

CHISINAU, REPUBLIC OF MOLDOVA, JUNE 7-9, 2023

ABSTRACT BOOK

THE 37TH BALKAN MEDICAL WEEK
“PERSPECTIVES OF THE BALKAN MEDICINE
IN THE POST COVID-19 ERA”

&

THE 8TH CONGRESS ON UROLOGY, DIALYSIS
AND KIDNEY TRANSPLANT FROM
THE REPUBLIC OF MOLDOVA WITH
INTERNATIONAL PARTICIPATION
“NEW HORIZONS IN UROLOGY”



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**The 37th Balkan Medical Week
“PERSPECTIVES OF THE BALKAN MEDICINE
IN THE POST COVID-19 ERA”**

&

**The 8th Congress on Urology, Dialysis and Kidney Transplant from
the Republic of Moldova with international participation
“NEW HORIZONS IN UROLOGY”**

ORGANIZED BY

**The National Section from the Republic of Moldova
of the Balkan Medical Union
and the Moldovan Society of Urologists**

*June 7-9, 2023
Chisinau, Republic of Moldova*

ABSTRACT BOOK



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WELCOME MESSAGE



Dear colleagues, distinguished guests,

It is my greatest honor and pleasure to invite you to the 8th International Congress on Urology, Dialysis and Kidney Transplantation with international participation, and the 37th Balkan Medical Week that will be held on June 7-9, 2023 in Chisinau, Republic of Moldova. The congress is organized with the support of the Ministry of Health of the Republic of Moldova, *Nicolae Testemitanu* State University of Medicine and Pharmacy and the Balkan Medical Union.

The Congress on Urology, Dialysis and Kidney Transplantation is hosted traditionally by the Moldovan Society of Urologists at the national level every four years, aiming to bring the most important scientific and practical aspects to more than 300 specialists from Moldova and from abroad.

This year, the scientific forum will be dedicated to the overarching theme “New Horizons in Urology”.

The 37th Balkan Medical Week, entitled “Perspectives of Balkan Medicine in the Post COVID-19 Era”, aims to promote cooperation, exchange of experience and friendship between medical doctors of Balkan countries, to inform specialists about current national and international scientific achievements in medical and pharmaceutical fields and to improve the quality of health care provided to the population of the Balkan region.

The program of the current Balkan Medical Week includes a wide range of up-to-the-minute topics in: Basic Medicine, Family Medicine, Cardiology, Surgery, Pediatric Surgery, Anesthesiology and Reanimation, and Emergency Medicine, Gastroenterology, Hepatology, and Infectious Diseases, Obstetrics and Gynecology, Pediatrics and Neonatology, Ophthalmology and Otolaryngology, Neurology, Neurosurgery, Rheumatology, Hematology and Transfusion, Dermatovenereology, Medical Rehabilitation and Physical Medicine, Dentistry, Pharmacy and Preventive Medicine.

The event will be attended by selected international experts who will lead courses, lectures and workshops, and outline the most recent advances in urology and other above-mentioned fields. Moreover, Balkan Medical Union Board members will honor the Congress with their presence. About 3000 specialists are expected to participate this year, including students, PhD fellows and resident doctors from different specialties.

We are looking forward to welcoming you at the congresses and are strongly convinced that our distinguished experts will fully meet your expectations, create opportunities for interdisciplinary professional communication and, implementation of innovations in medicine and pharmacy, will help achieving high results in scientific research, and clinical practice.

Your participation will make a significant contribution to these scientific events and the achievement of the goals that were set, giving them undeniable value.

Yours respectfully,

President of the congresses

Emil CEBAN

Emil CEBAN

PhD, Professor, Corresponding Member
of the Academy of Sciences of Moldova,
Rector of *Nicolae Testemitanu* University



MINISTRY OF HEALTH OF
THE REPUBLIC OF MOLDOVA



BALKAN MEDICAL UNION



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

THE 37th BALKAN MEDICAL WEEK

“THE PERSPECTIVES OF BALKAN MEDICINE IN THE POST COVID-19 ERA”

June 7-9, 2023, Chisinau, Republic of Moldova



The 37th Balkan Medical Week

“THE PERSPECTIVES OF BALKAN MEDICINE IN THE POST COVID-19 ERA”

June 7-9, 2023

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CERTAIN SOUND PATTERNS OR GENRES OF MUSIC INFLUENCE POSTOPERATIVE PAIN INTENSITY AFTER TOTAL HIP REPLACEMENT

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ABSTRACT

Introduction. Certain patterns of sounds and genres of music significantly influence mood, emotions, and these, in turn, the intensity of pain. The hypothesis assumes that certain patterns of sounds or music genres could influence (decrease) the intensity of postoperative pain. **Material and methods.** Prospective, consecutive study. Institute of Emergency Medicine, Chisinau, Republic of Moldova. Intervention: scheduled hip replacement. Research Ethics Committee approved. Exclusion criteria: deafness, pre-existing chronic pain, depression, anxiety, neuropathy. Patients' preferred sound pattern or music genre was registered preoperatively. Statistical analysis: Brown-Forsythe ANOVA test. Data are presented as mean and 95%CI. **Results.** Enrolled 217 ASA 2 and 3 patients (93/42.9% men). Age 65.7 ±

12.7 years. Pain intensity (NRS points), recorded 48 hours postoperatively, according to certain categories of sounds or preferred music genres, were: silence (n=74) – 5.32 (4.94 to 5.70), speaking without background noise (n=9) – 5.78 (4.35 to 7.20), classical music (n=12) – 3.58 (2.52 to 4.65), pop or rock music (n=9) – 4.33 (2.70 to 5.96), instrumental music, one instrument (n=23) – 5.39 (4.56 to 6.22), vocal singing (n=39) – 4.74 (4.16 to 5.33), sounds from nature (n=50) – 4.90 (4.39 to 5.41). Brown-Forsythe ANOVA test: F=2.33; p=0.0397. **Conclusion.** Preference for certain genres of music seem to significantly influence postoperative pain intensity. In this regard, classical music was associated with minimal pain intensity. Since some categories tend towards statistical significance, larger batches of patients are needed for definitive testing of the given hypothesis.

PREFERENCE FOR A PARTICULAR SOUND PATTERN OR MUSIC GENRE DOES NOT SEEM TO INFLUENCE THE PREVALENCE OF CHRONIC PAIN 6 MONTHS AFTER HIP JOINT REPLACEMENT

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ABSTRACT

Introduction. Chronic pain dramatically affects moods, feelings, and emotions. Similar effects are also induced by sounds or music. The hypothesis was whether the preferred sound pattern or music genre influences pain prevalence after 6 months postoperatively after total hip joint replacement. **Material and methods.** Prospective, consecutive study. Institute of Emergency Medicine, Chisinau, Republic of Moldova. Intervention: scheduled hip replacement. Research Ethics Committee approved. Exclusion criteria: deafness, pre-existing chronic pain, depression, anxiety, neuropathy. Patients' preferred sound pattern or music genre was registered preoperatively. Patients phoned over 6 months and asked whether or not they have pain (≥ 3 NRS points). Statistical analysis: Fisher's exact test. Data are presented as absolute and relative data. **Results.** Enrolled 217 ASA 2 and 3 patients

(93/42.9% men). Age 65.7 ± 12.7 years. At 6 months, response rate was 96/217 (44.2%). Pain (≥ 3 NRS points) was reported by 59/96 (61.5%) of patients. Next, the proportion of patients with no pain vs. with pain at 6 months, according to their preferred sound pattern or music genres, is presented: silence – 17 (46.0%) vs. 18 (31.0%), $p=0.4225$; speaking without background noise – 2 (5.4%) vs. 3 (5.2%), $p=1.0000$; industrial activity noise – 1 (2.7%) vs. 0 (0.0%), $p=0.3895$; classical music – 1 (2.7%) vs. 4 (6.9%), $p=0.6453$; pop or rock music – 0 (0.0%) vs. 4 (6.9%), $p=0.1540$; instrumental music, one instrument – 3 (8.1%) vs. 8 (13.8%), $p=0.5197$; vocal singing – 6 (16.2%) vs. 8 (13.8%), $p=0.5197$; sounds from nature – 8 (21.6%) vs. 13 (22.4%), $p=1.0000$. **Conclusion.** Preference for a particular sound pattern or music genre does not seem to influence the prevalence of chronic pain 6 months after hip joint replacement surgery.

MONITORING PICCO PARAMETERS IN PATIENTS WITH ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS) (CLINICAL CASE)

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ABSTRACT

Introduction. ELWI (Extravascular Lung Water Index) and PVPI (Pulmonary Vascular Permeability Index) can establish the severity of pulmonary edema in ARDS patients. ELWI > 10ml/kg is a definite criterion for pulmonary edema. ELWI > 15 ml/kg and PVPI > 3 indicate progression of ARDS with high mortality. Patient R., 36 years old, admitted to ICU in critical condition: ARDS, stage III, dyspnea, acrocyanosis, fever 38.3°C, SpO₂ of 84% at FiO₂ of 21%. Monitoring: mean arterial pressure, pulse, ECG, SpO₂, PiCCO, echocardiogram, laboratory tests, pulmonary X-ray, pulmonary CT scan, antibiogram, coagulation, acid-base balance, etc. **Objective.** Murray score > 2.5, oxygenation index - 56, radiologic bilateral subtotal pneumonic infiltration, Brixia score 18, leukocyte formula shifted to the left, absolute lymphopenia, thrombocytopenia, hyperprocalcitoninemia, hypoprothrombinemia,

hyperfibrinogenemia, hypoantithrombinemia III, hypoproteinemia, hypoalbuminemia; ELWI - 35 ml/kg; PVPI 7.6, GEDI (Global End-diastolic Volume Index) - 1131 ml/m²; SVRI (Systemic Vascular Resistance Index) - 1366 dynscm-5m²; Echocardiogram: signs of overload. Therapy. Mechanical ventilation, fluid restriction <1500 ml; colloids: human albumin, anti-staphylococcal plasma, red blood cell concentrate, crystalloids, anti-edema therapy: diuretics and osmotic diuretics and hypovolemic iso-oncotic plasmapheresis, antibiotic therapy, unfractionated heparin, vitamins, nitrates, gastroprotectors. **Results.** ELWI from 35 to 10 ml/kg, PVPI from 7.6 to 2.5, Brixia score from 18 to 12 points, SVRI from 1366 to 1610 dyn*s*cm-5*m², and oxygenation index from 56 to 397. On the 12th day, the patient started to breath spontaneously. **Conclusion.** PICCO monitoring, allow judicious arguments for fluid therapy and thus play a crucial role in saving patients with severe primary ARDS.

ELECTROLYTIC DISORDERS IN PATIENTS INFECTED WITH SARS-COV-2

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ABSTRACT

Introduction. SARS-CoV-2 infection induces serious complications with multiple organ dysfunctions and electrolyte disturbances.

Purpose. assessment of electrolyte disturbances in patients with severe forms of SARS-CoV-2 in ICU. **Material and methods.** A retrospective study during the year 2021. Including 30 patients with severe complications of SARS-Cov-2 infection, positive PCR tests, treated in the ICU department. Excluded patients with: age <18 years; autoimmune diseases; chronic renal diseases of the liver; chronic insufficiency; acute cardiac pathologies; patients who permanently administer drugs that induce electrolyte disturbances. The values of K⁺, Na⁺, Ca²⁺, Cl⁻ ions collected over 24 hours, 48 hours after admission to the ICU were estimated.

Results. Mean age - 51±5 years. At admission, hyponatremia is determined in all patients. After

24 h of treatment, the Na⁺ values are corrected ($p < 0.01$) to 23.33%, hyponatremia preserved to 76.67%. After 48h, the hyponatremia correction is insignificant. At admission, 12 patients (40%) had hypokalemia. After 24 hours of treatment, hypokalemia remained in 26% of patients and was not corrected even after 48 hours in 20% of patients. At admission, hypochloremia was present - 36.67% of patients. At 24h and 48h - Cl⁻ correction is significant ($p < 0.001$), hypochloremia is maintained only in women. At admission, 83% of patients had hypocalcemia. At 24 h the Ca²⁺ concentration normalizes significantly ($p < 0.05$). At 48h – insignificant correction compared to 24h. **Conclusions.** In severe forms of SARS CoV-2, electrolyte deficiencies are determined: mainly hyponatremia (100%), hypocalcemia (83%), hypochloremia and hypokalemia are found in one third of the patients.

PREDICTION OF RENAL MORPHOLOGICAL CHANGES (SAMCRS_{KIDNEY}) AT 24 HOURS AFTER TRAUMA

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ABSTRACT

Introduction. Polytraumas/severe traumas are can cause secondary damages to intact tissues by immunocompetent cells that infiltrate organs primarily unaffected by the traumatic agent and release proteases and/or free oxygen radicals. In this experimental study, was made an attempt to identify biomarkers for "distant" renal lesions and to develop predictive models for estimating their extent. **Material and methods.** In the experimental research, the conditions of a polytrauma were modeled and the concentrations of serum protease and antiprotease components described in the literature as being involved in the pathophysiology of secondary posttraumatic lesions were measured at different time intervals up to 24 hours after trauma. The correlation of the measured values with the values of renal impairment on the Assessment of Qualitative Changes with Semiquantitative

Reflection Scale (AQCSRS) was evaluated to form a predictive model of them. **Results.** In the correlation analysis of protease/antiprotease system components with AQCSRS_{KIDNEY} value 24 hours after traumatic impact, the score was associated with TEA_{2h}, TEA_{24h}, α1-antitrypsin_{24h}, CHEA_{5h}, CLEA_{0h}, EEA_{0h} and EEA_{2h}. Some trends were also observed to correlate with TEA_{5h}, AMPEA_{0h} and with CGEA_{5h}. **Conclusions.** AQCSRS_{KIDNEY} positively correlated with the enzymatic activity of proteases and negatively with antiproteases, following the logic of the respective destructive and protective effects. Less characteristically, negative correlations were observed between 24-h AQCSRS_{KIDNEY} and protease values at some time points. The explanation for the associations of "distant" renal injury with pre-trauma protease activity values may be that there is probably a balance between protective/destructive factors at this time point.

PLASMAPHERESIS IN SEVERE COVID-19

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ABSTRACT

Introduction. Plasmapheresis is a method of exchange blood plasma used in different categories of patients. Autoimmune diseases are prior to indications according to international guidelines for plasmapheresis. On the other hand, critical patients who determine cytokine disturbances due to Systemic inflammatory response does not represent a prior indication for plasmapheresis in guidelines. **The aim of the study.** Assessment of plasmapheresis in critical ill patients in ICU, who developed Severe Inflammatory Response with cytokine disturbances. **Material and methods.** A retrospective observational study of 64 medical records of patients admitted to ICU with severe COVID-19 was realized. Were recorded general data, and hemogram before plasmapheresis, and after plasmapheresis. **Results.** Plasmapheresis, performed in patients with severe COVID-19, SARS-CoV2

improved the clinical status and hemogram where Leukocytes, PCR, ferritin and lymphocytes denote a favorable evolution of cytokine disturbances and inflammatory response. C-reactive protein was evaluated, which decreases in 57% cases. C-reactive protein indicator, was correlated with patients hemodynamic and respiratory status improvement in 48% cases, after the plasmapheresis procedure. Patients that received plasmapheresis marked an improvement in serum ferritin index, in 70% cases. Analogously, the level of lymphocytes increased after the plasmapheresis in 55% cases. **Conclusions.** Severe COVID-19 (SARS-CoV-2) patients that were under plasmapheresis determined an improvement of Severe inflammatory response and Cytokine activity. Moreover, the performance of the procedure over the proinflammatory indices could suggest reconsider plasmapheresis as a prior procedure for severe COVID-19.

POSTREPERFUSION TISSUE METABOLIC CHANGES IN OVARIAN TORSION

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ABSTRACT

Introduction. Ovarian ischemia is a pathological condition that frequently occurs following torsion of the ovaries. In the case of healthy ovaries exposed to ovarian torsion (OT), it is extremely important to ensure their preservation by detorsion (DTO), as a radical surgical intervention to remove them could lead to hormonal disorders and infertility with a decreased quality of life. **The aim of the research** was to evaluate the tissue metabolic changes in ovarian torsion after torsion removal in order to highlight the optimal intervention strategies to reduce the negative impact of reperfusion. The study was approved by the Research Ethics Committee. **Material and methods.** 70 laboratory rats were randomly assigned, by 10, in 7 study groups: control, sham (only laparotomy), OT 3h, OT 3h / DTO 1h, OT 3h / cDTO 1h, OT 3h / DTO 24h, OT 3h / cDTO 24h. cDTO (controlled detorsion) included the opening and closing of the atraumatic ovarian pedicle clip with a 10 seconds interval, for 2 minutes, at the beginning of the reperfusion period. The levels of lactate

and malondialdehyde (MDA) were measured in the ovarian homogenates. The statistical analysis was performed using SPSS software. **Results.** It was determined that ischemia increased lactate by 38%, $p=0.006$, and MDA by approximately 23%, $p<0.001$, compared to the control group. After 1 h from cDTO, as well as DTO, the lactate levels were maintained similar to the amount recorded in the group with only OT, $p>0.05$, and over 24 h in both DTO and cDTO groups, a decrease in the lactate levels were observed, close to the control group, $p>0.05$. cDTO compared to DTO maintained MDA at the level of the values recorded in the group with only OT, $p>0.05$. In the groups with DTO the level of MDA was statistically significant higher, compared to both OT and cDTO groups, $p<0.001$. **Conclusion.** cDTO has a beneficial effect by reducing the formation of MDA, which is a specific biomarker for oxidative damage induced by the amplification of oxidative stress during the reperfusion period. Further studies with concomitant administration of antioxidants are required.

EXPERIMENTAL MODEL OF CARDIAC ISCHEMIA

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ABSTRACT

Introduction. Experimental modeling on small laboratory animals (mice, rats) allows the elucidation of the intracellular biochemical mechanisms underlying the cardiac ischemia. Isoproterenol, a non-selective synthetic beta-agonist, used in high doses induces severe oxidative stress accompanied by intracellular acidosis with increased membrane permeability. **The research aim** was to identify the metabolic changes induced by isoproterenol in cardiac tissue in order to prove the utility and reliability of chemical non-invasive methods for experimental studies. The study design was approved by Research Ethics Committee. **Material and methods.** The research was performed on 40 male adult rats randomly divided into 5 groups: sham, control (only solution of 0.9% NaCl), experimental (solution of Isoproterenol Hydrochloride 100 mg/kg subcutaneously one dose) – AMI.6h, AMI.24h, AMI.7d. The amount of ischemia-modified albumin (IMA) and advanced oxidation protein products (AOPP) were assessed in serum. Statistical

analysis was performed by applying Kruskal-Wallis and Mann-Whitney nonparametric tests (SPSS 23.0 software). **Results.** The highest serum values of IMA (by 20%, $p < 0.05^*$), and AOPP (by approximately 24%, $p > 0.5$) compared to sham and control groups were recorded in the experimental pre-infarction AMI.6h group. The subsequent dynamics is accompanied by the reduction of IMA levels by 11% in AMI.24h, the same values being maintained in AMI.7d ($p < 0.05^*$), while AOPP amount recorded a tendency to maintain elevated levels (by 21%) in the state of infarct (AMI.24h) and post-infarction (AMI.7d) (by 22%, $p > 0.5$). The serum content of AOPP, compared to IMA, was insignificantly higher in all experimental groups ($p > 0.5$). **Conclusion.** The elevated amount of IMA and AOPP in early diagnostics of acute myocardial infarction detects pre-infarction state with reversible ischemic alterations. Proper medication prevents necrosis and improves the clinical outcome. Further enlarged studies are required.

