of returning to work, active total range of motion (ROM) of the injured fingers, and the cosmetic appearance of the donor/recipient sites.

Results. All flaps survived completely, and the follow-up duration was 12 months. The average length of the surgery for the AVFs was distinctly shorter in comparison to other types. The SUPBRA were employed to reconstruct skin defects and extensor tendon defects using a vascularized palmaris longus graft in 1 finger. Optimal sensory recovery was better with AVFs and SUPBRA flaps as compared with DUAPs and DRAP flaps. No significant differences were noted in ROM or cold intolerance between the 4 types of flaps. Optimal cosmetic satisfaction was noted for the recipient sites of AVFs and the donor sites of SUPBRA flaps.

Conclusion. All four types of free flaps from the ipsilateral extremity are a practical choice in finger reconstruction for small/moderate-sized defects. The SUBPRAs play an important role in such operations due to the wider indications, and better sensory recovery and cosmetic appearance associated with this method.

34. HEPATOGENIC GASTRODUODENAL ULCERS: CLINICAL-EVOLUTIONARY AND THERAPEUTIC PARTICULARITIES

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Introduction. The problems of gastroduodenal surgery against the background of liver pathologies over the years require multiple interdisciplinary discussions related to diagnosis and treatment. Complications of gastroduodenal ulcers in cirrhotic patients to date lead to major discussions of both pre- and postoperative morbidity and mortality. Very often the primary symptomatology in cirrhotic patients with hepatogenic ulcers is gastroduodenal hemorrhage, being a phenomenon that imposes major surgical difficulties.

Aim of study. Highlighting epidemiological factors, developmental mechanism and methods of surgical treatment of hepatogenic gastroduodenal ulcer.

Methods and materials. The study included 15 cirrhotic patients admitted to the Surgery Clinic No. 2 being diagnosed with gastroduodenal ulcer bleeding. Cirrhosis was confirmed according to the data of the outpatient or diagnostic card used clinical, biochemical and histological methods. The whole group of patients at the time of hospitalization was investigated endoscopically, where in FEGDS in 100% of cases a gastric or duodenal ulcer complicated by hemorrhage was established.

Results. The following diagnostic methods were used to assess the morphofunctional condition of the stomach and duodenum: FEGDS, radioscopy of the stomach and duodenum, duodenography. Of all investigated studies, there were 11 patients with ulcer anamnesis and 4 primary gastroduodenal ulcers detected. In 8 patients after stopping the bleeding drug, 3-4 bioptates from the antrum region were taken during FEGDS control to identify H. pylori. Following the synthesis of the results found, we determined in 6 patients the positive test at H.Pylori.

Conclusion. Early diagnosis of H. pylori in patients with chronic liver disease will have a beneficial curative effect, as this infection remains an additional risk factor in the genesis of gastroduodenal ulcer bleeding in cirrhotic patients.

35 HISTOLOGICAL AND IMMUNOHISTOCHEMICAL PROFILE OF PRIMARY RETRO-PERITONEAL TUMORS

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Introduction. Primary retroperitoneal tumors (TRPs) are tumors that develop in the retroperitoneal space of the mesenchymal, neuro-ectodermal, or vestigial tissues and have no organic or metastatic affiliation. TRPs are a heterogeneous morphological group, the definitive diagnosis being possible to establish only after histopathological and immunohistochemical examination.

Aim of study. To carry out the importance of morphological and immunophenotypic aspects on retroperitoneal tumors in order to predict the neoplastic process.

Methods and materials. The study is descriptive, prospective. The study group included 118 patients hospitalized for diagnosis and treatment with suspicion of TRP in the Gastrology Department of IMSP IO, during 2016-2020.

Results. Out of 118 hospitalized patients, only in 84 cases what constituted (71.18%) proved to be primary. Liposarcoma was the most common histopathological form of malignant TRP, established in 20 cases which was (23.80%). The following, the most common, were non-Hodgkin's lymphoma with retroperitoneal lymph node involvement in 7 cases which constituted (8.33%), undifferentiated pleomorphic sarcoma - 6 cases (7.14%), leiomyosarcoma - 4 cases (4.76%) fibrosarcoma - 3 cases (3.57%), MPNST - 2 cases (2.38%), hemangiopericytoma, myofibrosarcoma, osteosarcoma, synovial sarcoma, ectopic seminoma - each with 1 case (1.19%). Although immunohistochemistry techniques were used, in 6 cases what constituted (7.14%) it was not possible to determine the morphopathological diagnosis. Among benign TRPs, the most common histopathological forms detected were benign lipoma and schwannoma - 7 each (8.33%) and retroperitoneal cyst - 6 cases (7.14%). The rarest histopathological forms were: retroperitoneal lymphadenopathy - 3 cases (3.57%), mesenchymoma and neurofibroma (2 cases each (2.38%)), angiolipoma, fibrolipoma, granuloma, leiomyoma, lymphangioma (1 case each). constituted (1.19%). To finalize the histopathological diagnosis of TRP, immunohistochemistry techniques were used in 44 cases which constituted (37.28%). The use of immunohistochemical diagnostic techniques allowed the finalization of the morphopathological diagnosis of TRP in 30 cases which constituted (25.42%), and in 14 cases what constituted (11.86%) the non-TRP status of the tumors was confirmed, these being: metastases of carcinoma in 4 cases (3.39%), neuroendocrine tumor - 4 cases (3.39%), GIST - 5 cases (4.23%), peritoneal pseudomyxoma - 1 case (0.84%).

Conclusion. The morphological aspect and the immunophenotype of the primary retroperitoneal tumors are defining characteristics in the predictive assessment of the evolution of the neoplastic process.

36. HUMAN AMNION/CHORION MEMBRANE IN THE TREATMENT OF DIABETIC ULCERS

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Introduction. Diabetic ulcers are complex chronic wounds that require several surgical interventions that lead to low quality of life of the patient. Human amnion/chorion membrane therapy has more advantages in treatment of foot ulcers, serving as a biological dressing.

Aim of study. Evaluating the efficacy and safety of human amniotic membrane allograft in treating chronic diabetic foot ulcers.

Methods and materials. We started the study with a group of 10 patients with chronic non-healing wounds. The patients were selected following all the inclusion criteria. All patients received only one application of dehydrated human amniotic membrane that was cut to match the wound size ensuring that it was consistently covered and adhered to the entire wound surface. At each weekly visit, vital signs were taken and blood glucose levels measured.

Results. Was determined a 85 % epithelialization occurred without drainage and need for dressing with utilisation of amniotic membrane at diabetic patients with foot ulcers.

Conclusion. Our clinical trial results have confirmed outcomes, that amniotic membrane should be considered an advanced skin substitute for ulcers and wounds in patients with circulatory disorders.

37. IDIOPATHIC OVERACTIVE BLADDER TREATMENT IN WOMEN AFTER REINJECTION OF BOTULINUM TOXIN

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Introduction. The aim of the study was to evaluate the efficacy and duration of the response after detrusor injection with botulinum toxin type A(BTX-A) in the treatment of idiopathic overactive bladder(OABi) with detrusor overactivity(DO) in women. Standard pharmacological treatment for OABi starts with anticholinergics or β3-agonists, but 46.2% of patients with OABi discontinued medical treatment due to poor or less effective response than expected or appearance side effects (xerostomia,constipation,vision deficiency). Complete investigation of bladder contraction function by urodynamic examination methods, including urinary phase, is recommended before detrusor injection with BTX-A. Intravesical BTX-A is effective for OABi symptoms associated with DO. The most common adverse event of BTX-A treatment for OAB is urinary retention and urinary tract infections (UTIs), which are found in 18% of cases at 2 weeks post-injection.

Case presentation. Was analyzed the efficacy and durability of repeated injectable treatment, performed on 30 years old females, diagnosed clinical and paraclinical with OABi and DO, during 2019-2021 at the Department of urology and surgical nephrology. The effectiveness of the procedure was assessed according to the voiding diary/24h, symptoms questionnaire (OABSS) and quality of life questionnaire (OABq) before injection and at 1-month checkup visit. The patient was refractory to treatment for 3 months, at least 2 different anticholinergic agents, discontinued treatment 4 weeks before BTX-A injection. Three injections of BTX-A were performed at doses of 100 U(1st and 2nd) and 200 U (3rd injection) into the bladder wall by rigid cystoscope, under i/v anesthesia, in 20 places around the bladder wall, avoiding the trigone.

Discussion. Analyzing the urodynamic data before injection after third dose of BTX-A, showed an increase values such as maximum urinated volume by 34 ml, the maximum capacity of the bladder by 57 ml and the decrease of number of phasic contractions and the detrusor pressure by 5,6ml/H2O. The dose of 200U has been shown to be consistent with improved voiding diary values, nocturnal indices (1.1) and nocturnal polyuria (10%), increased bladder function capacity (≤110 ml), and decreased frequency pe day (n<8). Significant improvement in urinary symptoms was established in the 3rd month compared to the first month in the patient after BTX-A injection at 200 U, except for nocturia, a symptom that disappeared immediately after all 3 injections. Based on the OABSS questionnaire, it was established that the symptoms improved to a slight degree of post-injection damage. The total index of urgency and frequency of urination after the third dose decreased with 27 units. The average duration of action after the first injection of the detrusor with BTX-A (100 U)~9 months, after the second injection (100 U)~6 months, and after the 3rd injection (200 U)~11-12 months. After all injections, no symptomatic/asymptomatic acute urinary retention developed that would have temporarily required clean intermittent catheterization or positive PVR, and ITU was confirmed only after the second injection by positive urine culture. The high score of OABq, after injection of all doses, was up to 90%, consistent throughout the follow-up of the patient.

Conclusion. BTX-A therapy is the optimal option for managing the refractory OABi symptoms due to DO. This study demonstrates that repeated detrusor injections of BTX-A are safe and valuable as a treatment option for DO over a period of several years.

38. IDIOPATHIC SENSORINEURAL HEARING LOSS

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Introduction. Idiopathic sensorineural hearing loss is a medical emergency, which requires immediate clinical and paraclinical examinations, as well as an appropriate and prompt treatment. In the literature there are many causes of the disease, but studies show that etiopathogenesis is determined only in 10-15% of cases. A number of special studies support the idea that any vascular injury or exposure to noise determines a local inflammatory response.

Aim of study. The description of an audiological diagnostic method that allows the identification and quantification of cases with this type of hypoacusis. The identification of treatment and recovery methods with the evaluation of the auditory-verbal post-recovery results.

Methods and materials. This is a review of clinical studie, trials and articles found in the databases like PubMed, Google Scholar, Medline, BMJ. The keywords used are „sensorineural hearing loss", „mediators", „inflammation" „cochlea", „idiopathic".

Results. The resolution phase of inflammation it's not a passive process, but an active one. Improving the resolution phase of the cochlear inflammatory process is a method of protecting auditory sensory cells, of accelerating the recovery and local reparation process, all of these contributing to the prevention and ameliorating of auditory dysfunction. The treatment of idiopathic sensorineural hearing loss is multimodal and should include, besides the well-known contemporary therapies, antioxidants agents such as essential fatty acids (Omega-3, Omega-6)

Conclusion. Idiopathic sensorineural hearing loss represents a health problem with an increasing incidence because of the exposure to noise in the urban environment, but also owing to the increase of cardiovascular, metabolic, immune and neurological diseases. Knowing the function of mediators and chemical receptors involved in the inflammatory resolution phase could lead to the finding of new therapeutic strategies for sensorineural hearing loss.

39. IMPLEMENTING THE MINIMALLY INVASIVE APPROACH IN CARDIAC SURGERY

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Introduction. Minimally invasive cardiac surgery has been gaining value in the Republic of Moldova since 2001, already occupying an exceptional place in both medical and teaching practice. It is an important alternative in the treatment of congenital and acquired cardiac surgical pathologies that have a morbid incidence in continuous growth.

Aim of study. Evaluation of the experience of the Cardiovascular Surgery Clinic,in approaching the minimally invasive cardiac surgery treatment in terms of the possibilities and data of the contemporary literature.

Methods and materials. The analysis includes 12 clinical cases, from the Cardiovascular Surgery Clinic,aged between 2 months and 75 years (average 25.7 years),in the period 2001-2022,female sex 9 patients, male sex 3 patients, with body weight 12 kg and 70kg (average 41 kg),analyzing the clinical appearance,diagnosis, intra-operative specificity and post-operative outcome.

Results. Patients who underwent cardiac surgery with a minimally invasive approach had different diagnoses,requiring different surgical tactics, but in all 12 cases, using the approach by antero-lateral thoracotomy of the IV intercostal space, on the right. In 6 cases it was performed. suturing the defect of the interatrial septum, in 2 cases it was performed the plasty of the defect of the interatrial septum, with autologous pericardial patch. A singular case is attested where: augmentation of the anterior cusp of the tricuspid valve with autologous pericardial patch and implantation of the Medtronic Contour 3D ring diameter 36; right atriotomy with excision of the aneurysm from which a patch was later used to close the defect of the interatrial septum; mitral valve prosthesis with mechanical valve SJM-29, excision of the myxoma (dimensions 21x11cm) in the region of the left atrium. The postoperative result is favourable, with stopping sedation after 8 hours-14.5 hours (average 9.8 hours) post-operative, easy physical recovery, with being in the profile section 3-5 days (average 3.8 days), post-operative with positive dynamics.

Conclusion. The minimally invasive approach and surgical tactics allow cardiac surgeons to use an advanced technique with specific state-of-the-art instruments, video systems, involving a 3-5 cm incision, in the right intercostal space IV or mini-sternotomy, frequently used in the surgical treatment of congenital heart disease, compared to sternotomy. This type of intervention has a much lower negative impact on the patient, by reducing bleeding and infection. The main visual advantage is reduced sedation period and reduced hospitalisation days with rapid postoperative recovery.

40. IMPORTANCE OF URODYNAMIC INVESTIGATIONS IN THE MANAGEMENT OF WOMEN WITH OVERACTIVE URINARY BLADDER

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Introduction. Overactive bladder (OAB) is defined by the International Society for Contingency as a urinary urgency, with or without urinary incontinence, usually associated with urinary frequency and nocturia. OAB symptoms affect ~ 17% of women, and its prevalence increases with age, reaching 30.9% of elderly patients. Detrusor overactivity (DO) is the most common cause of OAB and can be identified in 64% of patients during urodynamics (UDS), expressed by phasic contractions of the detrusor. DO is classified into two subgroups: neurogenic and idiopathic (DOi), depending on the presence/absence of neurological diseases. Botulinum toxin type A (BTX-A) injections have received a grade A recommendation for refractory idiopathic OAB by a group of European experts, and are present in the guidelines of the American Association of Urology (AUA) and the European Association of Urology (EAU) as a standard of treatment.

Aim of study. The aim of this study was to evaluate the efficacy of UDS up to the injectable surgical treatment with BTX-A of detrusor muscle in patients diagnosed with refractory OAB associated with DOi. Urinary symptoms of OABi don't provide a complete and definitive diagnosis of the underlying pathology compared to UDS and only an increase of urinary frequency cannot present the predictive symptom of DOi, therefore complete investigation of bladder contraction function by UDS, including exploration of voiding phase, is mandatory until BTX-A intradetrusor injection.

Methods and materials. A short-term prospective pilot study performed at Department of urology and surgical nephrology, during 2019-2021, included 20 females diagnosed clinical and UDS with OAB refractory to drug treatment, associated with DOi. UDS findings were correlated with clinical data based on the OAB Symptom Score questionnaire (OABSS) to determine the predictive value of treatment for injection. After confirming both clinical and urodynamic diagnosis, patients underwent BTX-A injection surgery and were followed postoperatively after 1 month by assessing urinary symptoms after completing the voiding diary/24h and the OABSS questionnaire.

Results. Based on UDS data, the diagnosis of OAB with DO was confirmed by establishing the presence of phasic contractions of the detrusor (n=3.85±1.1), increased values of detrusor pressure (Pdetmax=10.77±10cmH2O) and the presence of lower urinary bladder compliance (CVU=102.17±100ml/cmH2O), these data in 100% of cases were predictors of effectiveness of BTX-A injection. Low values obtained on filling cystometry: first sensation of voiding (FSV=76.6±55.1ml), first desire of voiding (FDV=113±100ml), strong desire of voiding (SDV=156±121ml) and maximal cystometric capacity (MCC=176±136.2ml) correlated in 100% cases with OAB symptoms (urinary urgency, frequency and nocturia) from the OABSS validated questionnaire. Low preoperative PVR values ($\bar{x}$ =4.75ml) didn't correlate with the occurrence of acute urinary retention or the need for intermittent post-injection catheterization, the same as presence of low value of maximum flow rate (Qmax=9.8±4.1ml/s).

Conclusion. The urodynamic investigation is a reliable investigation for the objectification and evaluation of urinary dysfunction and is predictive of some postoperative complications of BTX-A injection in patients with OAB and DOi.

41. INFECTIVE ENDOCARDITIS COMPLICATED WITH SEPTIC PULMONARY EMBOLISM

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Introduction. Septic pulmonary embolism (SPE) is a very rare condition that presents with nespecific signs: fever, cough, and hemoptysis. Depending on the embolic source, SPE can be classified as cardiac and extracardiac. A severe complication of infectious endocarditis (IE) is pulmonary artery embolization. Initial clinical features range from low fever and respiratory symptoms, including cough, haemoptysis, chest pain, purulent sputum and dyspnea. Most patients with SPE have similar manifestations of pneumonia.

Aim of study. Evaluation of the incidence of pulmonary embolic complications in infectious endocarditis with evidence of clinical and paraclinical features of these subjects and elucidating the relationship between the correct choice of treatment tactics and the optimal time with the survival rate of these patients.

Methods and materials. We identified 48 cases of IE, hospitalized in IMSP SCR "T. Mosneaga " during the years 2010-2021. After examining the medical records and radiological images of these patients, 6 cases of SPE were identified.

Results. 6 subjects were included in this study. The study group included 5 men and 1 woman, with a mean age of 38.1 years (range, 33-63 years; mean 35.1 ± 15.2 years). Two patients was <35 years old and 2 were > 50, 1> 60 years old). Symptoms included fever, cough , sputum , haemoptysis, pleuritic chest pain and dyspnea . In 6 cases (100%) heart murmurs were present. Microbiological tests revealed potential etiological pathogens in 4 patients (66.6%). Two patients who suffered sudden death were diagnosed with SPE after morphopathological examination. Transthoracic echocardiography (ETT) was performed in all 6 patients and all had significant abnormalities. All patients took antibiotics at least 1 week before arriving at our hospital. All received parenteral antimicrobial therapy as their initial hospital treatment and all were prescribed at least 2 different types of antibiotics. Comparison of recent studies on SPE cases. In our study, the presentation of fever, cough, hemoptysis, and chest pain were the most common clinical manifestations of SPE, similar to other SPE studies. In most patients, a heart murmur was detected with a stethoscope. Skin lesions were also prevalent in our study group, these result a concludent with other studies. Typical radiographic features of SPE include irregular airspace lesions, multiple nodules and cavities, and all shadows are usually multiple and peripheral. In this study, we were able to identify the characteristics associated with pleural effusion and hilar and / or mediastinal lymphadenopathy. If the patient suffers from skin lesions and has typical manifestations of SPE, a diagnosis of cardiac SPE should be considered. Transthoracic echocardiography is the fundamental and most important method used to diagnose, manage and monitor cases of IE. All patients underwent hospital X-ray, the opacity characteristic of septic pneumonia was the most common radiological manifestation in our study. Successful treatment of IE and cardiac SPE depends on the eradication of microbes by antimicrobial drugs. Antibiotics are the main and most important form of therapy in all forms of septic SPE. Lung damage such as septic embolism or cavitation is one of the key indications for right EI surgery.

Conclusion. Cardiac SPE remains a diagnostic challenge for clinicians. Our study showed that pre-existing heart disease, medical manipulation and intravenous drug use are key factors for cardiac SPE. Although vegetation on the right side is the main source of cardiac SPE, this condition can also be caused by vegetation on the left side of the heart. Most patients had typical clinical manifestations and radiographic results, but were nonspecific. For suspected cases, blood culture, CT are important measures for early diagnosis and treatment. Vigorous early therapy, including treatment with appropriate antibiotics and timely cardiac surgery to eradicate the source of infection, is extremely important.

42. LIMITATIONS OF FINE-NEEDLE ASPIRATION BIOPSY (FNAB) IN THYROID NODULES DIAGNOSIS.

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Introduction. Fine-needle aspiration biopsy is an important diagnostic tool in thyroid nodule(s) management. According to the results of FNAB, thyroid nodules are classified by the Bethesda system in 5 categories, from benign to malignant cytologic appearance. In clinical practice, besides FNAB informativeness and utility, there are some limitations depending, in the first row, on the structure of thyroid nodules.

Aim of study. To determine limitations of fine-needle aspiration biopsy in thyroid nodules diagnosis.

Methods and materials. This study was performed on 62 patients with thyroid nodules after a complex clinical and paraclinical assessment, including fine-needle aspiration biopsy, who underwent thyroidectomies. For FNAB adequacy were executed 2-3 needle entries under ultrasound guidance. In solid nodules (23 patients) were compared the passes from central and periphery areas, in mixed nodules (39 patients) – from solid and fluid areas. Cytologic results were correlated with definitive histology.

Results. The adequacy ratio in solid thyroid nodules varied from 81.3-85.7% and the false-negative rate for cancer was 22.2-28.0%. The adequacy ratio in mixed thyroid nodules for solid areas was 82%, for fluid areas – 48 %; and respectively the false-negative rate for cancer was 18% and 41%. The highest false-negative rates were determined in Bethesda categories IV (follicular neoplasm or suspicious for a follicular neoplasm) and V (suspicious for malignancy).

Conclusion. FNAB must provide valuable cytologic results in the diagnosis of thyroid nodule(s) which can be improved by obtaining an adequate material aspirated from solid areas under ultrasound guidance. In cases with difficulties in distinguishing benign lesions from malignant ones, it has to be completed with frozen section or diagnostic thyroidectomies.

43. MALIGNANT EXTERNAL OTITIS. EXPERIENCE OF THE OTORHINOLARYNGOLOGICAL CLINIC OF THE REPUBLICAN CLINICAL HOSPITAL "TIMOFEI MOȘNEAGA"

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Introduction. Malignant otitis externa, also known as necrotizing otitis externa, is an invasive infection of the external auditory canal and adjacent soft tissues and is a relatively rare complication of otitis externa. The infection begins as an otitis externa, but can progress to osteomyelitis of the temporal bone. In about 95% of cases the etiological agent incriminated is Pseudomonas aeruginosa. The incidence of MOE has increased recently due to the increase in the elderly population with diabetes. Possible complications that may occur are endocranial, facial nerve palsy, brain abscess and dural sinus thrombophlebitis.

Aim of study. Presentation of the experience of the otorhinolaryngology clinic in the treatment and management of malignant otitis externa.

Methods and materials. Retrospective study on the problem of malignant otitis externa during the period 2017-2021, Republican Clinical Hospital "Timofei Mosneaga", otorhinolaryngology clinic. 5 clinical cases of necrotizing otitis externa were analyzed. Accusations presented by patients: persistent otalgia with nocturnal exacerbation, purulent otorrhea, foul-smelling and resistant to local therapy, feeling of fullness in the ear. The alarm signal at otoscopic examination is triggered by the presence of granulation tissue at the osteocartilaginous junction of the ear canal.

Results. Two cases underwent drug treatment, one of which was complicated by a possible facial nerve paresis. Three of the cases resulted in death due to endocranial complications.

Conclusion. Antipseudomonal antimicrobials are the mainstay of therapy in malignant otitis externa. Recurrence of the disease is reported in 9-27% of patients. Otitis externa may recur up to one year after completion of treatment, during which time the patient is not yet fully cured. Given the severity of the disease and increased mortality (up to 50%), vigorous prevention measures and active cooperation between the otolaryngologist, endocrinologist and neurologist are required.

44. MANAGEMENT OF TRAUMATIC DIAPHRAGMATIC INJURIES.

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Introduction. Diagnostic and curative management of diaphragmatic lesions (DLs) is still difficult, representing a significant medical problem in both penetrating and blunt trauma.

Aim of study. To review the anatomy and physiology of the diaphragm, to describe the clinical presentation of traumatic DLs, and to discuss the diagnosis and therapeutic options available for traumatic DLs while highlighting the role of the trauma team in evaluating patients with this condition

Methods and materials. Retrospective study was conducted between 2014−2021 in Surgery Department Nr.1 ”Nicolae Anestiadi”, the Institute of Emergency Medicine, which included 48 patients with diaphragmatic lesions. The following parameters were evaluated: epidemiological data, trauma causes, defect size, presence of associated lesions, mean time from injury to surgery, applied surgical procedure, and postoperative morbidity and mortality.

Results. M:W ratio 2:1, mean age–35±13.4 years. Penetrating injuries were registered in 38 (79.2%) cases, while blunt abdominal trauma in 10 (20.8%) situations. Traumatic events: stabbing–35 (72.9%), aggression–2 (4.2%), car crashes–9 (18.75%), and catatrauma–2 (4.2%). On admission 13 (27.1%) patients were hemodynamic unstable. The following diagnostic tests were performed: chest radiography−39 (81.25%), FAST−36 (75%), Computed Tomography−15 (31.25%), laparoscopy−15 (31.25%), and thoracoscopy−3 (6.25%). In most cases, the diagnosis was established during first 72h after traumatic event−43 (89,6%). DL was discovered preoperative in 23 (48%) cases, while intraoperative in 25 (52,1%) victims. Isolated DL was established in 8 (16.7%) cases, accompanied injuries were present in another 40 (83.3%) situations, including parenchymatous organ injury−23 (57.5%), hollow organ lesion–12 (30%), and lung damage−7 (14.6%). DL was localized on the left side in 33 (68.75%) cases, on the right side−15 (31.25%), the wound diameter ranging from 0.5cm to 20cm. Surgical treatment was applied in all the cases. The following surgical access techniques were used: laparotomy−40 (83.3%), thoracotomy−2 (4.2%), combined thoracoabdominal access−3 (6.3%), and thoracoscopy−3 (6.3%). The surgical procedure involved a reduction of herniated viscera, treatment of associated lesions, and defect repair by simple suture in 46 (95.8%) cases, and duplication−2 (4.2%). Postoperative mortality−2 (4.2%).

Conclusion. Diaphragmatic injury should be routinely suspected in patients with chest or abdominal trauma. The most common diaphragmatic lesion is found intraoperatively, the laparotomy being dictated by the hemoperitoneum. In patients with inferior thoracic wounds and hemodynamic stability, laparoscopy and thoracoscopy can definitely establish the diagnosis. In addition, in the absence of intraabdominal lesions, thoracoscopy allows definitively to resolve the defect.

45. MASTOIDITIS - CLINICAL FORMS, DIAGNOSIS AND TREATMENT

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Introduction. Mastoiditis is an acute or chronic inflammatory disease of the middle ear, which occurs as a result of inflammatory processes of bacterial origin of mastoid cells. It usually occurs in the absence of treatment or improper treatment of acute or chronic otitis media and consists of the spread of the infection from the middle ear to the surrounding bone - the mastoid process. Mastoiditis with a diverse clinical picture may be able to cause life-threatening complications under certain conditions.

Aim of study. Mastoiditis is a common complication of acute otitis media, which manifests itself in several clinical forms that can cause complications. Mastoiditis is more common in a more vulnerable age group, which requires the application of emergency medical tactics to prevent severe complications.

Methods and materials. This literary review was based on literature findings, articles related to recent statistical evidence on mastoiditis. All relevant information was obtained from the literature review of open access databases.

Results. Currently, acute mastoiditis is a rare disease. Acute mastoiditis is a disease of very young people. Its incidence in children under 14 is given in the literature as 1.2-4.2 per 100,000 children per year. In most cases, children are 1-3 years old. Because children are more susceptible to middle ear infections, they are at increased risk of developing acute mastoiditis compared to adults. Mastoiditis is more common in children and people with nasopharyngeal disorders and a history of recurrent otitis media. Untreated otitis media increases the risk of acute mastoiditis and is the cause of higher incidence in developing countries. The progression of acute mastoiditis can have devastating consequences. Due to the location of the mastoid process, opportunistic infections can spread inward, intracranial, or outward, peripherally. Intracranial manifestations of acute mastoiditis occur in 6 to 23% of cases, these complications may include sigmoid sinus thrombosis, epidural abscess and meningitis. Extracranial complications of acute mastoiditis include the following: subperiosteal abscess, facial nerve palsy, labyrinthitis Gradenigo syndrome, Bezold abscess. In order to prevent the possible complications of mastoiditis as early as possible, it is necessary to apply surgical treatment - mastoidectomy, which in turn has several variations: simple mastoidectomy, radical mastoidectomy, modified radical mastoidectomy. Thus, the surgical treatment itself or in combination with the drug treatment favors the quality of the otorhinolaryngological system and of the whole organism.

Conclusion. The application of effective curative tactics and as early as possible, according to the clinical form of mastoiditis, stops the appearance of severe complications that can be life threatening under certain conditions.

46. MECHANICAL MALIGNANT BOWEL OBSTRUCTION IN THE SETTINGS OF GENERAL DEPARTMENT: CLINICAL CASE

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Introduction. Bowel obstruction is the most common complication of advanced colorectal cancer. Patients are often hospitalized with suspected intestinal obstruction of unknown origin, until after many studies the diagnosis of malignant bowel obstruction is confirmed. This is because early colorectal cancer in most cases is asymptomatic, so patients see a doctor only in the later stages.

Case presentation. A 63 year-old patient was admitted urgently at the Department of General Surgery, Municipal Hospital nr.1 presenting with diffuse abdominal pain, nausea, vomiting and constipation. History of disease: mild abdominal pain he already felt 6 months ago. He was referred to ultrasonography, which showed only prostate hyperplasia, followed by appropriate conservative therapy. As the pain was progressing a diagnosis of gastritis was made and he followed the treatment for it, nevertheless without any effect, as the pain became worse. He also noted that he had lost 10 kg in the last 6 months. On admission total leukocyte count was 11,1*10^9/l and hemoglobin – 95g/l. Abdominal radiography showed dilated bowel loops with air-fluid levels. The patient underwent emergency surgery. Intraoperatively, a tumor (8x6x6 cm size) with invasion in the retroperitoneal space and multiple metastases in the omentum and in the lower pole of the right kidney was detected. Because the tumor was considered as inoperable, a palliative surgery was performed: side-to-side ileotransversostomy. Biopsy of the specimen revealed adenocarcinoma, moderately differentiated (intermediate grade), T4N1M1, G2. On the 14th day after admission, the patient developed fever 38,5. The ultrasound scan revealed an abdominal fluid collection. A decision of relaparotomy was made with drainage of abdominal abscesses and protective loop ileostomy. The patient recovered and was discharged 35 days later.

Discussion. If colorectal cancer were detected in the early stages, patients' life expectancy would be much higher. In this case the success of treatment was due to a correct and prompt therapeutic management.

Conclusion. Despite the current availability of effective diagnostic methods, colorectal cancer continues to be detected at an advanced stage. There appears to be a need for a screening program for people with a history of hereditary colorectal cancer and for patients with documented digestive disorders.

47. MEDICAL AND SURGICAL TACTIC IN REFRACTORY CONSTIPATION ASSOCIATED WITH IDIOPATHIC MEGACOLON IN YOUNG PATIENTS

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Introduction. Chronic constipation is a common suffering, which lately affects the population more and more frequently. The worrying part is that a lot of young people are affected. When analyzing the anamnestic of these patients, we find that the suffering lasts for years without a proper guided treatment. Each patient requires an individual approach, but the results of treatment often remain refractory to the submitted curative efforts. This study is focused on young patients with severe refractory constipation associated with idiopathic megacolon, which required surgical intervention, being the last chance of adequate recovery.

Aim of study. To establish criteria for therapeutic/surgical conduit of patients with refractory constipation associated to idiopathic megacolon, which would allow the optimal volume of intervention, in relation to the clinical form and complications occurred

Methods and materials. During 2021, 4 patients were operated with idiopathic megacolon associated with refractory constipation. The age of the patients was between 20-42 years, with a duration of suffering between 6-16 years. The indication for surgical treatment served the inefficiency of the conservative methods with the persistence of severe constipation, with stools once in every 6-7 days (2 patients forced to resort to permanent evacuation clisters). All the patients, had all the criteria included in the Rome IV constipation criteria

Results. The patients underwent surgery with different volumes, based on the type of megacolon: 1- right hemicolectomy, 1- sigmoid colon resection, 1- subtotal colectomy and 1 with a multisectoral resection: right hemicolectomy and sigmoid resection with 2 anastomoses. In all interventions, primary anastomosis was applied, without a protective stoma. Postoperative evolution in all the cases was good without any complications, achieving a normal stool count of 1-2 stools per day

Conclusion. Chronic refractory constipation associated with idiopathic megacolon may be the last alternative surgical treatment. The volume of surgical intervention will be established according to the megacolon clinical form and the complications present at the patient. In patients with multisectoral or extended resections, the surgical treatment must be strictly individualized, but the results are promising

48. METASTATIC LOWER LIP CANCER

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Introduction. Squamous cell carcinoma of the lower lip is the most common malignancy of the oral cavity and the sixth most common cancer in the world. The 5-year survival rate for patients with early stages is 80-90% and for those with advanced stages it is reduced to about 50%. Cryotherapy is the alternative method of treating superficial forms of lower lip cancer in stage I and II. The literature still remains controversial regarding the need for lymphadenectomy of the submandibular and submental regions, even in the absence of lymphatic invasions (NO). Late metastases of lower lip cancer are found in 0-15% of cases for T1 and 32% for T2.

Case presentation. Patient, N. 66 years was diagnosed with cancer of the lower lip right angle T1N0M0 st. The patient underwent cryosurgical treatment with stabilization of the process for 2 years, at repeated treatment the patient has a metastatic tumor in the submandibular region on the right mobile, painless without affecting the skin 1.7 x 2.2 cm in diameter. He was hospitalized at the Oncological Institute of the Republic of Moldova, section "Head and neck tumors" where the diagnosis of lower lip cancer is established, condition after tumor cryodestruction, progression of the process with metastatic submandibular lymphadenopathy on the right. It was planned that the patient underwent surgical treatment in the volume of "Level I Submandibular Cervical Lymphadenectomy on the Vanach-type Straight". The postoperative period passed satisfactorily, the wound regenerated first, the sutures stolen on the 7th postoperative day. For two years, at the prophylactic examinations, the patient does not present data of local and metastatic loco-regional recurrence.