THE INFLUENCE OF ANIONS ON THE COORDINATION MODE OF SALICYLALDEHYDE S-ALKYLISOTHIOSEMICARBAZONES IN PALLADIUM(II) COMPLEXES

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ABSTRACT

Introduction. Thiosemicarbazones are important compounds due to their valuable biological properties and catalytic activity. Coordination of thiosemicarbazones with metal ions often enhances their properties and can lead to the emergence of new ones. **Material and methods.** In this study, we synthesized and characterized two new coordination compounds of palladium(II) with salicylic aldehyde S-methylthiosemicarbazone, aiming to investigate the coordination mode of the ligand and advance these compounds for biological activity research. The synthesis was carried out using $K_2[PdCl_4]$ and $K_2[Pd(NO_2)_4]$ salts and thiosemicarbazone derivatives of salicylaldehyde (H_2L), which were obtained from commercial sources. Basic crystallographic data were collected using a KUMA KM4CCD diffractometer at 120K.

Results. X-ray diffraction study of the synthesized coordination compounds revealed that the organic ligand in the $[Pd(HL)Cl] \cdot H_2O$ complex coordinates with Pd(II) through the ONS donor atoms. However, in the case of complexation with $K_2[Pd(NO_2)_4]$, S-methylisothiosemicarbazone of salicylaldehyde undergoes conformational rearrangements and coordinates with palladium(II) *via* the ONN donor set. **Conclusions.** Our results indicate that the presence of a methyl group on the sulfur atom does not affect the coordination mode of the ligand. However, replacing the salt $K_2[PdCl_4]$ with $K_2[Pd(NO_2)_4]$ leads to a modification of the coordination mode of the S-methylthiosemicarbazone of salicylic aldehyde. It is worth noting that such changes in the coordination mode were not observed in other thiosemicarbazones of salicylic aldehyde.

EVALUATION OF SOME TECHNOLOGICAL PARAMETERS FOR ACTIVE PHARMACEUTICAL INGREDIENT AND EXCIPIENTS IN THE PREFORMULATION PROCESS OF COMBINED POWDER

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ABSTRACT

Introduction. Powder represents a solid pharmaceutical form, which according to its composition, can be simple (has only one active pharmaceutical ingredient (API)) and compound (has more than one API). To ensure optimal stability and pharmacokinetics of APIs, excipients (E) are added to the powders as the diluents, lubricants, glidants, sweeteners, stabilizers. **The aim of the work.** Evaluation of technological parameters for Es and their mixtures in combination with APIs at the stage of the powders preformulation. **Material and methods.** Individual Es such as: microcrystalline cellulose, lactose monohydrate, d-mannitol (Cel.; Lact.; Himedia), citric acid (Chem-Lab), saccharin (Zah.; Sigma-Aldrich) were used; model M1-M12 mixtures of E and combinations of E with APIs (potassium aspartate, magnesium aspartate and potassium orotate (Sigma-Aldrich) and spironolactone, (Acros Organic)) were prepared; RADWAG

analytical electronic balance, ERWEKA tapped density tester, VP12A powder flow speed tester were employed. **Results.** Mechanical mixtures of Es without APIs and with them were prepared according to the technological rules of powder preparation and analyzed in terms of the basic technological parameters, the values of which should not exceed the established limits: Carr's Index (<26%), Hausner's Ratio (<1.35), Angle of repose (<35°), Flow speed (<100g/25s). Following the conducted research, those combinations of model mixtures, corresponding to these established limits for the technological parameters: M3 (SA-23.6%, Cel-50%, Lact-16.4%, Zah-10%), M5 (SA-23.6%, Cel-66.4%, Zah-10%), M8 (SA-23.6%, Cel-50%, Lact-26.4%,) were analyzed. **Conclusions.** Following these studies, the technologically optimal Es for the formulation of the compound powders were selected and three formulations were chosen, which will be used for the next stages of analysis.

OBESITY – A VECTOR IN NON-COMMUNICABLE DISEASES DEVELOPMENT

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ABSTRACT

Introduction. The World Health Organization (WHO) battles the burden of non-communicable diseases (NCDs) associated to obesity, recently intensified by the COVID-19 pandemic. The increase of obesity rate overwhelms the resources of the medical system due to inefficient treatment of its accompanying NCDs, overseeing the primary lifestyle issue. **The aim of research** was to identify the correlation between obesity and sedentary lifestyle to the non-communicable diseases (NCDs) development and severity of COVID-19 complications in the context of improvement of health resources. **Material and Methods.** It was performed a systematic review of data regarding the development of the Covid-19 infection in patients with NCDs provided by BMC and WHO (between 01.03.2020- 01.03.2021), and scientific articles related to obesity published in PubMed database (2008-2021). At the end of the selection process, 15 articles were selected for use

in the literature review. **Results.** In the context of the COVID-19 pandemic, obesity (BMI ≥ 30 kg/m²) has become a morbidity of high risk. The mortality rate reaches about 4 million deaths yearly, implying cardiovascular, endocrine, chronic respiratory diseases and other conditions. On the background of recent COVID-19 infection targeting its comorbidities, obesity has become more dangerous, with an infection prevalence of 14% to 44% in diabetes patients; 4,7% to 17,5% in hypertension patients, the most prevalent chronic comorbid condition being respiratory pathology (5%). The supervision of obesity according to an elaborate clinical protocol will prevent the increase of the number of patients presenting with NCDs and with severe forms of COVID-19. **Conclusions.** Due to direct association between obesity and its risks, the early monitoring and lifestyle change in obese patients will minimize the pharmaceutical treatment, resulting in disease reversal, cost reduction and avoidance of invasive treatment.

CHANGES OF LOCAL OCULAR RENIN-ANGIOTENSIN SYSTEM (RAS) MARKERS IN HYPERTENSIVE RETINOPATHY (HR)

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ABSTRACT

Introduction. The HR etiology appears to be related to both ocular and systemic vascular risk factors such as systemic hypertension (HTN). Reports that some RAS components levels are elevated in the patients' blood with HTN suggests that RAS may be involved in the HR pathogenesis. **Objectives.** To evaluate the tear and serum RAS markers (Ang II and ACE) in patients with primary hypertension with different degrees of HR. **Methods.** 90 patients primarily diagnosed with HTN, were evaluated for HR and stratified according to the Keith-Wagener classification into 3 groups: GI - 40 with grade I HR, GII - 32 with grade II HR and GIII-18 with grade III HR. Angiotensin II (Ang II) level and angiotensin converting enzyme (ACE) activity were assessed

both in the blood serum and tears (ELISA Kit of MyBioSource Inc., USA). $p < 0.05$ was considered statistical significant. **Results.** In HR, a decrease in tear and an increase in serum Ang II values were found with the progression of HR stage. Fluctuations were statistically true both in tears ($p = 0.035$) and in serum ($p = 0.039$), being negatively, statistically significant ($r_s = -0.323$, $p = 0.045$) correlated with each other. There was a statistically significant increase in serum ACE levels ($p = 0.032$) and insignificant in tears ($p = 0.536$). **Conclusions.** In HR, statistically conclusive changes of Ang II levels and ACE activity in the serum of patient with primary HTN were attested, which suggests the possibility of supplementing the diagnosis and stratification algorithm of HR with these biochemical markers.

CHANGES IN GLUCOSE AND IN THE INDICES OF LIPID METABOLISM IN PATIENTS WITH COVID-19

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ABSTRACT

Introduction. The SARS-CoV-2 virus influences the different metabolic pathways, especially the lipid and glucose metabolism. **Material and methods.** The aim of the study was to evaluate the clinical features and changes in blood glucose, lipid metabolism indices in patients with COVID-19. A cross-sectional study was performed, that included 1000 inpatients with COVID-19. The subjects were divided in two groups according to the presence of diabetes mellitus type 2 (DM2). We collected anthropometric dates (BMI), vital signs and laboratory tests: glucose, HbA1C, triglycerides (TAG), total cholesterol, HDL-cholesterol (HDL-chol), LDL-cholesterol (LDL-chol). **Results.** In patients with COVID-19

and DM vs non-diabetic was attested increased values of blood glucose and HbA1C ($p < 0,01$) at the admission. The carbohydrates parameters undergo significant fluctuations in dynamics: they decrease in diabetic and non-diabetic patients with COVID-19 who survived and continue to increase reaching maximum at day 10 in patients who died, in both groups. In patients with DM who survived were assessed the increase in TAG. In patients who died, at day 10 we determined decreased levels of cholesterol, LDL-Col and HDL-Col in both groups compared to survivors. **In conclusion** the abnormalities of the lipid and carbohydrate profile are associated with worst prognosis in COVID-19 patients, and could be a potential marker for the severity of the disease.

ASSOCIATION OF BIOCHEMICAL CHANGES IN CHILDREN WITH ABDOMINAL OBESITY AND METABOLIC SYNDROME

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ABSTRACT

Introduction. During the last decades, we attested to an increased prevalence of overweight and obesity especially in children, parallel with the increasing trends in metabolic syndrome (MetS). Therefore, MetS is recognized as a major pediatric problem. The aim of the study was the evaluation of biochemical changes in children with abdominal obesity and MetS. **Material and methods.** The study included 80 children with abdominal obesity (CA \geq 90th) hospitalized in the Cardiology Unit, Department of Pediatrics, IMSP Mother and Child Institute. The patients were divided into 2 groups Gr.1- 40 children with abdominal obesity with MetS and Gr.2- 40 patients with abdominal obesity without MetS. The patients were examined for variables including BMI, waist circumference (CA), blood pressure, fasting plasma glucose and

lipids (total cholesterol, triglycerides, LDL-Col, HDL-Col), and uric acid level. **Results.** In Gr 1 versus Gr 2 was detected an increase in BMI (28.26 ± 3.1 kg/m² vs 25.83 ± 3.86 , $p = 0.0013$), and CA (94.65 ± 8.91 cm vs 86.22 ± 8.42 cm, $p < 0.0001$). The fasting plasma glucose (Gr. 1- 4.85 ± 0.61 mmol/L, Gr.2 - 4.77 ± 1.58 mmol/L) and triglycerides (Gr.1- 2.13 ± 1.62 mmol/L in Gr.2 - 1.04 ± 1.26 mmol/L). were significantly higher in Gr.1. The correlational analysis carried out finds highly significant correlations between the abdominal circumference with the values of systolic blood pressure ($r=0.503$) and diastolic ($r=0.453$). **Conclusions.** In obese children with MetS, significant changes were found expressed by increasing BMI and abdominal circumference values, and statistically significant metabolic changes expressed by altered values of fasting plasma glucose and triglycerides.

AIRWAY MANAGEMENT OF POLY-TRAUMA PATIENTS WITH CERVICAL SPINE INJURY

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ABSTRACT

Introduction. Cervical spine injury has the highest frequency in poly-trauma patients due to its high mobility and flexibility. **Material and methods.** In this study, enrolled 125 patients in the year of 2022 who went to emergency department (ED) of Institute of Emergency Medicine (IEM) with poly-trauma, from which 95 patients were diagnosed with cervical spine injury, and approximately 20% had airway management. **Results.** The 20% patients who had difficulty breathing, with a necessity of airway management, intubated at sight in the emergency department,

when there was a suspecting of fracture between C3-C5 spinal cord following Nexus Guidelines for cervical fractures and Tintinalli's guidelines for Cervical trauma. The diagnosis was pre confirmed with the help of neurosurgeons and spinal surgeons, and confirmed by cervical CT. Patients suffered cervical pain, cervical stiffness, paresthesia, dysesthesias. **Conclusion.** The insurance of Airway management in poly-trauma patients is very vital, especially if the patient has a C-spin injury between C3-C5. which at any moment can lead to respiratory insufficiency due to the innervation of the nerves for the diaphragm.

AETOXYSKLEROL IN THE TREATMENT OF SYMPTOMATIC SIMPLE RENAL CYSTS

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ABSTRACT

Introduction. Percutaneous aspiration sclerotherapy is indicated for the treatment of symptomatic renal cysts. The efficacy of various sclerosing agents have been sources of ongoing debate and disagreement. **Purpose of the study.** The aim of this study was to evaluate the efficacy and safety of the use of aetoxysklerol 3% in the minimally invasive treatment of simple renal cysts. **Material and methods.** Between 2018 and 2021, the results of 43 symptomatic patients with an average age of 55 years, of which 22 men and 21 women, with renal cysts larger than 5 cm, detected on ultrasonography or CT Bosniak I. Under local

anaesthesia, through a percutaneous ultrasound - guided approach with an 18G needle, puncture the collection with aspiration of the liquid, then inject 1.0 ml of aetoxysklerol 3% solution for every 100 ml of aspirated liquid. **Results.** The complete disappearance of the renal cyst varied between 80% - 96% after a follow-up period of 3-36 months, for cysts up to 7.0 cm. The partial reduction of the renal cyst >50% varied between 35% - 55%. Minor complications 2 cases 4.6%: low fever and microhematuria. The success rate of sclerotherapy was inversely proportional to cyst size ($p=0.01$). **Conclusions.** Sclerotherapy with aetoxysklerol 3% is a more reliable, cost-effective minimally invasive method for the treatment of simple renal cysts.

CARDIOPULMONARY OUTCOMES OF PATIENTS WITH PULMONARY HYPERTENSION UNDERGOING LUNG RESECTION FOR LUNG CANCER

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ABSTRACT

Introduction. Lung cancer continues to be a leading cause of cancer deaths globally. Pulmonary hypertension is considered a risk factor for cardiopulmonary complications, including lung cancer surgery. Assessment of pulmonary hypertension (PH) is an essential part of the preoperative evaluation of candidates for major lung resection. **Material and methods.** The study included 129 patients undergoing surgery for lung cancer in the period 2016-2022, ≥ 18 years of age, who had a preoperative echocardiogram performed. Pulmonary hypertension was defined as pulmonary artery pressure of ≥ 36 mmHg measured by means of echocardiography. We compared the preoperative characteristics, intraoperative data and postoperative outcomes of patients with or without echocardiography-based pulmonary hypertension. **Results.** There were 84(65.11%)

patients without PH and 45(34.88%) patients with PH. The mean pulmonary artery pressure in the group of patients with pulmonary hypertension was 43 ± 0.88 mmHg. Postoperative complications were significantly different between patients without and those suffering from pulmonary hypertension (23.8% *vs* 53.33%; $p < 0,001$). Although without statistical significance, the perioperative mortality was higher in the group of pulmonary hypertension patients (5,95% *vs* 8.88%; $p > 0,05$). **Conclusions.** In our first assessment, pulmonary hypertension was associated with a high risk factor of cardiopulmonary complications in perioperative evolution. PH was a predictor of postoperative cardiopulmonary complications in pneumonectomies. Careful patient selection, recognition of perioperative risks and appropriate intraoperative hemodynamic monitoring may improve perioperative cardiopulmonary outcomes.

IS SPONTANEOUS HEMATOMA AN EVOLUTIONARY COMPLICATION IN COVID-19 INFECTION OR AN ANTICOAGULATION TREATMENT DEFICIENCY?

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ABSTRACT

Introduction. The increased incidence of thrombotic complications in patients with COVID-19, has required additional anticoagulant therapy, which has demonstrated effectiveness in reducing mortality. Considered secondary to these therapies, hemorrhagic complications have a major impact on the evolution of these patients. **Purpose.** To evaluate the characteristics of spontaneous hematoma in patients with COVID-19 infection treated with anticoagulants. **Material and methods.** Analysis of the characteristics and type of treatment of patients with spontaneous hematomas in the disease of COVID-19, treated in the surgical service of the hospital "St. Arch. Mich." and I of EM (2020 - 2021). **Results.** 12 patients were included: women (10), men (2) with COVID-19 and spontaneous hematomas: lower limbs - 6, intra-abdominal hematoma -2, preperitoneal hematoma -2, retroperitoneal hematoma - 2. Average age 70.91 ±3.06, all with concomitant pathologies and bilateral lung damage (Brixia 6-13). Treated in ICT - 7, intubated - 5, died - 3. Severe thromboembolic complications presented -3: TEPA -2, iliofemoral thrombosis -1. All received anticoagulants in therapeutic doses:

heparin -8 patients, low mass heparin -4. Duration of administration before complication - 8.37±1.33 days. Before complication procoagulant system indices: prothrombin -116.8±4.7; fibrinogen - 4.74±0.7; d-dimers - 1.38±0.09; TTP 29.63±3.2; - were correlated with the inflammatory syndrome: L - 15.78±2.3; LDH - 446.18±46.4; Protein C - 20.6±3.57; urea- 11.9±1.7, creatinine - 120.2±19.2; and respiratory acidosis: PH - 6.9± 0.4; pO₂ - 47.5 ± 4.16; pCO₂ - 50.2 ± 3.6. The results show indications for the continuation of anticoagulant treatment, but in modified, adjusted doses. Treatment in study: conservative treatment -5 cases, opening, drainage, hemostasis - 7 cases. **Conclusions.** Coagulopathy secondary to endothelial damage, with predominance of hypercoagulation, in critically ill patients infected with COVID-19 is a severe evolutionary complication. The aggravation of the biological disturbances under anticoagulant therapy, by increasing d-dimers and thrombocytopenia, suggests associated DIC syndrome with major evolutionary risk of hemorrhages. The therapeutic attitude requires an individualization, the objectives of the treatment and intervention being adapted to the particularities of the case.

ENDOSCOPIC MANAGEMENT OF URETERAL STONES – EXPERIENCE OF THE UROLOGY DEPARTMENT OF THE EMERGENCY MEDICINE INSTITUTE

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ABSTRACT

Introduction. Endoscopic lithotripsy is first-line therapy for complicated upper urinary tract calculi and for patients who fail primary extracorporeal shock wave lithotripsy. **Purpose of the study.** A retrospective study conducted in urosurgical department in Emergency Medicine Institute from 2020 to 2022 aims to identify the need for use of laser lithotripsy and/or other ureteroscopic equipment in patient undergoing ureteroscopy for ureteric stone management. **Material and methods.** In the study was included 522 patients treated by ureteroscopy. The mean age of the patient was 43,4 years. Ureteroscopy had done in the right side in

273 patients, left side in 249 patients, and bilateral ureteroscopy in 16 patients. **Results.** Ureteric stones found in upper ureter in 118 patients, middle ureteric stone seen in 57 patients, and lower ureteric stone founded in 347 patients, whereas 27 patients had stones at more than one location. Ureteric stone measuring 6 - 18 mm in largest diameter. Average duration of endoscopy was 23 minutes. A 92.7 % stone – free rate was obtained. No major complications occurred. Double J stent had been used in 98 patients and had been removed after 3 to 6 weeks. **Conclusions.** Ureteroscopy requires a good equipment, technical skills and vigilance of the performing urologist.