Discussion. Regional recurrence in the neck was the most common site of recurrence. Our results did support the belief that early surgical salvage had a reasonable chance of cure with 5-year disease free survival.

Conclusion. The lower lip cancer is a destructive local cancer with a major metastatic potential. This case demonstrates that, in the initial stages, lower lip cancer according to the physical method of cryodestruction without data of locoregional recurrence, has a major potential for regional cervical metastases.

49. MINIMALLY INVASIVE TREATMENT OF SOLITARY RENAL CYST

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Introduction. The solitary renal cyst is an oval or round formation of different sizes, it can be single or multiple, most often unilaterally delimited by a thin membrane, which may contain blood or serous fluid.

Aim of study. Study and interpretation of data obtained from the analysis of patients diagnosed with renal solitary cyst in the Clinic of Urology and Surgical Nephrology of the Republican Clinical Hospital "Timofei Moşneaga", during the years 2018-2021 and treated by laparoscopic method.

Methods and materials. This research is a descriptive observational study, which analysed data on the diagnosis and treatment of patients with solitary renal cyst, hospitalised in the Clinic of Urology and Surgical Nephrology of the Republican Clinical Hospital "Timofei Moşneaga", during 2018 -2021. The study group consisted of 66 patients. The following indicators were analysed: distribution of cases by age groups, gender, living environment, location, size and classification of cysts.

Results. Analyzing the distribution of cases by sex, we found that CRS has a higher incidence among men (59%) than women (41%). During the years included in the 2018-2021 study, 36 cases were registered in rural areas (55%), and in urban areas 30 cases (45%). Analysing the data, we noticed an increase in the incidence of CRS with age. The age of the patients in the study group ranged from 18 to> 65 years. After the anatomical location, the cysts were distributed as follows: upper pole 38 patients (51%), lower pole 20 patients (30%), medial renal 8 patients (12%). Regarding the size of the CRS, after interpreting the data we found that of the total number of patients, most had a cyst of 6-8 cm - 32 patients (49%), 9-11 cm - 18 patients (27%),> 11 cm - 10 patients (15%), 3-5 cm - 6 patients (9%). Analysing the data on the clinical signs present in patients with CRS, we found that the most common symptom is low back pain (62%), followed by hypertension (14%), anatomical defect (11%), hematuria (7%), and asymptomatic (6%). According to the distribution of cases according to the international classification of Bosnia, we established: 52 patients - Bosniak I, 14 patients - Bosniak II, and Bosniak III - no patients.

Conclusion. There are currently several treatment methods used in solitary renal cyst, but the minimally invasive laparoscopic method is currently the choice.

50. MULTIPLE CONSECUTIVE THROMBOTIC EVENTS – INVESTIGATING FOR ETIOLOGY (CASE REPORT)

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Introduction. Thrombosis represents the abnormal presence of a blood clot within a blood vessel. Under certain conditions, the thrombus can become an embolus, and lead to obstruction of various vascular territories. We report a case of multiple consecutive thrombotic events and aim to emphasize the difficulties in identifying the etiology in this specific case.

Case presentation. A 78-year-old male presented to the Emergency Department with a history of arterial hypertension and permanent atrial fibrillation (AF) (CHA2DS2-VASc score = 3) and no anticoagulant treatment. Three days earlier he presented rest dyspnea, atypical chest pain, and dizziness. Then, he developed severe pain and functional impotence of the left upper limb. On physical examination he presented with cyanosis, paresthesia, and paralysis of the left upper limb, with no pulse at the brachial, ulnar, and radial arteries, irregular heartbeats, and O2 saturation of 80%, with normal pulmonary auscultation. Laboratory data indicated hypoxia with normocapnia and mild respiratory alkalosis, positive D-dimer test, and slightly elevated troponin I. The ECG showed AF and negative T-waves in leads V1-V5. CT angiography revealed large emboli in both pulmonary arteries and total occlusion of the left subclavian artery.

Discussion. Surgical embolectomy by transbrachial approach was performed and the patient was started on unfractionated heparin. At the subsequent workup, echocardiography showed moderately enlarged right ventricle (RV) with moderately impaired systolic function sparing the RV apex, moderate tricuspid regurgitation, and systolic pulmonary artery pressure of 60 mmHg. Color Doppler and contrast ultrasound revealed patent foramen ovale (PFO). Several tumor markers were investigated, with negative results. After 32-h of hemodynamic stability, the patient presented right hemiparesis and mixed aphasia with sudden onset. Cranial CT showed a large left-sided ischemic stroke. Doppler ultrasound indicated 30% stenosis of the right and total occlusion of the left internal carotid artery. The patient was discharged 2 weeks later on oral anticoagulation and aspirin. At 3 months follow-up there was no recurrence of thrombotic events and no improvement of neurological sequels.

Conclusion. In patients with multiple thrombotic events establishing a definitive etiologic diagnosis is a major challenge. Direct, concomitant embolization from deep vein thrombosis (DVT) into the pulmonary and systemic circulation, through the PFO, deserves to be considered. DVT leading to pulmonary embolisms, with consequent opening the PFO via increased right atrial pressure is also possible, setting the route for subsequent paradoxical embolization and systemic embolic events. However, the cause could also be DVT leading to pulmonary embolism, and AF leading to systemic embolism.

51. PARAESOPHAGEAL HERNIA COMPLICATED WITH GASTRIC STRANGULATION

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Introduction. Paraesophageal hernias are usually asymptomatic, but in the presence of symptoms, the clinical picture is dominated by compression syndrome. Consequently, dramatic complications such as incarceration, obstruction, ischaemia and perforation of the herniated viscera can develop, resulting in high mortality.

Case presentation. Patient G., 65 y/o, is presenting primarily on 03.01.19 with the following complaints: dyspnea, retrosternal pain, nausea, vomiting, general weakness, dizziness. Bilateral pneumonia is suspected. Physical examination: BP – 120/80mmHg, HR – 98bpm. A paraesophageal hiatal hernia with herniation of the stomach into the chest cavity is found after plain chest X-ray and Barium swallow X-ray. Blood tests show anemia and leukocytosis: Hb – 55g/l, erythrocytes – 2,5x109/l, leukocytes – 16,8x106/l. Biochemical profile – within normal limits. The patient categorically refuses hospitalisation. On 09.02.19 she was brought again by EMS, in severe general condition, with the same complaints and preventive diagnosis of acute abdomen. Barium swallow X-ray is performed, which shows a hiatal hernia with partial transposition of the stomach into the chest cavity on the right, free air in the peritoneal cavity. USG shows pleural effusion on the right ≈ 500ml. As she is hemodynamically unstable: BP – 80/40mmHg, HR – 110, she is transferred to the ICU for preoperative preparation. Urgent surgical treatment is indicated. It is performed on 10.01.19, 16:55 - 20:35. During laparotomy, paraesophageal herniation of the stomach into the thoracic cavity with necrosis on the greater curvature and perforation of the chronic duodenal ulcer, signs of peritonitis were noted. In connection with this, "Resection of the large curvature of the stomach, suture of chronic perforated duodenal ulcer, recalibration of the esophageal hiatus with application of retrocolic gastro-enterostomy and drainage of the peritoneal cavity" was performed. The patient continues the post-operative treatment in the ICU, but remains in severe condition with progressive evolution of polyorgan failure. On the 3rd postoperative day, failing all resuscitation efforts, biological death occurs.

Discussion. This case demonstrates the lethal potential of paraesophageal hernia complications. The patient's complaints at first admission and the results of radiological examination suggested this diagnosis. The patient's refusal to be admitted postponed the surgery for a week, her general condition worsening significantly on the repeated visit. Nevertheless, the procedure was performed, the necrotic portion was resected and the diaphragmatic defect repaired. Postoperative, the patient presented negative dynamics, after which death occurred 48 hours later.

Conclusion. In case of paraesophageal hernias, surgical treatment must be initiated as early as possible before fatal complications develop.

52. PECULIAR FEATURES AND FUNCTIONALITY OF SIMULATORS USED FOR DIAGNOSTICS AND TREATMENT OF GENITOURINARY SYSTEM DISEASES

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Introduction. The current level of simulation technologies development makes it possible to implement a qualitatively new type of practical training for urologists based on innovative and promising methods.

Aim of study. In order to study the effectiveness of innovative technologies data, a review of publications and abstracts presented at the annual conferences of the American and European Associations of Urology, the Russian Society of Urology in the field of study, comparison and description of simulators used to diagnose and treat diseases of the genitourinary system, was carried out.

Methods and materials. To conduct the study, materials that describe various virtual simulators with high realism were used. They include, for example, the UroSim simulator, which allows to practice endosurgery skills in urology; simulator URO / PERC Mentor for developing skills in performing surgical interventions for urolithiasis, etc.

Results. According to numerous studies, simulation devices are a safe method to improve the technical skills of trainees at an early stage. However, the current generation of simulators also causes some questions. There is no data, for example, to determine which exercises lead to the improvement of technical skills used in real surgery. Further development of exercises for performing complex maneuvers and preventing the development of complications remain relevant issues nowadays. Performing tasks in the form of clinical situations using the UroSim simulator allows, in conditions close to real, to gain experience in various endourological and minimally invasive procedures, to master the skills of transurethral resection of the prostate gland, bladder, practicing interventions on the prostate gland using a laser, etc. No less effective is the URO / PERC Mentor simulator for developing skills in performing surgical interventions for urolithiasis. The simulator provides a single platform for endourological and percutaneous procedures. The assessment based on the results of the exercises includes such indicators as time and economy of movements, safety parameters of dissection and coagulation, errors and complications.

Conclusion. Currently, devices for simulation training in the field of urology have proven their effectiveness and relevance, and the safety of simulation training is universally recognized.

53. PERCUTANEOUS NEEDLE FASCIOTOMY COMPARED TO COLLAGENASE CLOSTRIDIUM HISTOLYTICUM INJECTIONS IN TREATMENT OF DUPUYTREN'S CONTRACTURE: A LITERATURE REVIEW OF COMPARATIVE STUDIES

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Introduction. Dupuytren's Contracture (DC) is a benign fibroproliferative disease that affects the palmar fascia of the hand and fingers. It appears due to the increased proliferation of the myofibroblasts that leads to the replacement of the normal type I collagen with type III collagen. As a result, firm and painless nodules and, subsequently, chords are developed, which contract and form fixed flexion of the finger. Even though an absolute cure for DC does not exist, several management techniques have been described, including operative and non-operative procedures, some of them being considered as classical methods (limited fasciectomy, dermofasciectomy), and others - modern (percutaneous needle fasciotomy, collagenase injection). Therefore, it is important to assess which of the existing approaches is considered to be currently the best treatment option.

Aim of study. The scientific literature describes an increased tendency for the usage of Collagenase Clostridium Histolyticum (CCH) injections and Percutaneous Needle Fasciotomy (PNF) in the treatment of DC over the past several years in patients with a mild and moderate contracture. A reason for these approaches is considered to be the substantially decreased amount of complications and a faster recovery reported post-interventional in the follow-up studies, even though with a higher recurrence rate compared to classical methods. However, the majority of the current studies are comparing the modern techniques (PNF or CCH) with classical ones (limited fasciectomy) and almost no articles compare the efficacy, complications, and recurrences among the modern procedures themselves.

Methods and materials. A literature review of articles published on Research4Life, Ovid, and Pubmed databases between 2012 and 2022 has been conducted. Only the studies matching the inclusion criteria, specifically comparing the CCH injections versus NF in terms of efficacy, complications, and recurrence rate, were selected. To identify the relevant articles, the following keywords were used: "Dupuytren", "collagenase", "fasciotomy".

Results. As a result, eight studies have been identified (451 CCH patients, 435 NF patients; 518 CCH fingers, 443 NF fingers; 738 males, and 150 females). The follow-up period range was from 6 to 60 months. Two studies reported a better outcome for PNF-treated patients, while the others have shown no significant difference. Four studies provided a higher rate of minor complications in the CCH treatment, while the remaining four demonstrated similar rates of side effects. All of the studies reported similar recurrence rates that are different according to the follow-up period of the study.

Conclusion. In the treatment of DC, both PNF and CCH provided similar outcomes, with slightly better results reported in PNF patients. A higher minor complications rate was reported in CCH patients. Further studies are required to investigate the findings as only one study provides a follow-up after 5 years.

54. PERFORATED MECKEL'S DIVERTICULUM: CLINICAL CASE

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Introduction. Meckel's diverticulum is a remnant of vitelline duct in the distal ileum, that is found in 2-3% of the population. The main problem in diverticulum is its non-specific symptomology and difficult diagnostics. According to different sources an average of 5% of patients with Meckel's diverticulum may develop complications, including perforation, hemorrhage, diverticulitis, and malignancy. Perforation presents one of the most sudden and dangerous complications, that can mimic other conditions.

Case presentation. Patient P, a 41-years-old man, was admitted urgently to the Department of Surgery, Municipal Hospital nr.1, with bloating and abdominal pain that appeared 3 hours before hospitalisation, nausea, weakness. Physical examination revealed a painful bloated abdomen, that doesn't participate in respiration, pain intensity maximises in right iliac fossa. Laboratory tests revealed high levels of WBC – 12.2 x10⁹/mm3, with shift to the left (band cells – 9%), low lymphocytes – 13%. Based on symptomology and laboratory tests acute appendicitis was suspected, and urgent surgery is indicated. During the intervention 8 cm McBurney incision was performed. At revision of abdominal cavity seropurulent discharge in volume of 10 ml was found, and edematous vermicular appendix 7x1cm, located retrocecal, retroperitoneal. Appendix was removed. After that at the distance of 60 cm from the ileocecal valve was found Meckel's diverticulum, perforated with foreign body (fish bone). Diverticulum had phlegmonous changes and fibrin plaques. Cuneiform resection of diverticula was performed. Small pelvis drainage and surgical wound dressing with aseptic bandage were performed. Macro- and microscopic description: Intestine segment is blind at the one end. Is similar to diverticulum. D = 4.7 x 2.8cm. Dark grey colour, covered in pale grey fibrinous masses.

Discussion. This case was selected due to its diagnostic value and ambiguity of the clinical picture. Based purely on symptoms acute appendicitis was suspected and later confirmed, but the basic diagnosis and cause of acute appendicitis was perforation of Meckel's diverticulum, that wasn't suspected at the moment. This case shows the problems that specialists encounter with this pathology and the importance of preoperative and intraoperative diagnostics.

Conclusion. Meckel's diverticulum is a rare condition, which is difficult to diagnose, due to its unspecific symptomology and high percentage of asymptomatic cases. Mostly they are discovered intraoperative or after the appearance of complications, that can have drastic or even fatal consequences.

55. PREDICTIVE BIOMARKERS OF COLORECTAL CANCER

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Introduction. Colorectal cancer (CRC) is the type of cancer with the highest incidence rate at present. Despite the fact that CRC is histologically homogeneous, each tumor has a unique molecular profile, which is characterized by different genetic and epigenetic changes.

Aim of study. Assessing the significance and informativeness of biomarkers in early detection of CRC in the current literature.

Methods and materials. PubMed, PubMed Central, Medline, Google Scholar databases for assessing the role of predictive biomarkers of CRC, keywords used „biomarkers", „colorectal cancer", „screening".

Results. The analysis of the databases selected 82 articles: 25 – dedicated to chromosomal instability and its involvement in colorectal carcinogenesis, 17 – on microsatellite instability and frequency of genomic mutations, 13 – on molecular repair systems, 27 – on polymerase gene mutations. Thus, several molecular genomic biomarkers have been identified, which are currently used for the diagnosis, prognosis and establishment of CRC treatment. The informativeness of many genes that are characterized by high frequency of mutations has been demonstrated (KRAS, NRAS, BRAF, PIK3CA, APC, TP53, SMAD2, SOX9), changes in DNA methylation (MLH1), affected expression at the level of mRNA or proteins and translocations (NAV2/TCF7L1), which contributes to the early confirmation of CRC and the early initiation of treatment for these neoplasms.

Conclusion. This review highlights the effectiveness of biomarkers and the importance of individual approaches in the curative management of patients with this type of neoplasia, with a direct impact on morbidity and mortality.

56. PURIFICATION OF COLLAGEN FROM HUMAN UMBILICAL-PLACENTAL COMPLEX FOR BIOENGINEERING USE

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Introduction. Collagen is a structural protein found in large quantities in the animal kingdom and has vital functions in tissue formation, attachment and cell proliferation. As a biomaterial it has a wide use in medicine, namely in traumatology, ophthalmology, oncology, dentistry, combustiology, pharmacology, both in the form of a matrix and as a carrier of encapsulated substances. The obtaining of high purity collagen is an important condition for use in tissue engineering.

Aim of study. Evaluation of the purity of collagen extracted from the umbilical-placental complex using different surfactants

Methods and materials. Placenta and umbilical cord from the Tissue and Cell Bank were used. Protocols for the elimination of blood and non-collagenous proteins from the human umbilical-placental complex were tested using sodium dodecyl sulfate, sodium deoxycholate, CHAPS, Triton X-100, Chloramine T with hydrogen peroxide, EDTA, and the control group was treated with distilled water.

Results. The purification of the collagen extracted from the umbilical-placental complex using different surfactants determined a differentiated purity. Non-ionic Triton X-100 detergent and CHAPS were most effective in removing non-collagenous proteins and blood. The lowest purity collagen is obtained using Chloramine T with hydrogen peroxide.

Conclusion. Anionic surfactant Triton X - 100 is the most effective in obtaining of high purity collagen from the umbilical-placental complex and preserve its native structure.

57. QUALITATIVE EVALUATION OF DETERGENT-ENZYMATIC DECELLULARIZED SMALL-CALIBER BLOOD VESSELS

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Introduction. Despite the obvious advantages of decellularized (DC) arteries as optimal vascular graft material, there are still some technical problems regarding the proper evaluation of the quality of obtained scaffolds. Scanning electron microscopy (SEM) and a series of histochemical stains as hematoxylin and eosin (H&E), Elastica van Gieson, Masson's trichrome, and Movat pentachrome can be used for scaffold characterization. H&E staining is indicated for qualitative assessment of remaining cellular components through the matrix, while SEM allows evaluation of the topology of the DC surface on the nano-scale and estimation of the preservation of the basal lamina integrity, thought to be important for cell adhesion and biocompatibility of scaffolds. Obviously, the balance between keeping the vessel architecture and removal of cellular components is crucial.

Aim of study. To evaluate the efficiency of a combined decellularization approach in cell removal from vascular tissue by H&E stain, and to appreciate its impact on the surface structure by SEM analysis.

Methods and materials. Cryopreserved porcine carotid arteries were treated with detergents for 48h under rotation (24h exposure to 0.5% SDS and 0.5% SDC, followed by 24h exposure to 1% TritonX-100) followed by an enzymatic digestion of DNA (48h exposure to 300 U/ml DNase I). The efficacy of DC and structural integrity preservation were evaluated by H&E stain and SEM. The sample preparation for SEM included the specimens' fixation, dehydration, critical point drying and metal coating.

Results. H&E stain revealed no persisting cells in the study group. SEM analysis demonstrated the luminal surface of carotid arteries was free of structural cellular artefacts after the treatment. In addition, the basal lamina of arteries appeared intact, fragmentation with fibers exposition being detected only within a few areas.

Conclusion. Complex characterization of decellularized scaffolds is mandatory, including qualitative and quantitative analysis of remaining cellular elements, structural evaluation of the matrix, and its biomechanical assessment. Histochemical stains, as H&E, allows to determine the presence of intact nuclei, indicative for whole cells, while SEM permits an overview of the morphology of the luminal surface. Additional assessments, such as immunohistochemical staining for basal lamina proteins (laminin, collagen IV, or fibronectin) can be considered beneficial to ensure that a basal lamina is truly present and can be tested for biocompatibility.

58. RECONSTRUCTIVE INTERVENTION RESULTS APPLIED TO COLOSTOMY PATIENTS

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Introduction. Surgical restoration of colostomy patients usually is a difficult surgical gesture with an increased incidence of complications and significant post-operative lethality – 3,9-4,1%.

Aim of study. Evaluation of postoperative complications after the restoration of digestive transit in colostomy patients.

Methods and materials. The retrospective study was performed in the Department of Surgery No. 2 of the State University of Medicine and Pharmacy *Nicolae Testemitanu*, within the Republican Clinical Hospital "Timofei Mosneaga", on a group of 127 colostomy patients, who underwent surgery to restore intestinal continuity during the years 2012 - 2021.

Results. Based on the obtained results, it was found that in colostomy patients with a short rectal stump, the incidence of anastomotic dehiscence was nearly double 11.3% compared to 6.7%. In cases of patients with protective ileostomy, suture dehiscence was not reported. The most common complication was suppuration of the wound - 34 (26.7%). In patients with anastomotic dehiscence, a surgical gesture such as re-laparotomy with re-colostomy was practised in a postoperative period of 6 days. The appearance of intestinal excretion can be less dramatic and conservative treatment can be available only under strict monitoring. Also, there were 3 (2.36%) deaths, 2 occurred as a result of purulent-septic complications, and one occurred as a consequence of pulmonary thromboembolism.

Conclusion. According to the retrospective study, it was found that colostomy patients with the short rectal stump are recommended to apply protective ileostomy which will certainly prevent anastomotic dehiscence. If an anastomotic intestinal fistula appears 6 days after surgery, it is recommended to perform a re-laparotomy with drainage and sanitation of the peritoneal cavity to prevent the extension of the purulent-septic process and development of polyorganic insufficiency syndrome and death.

59. REVASCULARIZATION OF THE MYOCARDIUM WITH THE USE OF BOTH INTERNAL THORACIC ARTERIES IN THE MULTIVASCULAR DISEASES OF THE CORONARY ARTERIES

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Introduction. Internal thoracic arteries have the best permeability of the grafts used for coronary bypass grafting, with 95-98% permeability 10 years after surgery. Using bilateral internal thoracic arteries has been shown to significantly improve clinical outcomes and increase long-term survival. But the proportion of operations with the use of two internal thoracic arteries worldwide does not exceed 10% of all coronary bypass surgery.

Aim of study. Benefit analysis of using both internal thoracic arteries in myocardial revascularization.

Methods and materials. From 2013 to 25.12.2021 in our clinic was 844 cases of coronary artery bypass grafting in coronary diseases were performed in 146 (17,29%) cases were used bilateral internal thoracic arteries, 138 (94,5%) men and 8 (5,5%) women, 54 ± 7.8 years of age. Most had angina pectoris cl. III-IV, 77 (58%) and history of myocardial infarction.

Results. The thoracic arteries were assembled as T-Graft 40 (27,4%) cases and in situ 106 (72,6%). In 93 (63,6%) cases autovena was used, 7 (4,79%) cases radial artery. A. internal thoracic arteries sequentially mounted in 26 (17,8%) cases. 20 (13,9%) patients were operated of pump. Lethality 1 case, perioperative myocardial infarction 2 cases, deep sternal wound infection 3 (2.05%).

Conclusion. Coronary bypass with the use of bilateral internal thoracic arteries is a contemporary and safe method in the myocardial revascularization in coronary artery disease; being free of limb trauma and the risk of infection of the wound after harvesting the venous or arterial graft. Currently, this should be considered as a preferred operation for most patients with coronary artery disease.

60. RISK FACTORS IN LAPAROSCOPIC CHOLECYSTECTOMY

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Introduction. Laparoscopic cholecystectomy (LC) represents the golden standard in the treatment of gallstone disease, including the patients with acute cholecystitis (AC). However, there may be difficult intraoperative situations when performing LC may be dangerous, in which conversion to open surgery is required. It has been established that 2-15% of LC are converted for various reasons, and conversion cases lead to a higher rate of postoperative complications, increased mortality, prolongation of hospital terms, etc.

Aim of study. To study the incidence of LC conversion to open surgery with the analysis of preoperative risk factors.

Methods and materials. The LC results were studied in 114 patients with AC treated in the surgery clinic of Municipal Hospital "Sfânta Treime" during 2020-2021 years. The patients were stratified into 2 groups: I- control group (LC without conversion) and II- study group (LC with conversion). The results were analysed according to age, sex, preoperative clinical and paraclinical examinations, including the neutrophil / lymphocyte ratio as a biological marker of inflammation. The severity of LC was determined according to the Nassar intraoperative difficulty scale.

Results. From the 114 patients with AC in whom LC was initiated, the intervention was performed in 103 cases; hence the conversion rate was 7.8%. In the conversion group we mentioned the predominance of men (66.7%) with a male / female ratio - 6/3, while in the control group women predominated - (n = 64, or 62.1%) cases. In group II we attested a higher average age, compared to group I. The patients of group I attested intraoperatively grade I-II of severity according to Nassar scale, while in the conversion group predominated grade III-IV of severity. The causes of conversion were: inflammatory vesicular and hepato-duodenal ligament plastron (n = 4), laparoscopic uncontrollable intraoperative haemorrhage (n = 3), gangrenous AC with perivesicular abscess (n = 1), inability to identify the cystic pedicle with the involvement of the duodenum in the inflammatory process (n = 1). The neutrophil / lymphocyte ratio in group I averaged 2.5, while in group II it significantly exceeded this value, averaging 3.9.

Conclusion. Conversion to open cholecystectomy represents a rational step in the treatment of complicated AC. The intraoperative findings are the main criteria in the surgeon's decision to convert from LC to an open procedure. Predictive factors of conversion in our study were male sex, higher age. The neutrophil / lymphocyte ratio was significantly higher in patients with severe AC and hypothetically may serve as a preoperative predictive risk factor for conversion in these patients.

61. SUPERIOR MESENTERIC ARTERY SYNDROME

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Introduction. Extrinsic duodenal obstructive disease of the third part of the duodenum by compression between the aorta and the upper mesenteric artery. The aorto-mesenteric angle being less than 18 degrees.

Aim of study. Diagnosis and surgical treatment of patients with chronic duodenal obstruction, by the aorto-mesenteric forceps mechanism.

Methods and materials. 7 patients, aged between 21 and 46 years old and treated in the Surgery Department of *St. Michael the Archangel* Municipal Clinical Hospital, from 2012 to 2018.

Results. Long medical history, with unsystematic epigastric pain, postprandial fullness, constipation. Underweight, with a BMI of 21.43kg / m2. Gastroduodenal radiography: relatively larger stomach, dilated duodenum with stasis of barium substance, pendular movements, duodenogastric reflux (DGR), delayed gastric and duodenal emptying. At angiographic CT, the aorto-mesenteric angle equal to 13.47 mm is determined. The surgical treatment undertaken: 1. Duodenojejunostomy L-L in 5 cases; 2. Strong Surgery in 2 cases. Simple postoperative evolution. Remote results: in 4 cases satisfactory results were recorded; in 2 cases constipation persisted, and in one case there were no changes.

Conclusion. The aorto-mesenteric forceps syndrome is clinically suspected, confirmed by duodenography and CT with angiography. The surgical treatment consists in performing a bypass anastomosis or lowering the duodenojejunal angle, with acceptable results.

62. SURGICAL ASPECTS OF ERYSIPELAS

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Introduction. Erysipelas has been known since ancient times, but even the achievements of modern medicine cannot completely overcome this disease. The annual incidence is up to 22.0 cases per 10,000 people. Main problems of erysipelas are its recurrent nature and purulent-necrotic complications. According to various sources in recent years, up to 19% of all cases of erysipelas are necrotic forms that do not respond to therapeutic treatment. As a consequence, there is currently a need to search for new methods of treatment and use of new surgical approaches for necrotic forms of erysipelas.

Case presentation. Patient P, a 65-year-old woman, was admitted at the Department of Septic Surgery, Municipal Clinical Hospital nr.1, with a fever of 39°-40° and ulceration on the postero-medial and postero-lateral surface of the lower part of the right calf. Physical examination revealed edema, hyperemia, necrotic skin lesions and ulcer. The ulcer appeared a month ago. The patient has a history of autoimmune thyroiditis, arterial hypertension, trophic ulcer of the right leg. Laboratory tests had shown an increased level of leukocytes - 17.3 U / l, hemoglobin - 103 g / l, erythrocytes - 3.6x1012 / l, urea - 9.2 mmol / l. The patient was diagnosed with a necrotic form of erysipelas of the right leg. On the third day of hospitalization an urgent surgery was performed - debridement of the necrotizing ulcer of the right leg. The patient received antibiotic therapy with ceftazidime 1 g 2 times per day for 10 days, then amoxicillin orally 500 mg 3 times per day for 5 days. Physiotherapy was carried out with ultraviolet rays for 7 days, as well as enzyme therapy with a trypsin dressing, boric acid and Levomekol ointment. On the 24th day of hospitalization, due to a tissue defect of 8x10 cm covered by granulation tissue an elective surgery – free skin grafting was performed. With the help of surgical dermatome, the split skin was harvested from the right thigh, with the complete coverage of the defect on the calf. A potassium permanganate dressing was applied to the donor site, glycerin – to transplanted flap and then was applied the aseptic dressing. The postoperative period was uneventful, the skin transplant is without rejection and defects.

Discussion. This case is a great example of progression and rate of development in erysipelas. It is representative of pathology's evolution and demonstrates effectiveness of combined antibiotic therapy and dermatoplasty in these patients.

Conclusion. Timely diagnosis and treatment play a decisive role in the evolution of erysipelas episodes. The active surgical treatment of necrotic forms can reduce the number of complications of erysipelas and improve the quality of patients' life.

63. SURGICAL TREATMENT FOR CHRONIC POSTEMBOLIC OCCLUSION OF THE FEMOROPOPLITEAL ARTERIES

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Introduction. Acute limb ischemia (ALI) is a condition that threatens not only the affected extremities but even the patient's life and therefore requires prompt intervention. The embolism is listed among the main causes of ALI, while emergency open surgical thromboembolectomy is still the standard approach to prevent limb loss. However, some patients tolerate the episode of ALI and are hospitalized afterwards (>14 days from onset) with symptoms of chronic limb ischemia.

Aim of study. The aim of our study was to evaluate the outcomes of surgical management in cases of chronic limb ischemia caused by embolic occlusion of the femoropopliteal arteries.

Methods and materials. The study was conducted at the Vascular Surgery Clinic, Institute of Emergency Medicine (Chisinau, Republic of Moldova), and included patients hospitalized between July 2019 and January 2022. A case series comprises 19 patients; aged between 38 and 88 years, median – 70 (25%-75% IQR 63-78) years. There were 10 (52.63%) men and 9 (47.36%) female patients; the left lower limb was affected in 13 (68.42%) cases. All patients noticed an acute onset of ischemic symptoms 15 to 182 days before admission, median – 20 (25%-75% IQR 15-30) days; while medical history did not reveal pre-existing peripheral arterial disease. Paroxysmal (n=9) or tachysystole (n=10) forms of atrial fibrillation have been diagnosed in all cases. In accordance with Fontaine classification of chronic limb ischemia there were 4 (21.05%) cases suitable for stage II, 12 (63.15%) limbs with stage III and other 3 (15.78%) – with stage IV. Isolated occlusion of femoropopliteal arteries along with absence of additional significant lesions suggestive for peripheral arterial disease has been confirmed by imaging: computed tomography angiography (n=9), duplex ultrasound (n=9) and digital subtraction angiography (n=5).

Results. All patients underwent surgical treatment, either under spinal (n=17) or general (n=2) anesthesia. Open thromboembolectomy was performed in 16 (84.21%) cases, in two patients being completed with vein patch angioplasty. In 2 (10.52%) cases distal femoropopliteal bypass with autologous vein was required, and in one (5.26%) patient vein graft interposition at the popliteal level was practiced. In 3 patients who underwent thromboembolectomy early reocclusion of femoropopliteal arteries was diagnosed. Restoration of blood flow was achieved through reconstructive vascular surgery: femoropopliteal/tibial bypass (n=2) or graft interposition (n=1). During the study period no cases of postoperative mortality were recorded, while the rate of major limb amputations was 10.52% (2 cases).

Conclusion. Open thromboembolectomy provides clinically acceptable results in patients with chronic postembolic occlusion of the femoropopliteal arteries. In cases of technical failure or early vessel reocclusion, reconstructive vascular operations remain a reliable option for restoring the arterial patency.

64. TECHNIQUES FOR APPLYING GAN NANOSTRUCTURES IN BIOLOGICAL MATRICES

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Introduction. From the beginning of the century XX several properties of amniotic membranes, including anti-inflammatory, anti-fibrous and pro-regenerative, have aroused interest in the possibility of its use as a transplant graft. The amniotic membrane has a major mechanical strength, which makes it an attractive biomaterial for use in surgery. The human amniotic membrane can also be used as a suture material, as it accelerates wound healing due to secreted growth factors. Impregnation of GaN nanoparticles on amniotic membrane wires, contributes to the promotion of cell differentiation, GaN nanoparticles, influences the process of cell proliferation, thanks to the piezoelectric effect.

Aim of study. To develop and characterize methods for placing GaN nanostructures on biological matrices. Bibliographic analysis on the topic "Techniques for applying GaN nanostructures on biological matrices". Characterization of known techniques for applying GaN nanostructures to biological matrices. Application of GaN nanostructures on amniotic membrane wires.

Methods and materials. The amniotic membranes were removed by hand, in sterile conditions from 3 placentas. Triton 1% solution and 0.5% SDS solution were used for the decellularization procedure. Identical wires were obtained from the amniotic membrane, on which the GaN nanoparticles were subsequently placed using the ultrasonic bath. Wires impregnated with GaN nanoparticles were characterized by electromicrospective scanning (SEM).

Results. With the help of SEM, images were obtained on which we can observe GaN nanoparticles on the threads in the amniotic membrane. These nanoparticles have been located along the entire length of the wire in different amounts, which may indicate that not all nanoparticles remain on the wire or that the wire is unevenly impregnated with nanoparticles. Portions without nanoparticles can also be seen on the wire.

Conclusion. Based on the results obtained, we assume that there is a need to improve the method of impregnating GaN nanoparticles on the wires obtained from the amniotic membrane.

65. THE CLINICAL AND MORPHOLOGICAL PECULIARITIES OF FOLLICULAR THYROID CARCINOMA

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Introduction. Follicular thyroid cancer is manifest as a solitary nodule, incapsulate, round shape. In section the tumors have solid structures, whitish with small area of necrosis. During 28 years was undergo for surgery about 1394 of patients: 651 of patients (46,7%) with resection thyroid gland; subtotal resection 382 (27,4%); maximal subtotal resection 251 (18%); thyroidectomy 89 (6,4%); mini invasive 21 (1,5%).