ACQUIRED MORGAGNI-TYPE DIAPHRAGMATIC HERNIA AFTER LAPAROSCOPIC HIATAL HERNIA REPAIR. A CASE REPORT

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ABSTRACT

Introduction. An uncommon type of diaphragmatic hernia is Morgagni hernia and commonly presents as a congenital disease. Acquired Morgagni hernias following laparoscopic or thoracoscopic surgery are exceedingly rare and are usually reported in the pediatric patients. **Material and methods.** The patient is a 70-year-old female who presented with progressive shortness of breath, cough and pain in front right wall of the thorax two years following a laparoscopic hiatal hernia repair. A chest CT scan showed a large Morgagni-type diaphragmatic hernia with herniated omentum occupying the anterior mediastinum as well as the right hemi-thorax. This hernia was successfully repaired using right transthoracic open approach

with complete resolution of patient's symptoms. **Results.** Morgagni's hernia is a rare occurrence (it constitutes less than 2% of diaphragmatic hernias), coexistence of Morgagni's hernia with hiatus hernia is a rare entity. It does not usually give symptoms, so it is usually diagnosed in adults as an incidental finding. The most frequent content of this type of hernia can be the colon, liver or omentum, the laparoscopic approach allows us to repair diaphragmatic defects, although thoracoscopic approach is also feasible as present in our report. If primary repair cannot be achieved, then synthetic mesh may be needed to obtain a tension free and durable repair. **Conclusions.** We presented a case of successful open repair of acquired Morgagni type diaphragmatic hernia in an adult following laparoscopic hiatal hernia repair.

MEDICAL-SURGICAL EMERGENCIES IN THE RED ZONE OF EMERGENCY MEDICINE DEPARTMENT, OF THE INSTITUTE OF EMERGENCY MEDICINE, REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Triage is the transparent way of prioritizing patients' access to care, and in the red zone, patients who require immediate intervention are sorted. **Material and methods.** To evaluate medical-surgical emergencies in the red zone in the DMU, 405 medical records of patients who were served in the year 2022 were analyzed. **Results.** Of the total subjects, 69.3% were men and 30.7% were women. Depending on age, the patients were divided into categories, 18-30 years - 9.1%; 31-50 years-35%; 51-70 years-34.8% and over 71 years-21.1%. The cause of the patient's serious condition was conditioned by road accidents in 21.9% of cases, altered state of consciousness-19.9%; catatrauma-8.8%, suicide attempts-1.9%, electrocution-0.4%, animal

aggression-0.4%. The assignment of cases to IMU disorders was: neurological profile-22.2%; neurosurgical-38.7%; traumatic-11.1%; surgical-20.7%, therapeutic- 7.3%. The seasonal incidence was 15.5% in winter, 19.2% in spring, 24.9% in summer and 40.4% in autumn. 92.5% of patients required hospitalization, 5.4% died in the DMU, and 2.1% were stabilized and transferred to other medical institutions. **Conclusions.** According to the demographic criteria in 2022, 69.3% male patients were served in the red zone, 30-50 years old predominated. 21.9% were brought after road accidents, being poly-traumatized, the neurosurgical profile predominating in 38.7%. In terms of seasonality, the demand for the red zone prevailed in autumn in 40.4% of cases. Patients treated in the red zone in 92.5% of cases were admitted to IMU, and deaths accounted for 5.4%.

INNOVATIVE APPROACHES IN WOUND HEALING

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ABSTRACT

Wound care management therapy represents a major health care problem in the entire world and biomedical research is constantly seeking for new options with respect to promoting the healing process and to reduce the therapy cost. Besides, there are local factors at the wound site that are involved in healing and which consist of moisture, ischemia and/or necrosis of the tissue and existing edema. Many factors including age of the patient, smoking, malnutrition, obesity and chronic diseases, such as diabetes, can delay wound healing and increase the risk of developing chronic wounds. Wound healing still remains problematic and nanotechnology seems to offer the best approach to hasten the healing of acute and chronic wounds. Even though several types of wound dressing materials have already been developed, proper wound healing

is far from being easily solved. Electrospun nanofibers (NFs), as novel wound dressings, show two key properties: a high surface/volume ratio and high porosity, properties that are responsible to promote cellular adhesion, proliferation, and differentiation. The design of the NFs offers a wide range of prospects in respect to polymer and active components (ACs) selection. The blends of natural and synthetic polymers are suitable to overcome the low spinnability of the natural polymers. Chitosan/hyaluronic acid-based nanofibers (CS/HA-NFs) have already been described as artificial extracellular matrices (ECMs) due to the resemblance of CS/HA to the glycosaminoglycans of the natural ECMs. CS accelerates the wound healing and the tissue restoration while HA is a non-sulphated glycosaminoglycan, component of the extra cellular matrix.

THE APPROACH OF HEMORRHAGE OF THE SUPERIOR DIGESTIVE TRACT IN EMERGENCY MEDICINE DEPARTMENT (2021-2022)

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ABSTRACT

Objectives. To identify the hemostatic techniques used in the approach of hemorrhage of the superior digestive tract in the emergency department (ED) of the Institute of Emergency Medicine (IEM). **Material and Methods.** This review was based on the study of 31 patients during the period of (2021-2022), that suffered from superior digestive tract hemorrhage, from which applied hemostatic solution, that differs between Thrombin 500 international units or Alcohol 2ml 70%. **Results.** Patients that were suffering from superior digestive tract hemorrhage, during their endoscopic investigation and verification, were administrate

initially Thrombin 500 UI dissolved in 10 ml of NaCl 0.9%. In 10% from total cases the procedures were done up to 4 times, with the maximum dosage of 2000 UI of Thrombin. In around 32,2% from total patients, needed more that thrombin after the maximum dosage and were also administrate with Sol. Alcohol 70% with the concentration of 2ml with 8ml of NaCl 0.9%. up to 2 rounds. The method is done by an endoscopiest. All 31 patients were provided successfully endoscopic hemostatic treatment. **Conclusion.** The applying of the correct hemostatic solution in time of investigating Endoscopic-ally is one of the most important approach of superior digestive tract hemorrhage.

MANAGEMENT OF CONCUSSION IN THE EMERGENCY DEPARTMENT OF THE INSTITUTE OF EMERGENCY MEDICINE, PERIOD 01.10.2022-01.04.2023

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ABSTRACT

Introduction. Concussion is a type of traumatic brain injury that occurs when the brain experiences a sudden jolt or blow to the head. **Material and methods.** Between 01/10/2022 - 01/04/2023 in the emergency department of the Institute of Emergency Medicine, qualified help was provided to 492 patients with a single diagnosis of concussion. At the same time, this diagnosis was identified in other 2538 patients who also had other diseases associated with brain concussion. **Results.** Distribution of patients according to sex, men represented 80% and women 20%. In relation to the age of the patients served, those under 45 represented 70%. In relation to the

general condition of the patients, 91 subjects were in serious condition and required treatment in the red zone. Patients suffering from headaches, dizziness, confusion, memory loss and sensitivity to light or noise, behavioral changes, were urgently investigated by brain CT to confirm that there was no brain damage. The consultation of the neurosurgeon was carried out, which had an impact both in the assessment of the diagnosis and in the treatment approach. **Conclusion.** The approach to the patient with craniocerebral trauma in the diagnosis of concussion is essential in the Emergency Department, having an impact of vital importance in order to confirm or deny the presence of craniocerebral injuries and to assess the tactics of conservative or surgical treatment.

THE EFFECTIVENESS OF REMOTE ISCHEMIC PRECONDITIONING IN PATIENT WITH INTRACRANIAL ATHEROSCLEROTIC DISEASE

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ABSTRACT

Introduction. Stroke remains to be the leading cause of mortality and disability among the cardiovascular disease. Different studies have proved that remote ischemic preconditioning (RIP) has favorable and protective effects. **Objectives.** The main goal of the research was to prevent stroke in patients with symptomatic intracranial atherosclerotic arterial stenosis (sICAS). **Material and methods.** The study involved 20 patients with sICAS. According NASCET criteria 3 patients (15%) were with mild stenosis, 10 patients (50%) with moderate, 7 patients (35%) with severe stenosis/occlusion. The average age was $72,9 \pm 8,1$, 15 male (75%), 5 females (5%). The study group underwent remote ischemic preconditioning with medical treatment according

to guidelines and then were followed for two years. **Results.** During two years 9 patients (45%) developed stroke. The severity of stroke evaluated according National Institutes of Health Stroke Scale (NIHSS) and were obtained the following results: mild stroke - 7 patients (77,8%), mild to moderately severe - 1 patient (11,1%) and severe stroke - 1 patient (11,1%). To measure performance in activities of daily living, patients with stroke, underwent the Barthel Scale/Index (BI): 5 patients (55,5%) were independent, 2 patients slight dependency (22,2%), 2 patients severe dependency (22,2%). **Conclusion.** According our study patients with sICAS that underwent RIP combined with therapeutic management, based on guidelines, prevent development of severe stroke in 88,9 % of cases and in 100% of cases the death.

EVALUATION OF THE PHARMACOTHERAPEUTIC APPROACHES FOR TREATMENT OF ARTERIAL HYPERTENSION BY MEASURING THE DRUG UTILIZATION

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ABSTRACT

Introduction. Drug utilization researches were defined by WHO in 1977 as marketing, distribution, prescription, and use of drugs in a society, with special emphasis on the resulting medical, social and economic consequences. Drug utilization, as part of pharmacoepidemiology, is intended to supplement the rational drug use. Measuring of the drug utilization indexes, at macro level, is an important component of the national drug policy, especially in the construction of adequate approaches for prevention, diagnosis and treatment of socially significant diseases, such as arterial hypertension (AH). **Aim.** To analyze the pharmacotherapeutic strategies which are applied to patients with AH by using quantitative and qualitative parameters at national level. **Material and methods.** Design: retrospective study of publicly accessible data from registries of National health insurance fund for the period January 2017-December 2021. The analyses

are in accordance with ATC/DDD methodology of WHO. The data was processed via descriptive statistical methods. **Results.** The analyzed population includes average 129 312 patients with essential arterial hypertension-11.09% of all hypertensive patients. The average expenses for one year are 8 229 567.10 BGN-which sum is divided into two groups-expenses for monoproducts 67.73% and for combined products-32.27%. Blockbusters INNs are Nebivolol, Lercanidipine and Moxonidine. **Conclusions.** The indicators of drug utilization shows that in Bulgaria for first-line treatment of AH are chosen beta-blockers Nebivolol and Bisoprolol, followed by Calcium antagonist Lercanidipine, and centrally acting antiadrenergic agents Moxonidine and Rilmenidine. In all section analyses, the considerable use of Lercanidipine is evident. These obtained results are inconsistent with the recommendations of European Society of Hypertension.

EVOLUTIVE HEART DAMAGE IN HYPERTENSIVE PATIENTS

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ABSTRACT

Introduction. The heart is one of the target organs in which uncontrolled arterial hypertension (HTN) causes major damage. Left ventricular hypertrophy (LVH) is the adaptation of the heart to HTN and is an important risk factor for multiple heart diseases. **Material and Methods.** It were studied the medical charts of 101 patients diagnosed with HTN, investigated according to the National Clinical Protocol that were admitted at the Institute of Cardiology. The following aspects were analyzed: signs of LVH, the presence of atrial fibrillation (AF) and diastolic heart function, using ECG and echocardiogram as investigative methods. **Results.** Of the examined patients, 47.5% were male and 52.5% - female; mean age was 68.4±9.8 years. The distribution of patients

according to the HTN gradation was: grade 3 – 67.3%, grade 2 – 28.7%, grade 1 – 4% of cases. A very high additional cardiovascular risk was in 97% and high risk – in 3% of cases. AF in anamnesis was present in 37 patients (36.6%). A number of 28 patients (27.7%) presented with the signs of LVH on the ECG. Echocardiogram established an increased thickness of interventricular septum and posterior wall of the left ventricle in 56 patients (55.4%), the diastolic dysfunction was recorded in 43 patients (42.6%) and its severity was associated with the HTN evolutive grades. **Conclusion.** The study showed that there is a relationship between HTN and heart damage, which highlights the importance of early detection of changes in the heart, such as LVH, AF and diastolic dysfunction, in order to prevent irreversible consequences.

EVALUATION OF LEFT VENTRICULAR FUNCTION IN PATIENTS WITH NON-HODGKIN'S LYMPHOMA UNDERGOING CHEMOTHERAPY

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ABSTRACT

Introduction. Non-Hodgkin's lymphoma is the most common hematologic malignancy with an increased risk for cardiovascular complications due to the applied treatment. Echocardiographic evaluation could lead to early detection of cardiotoxicity. **Materials and methods.** A sample of 83 consecutive patients who underwent chemotherapy (CTx), excluding those who received chemo- or radiotherapeutic treatment, with known coronary/myocardial diseases, moderate or severe valvulopathies. Echocardiography was performed at baseline, and at 6-month follow-up. Cancer therapy-related cardiac dysfunction (CTRCD) was defined as new left ventricular ejection fraction (LVEF) reduction by ≥ 10 percentage points to an LVEF of 40–49%. **Results.** LVEF decreased from 63.2 ± 4.5 % to 57.5 ± 4.7 % during follow

up ($p < 0.001$), also significantly increased the left ventricular end-diastolic diameter from 47.2 ± 5.2 mm to 54.3 ± 5.3 mm ($p < 0.001$), other parameters as the left-ventricular myocardial performance index and systolic velocity of mitral septal annulus did not achieve statistically significant differences ($p = 0.560$ and $p = 0.430$ respectively). E/e' was 10.3 ± 4.3 increased to 11.4 ± 5.6 ($p=0.233$), left atrial volume index increased from 29.4 ± 5.6 ml/m² to 36.2 ± 4.3 ml/m² ($p < 0.001$), the ratio of color M-mode flow propagation velocity to early diastolic trans – mitral flow velocity (E/V_p) increased at 6-month follow-up compared with baseline (1.6 ± 0.3 and 1.3 ± 0.4 , $p < 0.001$, respectively). CTRCD was assessed in 9 patients (9.63%). **Conclusion.** CTx has an impact on left ventricular function and the parameters above could be used for predicting CTRCD.

KNOWLEDGE AND SELF-CARE PRACTICES IN PATIENTS WITH ESSENTIAL HYPERTENSION

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ABSTRACT

Introduction. Essential hypertension, is a significant public health issue and is a main indicator of the consequences of cardiovascular disease. **Aim.** The purpose of this study was to determine the significance of knowledge and self-care practices among hypertensive patients. **Material and Methods.** PubMed and Google Scholar databases were reviewed in order to search for material. "Self-care" and "essential hypertension" were used as the keywords. From the 60 articles found, 20 were revised after applying the inclusion and exclusion criteria. **Results.** According to the majority of the authors (11 articles) patients with hypertension do not adhere well to educational activities without monitoring their healthcare provider. Out of the 11 articles, 8 suggested that

the key to achieving controlled blood pressure and avoiding complications is detailed education regarding lifestyle modification and pharmaceutical regimes. Weight loss management, physical activity, restricting alcohol/smoking/tobacco, and a low-sodium diet are the basic self-care practices recommended for maintaining normal blood pressure levels. More awareness among the patients and regular home monitoring of blood pressure is recommended for implementation. Effective communication between the physician and patient is essential for ensuring successful treatment. **Conclusion.** Patients with arterial hypertension show reduced adherence to disease monitoring activities, but this can be improved by better education of the patients and strict monitoring of their self-care practices and treatment by their physician.

TELEMEDICINE - CHALLENGES AND PERSPECTIVES FOR DIAGNOSIS OF ACUTE CARDIOVASCULAR EVENTS

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ABSTRACT

Telemedicine is the field which delivers interactive health services at distance by using modern equipment and telecommunications, aiming to improve patient's state of health. Telemedicine includes all areas of medical care and was determined as being economically effective and accessible for healthcare systems in densely populated geographical areas and for critical conditions. Distance consultations improve communication between medical centers and increasing patients' access to information about health. Cardiac disease is one of the leading causes of death worldwide with 1 in 3 deaths being attributed to acute coronary syndrome (ACS). It was determined that PCI (percutaneous coronary intervention) improves outcome in patients with ACS, door-to-balloon time recommended for performance being less than 90 minutes. The delay in diagnosis, conditioned by late addressability, atypical clinical presentations and difficult differential diagnosis increases time for door-to-balloon. Telecardiology is a modern practice that uses telecommunications for diagnosis and treatment of cardiac pathology at distance, accelerating speed diagnosis and settling smaller area sizes of myocardial necrosis and better clinical outcomes for patients with ACS and other acute cardiovascular events. "The center for prehospital diagnosis and triage of acute myocardial infarction" in Republic of Moldova ensures the reception and decoding of the electrocardiographic routes that are transmitted at a distance and provides advisory assistance for Emergency Medical Assistance (EMA) teams,

Emergency medicine departments (EMD) and specialized Emergency Reception Units (ERU), providing telemedical assistance. Telecardiological center facilitates time management and offers therapeutic guidance, optimizing treatment through national and international guidelines, in this way reduces number of missed diagnoses and hospitalizations, which results in lower health costs. Considering all the benefits that brings telemedical technologies, there are still multiple challenges that have to be studied and overcome. Facilitation of implementation for technical programs at the national level and solving technical compatibility problems with standardization being one of the priorities. Also dissemination of experience about practices in the field and development of e-health and telemedicine policies with strengthening the legislative, normative and ethical base in the branch of health information use, along with acceptance of telemedical services by healthcare providers and patients are other provocations. In perspectives, implementation of telemedical consultation services in emergency medical assistance at the national level is one of the primary aims in healthcare system in Republic of Moldova. The other, not least important goal are creation of remote monitoring and consultation services for patients with acute coronary syndrome and other cardiac acute events, introduction of modern methods of distance education, with the use of videoconferencing technologies in professional training of medical personnel and creation of telemedical service for exceptional situations and disaster medicine along with the elaboration of standards and norms of service ethics for telemedicine.