Aim of study. To determine the clinic and morphological peculiarities of follicular thyroid carcinoma.

Methods and materials. In the period of 1990-2018 in the department ,,Tumors of head and neck surgery" of the Oncologic Institute of Moldova was submissive for treatment 4062 of patients with diagnosis of thyroid cancer confirmed morphological. The following structures were found: 56,1% follicular carcinoma, 32,8% papillary carcinoma, 7,6% medullary carcinoma, 3,5% undifferentiated. Thus, follicular adenocarcinoma was found in 1394 of patients, 86,8 for woman and 13,2% for man.

Results. The study group consists of 1394 of patients with follicular carcinoma having variants: 1. Oncocitar carcinoma(of Hurthle cells). 2. Thyroid cancer non-invasive. 3. Follicular carcinoma with capsule spreading of thyroid gland and adjacent tissues (21,6%).

Conclusion. In the clinic of ,,Tumors of head and neck surgery" in period of 1990-2018 was treated 4062 of patients, 1394 with follicular carcinoma (56,1%) represented as a solitary nodule. The base of histological variants of follicular cancer was the following: oncocytic carcinoma (of Hurthle cells), non invasive, and capsula spreading of thyroid gland. Survival to 10 years 95-98%. On the basis of obtaining results of follicular carcinoma oncocytic variant, we recomanded organomaneged surgery.

66. THE CLINICAL EFFICIENCY OF TRANSRECTAL ULTRASOUND GUIDED BIOPSY IN THE PROCESS OF PROSTATE CANCER DIAGNOSTICATION

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Introduction The incidence of Prostate Cancer(PC) in 2020, in the Republic of Moldova was 28,5 % and the mortality 15,2%, thus the importance of prevention is evident.

Aim of study. The early diagnostication of PC provides a better evolution of the disease due to the higher rate of treatment efficacy and less complications. The transrectal ultrasound guided prostate (TRUS-P) biopsy is known to be the golden standard method of diagnosticating prostate cancer.

Methods and materials The TRUS-P biopsy was performed on a number of 328 patients from May 2016 until December 2021 in the department of Urology of the Republican Clinical Hospital. The study covers biopsies by core numbers, thus we have 43: 6-core; 44:10-core; 267: 12-core, and 28 patients who overcame polisaturation core biopsies (15,18,20) and others. We examined the PSA level, the age, and the histological interpretations of tissue.

Results. The age of the patients in the study was 50 to 90 years old. The minimum PSA level was 0,32 and the maximum level was 177.00 ng/ml, thus the average is 88,66 ng/ml. The diagnosis of Adenocarcinoma was found in 214 patients (56,02 %), the diagnosis of benign prostatic hyperplasia (BPH) was found in 122 patients (31,93%) and in 46 patients (12,04%) the morphological picture of atypical small acinar proliferation (ASAP), that can be suggestive for future PC was found. The 6-core biopsy revealed 24 (55,81%) patients with the diagnosis of Adenocarcinoma, 16 (37,2%) patients with the diagnosis of BPH, and 3 (6,97%) patients with ASAP. The 10-core TRUS-P biopsy identified 28 (63,63 %) patients with Adenocarcinoma, 8 (18,18%) patients with BPH and 8 (18,18%) patients with the diagnosis of ASAP. The 12-core TRUS-P biopsy shows 142 (53,18%) patients with Adenocarcinoma, 94 (35,2%) patients with BPH and the picture of ASAP in 31 (11,61%) patients. The prostate-specific antigen (PSA) average in the patients with Adenocarcinoma is 89,4 ng/ml with the minimum level of 1,18 ng/ml and the maximum level of 177.00 ng/ml. An interval of 0.32-74.00 ng/ml was found in patients with BPH with an average of 37.16 ng/ml. The interval of the PSA level 3,29-44,70 ng/ml with an average of 22.99 ng/ml was found in the patients diagnosed with ASAP. We identified 27 cases of Adenocarcinoma in patients under 60 years old, from 2016-2018: 8 (4.1%) patients and from 2018-2021: 19 (9.94%) patients.

Conclusion. Therefore the 10 and 12 core TRUS-P biopsy identifies the ASAP variants in patients more effectively than sextant biopsy. Moreover, the identification rate of PC in patients under 60 years old is increasing.

67. THE CURRENT SURGICAL ATTITUDE IN THE TREATMENT OF CHRONIC PANCREATITIS

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Introduction. Chronic pancreatitis is commonly defined as a continuing, chronic, inflammatory process of the pancreas, characterized by irreversible morphologic changes.

Aim of study. Evaluation of methods applied in the treatment of chronic pancreatitis

Methods and materials. A retrospective study was performed on the treatment methods applied to 80 patients with chronic pancreatitis, carried out during 2012-2020 within the Surgery Clinic No.2.

Results. The surgical approach includes drainage procedures in cases of dilated duct and resection procedures for narrow ducts. Surgeries performed: cystopancreatojejunostomy (CPJS) on the loop by Roux 42(52,5%) cases, external drainage of PP13 (16,25%) cases, eco-guided drainage of PP-11 (13.75%) cases, choledocojejunostomy on a speculate loop by Roux 7(8,75%) cases, caudal pancreatectomy with pancreaticojejunostomy, splenectomy 3(3,75%) cases, enucleation of pancreatic cyst – 3(3,75%) cases, DPC-1(1,25%)cases. The patients' evolution was favourable in 50 (62,5%) cases. The rate of early complications - 23 (28,75%) cases, late complications-15 (4,32%) cases reason for 4 (5%) of them required a new classical surgery and 3 (3,75%) a minimally invasive. No case of postoperative death has been reported.

Conclusion. Surgical treatment of PC has a high success rate, but must be individualized in relation to the anatomical features, pain characteristics, endocrine and exocrine functions of the pancreas, concomitant pathologies.

68. THE DEVELOPMENT OF HEPATOCELLULAR CARCINOMA IN CHRONIC VIRAL HEPATITIS C AFTER INTERFERON-FREE REGIMEN ADMINISTRATION: A CASE REPORT

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Introduction. Hepatocellular carcinoma (HCC) is a malignant tumor of the liver, primarily due to liver cirrhosis or chronic hepatitis. It is the fifth most common malignancy with highest incidences in Africa and Southeast Africa. The tumor may manifest with weight loss, jaundice, or ascites. A 5-year-survival rate is approximately 20%. The aim of the study is to present a case of hepatocellular carcinoma appeared in the evolution of chronic viral hepatitis C treated with Interferon-free antiviral regimen, and to set the focus on screening methods for patients with chronic viral hepatitis. Thus, early detection can be accomplished, and proper treatment is initiated.

Case presentation. We present the case of a 72-year-old patient with known chronic viral hepatitis C with sustained virological response after 12-week treatment, and with prostate adenocarcinoma treated with chemotherapy and radiotherapy (2020), admitted with intermittent abdominal pain in hypogastrium and 3-4 bowel movements per day with fresh blood and blood clots. Paraclinical investigations showed a severe form of hypochromic microcytic anemia and the investigations performed diagnosed a radiation colitis, for which treatment with Hydrocortisone enemas, 5-Aminosalicylates, fresh frozen plasma and blood transfusions were administered with an improvement in the symptomatology of the patient. Ultrasound showed a 38 mm focal hepatic lesion in the 6th segment, suggestive for HCC. MRI examination with Gadolinium showed similar characteristics for HCC, with early arterial washout, together with retroperitoneal and retrocrural lymphadenopathies. Alpha fetoprotein was within normal range.

Discussion. Ultrasound-guided Tru-cut biopsy was performed with the confirmation of moderately differentiated HCC (G2). The treatment recommended was sorafenib according to Barcelona Clinic Liver Cancer classification taken also into consideration the good clinical status of the patient.

Conclusion. Current guidelines suggest that screening for HCC is recommended in patients with chronic HCV accompanied by cirrhosis or advanced fibrosis, despite antiviral treatment associated with sustained virological response. The particularity of the case represents the presence of HCC with normal tumor markers, in a patient previously diagnosed with chronic hepatitis C, without the presence of fibrosis. Thus, clinicians should comply with HCC screening guidelines for early detection of HCC in these patients.

69. THE IMPACT OF PREOPERATIVE EVALUATION ON SMOKING.

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Introduction. There are about 1.14 billion smokers worldwide. Although the prevalence of smokers compared to 1990 has decreased, the absolute number of smokers, due to the rising population number, has increased. Annually, 8 out of 10 smokers are seen by a doctor or another healthcare provider, while less than 3 from 5 smokers are encouraged to quit smoking. Elective surgery can be used as an opportune "teaching moment" for the definitive smoking cessation.

Aim of study. The main goal of the study was to analyse the complexity of preoperative assessment of smoking patients and the level of information concerning the relationship between this habit and elective surgery.

Methods and materials. It was a prospective observational study, which enrolled 60 smoking patients who were admitted to the hospital for elective surgery. All the patients were assessed preoperatively in anaesthesia polyclinic.

Results. The study group was dominated by men (78.3% vs 21.7% women). The men's history of smoking exceeds that of women (21.78 ± 14.15 vs 12.92 ± 7.6 respectively), which is explained by the older age of men vs. that of women enrolled in the study and the younger age of onset of smoking among men. Analysing the complexity of the preoperative assessment by anaesthetist concerning smoking in 3 (5%) out of 60 cases the question regarding this vice was omitted, in 13 (21.6%) cases they have not been asked about length of smoking and in 15 (25%) cases the number of cigarettes smoked daily have not been specified. Regarding the volume of information provided during the consultation and especially, concerning the impact of smoking on the perioperative period, unfortunately in 24 (40%) cases the topic was not even addressed. A break of less than 4 hours since the last cigarette was reported by 25% of patients, only 13 (21.6%) reported a break longer than 1 day and in 32 (53.3%) cases the interval varied between 4 and 24 hours. The level of information of our patients concerning the impact of smoking on perioperative period is too modest. The number of patients that declared readiness to definitely quit smoking was lower than 25%, more than 1/3 of patients denied this fact, while almost half were unsure of desire and success to quit smoking.

Conclusion. Due to this study we defined the gaps in the preoperative anaesthetic assessment of smoking patients, the low level of information concerning the impact of smoking on the perioperative period and highlighted the modest impact of the anaesthetist on smoking cessation for both, short and long term.

70. THE TREATMENT OF THE OPTIC NERVE ATROPHY USING STEM CELLS (REVIEW)

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Introduction. Tissue engineering is the evolving science that combines cells, biomaterials and biochemical factors aimed at restoring, maintaining and substituting different types of tissue. An important role is played by the use of the stem cells in various fields of medicine, including ophthalmology, namely in cases of the optic nerve atrophy. The optic nerve atrophy is the main cause of decreased visual acuity and blindness. It is considered that the use of the stem cells can be an important strategy in the treatment of the optic nerve atrophy, as the stem cells restore the structure and the function of the optic nerve due to the organotypic tissue induction and vascularization. The optic nerve atrophy is caused by irreversible apoptosis of the neuronal cells. In the absence of a specific treatment of the optic nerve atrophy, the current therapies are based on the etiological cause or late complications. Considering the availability of the advanced therapies, the therapy using stem cells offers a new approach in the treatment of the optic nerve atrophy.

Aim of study. The evaluation of the latest advances of using mesenchymal stem cells based on clinical trials that included patients with optic nerve atrophy.

Methods and materials. This study is a literature review, based on synthesis of clinical trials published in the period between 2009-2022. This article includes publications identified through Google Search Engines, PubMed Databases, National Bibliometric Tool, etc. The information was systematized, highlighting both aspects of the use of mesenchymal stem cells in the pathologies associated with the optic nerve atrophy, as well as the results of 24 clinical trials published on clinictrials.gov.

Results. Current treatment of the optic nerve atrophy is based on the etiological causes or late complications. Considering the availability of advanced therapies, stem cell therapy offers a new approach in the treatment of the atrophy of the optic nerve. Being easy to harvest and cultivate, mesenchymal stem cells are most commonly used in regenerative medicine, they can be induced to differentiate into cartilage, tendons, adipose tissue and other cell lines. Mesenchymal stem cell harvesting has no ethical issues compared to embryonic stem cell harvesting. Also, mesenchymal stem cells are considered to be immunoprivileged because the major histocompatibility factor II is not expressed on their surface, and this great advantage allows the use of mesenchymal stem cells in autologous or allogenic form. Mesenchymal stem cells produce growth factors with paracrine action that are thought to activate endogenous repair mechanisms, due to these properties mesenchymal stem cells have been used in several clinical studies in optic nerve disorders where immunomodulatory and neuroprotective properties have been demonstrated. All of the properties mentioned above stand for the clinical use of mesenchymal stem cells in case of optic nerve atrophy.

Conclusion. The clinical use of the stem cells is a great possibility for the regeneration of pathologically modified tissues. This fact requires further studies to determine how to use the cell therapy in the case of optic nerve atrophy.

71. THE USE OF VANCOMYCIN AS AN EFFECTIVE ELEMENT IN MEDIASTINITIS PROPHYLAXIS

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Introduction. Deep sternal wound infection remains a significant hazard for cardiosurgical patients undergoing median sternotomy. Although the prophylactic use of topical vancomycin to reduce the incidence of deep sternal wound complications (DSWC) has been repeatedly examined, the method remains controversial.

Aim of study. Sternal mediastinitis is known as a complication of a postoperative infection especially after cardiac surgery. Analyzing international data on this serious complication, its morbidity varies between 0.15% and 2.5%, with mortality varying between 5 and 45% in different patient groups. Using different prevention methods is the objective.

Methods and materials. In the period of 2015– 2021 years in Medpark International Hospital more than 2000 patients had open-heart surgery. From 2015, for 98% of patients (in exception of patients with allergy) was used the method of sternal interior surfaces impregnation (post-sternotomy) with Vancomycin 1,5 gr powder, applied 2 times: before the pericardiotomy and upstream of sternal suturing, via the topical techniques.

Results. The rate of postsurgical complications with deep sternal wound infection in our Hospital was about 2% (N18). After starting using Vancomycin in 2015 there were no postoperative infections, deep sternal infections were not registered, reducing the cases up to 70% the number of superficial infections

Conclusion. The results are soothing, because after 2015 when this method is used Vancomycin 1.5 gr powder forming a homogeneous paste with 1 ml NaCl solution, applied 2 times: before pericardiotomy and upstream of sternal suturing The hazard of deep mediastinal complications is evidently reduced due to the surgical management optimized in correlation with the impregnation of powder. It is necessary to continue detailed study with the identification of the optimal formula of application.

72. THE USEFULNESS OF THE MIIS - SCORE FOR DEFINING THE LEVEL OF DIFFICULTY OF SPLENECTOMY FOR THE CIRRHOTIC PATIENTS

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Introduction. The evaluation of the cirrhotic patient for surgical intervention must be performed carefully and completely with the stratification of the perioperative risk.

Aim of study. The analysis of the prognostic accuracy of the MIIS score (minimally invasive splenectomy score) in predicting the outcome of splenectomy to patients with cirrhotic portal splenopathy.

Methods and materials. There were 43 splenectomised cirrhotic patients included in the survey. Retrospectively, the MIIS score (platelet count, BMI, splenic index, diagnosis, type of splenectomy) was taken into account and the difficulty of the splenectomy correlated with the postoperative results was calculated.

Results. At the enrollment: average age - 53.21 + -7 years, prevalence of Child B score -86% and sister MIIS> 3 - 57; the ratio of severe thrombocytopenia (Tc no. <40000 / mmc) / moderate thrombocytopenia (50000 -75000 / mmc) = 23% / 76% and the ratio of spleen diameter <1.5 /> 1.5 = 12 / 88. All patients had surgeries: laparoscopic vs open splenectomy = 9/34. Postoperative complications (18) had as a result of the death of 2 patients (4.6%); conversion / reinvention was required for 8 patients (18.6%), 7 of them were included in the MIIS score> 3. Overall, the results of the study show that there was a good correlation between the MIIS predictive index, the difficulty of splenectomy and the postoperative evolution. An important clarification is that marked perisplenism, intraoperative blood loss, degree of liver fibrosis and conversion itself increase the risk of the severity of the case.

Conclusion. The MIIS score has a modest diagnostic accuracy and can be used as an index of regency, useful for benchmark for selecting the right approach (open or laparoscopic) associated with good post-splenectomy results.

73. THERAPEUTIC APPROACH TO NASAL SEPTAL DEVIATION IN CHILDREN

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Introduction. Nasal septal deviation (DNS) is the most common nasal malformation, 75% of the global population suffering from it. Occurs more frequently in the first years of life, as in the case of a congenital trauma, or as a result of developmental disorders. Usually, it is located in the anterior cartilaginous portion and less frequently, in the superior bone portion. Nasal septal deviation can cause severe respiratory distress, apnea, anosmia and nasal obstruction.

Aim of study. Identification, awareness and therapeutic approach to deviation of the nasal septum.

Methods and materials. The latest information has been accessed and researched, in the therapeutic approach of nasal septal deviation in children, through the most contemporary search engines, such as: Google Scholar, National Center for Biotechnology Information, ScienceDirect, Medscape, PubMed.