CHRONIC CORONARY SYNDROME: NEWS AND MYTHS

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ABSTRACT

The European Society of Cardiology Guidelines on the diagnosis and management of chronic coronary syndromes (2019) emphasize the crucial role of healthy lifestyle behaviours and other preventive actions in decreasing the risk of subsequent cardiovascular events and mortality. In asymptomatic subjects over 40 yo, without evidence of cardiovascular disease, diabetes, chronic kidney disease or familial hypercholesterolemia, the screening for coronary artery disease should start by calculation of the SCORE risk. The guidelines have been revised to focus on chronic coronary syndrome instead of coronary artery disease. This change emphasizes the fact that the clinical presentations of coronary artery disease can be categorized as

either acute coronary syndrome or chronic coronary syndrome. Coronary artery disease is a dynamic process of atherosclerotic plaque accumulation and functional alterations of coronary circulation that can be modified by lifestyle, pharmacological treatment, and revascularization, which result in disease stabilization or regression. Patients with coronary artery disease may experience acute events or suffer from disease progression during their lifetime. For recently diagnosed chronic coronary syndrome patients, more frequent assessment and risk evaluation is required. Regarding the treatment, it evolved from a standard "first-second line" approach to a "stepwise, patient-tailored" approach. The "Diamond" approach takes comorbidities and pathophysiology as the key determining factors for the choices of anti-anginal drugs.

CHRONIC HEART FAILURE AND ATRIAL FIBRILLATION

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ABSTRACT

Chronic heart failure is a syndrome with high prevalence, associated with an important risk of morbidity and mortality. The prevalence of heart failure in the general population is 1-2% and increases with age. Atrial fibrillation is the most frequent sustained cardiac arrhythmia encountered in the clinical practice, with a prevalence of 2-4% in the general population. Heart failure and atrial fibrillation frequently coexist. The management of patients with these comorbidities should

include identification and treatment of precipitant factors for atrial fibrillation (hyperthyroidism, uncontrolled arterial hypertension, infections, electrolytic disorders etc), treatment of heart failure, prevention of thromboembolic events, control of heart rate and rhythm. The heart failure treatment is done according to the type of heart failure: with reduced or preserved ejection fraction. Screening and treatment of cardiovascular and noncardiovascular comorbidities is recommended in all patients with heart failure.

ETHICAL AND EQUITY ASPECTS IN THE ADVANCING OF THE MEDICINE – VASCULAR SURGERY

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ABSTRACT

Progress in medicine is represented, on one side, by advancing in continuity, constancy and stability, while respecting the property, based on achievements from the past and on the experience gained by our predecessors, and, on another side, by the development in education, science, technique, technology, administration and in other numerous connected aspects and is influenced by individual and social environment determined by our human nature. The transplantation of a leg from one human to another, with which Saints Cosma and Damian from Cilicia, Asia Minor are credited in the fourth century, represents a metaphoric or a metaphysical performance and is still one goal for the Vascular surgery in our time, in which the

human cosmic voyage is a physical reality. The almost simultaneous realization of the organ transplantation and of the first step of a man on the surface of the Moon, in the context of numerous life concerns rising apparently unsolvable problems, includes ethical and equity aspects in the advancing of the medicine, in general, and in Vascular surgery, in particular, and not only. It is obvious that the implicated names and their facts from different periods of time are simultaneously present in our mind and in our action and it is unfair to make comparisons, all we have to do is to put the correct diagnosis and to apply the adequate treatment in order to obtain the best possible result and to take into consideration and to respect ethical and equity aspects.

KNOWLEDGE AND SELF-CARE PRACTICES IN TYPE 2 DIABETES MELLITUS PATIENTS

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ABSTRACT

Introduction. Diabetes mellitus is a metabolic disorder, which frequently leads to important multiple complications and significantly reduce patient's quality of life. **Aim.** Our objective was to review the data about the influence of knowledge and self-care practices on patients with Type 2 Diabetes Mellitus. **Material and methods.** We have done a literature review of articles PubMed database limited by 2018-2023, using the keywords such as "Knowledge", "Self-care", "Type 2 Diabetes Mellitus" and "Education in Type 2 Diabetes". A total of 25 articles were reviewed. **Results.** The significant number of authors claimed that knowledge about Diabetes improved glycemic control and late arisal of

complications. Researchers proved that educated patients have shown greater adherence to medicine. Knowledge about the disease and its complications is motivating patients to be engaged in self-care practices. However, educating the patients on specific self-care practices, constant follow-up and frequent motivation by physicians is necessary for good results. Peer education among patients provides satisfactory outcomes but individual approach is more preferred. The patient must adopt a new attitude and put forth persistent effort. **Conclusion.** Knowledge and self-care practices implementations are strongly recommended for the patients with Diabetes mellitus for better outcomes, but the close monitoring by the doctor is necessary.

PREDICTION OF ATRIAL FIBRILLATION RECURRENCE IN PATIENTS WITH PAROXYSMAL ATRIAL FIBRILLATION

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ABSTRACT

Introduction. The prevalence of atrial fibrillation (AF) is ongoing increasing worldwide. Regarding the potential complications of AF and the high recurrence rate after manipulations for restabilizing sinus rhythm, the importance of searching relevant predictors for AF recurrence is evident. The aim of this study was to evaluate two new parameters for cardiorythmogram analysis, which were found in preliminary study, as predictors for AF recurrence. **Material and Methods.** This is an observational cohort study. 68 patients with paroxysmal atrial fibrillation treated by pulmonary vein isolation or electrical cardioversion were included. The parameters were analysed in the cardiorythmograms, obtained from steady-state 5-minute ECG recording. The new parameters were quantified regarding their predictive value

in a 12-month follow-up. **Results.** The post-test probability of the parameter High-Frequency Counterregulation (HF-Counterregulation) shows a specificity of 90% (CI 0.75-0.97) and a sensitivity of 100% (CI 0.83-1), its negative predictive value is 100% (NPV) with (CI 0.88-1) and the positive predictive value is 86% (PPV) with (CI 0.67-0.95). The parameter Low-Frequency-Drops (LFDrops) shows a specificity of 51% (CI 0.35-0.68) and a sensitivity of 94% with (CI 0.75-0.99), its NPV is 94% with (CI 0.73-0.99) and its PPV is 55% with (CI 0.38-0.70). **Conclusion.** HF-Counterregulation is a sensitive predictor for AF recurrence, which predicts significantly ($p < 0,0001$) the recurrence of paroxysmal AF. LF-Drops is applicable for screening of AF recurrence risk ($p < 0,001$), but is not relevant for predicting the timing of onset of the AF-recurrence.

THE IMPACT OF ESSENTIAL HYPERTENSION ON THE QUALITY OF LIFE OF THE PATIENTS

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ABSTRACT

Introduction. Essential hypertension is a chronic medical condition often associated with various co-morbidities and complications, which increases the risk for cerebral, cardiac, retinal and renal events. **Aim.** The aim of this study was to evaluate the impact of essential hypertension on patient's quality of life. **Material and methods.** The study is based on selected articles from Pub Med and Google scholar database from 2018 to 2023. "Quality of life" and "hypertension" were the keywords used. From 40 articles revised 28 were used for review. **Results.** The majority of articles revealed that hypertensive patients have lower quality of life in both the physical and mental domains comparative with healthy individuals. Symptoms and the longer duration of the disease,

co-morbidities, complications, absence of the social or family support are the factors negatively associated with Health Related Quality Of Life (HRQOL) of a patient. Pharmacotherapy has significant effect on improving patient's condition and quality of life. The most important domains of quality of life affected are pain/discomfort, regular activities and anxiety/depression. Some data also suggest that hypertensive patients was negatively affected by insomnia, sexual and cognitive dysfunction. **Conclusion.** The quality of life in patients with essential hypertension can be considerably impacted by numerous factors affecting mostly physical and social components. Regular treatment which improves the symptoms is associated with increasing quality of life as far as non-pharmacological recommendations.

TREATMENT OF PARTIAL EDENTULISM USING MODERN ACRYLATES

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ABSTRACT

Introduction. The treatment of partial edentulism with modern acrylates is defined as a prosthetic treatment strategy that aims to restore the functions of the stomatognathic system, by using acrylates which are: monomers-free, hypoallergenic, biocompatible, hydrophobic, aesthetic and durable. Usually these are injectable acrylates such as: Valplast, BioDentaplast, Flexite, Thermoflex. **Aim.** Evaluation of methods of prosthetic treatment of partial edentation using modern acrylates and learning the particularities of use and their advantages compared to conventional acrylates. **Material and methods.** In this study we analyzed the properties, advantages and drawbacks of several types of acrylates and emphasized on their

clinical application and long-term results. It was designed a randomized clinical trial comparing 2 types of acrylates: Valplast which is good for distributing forces naturally within the tissues of the oral cavity and BioDentaplast which poses a very high level of biocompatibility, being very well tolerated by tissues and high durability, does not absorb food residues, and does not change its chemical structure. **Results.** The follow ups were conducted at 1, 3 and 6 months after the treatment. The parameters analyzed were as follows: patient's comfort, dynamics of the aesthetic aspect after treatment, prosthesis stability and its practical use. **Conclusions.** Due to the good handling properties and excellent clinical results modern acrylates are recommended to be more often used in partial dentition therapy.

RESTORATION OF DENTAL LESIONS CROWNS BY THE INLAY SUBSTITUTION METHOD

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ABSTRACT

Introduction. To this end, replacement crowns, come with the solution to the given problem, they replace the morphofunctional capacity, restore the masticatory, aesthetic, and physiognomic function. For comparison, preparing a molar for a crown involves a loss of approximately 60-70% of coronal volume, compared to 5.5-27% for an inlay/onlay. **Aim of the research.** To evaluate the particularities of coronary dental lesions in order to optimize and plan the individualized treatment plan by substitution methods using microprostheses. **Material and methods.** In this study, we analyzed the properties, advantages and disadvantages of hybrid composite material types, and E-max, we

conducted the study on their tensile strength, modulus of elasticity and flexural strength capacities. **Results.** According to the literature reviewed and comparisons made: following treatment with onlays, they have increased strength over time, depending on the size of the tooth damage, taking into account several risk factors that could fracture the remaining walls, we choose the effective method of treatment, if a large part of the tooth is affected, <1.5 mm then we choose the method of coverage and cusps. In this case the tooth is strengthened due to the inlay, which reduces the risk of cracks and fracture. **Conclusions.** Due to its properties of increased strength and protection against tooth fracture and deflection, inlays are recommended in the restoration of DLC (dental lesions crowns).

PROSTHETIC TREATMENT OF PATIENTS WITH PARTIAL EDENTULISM IN THE FRONTAL AREA

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ABSTRACT

Introduction. Partial edentulism represents a dental arch in which one or more but not all natural teeth are missing. A dental bridge is a fixed dental prosthesis used to replace one or more missing teeth. Zirconia ceramic crowns represent a modern type of dental crowns that are widely used in prosthetic treatments, showing better clinical results than other types of artificial crowns and especially porcelain fused to metal (PFM) ones. **Aim of the study.** Analysis of the particularities of treatment methods for partial edentulism in the frontal area. **Material and methods.** In this study we analyzed the properties, advantages and drawbacks of several types of materials used for artificial crowns, as well

as multiple treatment options and emphasized on their clinical application. Our study can be classed as a randomized clinical trial that compares 2 main types of artificial crowns: metal ceramic crowns and zirconia ceramic crowns. **Results.** The follow-up were conducted at 1 and 3 months after treatment. The parameters analyzed were as follows: patient's pain perception, status of interdental papilla, structural integrity of prosthetic construction. **Conclusions.** Due to the excellent esthetic properties, high durability and biocompatibility, zirconia ceramic crowns are recommended to be more often used in the treatment of partial edentulousness, especially when it comes to the frontal area.

ORTHODONTIC TREATMENT WITH CLEAR ALIGNERS FOR PATIENTS WITH ANGLE CLASS I MALOCCLUSION

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ABSTRACT

Introduction. More and more patients with malocclusions are looking for alternatives to treatment with fixed orthodontic appliances. Clear aligners have proven to be the most comfortable option for orthodontic treatment for patients who prefer aesthetics orthodontic appliances. They are effective in the treatment of mild to moderate dental crowding; diastemas; posterior expansion; intrusion of one or two; in the case of extracted lower incisors and distal tipping of molars. **Material and methods of research.** 15 patients (9 women and 6 men); aged between 16 and 40 years old, who underwent orthodontic treatment with aligners. The patients were subjected to clinical and

paraclinical examination: analysis of study models, photographic examination, panoramic radiography, telerradiography. **Results.** The statistical analysis showed that the highest incidence of patients who opted for orthodontic treatment with aligners is the age range of 24-32 years old. Out of the total number of patients who underwent orthodontic treatment with aligners, 9 women (60%) suffered from dental crowding before the treatment and 6 men (40%), and in the case of dental spacing, it has been shown that men (67%) have a higher share compared to women (33%). **Conclusion.** The early and correct treatment of all clinical forms of class I malocclusion is important in solving aesthetic disorders, but most importantly in the functional rehabilitation of the stomatognathic system.

MAKING THE ZIRCONIUM OXIDE CROWN BY THE MODERN METHOD USING THE TECHNIQUE CAD-CAM

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ABSTRACT

Introduction. Zirconium oxide is one of the most promising restorative biomaterials, because it has favorable mechanical and chemical properties suitable for medical application. **The purpose of the work.** The study of specialized literature and the particularities of dental prosthetic construction from zirconium oxide. **Material and methods.** In this study, we performed the effectiveness of prosthetic treatment with zirconium oxide coating crown with various occlusions such as: orthognathic, head-to-head, deep occlusion. The patients were examined clinically-instrumentally, radiologically and the models in the articulator were studied. Parallel to the clinical examination, the paraclinical examination was also carried

out: retro-alveolar radiography, analysis of study models. **Results.** After the determination of the studies, what is related to the LOC and the prosthetic treatment with a crown of zirconium oxide coating, which allows the morpho-functional as well as aesthetic rehabilitation of the tooth. The dental crown requires the grinding of the tooth, which consists in the removal of some dental tissue content, both for layered zirconium oxide crowns and for full zirconium oxide crowns. **Conclusions.** The study of specialized literature demonstrates a high development of the prosthetic treatment with zirconium oxide crowns, which presents a modern method that offers excellent precision, also the prosthetic treatment with zirconium oxide crowns, presents a benefit, for coronary restoration of patients both aesthetically and functionally.

PECULARITIES OF PROSTHETIC TREATMENT IN SINGLE MISSING ANTERIOR TOOTH USE IMPLANT-SUPPORTED DENTAL CROWN

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ABSTRACT

Introduction. Clinicians today face many challenges when confronted with the task of replacing a single missing tooth in the dental arch, such as how to restore the function of the missing tooth structure while simultaneously working in harmony with the adjacent natural structures, by reviewing both the classical and modern method of single tooth replacement. **Purpose.** The purpose of this study is to provide a comprehensive outline and understanding of peculiarities of single tooth replacement in the anterior region use an implant-supported prosthesis. **Material and Methods.** In this study six patients with a single anterior missing tooth were selected for replacement treatment with an implant-supported metal-ceramic dental crown.

Specific treatment parameters were used to capture the emergent profile of the soft tissue during the manufacturing stage and retain the crown properly during the fixation stage. **Results.** All three patients received cement-retained implant-supported metal-ceramic crowns to replacement a missing anterior tooth. During their post-operative appointment, the esthetics, emergent profile, function and overall patient satisfaction was evaluated. All patients communicated satisfactory results with their new prosthesis. No patients reported any problems or complications. **Conclusions.** Treatment of a single missing tooth using an implant-supported prosthesis requires careful planning and clinical experience but if done correctly, the overall result and prognosis can be an excellent one.

RETENTION IN ORTHODONTICS. CLINICAL ASPECTS AND METHODS OF IMPLEMENTATION

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ABSTRACT

Introduction. Retention is necessary for three major reasons: 1) periodontal and gingival tissues are influenced by orthodontic tooth movement and require time for reorganization when the orthodontic appliance is removed; 2) teeth may be in an inherently unstable position after the treatment, so that soft tissue pressure constantly produce a relapse tendency; 3) changes produced by growth may alter the orthodontic treatment result. **Material and methods.** 12 patients, who were in a period of fixed and mixed contention. Of which fixed contention was applied to 7 patients and mixed contention to 5 patients. The patients were subjected to clinical and paraclinical examination. The patients were subjected to clinical and

paraclinical examination: analysis of study models, photographic examination, panoramic radiography, teleradiography. **Results.** Out of 7 patients who had fixed retention, relapse was observed in 3 patients with detached retainers. Out of 5 patients who had mixed contention, relapse was only detected in one patient because he did not wear the Hawley device, the retainer was detached or the patient did not go to the doctor in time. Other patients are under observation, stable and without changes. **Conclusion.** In the study we found, how much influence the application of a correct diagnosis and treatment. An advantage of retainers is attributed to the correction of minor dental deviations, thus these devices have the possibility to combine both: prophylactic and curative methods.

IMMEDIATE LOADING OF DENTAL IMPLANTS AND ADVANTAGES OF TEMPORARY RESTORATION

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ABSTRACT

Introduction. Implant - supported restorations for partially edentulous patients are a well-accepted and predictable treatment modality. Provisional restorations may be used at the time of implant placement or after an appropriate healing period. **Aim of the research.** Analysing the features of the implant-prosthetic treatment with immediate temporary crowns loading for restoring the integrity of the dental arches. **Material and methods.** Patients referred to the department of dental propaedeutics „Pavel Godoroja” for anterior implant treatment were considered. From the years 2020-2023, 20 consecutive patients (10 females and 10 males) ranging in age from 18 to 60 years presented for the placement of 38 implants

intended to support acrylic teeth after change with metal-fused ceramic restorations. All patients were in good health, with no chronic systemic disease or smoking habits, and gave their informed consent for immediate implant loading. All implants (Alpha-Bio) were placed into healed sites and a healing abutment was connected. **Results.** The immediate loading of dental implant in maxillary esthetic zone is a viable clinical concept and lead to favorable treatment outcomes. Besides the beneficial effects of immediate loading of dental implants might induce osteogenesis and good stability of the implant. **Conclusion.** Provisional restorations used to evaluate aesthetic, phonetic and occlusal function prior to delivery of the final implant restorations, while preserving the condition of the peri-implant and gingival tissues.

ASSESSMENT INDICES IN THE DIAGNOSIS OF TRANSVERSAL MALOCCLUSION OF FUNCTIONAL ORIGIN

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ABSTRACT

Introduction. Transverse malocclusion is the most common change that involves the maxilla. The transverse changes need to be assessed as early as possible, as the early diagnosis of transverse malocclusion influences the effectiveness of treatment. To diagnose orthodontic problems, which through prevention or treatment would help patients in the development of the dentomaxillary apparatus. The aim of the treatment is to improve the aesthetics of the smile and to enhance skeletal and dental stability. We conducted a literature search using a logical combination of the terms "transverse malocclusion", "diagnosis", "transverse changes" and "management". **Material and methods.** This article puts a literature review on the topic, examining the management and diagnosis of transverse malocclusion. The databases of Embase[®] and PubMed[®] were used in the search. Transverse malocclusion can lead to: temporomandibular dysfunction, unattractive facial features, masticatory limitations, poor quality of life due to impaired oral health. So, early and accurate diagnosis and treatment are very important for stability. Such need continues to motivate further development and evolution of maxillary transverse diagnostic tools. For the identification of the transverse malocclusion has been successful using clinical evaluations, model analysis, radiographic measurement, and occlusograms. For

clinical evaluation, the occlusion, the palatal vault shape, form and symmetry of the maxillary arch, predominant breathing mode, and buccal corridor width when smiling were all included in assessment. Soft tissue changes associated with transverse malocclusion are minimal, which may complicate the diagnosis. Thus, severe crowding, rotation, or buccal/palatal displacement of the teeth, crossbite (uni- or bilateral), high palatal vault is considered among the main manifestations. Patients with transverse malocclusion should be evaluated for the possibility of mouth breathing, and must be referred to the appropriate specialty as indicated. These are visual indicators that allow a clinician to make a first determination regarding transverse deficiency. **Results.** Management modalities can be different and it's depending on the growth stage of the patient. Proper treatment strategy must consider the type and magnitude of transverse deficiency, patient's growth status, dentofacial esthetics, stability factors, and periodontal tissue health. **Conclusions.** In order to prevent transverse malocclusion and their consequences, the specialist will recommend a well-defined diagnostic and therapeutical algorithm. Transverse malocclusion is more challenging to assess than vertical or sagittal discrepancies. Appropriate diagnosis and treatment planning is crucial in the treatment of transversal malocclusion. Such need continues to motivate further development and evolution of diagnostic tools.