Results. Six literary sources were selected for the period 2011-2020. The therapeutic approach to this type of nasal malformation will be a surgical one. Depending on the extent of the deviation, subperichondromucosa resection, repositioning, septoplasty, rhinoseptoplasty may be performed.

Conclusion. Nasal septal deviation has a growing prevalence in all age groups. Early intervention of the nasal septum deviation can prevent a subsequent septoplasty, as well as disorders related to the nasal airways, improving the patient's life quality.

74. TRACHEOSTOMY IN THE ICU

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Introduction. A tracheostomy is a procedure that permits creating a temporary or definitive channel in the anterior wall of the trachea to help breath or to ensure efficient artificial ventilation.

Aim of study. Tracheostomy is the most frequently performed procedure to patients admitted to the ICU that requires long mechanical ventilation. The most important indication for tracheostomy is the need for prolonged mechanical ventilation due to difficult airway management like upper airway obstruction in trauma, burn, surgery or cancer. A greater proportion of ICU patients undergo elective tracheostomy after considering the adverse sides of a prolonged translaryngeal intubation. The procedure reduced injuries and better tolerance, lower laryngeal complications. In a recent published nationwide survey investigating the indication, timing and preferred technique of tracheostomy. As said, prolonged mechanical ventilation was the leading indication for tracheostomy, followed by provision of airway protection, in neurological, traumatic or surgical disorders.

Methods and materials. The study was performed on a group of 61 patients with tracheostomy performed in the ICU. The study was based on the examination of the files of patients who were hospitalized from 01.01.2021 to 19.02.2022 in the Institute of Emergency Medicine of Republic of Moldova, Anesthesiology and Intensive Care Unit Department.

Results. The study group was studied by department, Group I the Neurosurgical department-47%, Group II Trauma department-13%, Group III Surgery department-27%, Group IV Other than those listed-11%. From Group I the Neurosurgical patients, 37% were discharged and 63% died, Group II Trauma department-38% were discharged and 62% died, Group III Surgery department- 35% were discharged and 65% died, Group IV Other than those listed-57% were discharged and 43% died. We divided the patients after the period of the tracheostomy was performed: Group A 1-5th day- 41% (discharged 48%, deceased 52%), Group B 6-10th day- 43% (discharged 42%, deceased 58%), Group C 11-20th day- 5% (discharged 33%, deceased 67%), Group D more than 20 day- 11% (discharged 15%, deceased 85%).

Conclusion. Conclusions Tracheostomy is applied to all patients admitted to the intensive care unit in critical condition. We observe the predominance of neurosurgical patients, whose survival rate is much lower compared to the mortality rate-63%. We also observe that, faster the tracheostomy is performed, the survival rate is higher from 48% in the first 5 days and decreases to 42%, 33% and 15% after 20 days.

75. TRANSABDOMINAL PREPERITONEAL (TAPP) VERSUS LICHTENSTEIN OPERATION FOR PRIMARY INGUINAL HERNIA REPAIR.

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Introduction. More than 20 million inguinal hernia repair surgeries are performed every year worldwide. Nearly 800.000 are performed in the United States. This is a multifactorial disease affecting individuals of all ages and of both sexes. Thirty percent of patients with inguinal hernia are asymptomatic, and up to 50% are aware of their hernia. Three percent of the patients present incarceration. Indirect hernia corresponds to more than 70% of cases among adults. The recurrence after surgery ranges from 3 to 8%. .

Aim of study. The aim is to investigate the differences between the transabdominal Preperitoneal (TAPP) and Lichtenstein in complication (intra surgical/post operator), rehabilitation , recurrence. To analyze the literature concerning after surgery complications. To identify the treatment method with less recurrences. To make a comparison in time needed for the patient to get back to his/her normal daily life.

Methods and materials. Data collection from published literature. Medical documentation, official statistics.

Results. The Lichtenstein tension-free mesh-based repair remains the criterion standard. The evidence was sufficient to conclude that the use of mesh was associated with a reduced rate of recurrence. The Lichtenstein method is easier for the surgeon to master and it's accompanied by less intra operative complication, but with a longer rehabilitation period. Transabdominal Preperitoneal (TAPP) is a feasible method for treating groin hernia associated with low rate of postoperative morbidity and recurrence. The anatomic landmarks are easily recognizable. The laparoscopic exploration allows for the treatment of incarcerated strangulated hernias and the intraoperative diagnosis of occult hernias. The postoperative rehabilitation of the patient is shorter than in Lichtenstein procedure rehabilitation. But with all the benefits the Laparoscopic approach has also disadvantages: a long learning curve for the surgeon to get the hang of it, around 200-250 cases, Higher recurrence and complication rates early in a surgeon's experience, Increased cost and Length of the operation.

Conclusion. The Lichtenstein procedure is a very common method because of its simplicity, reduced cost and shorter learning curve in comparison with the transabdominal Preperitoneal (TAPP). The TAPP in contrast with the Lichtenstein procedure carries less risk for the patient in the post operative stage (in the hand of experienced surgeon) with a shortened rehabilitation period and decreases risk of a recurrent. The transabdominal Preperitoneal (TAPP) is a procedure that is harder to master and is less cost effective than the Lichtenstein (this is the reason for the increase intra operatory complication early in a surgeon's experience) but in the hands of an experienced surgeon there is minimal to no risk of recurrency. In the future the transabdominal Preperitoneal (TAPP) procedure will become the gold standard but for now the more common treatment of the inguinal hernia is the Lichtenstein procedure.

76. UTILITY OF INDIVIDUALISED 3D PRINTER MODEL IN PREVENTION OF TRANSCUTANEOUS VERTEBROPLASTY COMPLICATIONS

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Introduction. Percutaneous vertebroplasty is an emerging interventional technique in which surgical polymethylmethacrylate is injected via a large bore needle into a vertebral body under imaging guidance. This technique is used in the management of osteoporotic and malignant vertebral fractures.

Aim of study. The purpose of this article is to describe complications arising from the procedure, and to see whether using customised 3D printer models for preoperative planning might help prevent complications during percutaneous vertebroplasty.

Methods and materials. We have reviewed the literature concerning percutaneous vertebroplasty complications. Further, 5 cases of vertebral body compression fractures were retrospectively selected from our database that had postoperative complications. The 3D-print model was made by using CT-Scan images to determine if avoiding intraoperative complications were possible.

Results. From our 5 selected cases, 3 patients (in 60 %) had cement extravasation in soft tissues and 1 patient had paraplegia. By analysing preoperative CT and intraoperative surgical protocol, the angulation and point of entry were compared. In 2 patients the point of entry was 4mm more medial and the angulation was 10 degree more lateral. In 1 patient, the vertebral body defect was neglected but seen on a 3D model. By using a different point of entry, postoperative complication could be avoided. At 2 patients had extravasation of cement into the paravertebral veins and can lead to pulmonary embolism.

Conclusion. Preoperative planning with 3D-print models can significantly improve the accuracy, shorten the operation time, and reduce the number of fluoroscopies, which eventually leads to less postoperative complications. Background Conventional percutaneous vertebroplasty is mainly guided by C-arm fluoroscopy, and it usually leads to excessive X-ray radiation exposure to patients, surgeons, and anaesthetists. Moreover, multi-time fluoroscopes may prolong the operation time. 3D-printed template could help minimise fluoroscopy shot times and fluoroscopy dosage during operation, and shorten operation time. We will compare the efficacy and accuracy of Percutaneous vertebroplasty assisted by “three-dimensional printed individual guide template” versus conventional Percutaneous vertebroplasty.

77. WIDE-AWAKE SURGERY WITH LOCAL ANESTHESIA IN HAND SURGERY

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Introduction. The wide-awake local anesthesia in hand surgery has gained popularity during recent years. It involves the use of a local anesthetic and epinephrine, and the patient remains awake during the whole procedure.

Aim of study. The purpose of this study was to assess the advantages, diverse application, outcomes, cost benefits, use in challenging environments, patient considerations, and contraindications associated with this technique.

Methods and materials. A 3-year prospective chart study was conducted of consecutive patients undergoing wide-awake surgery performed by 2 surgeons at a single institution. All procedures were performed with local anesthesia and epinephrine. Data collected included patient demographics, procedure volume, procedure type, surgical setting, functional and aesthetic outcomes and complications related to epinephrine use.

Results. During the study period, 3141 consecutive patients underwent 3374 wide-awake procedures with local anesthesia and epinephrine. Average patient age was 61 years, and 84% of patients were male. No complications related to use of epinephrine occurred, and no tissue necrosis, phentolamine reversal, anaphylaxis. No patients required conversion to general anesthesia or monitored anesthesia care. All patients were satisfied with functional and aesthetic results.

Conclusion. Wide-awake local anesthesia in hand surgery is a safe technique, with no reported cases of tissue necrosis, reversal, readmission, anaphylaxis, or anesthetic conversion. It confers particular advantage in surgeries such as tendon repairs, tendon transfers, and soft tissue releases in which intraoperative active motion can be used to optimise outcomes. The wide-awake approach also confers significant benefit due to efficiencies and cost savings.

XII. Traumatology Section.

1. ACUTE ACHILLES TENDON RUPTURE: PERCUTANEOUS TENORRHAPHY

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Introduction. Acute injury of Achilles tendon represents 20% from large tendon ruptures and the incidence is 11-37 per 100 thousand people (by Park et al. 2020).

Case presentation. A 43-year-old man, after a sprint, heard a crack and a sharp pain in his right ankle, on the posterior part a day ago. He went directly to the Clinical Hospital of Traumatology and Orthopedics. He was clinically examined where it was determined swelling of the ankle region and 1/3 of the lower back of the right leg, erasing the Achilian contour, the foot is moved sideways. Palpation of the Achilles tendon diastase. Thomson sign - positive on the right. The sonographic examination determined the Achilles tendon tears with a diastase of 4 cm. The patient was recommended surgery to repair the rupture of the Achilles tendon by percutaneous tenorrhaphy. An informed agreement was obtained after explication of the risks and benefits of the surgical treatment. Surgery was made with spinal anesthesia and fixing sterile zone, the distal and proximal ends of the Achilles tendon were drawn with a sterile marker from the visually determined and palpable injury on the skin. Percutaneous sutures were applied after Cuneo in two rows at the proximal end and one row at the distal end, through two mini-incisions, the opposite ends were adapted on the lateral and medial edge, the foot in the equine (hyperflexion), thus the final ligation of the threads was achieved. Applying the dressing. The final step is followed by the application of the leg immobilization with the foot in the equine on the right. Simple evolution of the postoperative period. After 6 weeks of immobilization, the patient starts rehabilitation.

Discussion. Fresh Achilles tendon injury needs to be diagnosed primarily as early as possible, with the use of sonographic examination to confirm the clinical diagnosis allowing us to perform minimally invasive treatment such as percutaneous tenorrhaphy.

Conclusion. Achilles tendon is the largest and strongest tendon of the human body and its usual injury is caused by recreational activity. Early establishing the diagnosis of Achilles tendon injury permitted primary repairing this anatomical structure by minimally invasive technique.

2. BENNETT FRACTURE-DISLOCATION. DIAGNOSIS AND TREATMENT

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Introduction. The metacarpal bone fractures-dislocations bones an around 4% of hand injuries (by Liverneaux et al. 2015)

Case presentation. A 37-year-old man supported an accident at work by falling down on the hand 4 weeks ago. At the local polyclinic was examined by an trauma doctor (clinical exam and x-ray investigation in 2 orthoplans). Was determined to be a contusion of carpal joint with applying a cast for 3 weeks. After this period, the patient has started rehabilitation and after 1 day, the patient presents thumb pain. He had pain with limitation of range of movement in abduction/adduction, flexion/extension. Computer tomography was made and showed displacement of the baze of the first metacarpal bone with a fragment at trapezo-metacarpal joint. The surgery option was proposed to the patient. The risks and benefits of the surgical treatment were presented to the patient, and accepted by him through signing the informed agreement. Before start the surgery was made with locoregional anesthesia, with delimitation of steril zone, by marked zone in the projection extensor pollicis brevis tendon and protect the cutaneous branch of the radial nerve, was made a dorsal skin incision of 2 cm - over the base of the thumb capsule-tomia, was determine articular surface of metacarpal base and trapez with a fragment. By longitudinal traction, pronation and pressure at the thumb metacarpal base was obtained, after this internal fixation with k-wires in „X". X-rays confirm the successful osteosintesis of metacarpal fragments. Operative wound was closed step by step of anatomical topography. Postoperative period has a simple evolution. The patient had a well-padded gypsum splint forearm-thumb in abduction immobilisation for 6 weeks.

Discussion. Bennett injury is a fracture of the internal angle of the base of the first metacarpal at which the palmar ligament of the trapezius-metacarpal joint is inserted, this fragment remains unmoved, the rest of the metacarpal being pulled up and back by the long abductor that is inserted on the external fragment of the base, thus achieving a dorso-radial dislocation fracture in the teapezo-metacarpal joint, as well as the thenar muscles. So at the start this fracture is unstable and is indication for surgery(by Antonescu 2006; El-Hadidy et al. 2019)

Conclusion. Bennett injury can even overlook an experienced traumatologist. This case, which is relatively rare in hand injuries, argues for the need to consult a hand surgeon, because not being treated in time the given injuries lead to deformed osteoarthritis of the thumb joint by disabling consequences for the patient.

3. COMPLEX REVISION HIP ARTHROPLASTY

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Introduction. Total hip replacement is one of the most successful procedures in orthopedics. But 4 to 5 percent of cases may require revision surgery within 10 years and 15 percent of patients needed it within 20 years, according to a 2017 study in The Lancet. Hip joint revision surgery is performed to repair the primary prosthesis that has been damaged over time due to an infection, some of periprosthetic fractures or due to normal wear. Revision hip arthroplasty helps to fix the problem so the hip can function normally again. There are cases when just some components need to be revised, in other the whole prosthesis needs to be removed or replaced.

Case presentation. The patient, a 40-year-old man, was admitted to the Orthopedic Department of Clinical Hospital of Traumatology and Orthopedics form Chisinau accusing pain of the right hip and functional impotence. From the anamnesis, 8 years ago, being abroad, the patient was involved in car accident, resulted with right acetabular and femoral head fractures. By emergency it was performed total hip replacement with the use of the cage, 1 year later had the dislocation of the prosthesis, treated by closed reduction. After rehabilitation the patient had an active social life. For last year the patient started to have pain, then he began to limp and using two crutches. It was made radiography and was highlighted degradation of the acetabular component. In our clinic was performed revision right hip arthroplasty, with changing just of the acetabular component. Acetabular defect was Paprosky 3B, it was necessary to use bone grafting and a new cage. 1 month later the patient had the dislocation of the prosthesis, closed reduction was without good effect, it was performed open reduction and changing the femoral component. The patient is now recovering and is in period of rehabilitation.

Discussion. In most of the revisions, are used specialized implants that are designed to compensate for the damaged bone, sometime are helpful bone grafts or augments. In our clinic we have experience using of the bone grafting, usually performing good results. It is very important to have tissue bank very closed to the clinic where it is performed revision surgeries, because sometimes things can be unpredictable.

Conclusion. Primary total hip and revision hip arthroplasty have the same goals, to relieve pain and improve function and quality of life. Revision surgery is a longer, more complex procedure, requires extensive planning, as well as the use of specialized implants and tools, in order to achieve a good result. Even revision arthroplasty technologies advanced last decades, each case is individual and challenging for the orthopedic surgeon.

4. DIAGNOSIS AND TREATMENT OF TIBIAL PLATEAU FRACTURES IN EMERGENCY MEDICINE INSTITUTE IN THE REPUBLIC OF MOLDOVA DURING 2019

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Introduction. Tibial plateau fractures represent about 1% of the total fractures in the general population, 8% among old people, and 56.9% of the proximal tibia fractures. The sex distribution is an alternating one, in men, the most traumas of this kind are registered at the average age of 40-44 years, and in women, it is 55-59 years. Tibial plateau fractures most often occur through an indirect mechanism, valgus/varus movements, or vertical shock. Tibial plateau fractures at different ages, most often, have different production mechanisms. Tibial plateau fractures in the elderly occur as a result of falls with low kinetic energy (falls from one's height, slips, etc.), this is due to osteoporotic changes that occur in old age, especially in women who have more severe osteoporosis. Injuries characterized by high kinetic energy predominate among young people, such as road accidents, falls from high locations, and sports trauma. Tibial plateau fractures affect knee alignment, stability, and movement. Early detection and appropriate treatment are critical in minimizing the patient's disability and reducing the risk of complications, especially post-traumatic arthritis.

Aim of study. To emphasize the diagnostic methods and the results of the treatment of tibial plateau fractures treated in Orthopedics and Traumatology Clinic „V. Bețișor” during 2019.

Methods and materials. We analyzed 62 clinical cases: 32 men and 30 women; The mean age was 60 years among men and 64 years among women, and the general mean age was 61 years. As of Schatzker classification, there were 7 cases of type I, 12 – type II, 10 – type III, 12 – type IV, 12 – type V and 9 cases of type VI. CT scan and radiography were performed in 57 cases, while only radiography was done in 5 cases. 52 cases of habitual trauma, 6 car accidents, 2 sports trauma, and 2 cases of aggression were reported. Surgical treatment was done in 38 cases. Open reduction and internal fixation was done in 33 cases, closed reduction and internal fixation - 5 cases (4 percutaneous screws, 1 external fixator). 24 cases were solved by conservative treatment because of no absolute indications for surgical treatment or because of the very high anesthesia risks.

Results. Postoperative follow-up was performed at 6, 12, 18, and 24 weeks. Patients were evaluated according to the Knee Society Clinical Rating System with an average of 85 points. One case of death on the 11th day of hospitalization was caused by comorbidities. Complications occurred in 5 cases (infection of the incision).

Conclusion. The best results and less complications were achieved during a close and personalized approach to each case when proper investigations and methods of reduction, fixation were done and the patient’s compliance was good.

5. DUPUYTREN CONTRACTURE COMPLICATED WITH CARPAL TUNNEL SYNDROME

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Introduction. Dupuytren Contracture is a pathological thickening of the skin in the palm and at the base of the proximal phalanges, which develops into a hard knot or retractile band. Over time, it can lead to one or more fingers to contract irreversibly. Carpal Tunnel Syndrome is an abnormal hand condition that is caused by pressure on the median nerve in the radiocarpal joint. This can lead to symptoms such as paresthesias, numbness and loss of sensitivity in the hand, wrist and arm. Dupuytren Contracture is treated by fasciotomy, fasciectomy, percutaneous aponeurotomy or enzimatic injections, while the surgical treatment for Carpal Tunnel Syndrome is decompression of the transverse carpal ligament. These two diseases can have similar symptoms, but they are caused by different factors and may require different treatments.

Case presentation. In the Hospital of Orthopedics and Traumatology, march-august, 2021, underwent partial fasciectomy 2 patients with Dupuytren Contracture, grade II-III, which after 2 months were complicated by the Carpal Tunnel Syndrome, ultrasonographically confirmed - the median nerve with inflammation signs along the path, the common synovial vagina of the flexors dilated. There was performed decompression of the transverse carpal ligament, with neurolysis of the median nerve. Currently, both patients do not mention recurrences.

Discussion. Dupuytren Contracture has unknown etiology. All over the world, there is no single principle to define it, but it is supposed to be caused by repetitive trauma, genetics, smoking, diabetes, alcoholism, liver pathologies, etc. Carpal Tunnel Syndrome can manifest, also, after trauma, surgery or other inflammatory processes. The literature is conflicted in regard to these conditions as a consequence after intervention for common pathologic conditions of the hand, as well as regarding their management. There are not so many cases in our experience when Dupuytren Contracture is complicated by Carpal Tunnel Syndrome, worldwide it has a 4,6% incidence.

Conclusion. Inflammation caused by surgery for Dupuytren Contracture was the first causative trigger for the onset of the Carpal Tunnel Syndrome. Also, during these 2 months wearing the splint and performing exercises that represented repetitive movements in the radiocarpal joint, were the factors that contributed to the evolution of the disease.

6. FUNCTIONAL REHABILITATION FOR UNSTABLE FRACTURES OF THE CLAVICLE

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Introduction. Fractures of the clavicle are quite common - in 12.5-26.1%, with a predominant lesion of people of working age (20-50 years). Unstable damage of the clavicle in the middle third inevitably affects not only the state of the damaged segment, but also the entire upper limb.

Aim of study. Study of effective methods of rehabilitation of patients with unstable clavicle fractures.

Methods and materials. Under our supervision there were 65 patients with fractures of the clavicle hospitalized to the Department of Traumatology of the Institute of Emergency Medicine in the period 2018-2021. The majority were men - 54 (83.1%), and women – 11 (16.9%). The age of the patients ranged from 18 to 68 years, with a mean age of 43 years. The main cause of injury was household injuries - 49 patients (75.4%), as a result of falling from a standing position, as a result of slipping). Fractures of the clavicle occurred mainly in the middle third - 83% (54 patients), as well as 13.8% (9 patients) - in the distal third and 3.1% (2 patients) - fractures of the proximal end of the clavicle; with displacement were observed in 62 of cases (95.4%), without displacement - 3 (4.6%). The right clavicle was injured more often in 54% of cases (35 patients), which is associated with the dominance of the right upper limb. In all cases, fixation of clavicle fractures was performed surgically - internal osteosynthesis with a plate. The hospitalization period ranged from 1 to 9 days, with an average of 5 days. Rehabilitation activities began from the first days of hospitalization of patients. Monitoring the dynamics of rehabilitation efficiency and correction of exercise performance were carried out on the basis of orthopedic examination and instrumental research methods.

Results. Functional rehabilitation was prescribed in the postoperative period for all patients, in combination with adequate anesthesia and antibiotic prophylaxis, courses of physiotherapy and special exercises were carried out. In all cases, a complete restoration of range of motion in the joints of the injured limb was achieved, which allowed patients to return to their work as soon as possible.

Conclusion. The effectiveness of treatment for clavicle injuries is based not only on adherence to the principles of osteosynthesis, but also depends on the method of functional rehabilitation. The combination of the optimal method of surgical fixation of the fracture and adequate functional rehabilitation allows achieving the best treatment results.

7. ILIO-SACRAL STABILIZATION- METHOD OF OSTEOSYNTHESIS IN PELVIC FRACTURES

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Introduction. Pelvic trauma is one of the most difficult problems in lesion surgery, and its prevalence is 3-7% of the total number of lesions of the musculoskeletal system. Ilio-sacral fixation is performed to restore the integrity of the posttraumatic pelvic ring.

Aim of study. In this presentation, we intend to present ilio-sacral stabilization as a treatment method available in severe-unstable pelvic fractures, with the recommendations of various specialists, to evaluate the results of surgical treatment.

Methods and materials. We surgically treated and dynamically examined patients hospitalized at the Institute of Emergency Medicine, Chisinau with diagnostically unstable pelvic fractures during the period 2019-2022 operated on by ilio-sacral fixation as the only method of fixation or in combination with other fixations.

Results. All patients were verticalized and discharged up to the 7th postoperative day. Septic and neurological complications, both early and late, have not been reported in this type of fixation. Complications such as degradation of osteosynthesis material in the study group were not recorded. Ilio-sacral fixation could be used either as the sole method of fixation or in combination with other pelvic fixations both internal and external. Satisfactory bone block was formed in all patients.

Conclusion. 1) Ilio-sacral fixation is a method of internal osteosynthesis recently proposed and used successfully in both pelvic trauma. 2) Ilio-sacral fixation allows a firm stabilization and early mobilization of the patient.

8. MANAGEMENT OF BURN PATIENTS: CHOOSING THE OPTIMAL METHOD OF TREATMENT

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Introduction. Burns are underestimated, life-threatening injuries that are difficult to manage, because of systemic inflammatory response, fluid loss, large scale infections. An ideal burn wound dressing should have good antiseptic properties, reduce epithelization period, absorb exudate provide moisturization and pain relief. Injuries caused by frequent dressing, also, represents an important issue. One of the main problems is improvement of surgical treatment methods, directed towards a debridement and adequate plastic cover. Enzymatic debridement, autodermoplasty, allografts, xenografts, flaps, semisynthetic skin substitutes, cell therapy, tissue expansion – choosing an optimal treatment method, will lead to both shortening the hospitalization period and avoiding sequelae.

Aim of study. To underline the particularities of burns management by studying the scientific articles, for the elaboration of the recommendations for choosing the best treatment option.

Methods and materials. It was done a literature review, by searching the scientific articles on *Google Scholar*, *PubMed*, *Elsevier*, *Cochrane*, published last 5 years, using keywords *"burns surgical management"*, *"burns dressing"*, *"burns grafting"*.

Results. Among the substances widespread in burn dressing, povidone-iodine is an antiseptic with wide-action spectrum, reduces epithelization period, when compared to chlorhexidine. Chlorhexidine in a concentration greater than 2% is more effective than silver sulfadiazine. Sulfadiazine is quite widespread, notwithstanding that it is associated with poor healing results, the need for frequent dressings and the pain associated with this. Regarding surgical treatment, early wound debridement decreases the rate of infections and length of hospitalization. Defects reconstruction and coverage should be performed as soon as possible after debridement to decrease fluid loss and infection. It can be done temporary covering with allograft or synthetic skin substitutes, or permanent, with autologous split skin grafts, this depends on burned area of the skin and availability of the donor sites.

Conclusion. Burns injuries are common, the majority requiring only dressings. A proper wound dressing will protect against infection, reduce epithelization period, absorb exudate, provide moisturization and pain relief. In massive burns – dressing is not sufficient, and wound closure requires excisions of burnt skin and donor grafting, to generate skin synthesis and angiogenesis. Although, in our practice, autografts are not always available because of the lack of skin donors and the severity of the injuries. In such cases, it is used allografts, xenografts, semisynthetic skin substitutes, cell therapy, tissue expansion, flaps. The disponible plasty methods can be crucial in optimizing outcomes.

9. PARTICULARS OF RADIATION DIAGNOSTICS IN POLYTRAUMATIZED PREGNANT WOMEN

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Introduction. In radiation diagnostics in polytraumatized pregnant women, the main research methods are radiography, USG and CT. The use of radiography and CT in pregnant women is controversial. A dose of ionizing radiation >100 mGy is considered a threshold for the occurrence of mutations in the fetus, and >200 mGy is considered unfavorable for the mother. The task of accurate diagnostics of injuries in polytraumatized pregnant women forced the use of radiation diagnostics in excess of the norm of the radiation dose. The purpose of the study is to determine the dose of absorbed ionizing radiation (mGy) in the accurate diagnosis of injuries in a polytrauma pregnant woman.

Case presentation. Clinical case of treatment of a pregnant woman E., 28 years old, who was involved in a car accident, as a passenger, 10 days before addressing IMSP IMU, in Ukraine. She addressed the following symptoms: headache, pain and edema of the facial region, pain when chewing, limitation of the opening of the mouth, pain in the region of the left arm. 20 weeks pregnant. At the primary examination the general condition was of medium severity, the neurological status was adequate. Breathing was nasal free, with a frequency of 14 / min. Stable hemodynamics (pulse 72 beats / min, blood pressure 120/90 mmHg). The local examination shows the facial asymmetry caused by the post-traumatic edema of the soft tissues in the left jugular region, where the skin was edematous, hyperemic, painful to the touch. The left arm was swollen and painful. She was examined by an oromaxillofacial surgeon, gynecologist, traumatologist, etc. The studies were performed using modern digital systems according to standard methods.

Discussion: At the hospitalization of the patient, the following imaging investigations were performed: radiography of the left forearm with plaster splint applied 10 days ago, an irradiation dose of 0.2 mGy (from 0.35 mGy), fracture of the radial bone in a typical place, secondary displacement of the fragments. Computed tomography (CT) of the head was performed with a radiation dose of 3.2 mGy (permissible 100-50 mGy), where the fracture of the paramedian mandible on the left was established with insignificant displacement of bone fragments. Fracture of the lower wall of the left maxillary sinus, with the displacement of bone fragments. Maxillary sinusitis on the left. Ultrasound of the small pelvis was also performed to examine the condition of the fetus. In conclusion: pregnancy in evolution within 29 weeks, amniotic waters in normal volume. Placenta inserted posteriorly, grade II of maturity, with a thickness of 33 mm. Cervical canal - 40 mm, closed. The clinical diagnosis of closed craniocerebral trauma, concussion has been established. Post-traumatic fracture of the mandible, unconsolidated, in the paramedian region on the left, condition after bimaxillary immobilization. Left radius fracture in typical place, immobilized with a plaster splint. Intrauterine pregnancy 22 weeks.

Conclusion. Following imaging investigations, the maximum dose of irradiation was 3.4 mGy, which is permissible to maintain the pregnancy and apply the necessary treatment to the pregnant woman, to reduce the pain syndrome. Regarding radiation in pregnancy, the suggestions of the National Council for Radiation Protection are ≤0.05 Gy (50 mGy), but the risk of teratogenicity from <0.1 Gy (100mGy) is very high.

10. SELECTIVE WRIST ARTHRODESIS: STANDARD VS COMBINED GRAFT WITH STEM CELLS. EXPERIMENTAL RESEARCH

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Introduction. Selective arthrodesis is a surgical procedure used to be done in advanced wrist joint arthritis. The aim of the surgery is to achieve a stable joint, by intercarpal ankylosis, which removes the pain syndrome and restores the strength of the hand, unfortunately with the risk of decreasing the range of motion in the wrist joint.

Aim of study. Comparative evaluation of the method of selective wrist arthrodesis using standard vs combined graft with stem cells.

Methods and materials. Our study is based on experimental research on 10 New Zealand rabbits. In the first study group, on 5 laboratory animals was performed standard arthrodesis of wrist joint. In the second study group, on other 5 laboratory animals, was developed the new treatment technique using the combined graft with stem cells, obtained by tissue engineering.

Results. In all cases, an immediate postoperative radiograph was performed. The clinical and radiological evaluation, performed at 4, 8 and 12 weeks after the surgery. Computer tomography of each operated wrist was done 12 weeks postoperatively. Imagistic results showed us, that the group were performed arthrodesis using combined graft with stem cells, the ankylosis were achieved faster. Preliminary histological examinations of experiments indicate more active involvement in the process of osteogenesis in the use of combined stem cell transplantation.

Conclusions. Our experimental research highlights an innovative method of surgical treatment - arthrodesis using the combined graft with stem cells. It turned out to be a harmless and safe method. A comparative study with the standard treatment method was performed, the imaging and preliminary histological results are encouraging. The final analysis of the results is still in process.

11. STAGED MEDICAL TREATMENT OF A PATIENT WITH PELVIC LESION TYPE C (TILE CLASSIFICATION)

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Introduction. Pelvic trauma is one of the most difficult problems in lesion surgery, and usually to restore the integrity of the posttraumatic pelvic ring several stages of surgical treatment are required.

Case presentation. Patient - a 35-year-old man, suffered compression trauma, a 150 kg wooden cart fell over the pelvis. Urgently admitted to a rational hospital in the anesthesia and intensive care unit where he was under supervision for the first 72 hours. After the transfer, the patient was further investigated, reassessed, and the pelvic external fixation applied. Postoperatively, after the first stage of surgical treatment, the patient was in the intensive care unit for 48 hours. When the general condition of the patient improves, more than 8 days of external pelvic fixation. The following was performed: 1) Reduction of pubic symphysis disjunction and osteosynthesis with plate and screws. 2) Reduction of disjunction in the sacroiliac joint on the left. Percutaneous osteosynthesis with ilio-sacral screw. On the 4th postoperative day, the patient found Sars Cov-2 positive and left the medical institution on his own - refusing special help. Subsequently, on the 6th day after leaving the medical institution and on the 10th day postoperatively, the patient announces that serous eliminations with suture dehiscence have appeared from the suprapubic wound. After 16 days PCR test - negative, readmission: 1) Revision of the suprapubic dehiscent wound, refreshing of the edges of the dehiscent wound, lavage, repeated collection of microbiology, application of secondary sutures. 2) Fixation of the left spino-pelvic. The patient was discharged on the 15th day of admission and 7 weeks after the trauma.

Discussion. The patient needed several stages of medical help. SarsCov-2 disease has aggravated both the general condition of the patient and the regeneration of wounds, with their infection. Only the staged work allowed the successful resolution of the medical case.

Conclusion. Patients with unstable pelvic fractures type C usually require staged multidisciplinary treatment. Traumatologically it is necessary to restore the integrity of half-rings anterior and posterior.

12. SURGERY OF TRIANGULAR FIBROCARTILAGINOUS COMPLEX POST-TRAUMATIC INJURY PALMER 2B

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Introduction. The triangular fibrocartilage complex (TFCC) is an important anatomical morphology of distal radioulnar joints, knowing its structure, clinical signs which evidence the pathology of this „black box" human body region will contribute threat this clinical problem(by Kleinman W. B 2007).

Case presentation. A 55-year-old woman fell down on both her hands 2 months ago. First medical aid was given at the regional trauma point, being examined clinically with wrist x-ray. The diagnostic was a contusion of a radiocarpal joint with applying a cast for 3 weeks, after starting rehabilitation of hand function. 24 days ago she fell down on her right hand - diagnostic was contusion of radiocarpal joint with applying a cast for 2 weeks. After 7 days of kinetic therapy, the pain was in pronation and supination with pain on the dorsal side of the hand (shuck, piano key tests were positive). X-rays showed displacement of the ulnar head from radial fovea posteriorly. Sonography exam visualized total injury of fibrocartilaginous disc and anterior and posterior radioulnar ligaments of DRUJ. The patient was informed about the risks and benefits and accepted the surgical treatment tactic„Reconstruction of right distal radius ulnar ligaments with tendon autograft after Johnston Jones and Sanders". Was made an sinusoidal incision through 5-6 extensor compartments, TFCC have degenerative aspect and irreparable, by volar access by ulnar flexor of the carpus, pronator square was delimited with L-shaped capsulo-tomy of the DRUJ, the long palmar flexor tendon graft was collected, by passage the tendon graft through the tunnel at the level of the distal metaphysis of the antero-posterior radial bone, performing 2 tunnels through the fovea and ulnar neck (volar and palmar), the ends of the tendon graft are passed through the radial bone tunnel, then from the sigmoid fossa through the fovea and tunnels to the ulnar neck making a suture loop with the forearm in supine, fixing the distal radio-ulnar joint with 2 k-wires.The patient had a forearm-hand immobilization for 4 weeks, by removing k-wires with initiation of rehabilitation of hand function.