HOW FIX SHOULD BE FIXED

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ABSTRACT

The current trends in extensive oral rehabilitation involve the achievement of screw-retained implant-supported restorations. Marketing and efforts to meet patient demands have led to a single type and method of rehabilitating maxillary or mandibular edentulous patients to become predominant

and become a kind of "universal panacea" in the treatment of this type of complete edentulism. The conference aims to discuss the fundamental principles directly involved in therapeutic decision algorithms regarding the approach to this subject and to draw guidelines regarding the appropriate therapeutic decision that provides predictability for this type of implant-supported restorations.

PREDICTIONS AND DIGITALLY MADE ORTHODONTIC DEVICES IN DENTAL HYPODONTIA

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ABSTRACT

Introduction. Hypodontia involves an anomaly with the lack of a small number of teeth on the dental arch. Hypodontia is classified as primary involving the lack of a tooth bud and secondary with the premature loss of teeth as a result of caries and its complications, trauma, tumors, having an impact on the development of the dento – maxillary apparatus through the lack of functional stimulus and causing severe consequences, thus being considered a major cause in the occurrence of dento – maxillary anomalies. **Material and methods.** In our study, the orthodontic assistance in the case of hypodontia is reflected through the bibliographic synthesis of articles on the subject of maintaining the integrity of the dental arch through digitally made space maintainers. Data collection for virtual planning involves investigating our patients by:

photostatic exam, OPG, TRG, intraoral scanning and 3D printed study models. **Results.** The application of the individualized treatment plan is possible thanks to detailed examinations and virtual planning softwares, through which the type of orthodontic device is chosen taking into account the particularities of the clinical case, with its subsequent manufacture through CAD/CAM technology. **Conclusions.** Space maintainers are the orthodontic devices of choice, mainly used in teenagers and young adults to maintain the interdental space until the definitive restoration of the integrity of the dental arches through implant – prosthetic treatment. The technical – scientific progress gives us today a new manufacturing technique thanks to digital planning methods, which offers predictability, high precision and allows treatment to be individualized.

THE CLINICAL PICTURE OF CORONARY DENTAL LESIONS AND THE PARTICULARITIES OF PROSTHETIC TREATMENT WITH ARTIFICIAL CROWNS ON DIFFERENT VARIETIES OF POST AND CORE PROSTHETIC DEVICES

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ABSTRACT

Introduction. Obtaining successful results in the root canal treatment of teeth damaged by caries and its complications, by dental traumas, in order to prevent tooth extractions by preserving the roots.

Material and methods of research. Examining 30 patients aged 18-55 years, we established total and subtotal coronary dental lesions, in which case the treatment was possible with a post and core device, prefabricated from metal alloys or fiberglass.

Results. It was possible to restore the morphology, functionality and proper aesthetics of the tooth.

The degree of destruction of the coronary dental tissues is the main index for the post and core devices with the aim of ensuring the resistance of the future prosthetic construction. **Conclusions.** The clinical and paraclinical examination of the patients gave the opportunity to appreciate and to determine the indications, contraindications in order to use different types of the post and core prosthetic devices depending on the condition of the remaining hard tissues of the root of the tooth, the possibility of applying advanced techniques and various materials.

TREATMENT OF CORONARY ODONTAL LESIONS OF THE LATERAL TEETH, USING ALL-CERAMIC INLAYS

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ABSTRACT

Introduction. Coronary odontal lesion represents a distinct pathology of the stomatognathic system from several aspects: varied etiological factors; affects the crowns of temporary and permanent teeth; they can be acquired in the pre- and post-eruptive period of the teeth; complicated pathogenetic mechanism. **Material and methods.** 17 patients (10 m., 7 w.) aged between 20 and 38 years were selected, examined clinically, paraclinically and treated prosthetically using inlays. In this group were included the cases with the extension of the COL on the proximal and occlusal surfaces. **Results.** Based on the results of the clinical-instrumental and paraclinical examination, the presence of COL at the level of

the lateral teeth was found: 7 patients with COL at the level of one tooth; 5 patients with COL at the level of two teeth located on a hemiarcade; 5 patients with COL at the level of three teeth and more located on different hemiarcs. The treatment was carried out by using all-ceramic inlays, which are characterized by: mini-invasive interventions; presents aesthetic and performing mechanical properties; the production technique ensures a high precision of restoration of the interdental contact point. **Conclusions.** Objective clinical manifestations of COL determine the method and technique of dental crown reconstruction. The use of all-ceramic inlays ensures the morphological reconstruction of the dental crown and the restoration of disordered functions.

LEVELING OF THE OCCLUSION PLANE IN EXTENDED PARTIAL EDENTATION - MODERN ASPECTS

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ABSTRACT

Based on complex clinical-instrumental examination of 21 (13m., 8w.) patients with partial adentia clinical manifestations of imbalance dental arches occlusal plane has been studied. It was found that imbalance of occlusal plane in case of partial adentia is manifested by migration of teeth limited defect of dental arch and teeth contact with dental arch defect with possibility of occlusal interference appearing and blocking mandible movements. These changes influence occlusal imbalance with morphological-functional disturbances on local and local-regional level. The particularities of the partially extended edentulous prosthetic field are determined by the number,

topography, axis of implantation and periodontal value of the remaining teeth; the absence or presence, the number and topography of additional gaps, the degree of atrophy of the alveolar ridges, the characteristic of the fibromucosa. In the case of extended partial edentation, the unevenness of the occlusal plane is manifested by the migration of the adjacent teeth and those antagonistic to the gaps, with the possibility of blocking the movements of the mandible in the event of the installation of occlusal interferences. These changes influence the installation of occlusal imbalance with morpho-functional disturbances at the local and loco-regional level, which also argues for the need to level the occlusal plane.

ULTRASONOGRAPHY IN ORTHODONTICS. PREMISES AND INDICATIONS

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ABSTRACT

Introduction. Ultrasonography is a fundamentally new, diagnostic method in orthodontics, that can visualize the condition of temporo-mandibular joint, masticatory and mimic muscles. It represents an effective alternative to nuclear magnetic resonance. The purpose of the study is to demonstrate the utility of ultrasonography in the diagnosis of dysfunctional syndrome of the temporo-mandibular joint and the detection of inflammatory changes in the oro-facial system. **Material and methods.** Review of scientific articles in the BMC database, addressing the importance of diagnostic data obtained during the ultrasound examination of the dental system. **Results.** The applicability of ultrasound imaging in orthodontics is in a continuous evolution. This

medical examination is indicated for patients with pain and cramps in the temporo-mandibular joint, headache, and muscle hypertonus. We have determined that the ultrasound is effective in locating the joint disc, visualizing the specific signs of temporomandibular arthritis, but also in measuring the thickness and length of muscle in patients who have undergone complex orthodontic-surgical treatment. **Conclusions.** The use of ultrasonography in orthodontics is advantageous for determining preliminary diagnosis in patients with symptoms specific to dental-maxillary dysfunction. This imaging technique provides real-time images and has no contraindications. The positive results obtained during ultrasound investigations can be compared with the MRI exam data to increase the level of accuracy of the final diagnosis.

PARTICULARITIES OF IMPLANT-PROSTHETIC REHABILITATION OF PATIENTS WITH RADICULAR CYSTS

Diodor STRATILA

ABSTRACT

Introduction. Extended periapical lesions and radicular cysts often lead to severe consequences when implant-prosthetic rehabilitation is planned, due to soft and hard tissue atrophy. The individual tooth extraction and cystectomy planning plays a crucial role in further rehabilitations. **Aim.** Evaluation of the role of implant-prosthetic rehabilitation planning in changes of surgical approach for cystectomy and teeth extractions. **Material and methods.** The study was performed on 15 patients presenting radicular cysts in anterior and posterior regions of the upper jaw. Clinical and paraclinical evaluation (CBCT) was performed to analyze dimensions and topography of the roots and cysts, resorption of bone and anatomical structures involved in the lesion. The treatment

planning was modified considering further implant prosthetic rehabilitation regarding flap design, type of extraction, minimal osteotomy as well as grafting options. **Results.** The analysis of healing process after cystectomy with teeth extractions and evaluation of bone and soft tissue status prior to implant placement demonstrated that the implant prosthetic rehabilitation planning before teeth extraction and cystectomy gives better results which allows to modify the surgical approach for minimizing bone and soft tissue atrophy. Moreover, the application of esthetic risk factors should be taken into consideration before tooth extraction. **Conclusions.** To decrease the number of surgeries and grafting procedures in implant prosthetic rehabilitation, the planning process should be performed even before teeth extraction and cystectomies.

ORTHODONTIC TREATMENT WITH CLEAR ALIGNERS FOR PATIENTS WITH ANGLE CLASS I MALOCCLUSION

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ABSTRACT

Introduction. More and more patients with malocclusions are looking for alternatives to treatment with fixed orthodontic appliances. Clear aligners have proven to be the most comfortable option for orthodontic treatment for patients who prefer aesthetics orthodontic appliances. They are effective in the treatment of mild to moderate dental crowding; diastemas; posterior expansion; intrusion of one or two; in the case of extracted lower incisors and distal tipping of molars. **Material and methods of research.** 15 patients (9 women and 6 men); aged between 16 and 40 years old, who underwent orthodontic treatment with aligners. The patients were subjected to clinical and

paraclinical examination: analysis of study models, photographic examination, panoramic radiography, telerradiography. **Results.** The statistical analysis showed that the highest incidence of patients who opted for orthodontic treatment with aligners is the age range of 24-32 years old. Out of the total number of patients who underwent orthodontic treatment with aligners, 9 women (60%) suffered from dental crowding before the treatment and 6 men (40%), and in the case of dental spacing, it has been shown that men (67%) have a higher share compared to women (33%). **Conclusion.** The early and correct treatment of all clinical forms of class I malocclusion is important in solving aesthetic disorders, but most importantly in the functional rehabilitation of the stomatognathic system.

MODERN ROTARY SYSTEMS IN ENDODONTIC TREATMENT

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ABSTRACT

Introduction. One of the most important steps in endodontic treatment is the preparation of a uniform space, the use of endodontic irrigant and creating space for the endodontic filling. The success and effectiveness of endodontic treatment is largely determined by the quality of chemo-mechanical root canal treatment. In recent years there has been a major emphasis on the use of rotary mechanical instrumentation systems, namely the use of Nickel-Titanium alloys, which due to their properties represent a favorable flexibility in the instrumentation of difficult anatomies. The objective of this study is to analyze the properties of different varieties of rotary systems used in the mechanical preparation of the endodontic space. **Material and methods.** The study was conducted on 20

subjects that were divided into 2 groups. Group 1-6 patients received treatment with the Protaper Universal rotary system, group 2- 14 patients to whom mechanical instrumentation was applied, 7 of which received treatment with the Protaper Next and the other 7 with Dc Taper. **Results.** Mechanical instrumentation was performed on different nosological entities, the prevalence being acute pulpitis. Among instrumented teeth, the prevalence was on the side of multirooted teeth. **Conclusions.** The clinical application of different NiTi rotary systems has to be determined individually, as each clinical case has its own particularities. The success of an endodontic treatment depends not only on the selection of rotary instruments used and their method of use, but also on the practitioner's experience and step-by-step instrumentation protocols.

THE MANAGEMENT OF IMPLANT TREATMENT IN THE PRESENCE OF MUCOSAL CYST OF THE MAXILLARY SINUS. CLINICAL CASE

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ABSTRACT

Introduction. Application of an implant in the posterior maxilla sometimes is challenging especially when there is present maxillary sinus pathology. In certain clinical situations it can still be performed simultaneously with sinus clearance.

Objective. To evaluate the treatment features of implantation in patients with bone insufficiency in the posterior site of the maxilla in the presence of maxillary sinus pathology. **Material and methods.**

Patient C.S., M/26 years old presented to the dental clinic "Omni Dent" with complaints about missing teeth in the posterior sector of the upper jaw. During clinical and paraclinical examination was established diagnosis: partial bilateral partial dentition in the maxilla, Kennedy class 2 with missing teeth 15, 16, 26, 27, caused by dental caries complications, associated with a cystic formation

on the sinus floor on the right side. **Results.** A typical lateral sinus lift operation was performed, with exception of completing it with the removal of the mucosal cyst through the created window, aspiration of cyst contents and membrane, followed by subsequent stages: creation of neo-alveoli, protection of the Schneiderian membrane defect with A-PRF, augmentation with synthetic biomaterial "KP3-LM", implantation and suturing. Clinical and radiological evaluation at a distance of 1 year demonstrated the effectiveness of the approach method in virtue of morphofunctional rehabilitation and the absence of complications. **Conclusions.** The method of implant treatment in the presence of maxillary sinus mucosal cyst can be performed simultaneously with sinus clearance and is one of the preferred methods for reducing overall treatment time.

RETENTION IN ORTHODONTICS. CLINICAL ASPECTS AND METHODS OF IMPLEMENTATION

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ABSTRACT

Introduction. Retention is necessary for three major reasons: 1) periodontal and gingival tissues are influenced by orthodontic tooth movement and require time for reorganization when the orthodontic appliance is removed; 2) teeth may be in an inherently unstable position after the treatment, so that soft tissue pressure constantly produce a relapse tendency; 3) changes produced by growth may alter the orthodontic treatment result. **Material and methods.** 12 patients, who were in a period of fixed and mixed contention. Of which fixed contention was applied to 7 patients and mixed contention to 5 patients. The patients were subjected to clinical and paraclinical examination. The patients were subjected to clinical and

paraclinical examination: analysis of study models, photographic examination, panoramic radiography, teleradiography. **Results.** Out of 7 patients who had fixed retention, relapse was observed in 3 patients with detached retainers. Out of 5 patients who had mixed contention, relapse was only detected in one patient because he did not wear the Hawley device, the retainer was detached or the patient did not go to the doctor in time. Other patients are under observation, stable and without changes. **Conclusion.** In the study we found, how much influence the application of a correct diagnosis and treatment. An advantage of retainers is attributed to the correction of minor dental deviations, thus these devices have the possibility to combine both: prophylactic and curative methods.

HYPERPLASTIC GINGIVITIS IN NON-LYMPHOBLASTIC ACUTE LEUKEMIAS: INSIGHTS INTO DIAGNOSIS AND INTERDISCIPLINARY MANAGEMENT

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ABSTRACT

Introduction. Gingival enlargement is reported as a consistent symptom, which forwards patients for a dentistry consultation and may lead to an early diagnosis of acute leukemia (AL). The objectives of researches were the evaluation of diagnosis and management of hyperplastic gingivitis (HG) in AL. **Material and Methods.** Our observational, analytical and descriptive study enrolled 7 patients with AL, who were treated at the Institute of Oncology between 2012-2022. The diagnosis was proved by the bone marrow aspiration (BMA) with cytochemical reactions, tissue biopsy or fine needle aspiration cytology. The immunophenotyping was performed in the selected cases. **Results.** HG developed in cases with myelo-monoblastic and monoblastic AL. The leukemia patients were admitted to the Institute of Oncology with a history of fatigue, fever, bone pain, gingival bleeding

and enlargement identified by stomatologists and family doctors from the consulting centers. ECOG-WHO performance score was 2-3. The intra-oral examination revealed generalized gingival hyperplasia. There were the amounts of plaque and calculus, which did not justify the enlargement degree. The gingiva was spongy and painless on palpation, with solitary sectors of necrosis and mucosal bleeding. Blood count: Hb 66-101 g/l, RBC 2.3-3.7 x 10¹²/l, WBC 11.3-41.2 x 10⁹/l, PLT 37.0-115.0 x 10⁹/l, blast cells 17-56%. The BMA detected myeloid blast cells (31.0-56.0%) and monocytes (9.0-14.0%). HG regressed in 5 patients after obtaining the complete (4 cases) and partial (1 case) hematological responses under the combined chemotherapy. **Conclusions.** HG occurs in AL mostly due to the gingival infiltration with blast cells. HG may regress under chemotherapy and local treatment in patients with complete or partial hematological responses.

USE OF CALCIUM SILICATE MATERIALS IN DIRECT PULP CAPPING IN PERMANENT TEETH

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ABSTRACT

Introduction. Vital pulp therapy (VPT) is defined as a dental conservative treatment strategy that aims to preserve the vitality and functionality of the pulp tissue that has been compromised but not destroyed by caries, trauma or restorative procedures. Direct pulp capping is defined as the application of a material with odontotropic effect over an exposed vital pulp in order to facilitate the formation of reparative dentin and maintain the vitality of the pulp. The group of calcium silicate cements is a modern group of dental materials and it is widely used in the vital pulp therapy, showing better clinical results than other groups of curative dental materials. **Material and methods.** In this study we analyzed the properties, advantages and drawbacks

of several types of calcium silicate cements and emphasized on their clinical application and long-term results. It was designed a randomized clinical trial comparing 2 types of calcium silicate cements (mineral-trioxide aggregate and calcium trisilicate) with self-curing calcium hydroxide for direct pulp capping treatment. **Results.** The follow ups were conducted at 6 and 12 months after the treatment. The parameters analyzed were as follows: patient's pain perception, dynamics of the electroodontometry values after treatment, the thickness of the newly formed dentinal bridge. **Conclusions.** Due to the good handling properties and excellent clinical results calcium silicate cements are recommended to be more often used in vital pulp therapy.

AMELOBLASTOMA. EARLY DETECTION AND THERAPEUTIC MANAGEMENT. CLINICAL CASE

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ABSTRACT

Introduction. Ameloblastoma is a benign tumour of odontogenic origin, whose structure similar to the enamel organ, which originates from epithelial tissue and is characterised by an invasive, locally destructive growth. Early detection as and minimally invasive surgical treatment are the concerns of specialists in the domain who are working on to reduce the invalidating consequences of the pathology. **Material and methods.** Patient V. A., F/ 58 years old, was referred to the stomatological clinic: „Omni Dent” presenting functional and aesthetic complaints. Clinical and radiological manifestations showed bone destruction in the left mandibular body with the presence of tooth mobility and innervation disorders. The established diagnosis was: "Chronic

osteomyelitis of the mandible on the left region of the body". **Results.** Was performed the operation of sequestrectomy, and only after histological examination follicular ameloblastoma has been identified. Was performed operation of segmental excision of the mandible, restoration with reconstructive titanium plate and subsequent implant prosthetic rehabilitation with four remote implants in intact bone. One-year dynamic follow-up demonstrated the efficacy of the applied methods, lack of complications and acceptable outcome. **Conclusions.** Clinical detection without accentuated manifestations, diversity of histological structure of ameloblastoma is the basis for diagnostic errors, accordingly, at the stage of final planning of surgery is a necessary condition - the use not only of computed tomography scanning but also histological examination.

PARTICULARITIES OF THE COMPOSITION OF THE ORAL FLUID IN CHILDREN WITH HYPOPLASIA OF DENTAL ENAMEL

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ABSTRACT

Introduction. The aim of the present paper was to study the peculiarities of the composition of the oral fluid (OF) in children affected by dental enamel hypoplasia (DEH). **Material and methods.** In the case-control study were clinically examined 78 children between the ages of 6 and 18. IN the research group (L1) were included 39 children with DEH. The control group (L0) consisted of 39 conventionally healthy children. In order to highlight the particularities of of composition in children with DEH were studied biochemical markers of phosphor-calcium bone metabolism. The dosage of Ca, Pi, tartrate-resistant acid phosphatases and thermolabile alkalis was performed with standard kits EliTech (France), osteocalcin dosing was performed immunoenzymatically (ELISA) with the DSL-10-7600 ACTIVE Human Osteocalcin

Enzyme-linked Immolunosorbent Assay produced by Diagnostic Systems Laboratories Inc. (USA). **Results.** The study detected in OF the reduced activity of thermolabile alkaline phosphatase (ALP), the statistically significant increase in the activity of tartrate-resistant acid phosphatase (TRAP), the statistically significant decrease in the level of Vitamin D3, as well as the significant reduction of the Ca/Pi ratio in OF. **Conclusions.** The study of the particularities of the OF composition in children affected by DEH detected the deregulation of bone and phosphor-calcium metabolism which represents an important caries risk factor and highlighted the need for deepening interdisciplinary studies to argue for the complex approach in planning preventive measures, developed by multi-purpose teams of medical specialists.

TREATMENT OF DENTAL CARIES WITH LIGHT CURE COMPOSITE MATERIALS

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ABSTRACT

Introduction. The most common method of restoring the hard dental tissues are esthetic restorations with light cure composite materials. With the help of light-curing materials is possible to restore the tooth, improving natural strength and function. Adhesive technology has made great strides in tooth preparation with minimal removal of hard dental tissues. The composite materials restore the color of the dentin, as well as the enamel. They establish close ties with the dental tissues. Although the fillings are subject to wear and tear and have the tendency to change their shape, they can be easily replaced with another filling, with minimal loss of dental structure. **Material and methods.** As part of this study, 17 patients aged between 18-60 with dental caries

were examined and treated, who went to the University Dental Clinic. During the course of the treatment were used instruments for classical type of examination, tools for modeling the composite, abrasive discs and strips, polypants, burs of various shapes for the preparation of hard tissues, various brushes for finishing and polishing the restoration. **Results.** The patients who performed the morpho-functional and aesthetic restoration of teeth by direct method with light cure composite materials presented satisfactory results. At the monitoring stages in dynamics due to the fact that light cure composite resins are modern materials with a wide range of uses in dentistry. **Conclusions.** Due to good handling properties and excellent clinical results, light-curing composite materials are considered very effective in restoring tooth morphology and function.

REHABILITATION OF PATIENTS WITH COMPROMISED PERIODONTAL STATUS

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ABSTRACT

Introduction. Periodontal disease (PD) continues to be a challenge for the dentist, because in terms of treatment it is one of the most complicated pathologies (in this case periodontitis) and must be viewed in the complex, and therapeutic methods also need to be complex and maximally individualized. The modern concept of the approach to PD with an important role in the curative-prophylactic process confirms once again, that PD can be diagnosed, treated and monitored ("Controlled periodontitis") only by applying the principle of multilateralism. Therefore, the periodontal treatment, with the ultimate goal of rehabilitating the functions of the dento-maxillary apparatus, must be a complex, interdisciplinary one, intersecting all dental specialties, and general medicine specialists depending on the case, it needs to be staged and fully realized, thus ensuring a stable and time lasting periodontal health. **Material and methods.** In this study, were enrolled, 23 patients with severe periodontitis, stage III and IV, grade A – 6 patients; grade B - 10; grade C - 7 patients/

compromised in terms of the functionality of the dento-maxillary apparatus (mastication, aesthetics, phonation, deglutition, sensitivity, including psycho-emotional status), women – 14, men – 9. All patients were examined and treated in complex and maximally individualized for each clinical situation, applying the principle of multilateralism/interdisciplinary. **Results.** Following the realization of the complex treatment plan (initial/etiological stage with all components, corrective stage and maintenance treatment, consultation of general medicine specialists depending on the case), the patients in the study were rehabilitated from a morpho-functional, aesthetic and psycho-emotionally aspects, thus being socially integrated. **Conclusions.** In terms of diagnosis, the approach to PD (in this case periodontitis) needs to be complex and multilateral/interdisciplinary. Structuring and execution of the treatment plan must be complex and complete. Giving the patient with a compromised periodontal status a new chance for morpho-functional rehabilitation of the dento-maxillary apparatus, psycho-emotional and social reintegration.

CLINICAL ASPECTS AND PROSTHETIC TREATMENT OF MAXILLARY TOTAL EDENTULISM

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ABSTRACT

Introduction. The prevalence of total edentulism differs significantly between countries, cities and regions within the same country. It can be affected by various factors, such as age, sex, and socioeconomic factors along with lifestyle and health behavior. Data from the World Health Organization (WHO) and independent studies in 42 countries show that the prevalence of total edentulism is the lowest in Nigeria (1.3%) and the highest in Bosnia-Herzegovina (78%) among those aged >65 years. Nowadays, in the European Union, more than 50% of the population aged >70 years suffer from total or partial edentulism. **Material and methods.** As part of this study, 7 patients aged between 50-78 diagnosed with maxillary total edentulism, from the University Dental Clinic. During the treatment were used

two technique of final impression, first by Herbst, second purpose by school of Bucharest. **Results.** All patients were informed about the study and signed an informed consent. The study was carried out over a one-year period, evaluating the success of prosthetic treatment of maxillary total edentulism using total dentures. The patients, who had the prosthetic field impressed according to Herbst's method, needed 3 corrections, which were carried out in the following days after the prostheses were delivered. And the patients who had the prosthesis impressed according to the Bucharest School's concept needed to have the edges of the prosthesis retouched 4 times. **Conclusions.** A comparative analysis of functional impression methods has shown that the difference between prostheses obtained by these methods is minimal and depends largely on the capabilities of the treating doctor.

THE ROLE OF VITAMIN D IN THE TREATMENT OF CHRONIC MARGINAL PERIODONTITIS

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ABSTRACT

Introduction. Periodontitis is a major global problem with devastating effects on oral health and a strong link to general health, as well as to the socio-economic impact and widespread health costs worldwide. Vitamin D is classically known as a "bone hormone." Recently, however, it has been found that vitamin D plays a role in connection with certain systemic diseases, such as cardiovascular disease, cancer and periodontal disease. **Material and methods.** In this literary review were examined specialized books and articles from national and international online medical resources such as: PubMed, American Academy of Periodontology, Electronic database of the SUMPh "*Nicolae Testemitanu*". Out of 100 analyzed sources, 41 were selected according to the

principles established as the most suitable that can be applied in this study. **Results.** Periodontitis is a major global problem with devastating effects on oral health and a strong link to general health, as well as to the socio-economic impact and widespread health costs worldwide. The features of this disease are bone loss, an inflammatory, immune reaction. Vitamin D has a role in both homeostasis of calcium and bone and in immune function. Vitamin D lead to bone loss and severe inflammation, both of which are well-known symptoms of periodontal disease. **Conclusions.** Vitamin D currently appears to play an important role in oral health. The effects of vitamin D and its role in the treatment of periodontal disease should be further explored and elucidated, which may help in the treatment of various chronic conditions, including chronic marginal periodontitis.

THE RELATIONSHIP BETWEEN THE LEVEL OF SECRETORY IMMUNOGLOBULIN A IN THE ORAL FLUID AND THE AFFECTION OF CHILDREN THROUGH DENTAL CARIES

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ABSTRACT

Introduction. Dental caries is a frequent condition of the human population and the mechanism by which some individuals are susceptible to dental caries (DC) and others are caries resistant is of major interest to researchers. **The purpose of the work.** Evaluation the relationship between the level of serum immunoglobulin A (sIgA) in the oral fluid (OF) and children's susceptibility to DC. **Material and methods.** In the case-control clinical study were examined 198 children between the ages of 4 and 14, divided into 2 identical groups according to structure. In the research group (L1) were included 99 children with severe carious activity and the control group (L0) was made up of 99 children without dental caries. Were evaluated dental caries prevalence indices and carious experience indices

dft, dfs, DMFT and DMFS. The sIgA level was determined by the immunoenzymatic analysis method on a solid support using the reagents of OOO Vectior-Best (Russia) and in accordance with the manufacturer's recommendations. **Results.** Was estimated statistically significant inverse relationship between the sIgA content in the OF and the DMFT, DMFS caries experience indices in the L1 group children. **Conclusions.** The estimated statistically significant relationship between sIgA content in OF and indices of caries experience confirms the previously launched hypothesis that sIgA level in OF is a salivary biomarker of the rampant evolution of DC. Thus, the significant decrease in the level of sIgA in FO detected in children affected by DC needs to be taken into account when planning individualized preventive measures.

DIAGNOSIS AND TREATMENT ASPECTS OF DESQUAMATIVE GLOSSITIS

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ABSTRACT

Introduction. The oral cavity is a major indicator in assessing the quality of systemic function of the entire body. The disorders of the lingual mucosa are of particular interest, as they reflect both oral and general health status and are often the preferred site for the first manifestations of systemic diseases. Manifestations localized in the tongue area are frequently encountered and can present with a diverse clinical picture - ranging from changes in color to desquamative glossitis. Desquamation of the tongue epithelium is common in disorders of the gastrointestinal and nervous systems, metabolic disorders, collagenosis, dermatitis, anemias, etc. It is caused by trophic disturbances that occur in the submucosal layer, which can be initiated by inflammation, allergy, autonomic changes, etc. **Material and Methods.** Based on the analysis of the results of the complex clinical and laboratory

study, the clinical forms of desquamative glossitis (dysbiotic or microbial, mycotic, neurogenic, allergic, mixed) were highlighted. Considering the pathogenetic factors, conditioned by the presence of general pathologies, which develop the types of desquamative glossitis, the diagnosis and management of complex treatment become individualized. **Results.** The proposed diagnostic methodology and the elaborated treatment regimen of desquamative glossitis allowed for achieving a desired therapeutic effect. The influence on the pathogenetic mechanisms at the beginning of treatment contributes to the reduction of subjective data, rapid epithelialization of the desquamated area. **Conclusions.** The clinical and laboratory data confirm the reduction of mucosal immunity dysfunction, restoration of oral microflora, and normalization of capillary microcirculation through differentiated complex treatment of desquamative glossitis.

MANAGEMENT OF THE MANDIBULAR VASCULO- NERVOUS BUNDLE IN ENDODONTIC TREATMENT

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ABSTRACT

Introduction. For oral-maxillo-facial practice, the topographic relationships of the lower teeth with the mandibular canal are particularly important. Sometimes the mandibular canal can be involved in endodontic treatment by propelling the filling material. **The aim of the work.** Analysis of endodontic treatment complications, correlated with the ratio of the teeth to the mandibular canal. **Material and methods.** Patient L.E., F/56 years old, addressed the "Omni Dent" dental clinic with the following complaints following the endodontic treatment of d.37: pain in the sector of tooth 37, paresthesia on the left mandibular side. Following the clinical and paraclinical examination, the diagnosis of a foreign body in the mandibular canal on the left side, caused by the propulsion of the

endodontic material, was established. **Results.** The intervention to remove the obturation material from the mandibular canal was performed, by creating access through a vestibular incision and taking off the mucoperiosteal flap, trepanation of the vestibular cortex with the creation of the access window, removal of the endodontic filling material, filling in the defect with A-PRF, suturing and control radiography. Sensibility on the path of the inferior alveolar nerve was restored after 6 months. **Conclusions.** Through a minimally invasive approach and management of the inferior alveolar vasculo-nervous fascicle, surgical procedures to remove the foreign body can be performed. The mandibular canal must be analyzed and managed very carefully and thoroughly during both endodontic and surgical treatments, in order to prevent further complications.

ASSOCIATION BETWEEN DENTAL CARIES AND QUALITY OF LIFE IN CHILDREN

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ABSTRACT

Introduction. Evaluating an individual's quality of life can provide valuable insights into their overall health status and the effectiveness of healthcare interventions. This study aimed to evaluate how dental caries (DC) and its treatment affect the quality of life (QoL) of school-age children. **Material and methods.** A cross-sectional prospective study was conducted at the Department of Pediatric Oral-Maxillo-Facial Surgery and Pedodontics "Ion Lupan" of the "Nicolae Testemitanu" SUMP. The study group (Gr₁) comprised 82 children with DC and the control group (Gr₀) included 82 children without DC. QoL was evaluated using the Child-Oral Impacts on Daily Performances (Child-OIDP) questionnaire. The correlation between the severity of tooth decay and its impact on children's QoL

was determined using the Spearman ρ coefficient and data was analyzed using Epi-Info. **Results.** Out of the 164 respondents, 48.1% experienced at least one impact, with eating (23.2%) and smiling (19.1%) being the most affected daily performances, while playing (0.7%) and schoolwork (1.2%) were the least affected. Bleeding gums (38.8%), injury (26.7%), and sensitivity (32.6%) were the main causes of impact, and adolescents reported an average of 1.2 pathologies as perceived causes. There was a significant positive association between DC indicators and the impact on QoL, indicating increased treatment needs and insufficient access to dental care. **Conclusion.** The significant prevalence of DC negatively affecting the quality of life (QoL) of children indicates a deficiency in the provision of dental services for this demographic.

MANAGEMENT OF DENTAL IMPACTION FROM ORTHODONTIC SURGERY PERSPECTIVE. CLINICAL CASE

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ABSTRACT

Introduction. Dental inclusion is an anomaly characterized by the retention of a tooth in the alveolar process, the eruption of which has been blocked by its position in the bone or an adjacent tooth. Orthodontic surgery offers surgical methods to aid orthodontic treatment in treating dental inclusion. **Objective of the study.** To evaluate the diagnostic features and treatment methods of orthodontic surgery for dental inclusion. **Material and methods.** Patient T.E., F/21 years old, presented at the dental clinic "Omni Dent" with aesthetic and functional complaints. The diagnosis- malocclusion class III Angle associated with the inclusion of tooth 23 was established through clinical and paraclinical examinations (OPG, TRG, CBCT, photographic examination, intraoral scanning). tooth 23, which

had a horizontal position, had indications for odontectomy. **Results.** Orthodontic treatment was initiated using the fixed bracket system, to align the dental arch and create the necessary space for eventual implant-prosthetic restoration. Surgically, tooth 23 was extracted by incising and elevating the mucoperiosteal flap, drilling the cortical bone to expose the included tooth, dividing it and removing it sequentially. The created defect was filled with augmentation materials (Kolapol KP3-LM) and fibrin membranes (A-PRF). After the osteointegration period (6 months), implantation followed. **Conclusions.** Dental inclusion is a frequently occurring dental eruption anomaly that creates aesthetic discomfort and functional disturbances. Orthodontic surgery methods aid orthodontic treatment. Extraction of the included tooth and replacement with a dental implant is often inevitable.

SINUS GRAFTING: PREOPERATIVE PITFALLS & COMPLICATIONS

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ABSTRACT

Implant treatment involving the edentulous posterior maxilla often presents a significant challenge due to inadequate bone quantity and quality. Sinus augmentation is the most common surgical technique to overcome bone volume deficiency. It is considered a safe, predictable and reliable treatment procedure. Preoperative pitfalls and intraoperative and postoperative complications, involving lateral wall sinus floor augmentation procedures, will be comprehensively reviewed. Firstly, preoperative pitfalls including anatomical and pathological findings besides the

current controversy in the scientific community regarding sinus augmentation will be extensively considered. we will also focus on the preoperative stage with perfection in mind and we will refer to the most recent scientific publications and innovative clinical research. Secondly, three key kinds of potential intraoperative and postoperative complications - membrane perforation, bleeding, and infections will be discussed. Thirdly, a preventive and therapeutic protocol will be discussed for the treatment of preoperative sinus pathologies and intraoperative and postoperative infections. Finally, recommendations will be made to aid avoiding pitfalls and minimize complications.

CHRONIC MARGINAL PERIODONTITIS – DIAGNOSIS AND TREATMENT

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ABSTRACT

Introduction. Marginal periodontal disease is the most common disease of the dental-maxillary system, with gingival or periodontal localization and a slow or aggressive evolution. Being a continuously growing disease that varies from one continent to another depending on the geographical area and population groups, there is an increased tendency for the given condition to spread among young people. Due to the particularities of evolution and clinical manifestations, it requires the timely and correct selection of therapeutic strategies. **Purpose of the work.** To assess the methods of diagnosis and treatment of patients with chronic marginal periodontitis. **Material and methods.** The study was carried out based on the analysis of the clinical material of 15 patients (8 women and 7 men) with CMP, treated in the University Dental Clinic,

Department of Odontology, Periodontology and Oral Diseases *Sofia Sirbu*. The age of the patients ranged between 25 and 45 years old. The diagnostic algorithm included clinical, laboratory and radiological (orthopantomography) examinations. **Results.** The radiological examination (OPG) was the clinical method used in the study. It aimed to confirm the diagnosis of CMP by highlighting the pathological changes in the bone tissue, the level and types of resorption, the degree of spread, and the type of involvement. This method helped to make a differential diagnosis between different types of CMP. **Conclusions.** CMP is a pathological condition caused by such factors as the microbial factor, namely the invasion of microorganisms in the tissues, and the traumatic factor. The radiological methods are investigations that determine the treatment of choice for patients with CMP.

TEMPOROMANDIBULAR JOINT DYSFUNCTION – CAUSES AND SYMPTOMS

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ABSTRACT

Introduction. The temporomandibular joint (TMJ) dysfunction is a multifaceted and interdisciplinary problem that must be solved by doctors from various fields: dentist, neurologist, psychotherapist and others. TMJ disorder is the pathology of the stomatognathic system that is encountered more and more often every year, because the etiology is different and the pathogenesis is not well investigated. **Aim of study.** To analyze the existing literature research and to identify the clinical relevance of temporomandibular joint diseases. **Methods and material.** A comprehensive review of the literature was done through Medline and PubMed database for research articles with keywords „temporo-mandibular joint”, „Costen syndrome”, „dysfunction”. The bibliography of the

selected articles was studied in order to find other articles and books relevant to the topic and purpose.