Discussion. I hope that this clinical case as a whole will help colleagues in the treatment of DRUJ pathology and the efficient management of these patients with painless results.

Conclusion. TFCC injury type 2B posttraumatic(chronic) by Palmer with sonographic examination was possible and on surgery it was confirmed. Quality of diagnosis of TFCC injury in early time remains as a surgical possibility.

13. SURGICAL TREATMENT FOR TERRIBLE TRIAD INJURIES OF THE ELBOW.

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Introduction. Elbow dislocation with both radial head and coronoid fractures has been referred to as the terrible triad injury . It represents a pattern of complex elbow instability that has been associated with a poor prognosis. Persistent elbow instability after injury often results in pain, poor function, progressive joint degeneration.To prevent persistent instability after these injuries, the surgeon must decide which structures require surgical repair and how to best deal with each of these. The current standard surgical protocols for treating terrible triad injury include fixation of the coronoid fracture, repair or replacement of the radial head, and repair of the lateral ligament complex, reserving medial collateral ligament repair and application of hinged external fixation for patients with residual instability. However, surgical treatment for terrible triad injuries of the elbow remains challenging, and specifically, there is controversy of whether the radial head injury should be surgically repaired or replaced with a prosthesis.

Case presentation. Patient Y, 22, suffered a fall from a bicycle with support on his right upper limb. The patient is urgently referred to the emergency department of the Emergency Medicine Institute. Clinical examination shows deformity of the right elbow joint, severe pain on palpation and attempts to mobilize the joint. Radiographic and CT Imaging examination established the diagnosis: Posterolateral dislocation of the bones of the right forearm. Masson III radial bone head fracture and Regan type II coronoid process fracture. The patient underwent surgery urgently. The following were performed: closed reduction of forearm bone dislocation, cemented arthroplasty of the radial head, osteosynthesis of the coronoid process with a screw, suturing of the lateral collateral ligament of the elbow. The patient followed the postoperative regimen. At one year he presented for a follow up. The postoperative functional results were as follows: Flexion/Extension - 140/10, Pronation/Supination - 85/80; DASH score -2.5; MEPS score - 100 p.

Discussion. A very good functional result was obtained. There were no postoperative complications. The patient returned in full volume to his daily activity.

Conclusion. The current diagnostic and therapeutic protocols allow obtaining satisfactory clinical outcomes in the majority of cases. The strict application of current algorithms by an expert elbow surgeon appears to improve clinical results by reducing the influence of other avoidable negative prognostic factors well known in current literature, such as the incomplete recognition of injuries, delayed treatment, inadequate treatment of bony and ligamentous injuries, prolonged immobilization and, last but not least, the surgeon’s inexperience.

14. SURGICAL TREATMENT OF INTRA-ARTICULAR DISTAL RADIUS FRACTURES, WITH POLYAXIAL ANGULAR STABILITY PLATE.

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Introduction. Distal radius fractures are about 2 times more common than fractures in other areas of the human body. The annual incidence is 24 cases per 10,000 people per year. Predominantly affected are women, of >55 years old, than men of the same age, the ratio being 2/1. While in younger age, more common cases are encountered among men. Polyaxial angular stability plate is the type of implant that ensures a stable fixation of the fracture due to its anatomical shape and the locking of the screw at the optimal angle for reduction. Once the acceptable reduction is made, the fixation with such a plate assures that during the manipulations, the fragments will be kept in the initial position. The main advantage of this plate is that it is not necessary to move the plate in the sagittal or axial plane in order to be able to fix the screw, in comparison with uniaxial plate, this type does not disturb the underlying cortical bone infusion as much as conventional plates do.

Case presentation. Patient X, 60 years old. The woman fell, as she got off the trolleybus, leaning on her left hand palm. The patient has been complaining of pain in the region of the left radio-carpal joint, limited movement, edema. She has been transported to IMSP IMU, emergency department for further treatment. RX examination has revealed a fracture of left distal segment radial bone, radiological AO2RC1.2. An orthopedic closed reduction of the fracture has been performed, radiologically the reduction is not acceptable, the patient is being prepared for surgical treatment. Modified Henry approach. Open reduction of the left distal radius fracture with polyaxial angular stability plate, radiologically fracture is reduced anatomically, stable. The patient followed the postoperative regimen. She came for an examination a year after surgical treatment, function: flexion-extension amplitude 65-70 grades, adduction 35-40 grades and abduction 15 grades.

Discussion. Great postoperative results. Functionally, the movements in the left radio-carpal joint are good and coincide with that of the right upper limb. Postoperative complications did not occur. The patient returned to her daily routine.

Conclusion. Based on the diagnosis and treatment tactics performed, we have chosen a correct fixator that allowed us to obtain a stable reduction, which did not change postoperatively. Due to the polyaxial angular stability plate, its adaptation to the bone was optimal, and maintained a good vascularity of the periosteum, which allowed us a faster and qualitative bone regeneration. Polyaxial angular stability plate has been shown to be an optimal implant for intra-articular distal radius fractures in elderly people.

15. THE INTERRELATIONSHIP OF EARLY VOLUME AND RESPIRATORY RESUSCITATION AND THE CLINICAL AND EVOLUTIONARY IMPACT OF CRITICALLY INJURED POLYTRAUMA PATIENTS.

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Introduction. Poly trauma continues to be a leading cause of death and disability in all age groups, especially young people. The death of polytraumatized patients is most often caused by lack of oxygenation of vital organs, spinal cord trauma, internal bleeding with the development of hemorrhagic shock or combinations thereof. Initial assessment and management of severely injured patients is a difficult task and requires a quick and systematic approach, which would be useful to increase the speed and accuracy of the clinical/paraclinical assessment process.

Aim of study. The research aims to identify the clinical-evolutionary impact in critically injured trauma patients as a result of early volume and respiratory resuscitation at the prehospital stage and in the Department of Emergency Medicine (DEM).

Methods and materials. The prospective study will be conducted in the period 2020-2023, on a sample of 160 critically injured polytrauma patients.The volume and respiratory status, the methods of volume and respiratory resuscitation in critically injured polytrauma patients during the pre-hospital and DCMU onset period will be evaluated.

Results. According to data from the literature, the polytrauma patient is a challenging case in the pre-hospital stage and in the emergency unit. Resuscitation of the polytraumatized patient is a therapeutic intervention that must be done quickly, consisting of essential steps that take place successively over time.Therefore, the resuscitation of vital functions as well as the evaluation of trauma-induced injuries must take place at the same time. Another component of early resuscitation of the critically injured polytrauma patient is ensuring optimal ventilation. The primary purpose of intubation is to ensure adequate ventilation and oxygenation and to ensure airway permeability. Rapid sequence induction seems to be the best method, however, several issues need to be clarified, such as who is best suited for the decision to intubate, which drugs and devices to use, and the ideal infrastructure for intubation services. Most of the available data come from retrospective studies, which therefore remain controversial regarding the proper use of tracheal intubation in patients who have suffered traumatic injuries.Adequate ventilation may influence the positive prognosis of patients with severe trauma. The Remote Risk Control Strategy is the concept and practical application or extension of the Risk Control Strategy to the prehospital stage, which today includes the administration of plasma, erythrocyte mass and platelet concentrate in a ratio of 1:1:1 and tranexamic acid in order to ensuring hemostasis by stopping the processes of fibrinolysis, supporting the formation of clot and increasing the formation of thrombin. Elements of this strategy are already being implemented in AMUP in Norway, Israel and the United Kingdom in patients treated with tranexamic acid. A prospective cohort study has shown reduced mortality, and the current European Guide to the Management of Severe Bleeding and Posttraumatic Coagulopathy recommends administering the first dose of tranexamic acid at the prehospital stage to patients in posttraumatic hypovolemic shock. The decision to apply the risk control tactic needs to be made in the DMU stabilization room.Johan Groeneveld, author of an editorial on the subject, published in 2010 in Critical which argues that it is difficult to establish the toxic effect of synthetic colloids in humans, most studies in this field are experimental, on animal model.Thus, in critical conditions, early volume replenishment in the first 12 hours is an essential condition for the correction of tissue hypoperfusion; Continuation of aggressive fluid administration 48-72 hours after injury, when microcirculation and capillary permeability is altered, leads to adverse effects.

Conclusion. The Risk Control Strategy is a multidisciplinary approach for polytrauma patients with major bleeding that includes several objectives to improve the prognosis and reduce mortality; permissive hypotension, hemostatic resuscitation through early use of blood preparations and components, control of hemorrhage,according to the European Trauma Registry (2008-2013), real polytraumas account for 12% of all cases but cause 1/3 of all deaths among hospitalized patients.The literature does not provide exact guidelines for fluid resuscitation and there is much controversy about the advantages and disadvantages of using colloids or crystalloids so it has been found that each patient is approached individually, ensuring resuscitation management to be chosen according to clinical / traumatic condition.

16. THE SURGICAL TREATMENT OF THE POLYTRAUMA PATIENT

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Introduction. Polytraumatism is a syndrome caused by multiple lesions of defined severity (ISS≥17 points), accompanied by sequential systemic reactions which may cause dysfunction and insufficiency of organs and systems of vital organs, which were not itself involved in the lesions. Around 16000 people in the world die every day as a result of trauma (5,8 million people per year) and the forecast for 2020 is no better, the surveys show that this year there are expected around 8,4 million deaths. Management in polytrauma patients has been considerably changed in recent years, due to the rapid development of multi-fracturing techniques. Despite the implementation of good methods of diagnosis and treatment, there is no reduction in complications and invalidations from trauma, which is explained by the severity of these injuries. Without measures to combat and improve treatment methods, they will lead to an increase in socio-economic harm over the next 10 years. More than 70% of all patients with major trauma need at least one orthopedic surgical procedure, and injuries of the extremities are associated with higher blood transfusion rates, prolonged hospitalization time and many other complications. Several studies have shown the advantages of early fixation of long bone fractures, in particular of femoral diaphysis in polytraumatized patients, namely: Facilitation of medical care, earlier mobilization with improvement of lung function, prevention of complications such as fat embolia, pneumonia, pulmonary thromboemboli, sepsis, etc., and finally by decreasing morbidity and mortality. Primary intramedullary osteosynthesis of the femur (especially in type A and B fractures) may only be recommended for polytraumatized patients without significant chest damage with a score (ISS <25) and if ISS exceeds 40 points, primary stabilization is still essential, but should only be done with external fixers (Cape H-C, Jones A, et all, 2005). ETC involves definitive surgical stabilization of all long-bone fractures during the early phase of treatment (24–48 h). The concept of the ETC holds the merit to focus the attention of the international medical community on the need to stabilize long-bone lesions; this constituted the first step in the development of the modern management of multiple traumas. ETC should be preferred when the clinical condition of the patient and the presence of well-trained surgical teams permit it.

Case presentation. The X patient, 54, suffered a trauma, falling from a height of 5 meters. It is transported to the hospital immediately. Being immobilized , it charges pain, functional impotence at the lumbar spine, pelvic and lower leg pelvic on the right. Clinically-radiology investigated and consulted by the multidisciplinary team, diagnosis is established: Polytrauma . Catatraumatism. The sub-trohanter-closed fracture of the femur as Seinsheimer Type IV. AO - 31A3. Fracture of cross-springs of vertebrae L4-5 on the right with movement of bone fragments. Fracture of the sacral mass on the right, with displacement of the bone fragments and injury to the cortical of the shutter holes. The dehiscence of the pubic symphysis and the sacroiliac joint on the left. Two-way pulmonary bruise. Multiple scars of the body and extremities. ISS – 22 points. Following laboratory investigations, no deviations were revealed. This ensures that the patient is admitted at a steady state and within the first 48 hours under general anesthesia protection, the following interventions have been performed for 5 hours: Open reduction. Fixation of the pubic symphysis lesion with the plate; spino-pelvic fixation on the right; indirect reduction. The osteosynthesis of the femur right proximal with the central stem medulla. The postoperative period – no features, no complications, the plagues have scar. Over 7 post-operator days, no active support and movement - with the help of the underarms. At 2,5 months active support on the right lower member and at 4 months, more regular activity is allowed. At one year the patient is presented to the control, where good postoperative functional results with large movements at the affected joints were highlighted.

Discussion. A very good functional result was achieved. Post-operative complications have not been registered. The patient has returned to full volume to his day-to-day activity.

Conclusion. The polytraumatized patient is a complex patient, requires a multidisciplinary and individualized approach, and early and complete surgical treatment increases the chance for good results, decreases the complications rate, increases the possibility for a full recovery and prevents patient invalidity.

17. THE UTILITY OF DASH AND MICHIGAN SCORES IN DUPUYTREN'S CONTRACTURE

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Introduction. Palm fascia fibromatosis is a benign fibro-proliferative tumor (ICD - 10, M 72.0 Dupuytren's contracture (disease)). A severe form of finger contracture in Dupuytren's disease often treated with surgery based on measuring the severity of finger flexion contracture (by Alberton et al. 2014; Broekstra et al. 2015; Kang et al. 2014).

Aim of study. Establishing the clinical relationship of DASH Michigan questionnaires with the clinical status of Dupuytren's contracture (DC).

Methods and materials. We have proposed a study of patients with DC which consecutively was treated in the Department of Hand Surgery Department, Clinical Hospital Traumatology and Orthopedics, Chisinau in the period 2021. Primary outcomes were determined by using Disabilities of Arm and Shoulder and Hand (DASH) score and the Michigan Hand Outcomes Questionnaire. Results were shown as mean with standard deviation.

Results. From 86 patients the average per group of DASH(D) and Michigan(M) Questionnaire were 30,6 ± 8,3 and 72,7 ± 9,1. When was affected only one hand, in left part the scores of D and M were (24,14%; 21 cases) 26,3±9,4 and 75,6±7,5, in the right part (32,18%; 28 cases) 32,25±9,1 and 69,8±9,7. In cases with bilateral DC (43,68%; 38 patients) the scores of D and M were 31,8±6,5 and 73,3±9,2. According by stages the scores of D and M were: II (35 cases;40,23%) 26,5±8,8 and 74,5±9,4; III (49 cases; 56,32%) 33,3±7,1 and 71,9± 9,1; IV (3 cases; 3,45%) 35,4±2,5 and 65,4±0,58. By gender scores of D and M were: male (68 cases; 78,2%) 29,8±8,2 and 73,6±9,3; female (19 cases; 21,8%) 33,5±8,4 and 69,8±8,3. The average age of the group is 57,83±10,2. Population from rural(49cases; 56,32%) zone scores of D and M show 31,4 ±8,2 and 72,6±10,02, but for urban zone (38 cases;43,68%) 29,53±8,5 and 72,95±8,1.

Conclusions: In clinical examination of the patients with DC it is advisable to include Disabilities of Arm and Shoulder and Hand (DASH) score and the Michigan Hand Outcomes Questionnaire because they have measurable data that can be compared with posttreatment methods of DC.

18. TREATMENT OF TIBIAL BONE DEFECTS BY THE ILIZAROV METHOD

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Introduction. Open tibial bone fractures are the most common open fractures of long tubular bones, with an incidence of 3.4 per 100,000. The increased frequency is mainly due to high energy injuries, as a result of: road accidents, production injuries. One of the options for treating tibial bone and soft tissue defects is to replace the bone defect with the compression-distraction method with the use of continuous micro-displacement.

Case presentation. Patient, 44 years old, originally from Chernivtsi, Ukraine, injured in a car accident in Russia. He suffered an open fracture of the bones of the right leg in the distal metadiaphyseal region. He underwent primary surgery in Russia, where the primary surgical treatment of the wound was performed, the osteosynthesis of the leg bones with extra-focus fixator type Ilizarov. It is complicated by soft tissue necrosis in the post-traumatic region. He underwent repeated surgery in Chernivtsi, secondary surgical debridement of the wound, necrectomy. After 12 months after the trauma, he was admitted to the Department of Traumatology and Septic and Reparative Orthopedics of the IMSP SCTO with the diagnosis of: chronic posttraumatic osteitis of the right leg bones, septic pseudarthrosis, recalcitrant distal metadiaphysis of the right tibial bone, (Cierny Mader IV B), soft tissue and bone defect, recalcitrant pseudarthrosis of the right tibial bone.It was made: tibial bone sequestrectomy, drying the septic focus, soft tissue defect plasty with posterior tibial perforator flap, corticotomy at the level of the proximal metadiaphysis of the tibial bone for the substitution of 6 cm. of segmental defect of tibial bone, by the method of compression-distraction by the use of continuous microdeplacement and osteosynthesis with fixator Ilizarov. Defect replacement was made for 63 days. At day 64, the patient was readmitted and surgically reoperated: reassembling the extrafocus fixator. After 167 days, the consolidation of the fracture was obtained and the extra-focal fixator was removed.

Discussion. These severe traumas remain a challenge for orthopedic, plastic, vascular surgeons. The compression-distraction method by using continuous microdeplacement and osteosynthesis with extrafocus fixator Ilizarov has some disadvantages: the inconvenience of the patient, permanent monitoring by the orthopedic doctor, infections in the region of the extrafocus fixator pins.

Conclusion. Open fractures of the lower extremity are the most common open lesions of the long bones, but their management remains a matter of debate. External fixation it’s a minimally invasive, effective method and relatively easy to perform by an experienced surgeon.

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