Results. As a result of processing the information and examining the titles of the found articles, 112 articles were found suitable for the topic and subject of the given review. TMJ dysfunction can be caused by different reasons. The dentist must consciously examine patients with TMJ disorders, drawing special attention to the collection of anamnesis.

Conclusions. TMJ dysfunction is a topic that does not lose its relevance, because it is still a problem to identify the causes of pathologies of the TMJ and their treatment. TMJ pathology can be caused by various factors, the identification of this problem should be approached with all seriousness, taking into account all diagnostic methods and a high-quality anamnesis taken from the patient.

PROCESSUS INFLAMMATOIRES DANS LA RÉGION ORO-MAXILLO-FACIALE, LÉSIONS DES OS DU SQUELETTE FACIAL

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ABSTRAITE

Introduction. Lorsque les os du squelette facial sont affectés par diverses étiologies, un processus inflammatoire se produit souvent dans les tissus mous environnants, provoquant des abcès et des phlegmons dans la région maxillo-faciale. **Matériel et méthodes.** Etude et suivi des patients de l'IMSP IMU, service de chirurgie oro-maxillo-faciale. Dans le groupe de patients étudié, l'inflammation des tissus mous s'est produite à cause de l'infection odontogène, de la consommation de drogues et de diphosphonates. **Résultats.** Des cas cliniques de patients atteints d'ostéomyélite du squelette facial: maxillaire, mandibule, os zygomatique, nasal et temporal, causée par l'ingestion de médicaments contenant du phosphore et des diphosphonates, ont été étudiés. Ces changements pathologiques dans les os ont été compliqués par la propagation de l'inflammation aux tissus mous du visage, du cou,

des sinus et de la conjonctive des yeux. Certains patients ont développé une nécrose osseuse suite à l'utilisation de ces agents. Les premiers symptômes commencent par une douleur au niveau d'une ou plusieurs dents, suivie d'une mobilité dentaire, après leur extraction d'une alvéole passante en ostéomyélite, limitée ou diffuse, puis l'inflammation s'étend aux sinus maxillaires, aux os malaire et temporaux (si la mâchoire supérieure est touchée), provoquant des sinusites maxillaires, des frontites, des ethmoïdites, des conjonctivites et des méningites. Lorsque la mâchoire inférieure est touchée, l'inflammation s'étend au médiastin et, dans certains cas, aux clavicules et aux os du thorax. **Conclusions.** La détection précoce de l'ostéomyélite osseuse toxique permet d'éviter le développement d'un processus diffus dans l'os et la propagation de l'inflammation aux tissus mous du visage, de la tête et du cou (ce qui peut être fatal).

MORPHO-FUNCTIONAL AND AESTHETIC RESTORATION OF FRONTAL TEETH WITH FLUID COMPOSITE MATERIALS. ALGORITHM

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ABSTRACT

Introduction. Fluid composites are resin-based materials, diluted with low viscosity, which is used in dentistry as a restorative material for frontal, lateral teeth and in the treatment of carious and non-carious diseases. **Purpose.** Evaluation of the types of coronary dental lesions according to the etiological factor at the front teeth. Analysis of dental glyphs at the composite-dental tissue interaction. **Material and methods.** a) In that study were included 28 patients, 10 women and 4 men aged between 30 and 45 years, who went to the USMF No. 1 dental clinic for treatment. In accordance with the purpose and objectives of this paper, we studied specialized literary sources

and analyzed the clinical and paraclinical features of diagnosis with the development of a treatment plan. b) As working materials, were used: fluid composites such as Clearfil AP-X Esthetics Flow (Kuraray) and composites Clearfil AP-X ES-2 (Kuraray). **Results.** After examining the patients, the presence of carious diseases was determined in 85.7% of cases, non-carious diseases in 14.3% of cases. Microscopic analysis of dental grinds demonstrated better adhesion of fluid composites to viscous composites. **Conclusions.** 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.

THE COMPARATIVE STUDY ON THE EFFICIENCY OF SEALING MATERIALS OF THE PERMANENT FIRST MOLARS

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ABSTRACT

Purpose. To check the efficiency over time of four different classes of materials (ormocers, sealing composites, compomers, glassionomers) for sealing pits and pits and their clinical evaluation on permanent first molars. **Material and method.** A group of children was selected with first permanent molars that met the sealing requirements and the first molars were sealed, following the application technique and the time duration (18 months) of the retention of the materials on the surfaces hard teeth and if carious lesions have appeared on the sealed surfaces. **Results.** Each group of material

itself presents different chemical properties, which gives them some advantages. The most resistant material being the one from the ormocer class, having the highest retention in the two years (89%) and the least resistant being the one from the glass ionomer class (71%). The most difficult to handle is the ormocer. And as the appearance of carious processes, all four present a small percentage (below 8%). **Discussions.** All four classes show satisfactory durability over time and the percentage of new carious processes is low. **Conclusions.** For the prevention of carious processes on first permanent molars, the materials studied in this study are efficient.

PREVENTIVE DENTAL SCREENING IN KINDERGARTEN AND SCHOOLS – A POSSIBLE WAY TO INCREASE THE ORAL HEALTH OF THE POPULATION

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ABSTRACT

Currently, Eastern European countries, but especially Romania, are in the last place in Europe in terms of oral health. There are studies that state that 80% of Romanians have dental problems, and the consumption of oral hygiene products is below the European average. Romanians are not used to regularly going to the dentist and are not aware of the benefits of preventive check-ups. Oral pathology is closely correlated with chronic diseases, they share common risk factors and there is a bidirectional determinism between them. The WHO recommends "integrating oral health into general health promotion strategies and assessing oral health needs through socio-dental approaches". Thus, it is necessary to develop a prophylactic dental screening program in kindergartens and schools. At the same time, it is necessary to raise awareness and make society responsible for diagnosis and early medical intervention and for the importance of recovery therapies. Healthy habits start from

childhood, parents have the decisive role, then education should continue in kindergartens and schools. It is the obligation of parents, educators, teachers and also of the governors that the education given includes in one way or another the benefits of prophylactic dental control but also to facilitate the population's access to these services. By sensitizing public opinion, habits can be created to change people's attitude towards early diagnosis, and thus significant improvements in the situation can be achieved. The proposed initiative is part of the strategy of the National Institute for Mother and Child Health "Alessandrescu-Rusescu" Bucharest which is the technical-methodological body of the Ministry of Health in the 2 fields (mother and child health) and involved in health education (health promotion). The main conclusion of the study can be narrowed down to the idea that health policies must be realistic and sustained over time, in order to achieve the desired results on the health and quality of life of the population.

CORRELATION ENTRE LE FACTEUR DE NÉCROSE TUMORALE- α ET LES CARIES DENTAIRES CHEZ LES ENFANTS APRÈS LA RADIOTHERAPIE BUCCO-PHARYNGEE

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ABSTRAITE

Introduction. L'objectif de travail: estimer la corrélation entre les taux de TNF- α salivaire et les indicateurs de la carie dentaire (CD) chez les enfants atteints de tumeurs malignes de la tête et du cou (TMTC) après la radiothérapie bucco-pharyngée (RTBPh). **Matériel et méthodes.** Le travail a été réalisé dans le cadre du projet du programme d'État : „Chirurgie moderne personnalisée dans le diagnostic et le traitement complexe des tumeurs chez les enfants” (chiffre:20.80009.8007.06). Une étude clinique cas-témoin a été menée sur un échantillon de 58 enfants: le groupe de recherche (Gr1) a été composé de 29 enfants âgés de 5 à 18 ans, atteints de TMTC à l'intervalle de 6 mois à 2,5 ans après la fin de la RTBPh, et le

groupe témoin (Gr0) - de 29 enfants sains. Les indices de prévalence de la CD et les indices: cos, COA et COAS ont été étudiés. Les taux de TNF- α salivaire ont été évalués par la méthode d'analyse immunoenzymatique sur support solide. **Résultats.** L'analyse corrélationnelle a révélé une forte relation directe, statistiquement significative entre l'indices cos, COAS et les taux de TNF- α salivaire ($r=0,8$, $p<0,01$) chez les enfants de Gr1 après la fin de la RTBPh. **Conclusions.** L'une des causes de faible résistance au CD chez les enfants atteints de TMTC après la RTBPh pourrait être la surproduction de TNF- α salivaire. TNF- α salivaire simpose comme biomarqueur salivaire pour l'évaluation du risque carieux individuel et la prédiction des caries dentaires rampantes.

OPPORTUNITIES AND PERSPECTIVES IN THE RESEARCH AND CLINICAL MANAGEMENT OF EARLY CHILDHOOD CARIES

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ABSTRACT

Introduction. Early caries in children is as aggressive as it is preventive. In the present study, the risk factors of early caries in children and strategies to prevent early caries in children at the community level will be elucidated. **Material and methods.** 42 literary sources were analyzed with reference to the oral health policies and strategies proposed by the recognized international authorities and the level of their realization in the Republic of Moldova. **Results.** The importance of public health strategies for the prevention of early caries in children was highlighted: 1. Oral health screening, especially in vulnerable communities;

2. Development of a National register of evidence of early caries in children; 3. Analysis of drinking water sources in the RM localities to detect the level of fluoride; 4. Administration of fluoride preparations or fluoridation of water or some foods in localities with low concentration of fluoride in drinking water; 5. Promotion of oral health at group and population level. **Conclusions.** This study provides evidence that community-based oral health promotion interventions that combine all public health strategies associated with oral health are most effective in reducing dental caries in children. Interventions implemented separately, sporadically and that do not take into account the specifics of the community have a limited impact.

THERAPEUTIC MANAGEMENT OF ACUTE FOCAL PULPITIS USING VITAL PULP EXTIRPATION METHOD

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ABSTRACT

Introduction. Acute focal pulpitis is one of the most common emergencies in dentistry, requiring immediate therapeutic intervention to alleviate painful symptoms and prevent potential complications. Vital pulp extirpation is an optimal treatment strategy aimed at preventing the occurrence of pulpal and periodontal complications when the pulpal status and general unfavorable conditions of the patient no longer allow dental pulp preservation. **Material and Methods.** The clinical study was conducted on a group of 10 patients aged between 25-45 years, diagnosed with acute focal pulpitis, using clinical and paraclinical examination methods. Treatment was performed using vital pulp extirpation, which involved anesthesia, preparation of the access cavity, removal of inflamed pulp tissue, mechanical preparation, antiseptic treatment and three-dimensional obturation of the root canals.

The patients were monitored for 6 months after treatment, during which they underwent periodic clinical and paraclinical examinations. **Results.** The vital extirpation method was successful in managing of acute focal pulpitis in all patients, with a significant reduction in post-treatment pain. The radiological examination showed the absence of signs of periapical pathology and the vitality tests provided a positive response. During the follow-up period, no clinical or radiological complications were detected, all treated teeth maintaining their integrity and functionality. **Conclusions.** The vital extirpation method applied in acute focal pulpitis represents an optimal treatment strategy that provides superior results by combating pain, attenuating the inflammatory process, preventing periodontal complications, ensuring dental functionality and guaranteeing the success and reliability of long-term treatment.

A CASE OF BULLOUS PEMPHIGOID IN YOUNG FEMALE PATIENT SUFFERING FROM AIDS

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ABSTRACT

Introduction. Bullous pemphigoid is an autoimmune chronic blistering disorder manifested clinically through bullous, urticarial, and itchy skin eruption, which rarely involves mucous membranes. Disease results of immunoglobulin G and activated T lymphocytes depositions at the basement membrane level, leading to eosinophils inflammation resulting in subepidermal cavity formation. Bullous pemphigoid is common among elderly immunocompetent people. **Material and methods.** The clinical case of an HIV infected young woman manifesting itchy inflammatory blistering skin condition. **Results.** We present a case of 23-year-old female patient who developed an extremely itching, even painful disseminated papular and bullous skin eruptions involving her face, trunk, external surfaces of upper and lower limbs with spared mucous membranes. She denied

any history of medicines intake or infectious disease. Patient was tested positive for HIV infection and admitted at National Hospital of Dermatology and Communicable Diseases. Systemic treatment with prednisolone at a dose of 1mg/kg/day administered during almost a week haven't shown any skin improvement. Blood smear examination shown evident leukocytosis with increased ESR. No acantholytic cells, neither eosinophils were found in bullous exudate. Histopathology report shown subepidermal bulla with eosinophil microabscesses leading to bullous pemphigoid. Patient received a few 5-days courses of Dapsone with remarkable improvement of skin rash evolution. **Conclusions.** According to literature data bullous pemphigoid isn't common among HIV patients especially of young age being related to antiretroviral intake and positively responding to systemic steroids. In our case no drug relationship was established, skin eruptions receded under sulphone treatment.

APLASIA CUTIS CONGENITA - CASE REPORT

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ABSTRACT

Introduction. Aplasia cutis congenita (ACC) is a very rare, congenital benign pathology. The incidence of the disease is unknown, so far around 500 cases have been reported. The prognosis for ACC is usually good. ACC was described by Cordon in 1767, being manifested as a solitary, scarring lesion, involving various layers of the skin and sometimes the bone. The lesions may occur anywhere on the body, but in 70% it is located on the scalp. ACC can occur as an isolated defect or can be associated with other anomalies. An ACC classification by Frieden I.J. consists of 9 basic groups, with the absence or presence of associated malformations. **Case presentation.** We present the case of a 10-month-old male patient, whose mother requested a dermatologist consultation for

a congenital scarring alopecia lesion on the scalp. The child was born from a healthy pregnancy with no perinatal or hereditary history of pathology. The lesion manifested as a solitary, round-ovular, non-inflammatory, pink-pale well-demarcated, easily folded site of scarring alopecia at the vertex, measuring 2x3 cm in diameter. The hair around the lesion had a much more rapid growth, being darker and coarser than the rest of the hair on the scalp. Specialist consultation both at birth and in hospital (neurologist, ophthalmologist, pediatrician, cardiologist) did not reveal any pathology and/or deformities. The distinct character of the case was recurrent contagious impetigo. **Conclusions.** The presented case is included in the rarest congenital skin diseases, which can associate various syndromes, presenting both clinical and scientific interest.

CASE EVOLUTION OF A PRIMARY CUTANEOUS ANAPLASTIC LARGE CELL LYMPHOMA

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ABSTRACT

Introduction. Primary cutaneous anaplastic large cell lymphoma (PC-ALCL) is a type of cutaneous T-cell non-Hodgkin's lymphoma (NHL), characterized by presence of anaplastic large lymphoid cells CD30-positive. Clinical manifestations are characterized by single or multifocal nodules that ulcerate, are autoregressive and recurrent. The lesions usually occur on the trunk, face, extremities and buttocks, usually being asymptomatic. **Material and methods.** Prospective clinical study of a patient with primary cutaneous anaplastic large cell lymphoma. **Results.** A 5 years history of disease in a 45-year-old man with skin lesions on the face, upper and lower limbs, and body. First manifestations were characterized by disseminated skin xerosis and chronic eczemas. From January 20, 2023, nodular formations

appeared located on the calves, neck, upper limbs, groin, accompanied by a fever of 39C. Over time the lesions increased in volume. Dermatological status: nodules of different sizes 1-4 cm in diameter are observed on the face, upper and lower limbs and trunk, on the surface of which there are adherent, sero-purulent crusts. In some areas nodules are without ulcerations, of different sizes 0.5-3cm, hard to the touch, painless with unchanged surface. The biopsy was taken, which revealed specific modifications for PC-ALCL. Thoracic and abdominal CT revealed systemic involvement. **Conclusions.** First appearance of PC-ALCL can be prolonged cutaneous xerosis and recidivate eczemas. The incidence of PCALCL among other types of peripheral T-cell NHL is 1.7%, that is why it can be misdiagnosed. The treatment of choice is brentuximab vedotin. If not treated, can lead to systemic form and death.

CONGENITAL SYPHILIS CONTROL IN ANENII NOI DISTRICT

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ABSTRACT

Introduction. Congenital syphilis is a public health problem, that outcomes from an undiagnosed or inadequately addressed case of syphilis in pregnant woman, resulting significant losses of individual health, community costs and social damage. **Material and methods.** We have made a retrospective medical files analysis of all pregnant women since 1996 till 2022 that were in antenatal care (ANC) in Anenii Noi district. **Results.** The total of 32778 pregnant women were examined during 1996-2022 period, being constantly more than 95% taken annually in ANC and tested for syphilis at least once during pregnancy. Positive for syphilis were diagnosed in 476 (1,45%) cases. From these positive for syphilis pregnant women a total number of 15 (3,15%) congenital syphilis live cases

occurred. During analyzed 1996-2022 period, the average per year distribution of positive for syphilis women were 18,3 cases producing 0,58 cases of live birth cases of congenital syphilis. Making an assumption that all pregnant women produced one livebirth, the overall congenital syphilis rate was 45,72. **Conclusion.** According to WHO criteria of elimination of mother-to-child transmission of syphilis the main impact indicator is congenital syphilis rate being under 50 referred to 100000 live births. In Anenni Noi district that cumulative indicator for 26 analyzed years proved to be 45,72, being under the threshold, but pretty close to it. The process indicators, as pregnant ANC coverage and testing for syphilis, proved to fit into WHO frames. That case study speaks about validation of mother-to-child transmission of syphilis in Republic of Moldova at district level.

HERPES ZOSTER OPHTHALMICUS: CASE SERIES REPORT

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ABSTRACT

Introduction. Herpes zoster occurs due to the reactivation of the latent varicella-zoster virus. The disease presents as an erythematous-vesicular eruption with a dermatomal distribution. Herpes zoster ophtalmicus results from the involvement of the ophthalmic branch of the trigeminal nerve, being considered an ophthalmological emergency. **Material and methods.** We present a prospective case series involving a 5-month-old patient and an 86-years-old patient, treated at the Hospital of Dermatology and Communicable Diseases with the diagnosis of Herpes zoster ophtalmicus. Case 1. A 6-day history of illness in a 5-month-old child, hospitalized with eruptions on the left cephalic region. The physical exam presented an erythematous vesicular rash on the edematous base. Cervical lymph nodes were increased up to 0.5-0.6

cm. Changes in the general status of the child were not observed: the consultation of the neurologist and the pediatrician did not find any somatic changes. Case 2: A 8-day history of disease in an 86-years-old patient with an excruciating burning pain followed by the outbreak of vesicles localized in the left cephalic region. On physical exam we revealed grouped hemorrhagic vesicles and crusts. Conjunctival injection was attested in the left eye. The ophthalmologist established the diagnosis of an acute keratoconjunctivitis. Paraclinical investigations didn't show significant deviations. **Conclusions.** Herpes Zoster is a rare disease in infants. Herpes zoster ophtalmicus often occurs in a more severe form and is difficult to treat, both in adults and children, as well as severe vision loss eye complications can develop. Antiviral treatment protocol is crucial in preventing them.

HYDROA VACCINIFORME – CASE SERIES REPORT

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ABSTRACT

Introduction. Hydroa vacciniforme is one of the rarest forms of photosensitivity dermatoses. It affects sun-exposed skin and is characterised by recurrent fluid-filled blisters ('hydroa') that heal with pox-like ('vacciniform') scars. **Case presentation.** We present the case of 13 years old male patient, whose mother requested a dermatologist consultation for a lesion on the face and upper limbs for more than 5 years. The mother cannot specify what caused the itchy lesions. The process evaluates with remissions and

relapses 4-5 times a year, exacerbations occurring especially in the spring and remits in the autumn. The child was consulted at the Dermatology and Communicable Diseases Hospital in April 2018, when the diagnosis of Photodermatosis was established. **Conclusions.** Hydroa vacciniforme is a very rare photosensitivity disorder of childhood that is characterized by pruritic or painful vesicles in photo-distributed areas. These lesions usually follow sunlight exposure and notably heal with permanent varioliform-type scarring. Onset is typically seasonal, in the spring or summer months.

LAMELLAR ICHTHYOSIS – CASE REPORT

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ABSTRACT

Introduction. Lamellar ichthyosis (LI) is an autosomal-recessive disorder that appears at birth, affecting around 1 in 600.000 people, and the newborn usually is encased in a collodion membrane, eventually with a red skin. Over time, the skin develops large, brown plate-like scales, which appear to be arranged in a mosaic pattern, associated with scarring alopecia and ectropion. Histopathologic examination shows orthokeratotic hyperkeratosis with mild to moderate acanthosis. Immuno-histochemistry reveals antibodies directed against transglutaminase 1 (TGM1) or transglutaminase 1 enzyme activity. **Case presentation.** A 19 years-old patient was born in a collodion membrane, a shiny, waxy-appearing outer layer to the skin. This was shed 2 weeks after birth, revealing the main symptoms of the

disease, extensive scaling of the skin caused by hyperkeratosis. With increasing age, the scaling was tending to be concentrated around the joints in areas such as the groin, the armpits, the elbow and the neck. The patient also was suffering from low degree of myopia and osteocartilaginous exostosis of the right femoral bone, for which was advised with a surgical intervention. The treatment regimen included systemic retinoids, such as Isotretinoin and Acitretin, that proved to be very effective, being limited in time for a potential toxicity. **Conclusions.** LI is a rare genetic skin disorder with no curative treatment, but the symptoms can be relieved, especially with systemic retinoids. Mutations in TGM1, the gene encoding transglutaminase 1, were founded in several families with LI, solidifying the role for knock-out transglutaminase 1 as a cause of LI.

LATE FORM OF NEUROSYPHILIS ASSOCIATED WITH TERTIARY SYPHILIS IN AN IMMUNOCOMPETENT MAN – CASE REPORT

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ABSTRACT

Introduction. Tertiary syphilis is a rare systemic disease, which describes the final stage of syphilitic infection. It is associated with late form of neurosyphilis and often occurs in untreated patients. **Case presentation.** We present the case of 63-year-old immunocompetent man with a history of nodular and nodular-ulcerative lesions, some of them covered with crusts. He denied any signs of primary and secondary phases and any previous treatments. On the neurological examination, we revealed paresis of oculomotor nerve on the right side, facial asymmetry on the left side, the involvement of the vestibular part of the VIII nerve and cerebellar ataxia, extrapyramidal symptoms and dementia changes. We also noticed the presence of the Argyll-Robertson pupils sign and, later, urine and fecal incontinence. The patient was diagnosed

with tertiary syphilis accompanied by late form of neurosyphilis based on the clinical symptoms, morphology of the lesions, positive serological serum and cerebrospinal fluid tests. A cerebral CT showed cortical atrophy and dermatopathological examination revealed infiltration of lymphocytes and plasma cells without granulomas. **Conclusions.** Tertiary syphilis is a large diagnostic challenge. The difference should be made between late recurrence in secondary syphilis with ulcerative lesions following deep pustules on one hand, and nodular-ulcerative, eventually gummatous, lesions of tertiary syphilis on the other hand. The other point favoring tertiary syphilis is the persistence of the nodular lesions under antibiotic treatment. Although the syphilis can affect nervous system at any stage of the infection, it is more common to manifest symptoms during the late form of syphilis.

PARANEOPLASTIC DERMATOMYOSITIS – CASE REPORT

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ABSTRACT

Introduction. Dermatomyositis is an idiopathic inflammatory myopathy with characteristic skin changes and a progressive muscle weakness. In the older age, the incidence of malignancy is higher in dermatomyositis. Paraneoplastic syndromes are described in 10-25% of adult patients with dermatomyositis. **Case presentation.** A 73-year-old man presented to our hospital with a history of 6 months skin lesions spread firstly on the scalp and later on the face, chest, shoulders, back and the upper limbs. He was also complaining of progressive muscle weakness of the arms and thighs during the last few weeks. There was no history of other constitutional symptoms such as weight loss, dyspnea or respiratory symptoms. On the dermatologic examination, we revealed heliotrope rash, a scaly scalp with inflammation, the specific shawl sign associated with photosensitivity over

the sun-exposed sites, red nail folds, purple papules over the tops of the interphalangeal joints (Gottron papules). A chest x-ray and CT scan were performed with a result of a massive posterior-basal expansive process on the left pulmonary field, hilar lymphadenopathy.

The patient was diagnosed with paraneoplastic dermatomyositis based on the clinical and imagistic examination. He was urgently referred to the oncologist for establishing the malignant tumor diagnosis and to follow a specific therapy. **Conclusions.** Dermatomyositis is a rare disease and the physical findings may vary widely from case to case as patients may present differently. The association between dermatomyositis and malignancy is well documented. In this case we revealed classical dermatomyositis signs associated with lung malignant tumor.

PYODERMA FACIALE (ROSACEA FULMINANS): CASE REPORT

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ABSTRACT

Introduction. Pyoderma faciale, also known as rosacea fulminans, is an acute, inflammatory eruption almost exclusively seen on the face, manifested by the sudden onset of large, tender, inflammatory papules, pustules, and nodules. It usually occurs in women aged 15-46, sporadically reported in men and children. Although its etiology remains unknown, it is believed that hormones contribute to the development of the lesions since the condition is much more common in females and, in some cases, has been associated with pregnancy. Treatment options include corticosteroids, isotretinoin, dapsone and antibiotics. **Material and methods.** We present a prospective case involving a 36-years-old pregnant woman during the 17th week of her third pregnancy, treated at the Hospital of Dermatology and Communicable Diseases with the diagnosis

of Pyoderma faciale (Rosacea fulminans). The patient, with no history of acne, reported the abrupt appearance of painful lesions on the face 14 days before. Physical examination revealed erythematous and edematous plaques on the cheeks, nose, chin, forehead with inflammatory nodules, pustules, absence of comedones. Paraclinical investigations didn't show significant deviations. No infective organisms were found in bacterial cultures of the affected skin. The usual treatment with isotretinoin was contraindicated during pregnancy. The patient started an alternative treatment with prednisone and azithromycin, as well local treatment with fusidic acid cream, obtaining gradual reduction of lesions. **Conclusions.** Rosacea fulminans is a severe dermatological disease with striking psychological, emotional and social reflexes. Early diagnosis and prompt treatment are indispensable in minimizing severe scarring, but considering the pregnancy, therapeutic options are limited.

PYODERMA GANGRENOSUM SECONDARY TO HERPES ZOSTER – CASE SERIES REPORT

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ABSTRACT

Introduction. Pyoderma gangrenosum is a rare inflammatory neutrophilic dermatosis, characterized by painful and ulcerating lesions on the skin, with a spectrum of clinical presentations and variable clinical course. It can be a rare complication of Herpes Zoster. **Material and methods.** A series of 2 patients with a final diagnosis of Pyoderma Gangrenosum is presented. First case of 61-years-old immunocompetent woman presented with a history of multiple intensely pruritic vesicular eruption, pronounced right axillary fossa pain syndrome and subsequent crusting. After the detachment of the crust, an ulceration of 5-6 cm in diameter appeared with an intensely erythematous base where the underlying muscle and fascia can be seen. The second case shows a 64-years-old immunocompetent woman with a three-week history of herpetic eruption

involving the submammary folds. Persistent painful ulcers with undermined bluish borders with surrounding erythema developed after 2 weeks. **Results.** Both patients were diagnosed with pyoderma gangrenosum as a complication after Herpes Zoster based on history and evolution, clinical symptoms and morphology of the lesions. **Conclusions.** Pyoderma gangrenosum is an idiopathic, inflammatory, ulcerative disease with a chronic, relapsing course of undetermined cause that can progress quickly. In larger series, about 50% of patients show an underlying disorder. The diagnosis is based on clinical and pathologic features and is one of exclusion of conditions that produce ulcerations. Biopsy will not make the diagnosis but can be used to rule out other causes. Hospitalization is helpful for cases with significant wounds. Early treatment can help reduce the risk of scarring.

THE EFFICACY OF STANDART ANTIMYCOTIC TREATMENT ASSOCIATED WITH SULODEXIDE IN DIABETIC FOOT COMPLICATED WITH TINEA PEDIS

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ABSTRACT

Introduction. Diabetes mellitus (DM) is a chronic hyperglycemic condition, exposure to high glucose levels leading to a series of biochemical, structural and functional changes of the mature vascular endothelial cell and vascular smooth muscle cell. Due to compromised immune and vascular systems, patients with DM become susceptible to fungal infections. **Material and methods.** We present an analytical, clinically controlled study realized on a group of 46 patients with DM type 2, who presented microvascular changes in the lower limbs associated with tinea pedis. The diagnosis of tinea pedis was confirmed by microscopic and culture examination while the microvascular changes - by periungual digital capillaroscopy. The patients were divided into 2 equal groups: group 1-followed standard antifungal treatment

and group 2-standard antifungal treatment in association with Sulodexide. The evaluation of the effectiveness of the treatment was realized on the 45th and 90th day of treatment. **Results.** The fungal culture test revealed *Tr.rubrum* in 35 patients - 76.1%, *Tr.mentagrophytes* in 11 patients - 21.7% and *Epidermaphyton floccosum* in 1 patient - 2.2%. On capillaroscopic examination, patients presented giant capillaries, architectural disorganization, multiple branched capillaries, crossed capillaries, loss of capillaries or even extensive avascular areas. At the microscopic and culture examination on 45th and 90th day of treatment, only 25 patients (54.3%) presented a negative culture result in first group comparative to 33 patients (71.7%) in the second one. **Conclusions.** It is recommended to remedy the microvascular abnormalities in the diabetic foot complicated with tinea pedis in order to obtain better therapeutic results.

EVALUATION OF CLINICAL-EVOLUTION CHARACTERISTICS AND TREATMENT EFFECTIVENESS IN PATIENTS WITH POST-ACNE KELOID

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ABSTRACT

Introduction. Post-acne keloid (pAK) remains one of the basic complications in patients with acne vulgaris. Post-acne scars that remain or appear as a result of the treatment and pathological healing of the lesions, can create discomfort for the patient and cosmetic derangement more pronounced than acne itself. Epidemiological data support the concept that the genetic predisposition to (pAK) is inherited, a fact confirmed by extreme values of the heritability coefficient. Pathogenesis in (pAK) has revealed a series of changes related to the wound healing process in acne. **Material and methods.** Clinical-evolution evaluation and therapeutic response in patients after Sol Kenalog 40% administration. (Triamcinolone acetonide) i/l plus

liquid nitrogen on the lesion, versus the combination of 5-FU i/l. With the subsequent evaluation of the effectiveness of the treatment: objective, subjective sensations, the pathomorphological examination before the treatment, during the treatment and after obtaining a satisfactory result, in patients with (pAK). **Conclusions.** Based on the results of the study, practical recommendations will be proposed for: 1. Development and implementation in medical practice of new measures to detect the triggering factors in (pAK). 2. The development of the complex treatment scheme, which offers the possibility to recover the lost functions of the skin in patients with (pAK) and to ensure a state of lasting/complete remission with the improvement of the psycho-emotional state.

INTRADERMIC SUTURE IN SKIN TUMORS

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ABSTRACT

Introduction. In skin tumors there is significant variety in surgical suturing materials and techniques. Continuous intradermal suture may be preferable to simple interrupted sutures for wound closure. The advantages of this method are: patient satisfaction, cosmetic scarring, minor postoperative complications. **Material and methods.** The batch includes 20 patients: 4 men aged between 40 - 62 years and 16 women aged between 16 - 65 years.

Established diagnosis: Dermal nevus. Sebaceous nevus. Atypical nevus. Basal cell epithelioma. Epidermal cyst. The cosmetic results were evaluated up to 20 months. Histopathological examination confirmed the diagnosis. Treatment: excision in case of nevi and epitheliomas, incision in case of epidermal cyst with application of intradermal suture. **Conclusions.** Continuous intradermal suture produces a better cosmetic result than simple interrupted sutures and provides better patient satisfaction.

PERIORBITAL SUPPURATIVE GRANULOMA – CASE PRESENTATION

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ABSTRACT

Introduction. Suppurative granuloma is part of the granulomatous conditions that represent a group of diseases with varied etiology and clinical manifestations, which have in common the formation of granulomas on the skin or other organs, revealed only in the histopathological examination. The name granuloma comes from the Latin language-granulum (granule), -oma (result of an action), and from a histopathological point of view it is defined as an organized collection of histiocytes. Depending on the histopathological appearance, granulomatous conditions can be divided into five categories: epithelioid granulomas, tuberculoid granulomas, palisade granulomas, suppurative granulomas and foreign body granulomas. **Material and methods.** We present the case of a male patient, 64 years old, from a rural environment, diagnosed with this

disease. Patient relates that is sick for 6-7 months. The onset of the disease was slow, according to the patient, he went to ophthalmology with a tumor on the upper eyelid (chalazion). After the surgical removal of the tumor, the complication described in the presentation occurred. Differential diagnosis: Squamous cell epithelioma, basal cell epithelioma, lipoid necrobiosis, herpes zoster, deep mycosis, chronic erysipelas, amelanotic malignant melanoma. Complex treatment was administered: cortisone therapy according to the schedule, non-steroidal anti-inflammatory drugs, short courses of antibiotic therapy, desensitizers, vitamin therapy. **Conclusions.** Periorbital suppurative granuloma is a very rare form, the diagnosis is established only after a morphological examination. This state of granulomatous inflammation occurs in patients with allergic predispositions. Treating this condition is difficult and requires long time therapy.

RELATIONSHIP BETWEEN URIC ACID LEVEL AND TYPE OF DIABETES

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ABSTRACT

Introduction. Diabetes mellitus (DM) is a chronic disease with increasing prevalence over the past decades. This makes vital to identify the risk factors. Last years was underlined the importance of uric acid (UA), which has an important role in the onset of DM and its complications. **Material and methods.** The study included 60 diabetic patients divided in: I group -30 with type 1 DM and II group - 30 with type 2 DM, hospitalized in SCR „Timofei Mosneaga”, between 01.01.22 and 19.10.22. **Results.** The average age in the I group is 41.65 ± 14.77 and in the II group is 60.86 ± 6.57 . Serum UA levels were categorized into normal

<214 $\mu\text{mol/l}$ and high >214 $\mu\text{mol/l}$. The first group had normal UA - 46.6% and high UA - 53.4%, in the second group 13.33% presented normal UA and 86.6% high level. Also, was analyzed the relation between UA and GFR, which reveal the correlation between them: for the first group: $R = -0.56$ and $P = 0.00128$ and for the second one: $R = -0.59$ and $P = 0.0005$. **Conclusion.** The high level of UA was found in patients with DM, especially in type 2 DM (86.6% vs. 53.4%). A significant negative association was observed between serum UA and GFR. UA monitoring is important aim for prevention DM's complications, especially the renal one.

EFFICACY AND SAFETY OF GLP-1 RECEPTOR AGONISTS IN PATIENTS WITH DIABETES MELLITUS - SYSTEMATIC REVIEW

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ABSTRACT

Introduction. Glucagon-like peptide-1 (GLP-1) is an incretin hormone, which potentiates glucose-dependent insulin secretion. Patients with type 2 diabetes have weakened incretin effect due to reduced levels of GLP-1. The aim of this systematic review is to evaluate the efficacy and safety of GLP-1 receptor agonists in patients with type 2 diabetes mellitus by examining clinical trials with this class medicinal products. **Material and methods.** We performed a literature search of scientific publications in the MEDLINE and Central Library of Medicine database, using keywords for the period 2005-2022, identifying 222 articles analyzing efficacy and safety of GLP-1 receptor agonists in patients with diabetes. We used the PRISMA guidelines for the systematic review. We performed PICO analysis as primary statistical analysis. **Results.** We synthesized the obtained

results in terms of clinical trial design, characteristics of the study population, primary endpoints, efficacy in reducing HbA1c and safety data. There is strong evidence supporting indications for use of GLP-1 agonists in overweight or obese patients, who have cardiovascular disease, impaired renal function or are at high risk of hypoglycemia. The safety profiles of all agents of this class are similar. Semaglutide and Tirzepatide demonstrated the highest efficacy in reducing HbA1c by respectively 1.6% and 2.0 %. The most common adverse events are gastrointestinal - nausea, vomiting, diarrhea. **Conclusion.** We established the superiority of GLP-1 receptor agonists over other antidiabetic medicinal products in terms of HbA1c reduction and weight loss, without a risk of hypoglycemic episodes.

REGULATORY ASPECTS OF PLANNING AND CONDUCTING CLINICAL TRIALS OF MEDICINAL PRODUCTS FOR TREATMENT AND PREVENTION OF DIABETES MELLITUS

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ABSTRACT

Introduction. Diabetes mellitus is a metabolic disease characterized by hyperglycemia due to impaired insulin secretion, impaired insulin action (insulin resistance) or a combination of both. Chronic hyperglycemia is associated with serious long-term consequences, including damage and dysfunction of various organs - kidneys, eyes, heart, blood vessels, nerves. The development of new therapeutic strategies is a serious challenge. The aim of this study is to analyze the current regulatory framework at EU level for the development of new medicinal products intended for treatment of diabetes mellitus. **Material and methods.** We performed a content analysis and literature review of published guidelines from the EMA, scientific organizations and national pharmacotherapy guidelines. **Results.** Strict, uniform and clearly

defined rules have been introduced at the EU level. There are specific considerations, strategies and steps according to the type of study population in terms of age, gender, disease severity and duration, criteria for efficacy of the therapy, measures of glycemic control such as glycosylated hemoglobin (HbA1c), fasting plasma glucose, effects on serum lipid levels and on the development of macro- and microvascular complications, clinical trial design, studies in specific populations, determining safety in terms of hypoglycemia and cardiovascular risk factors. HbA1c is an appropriate primary endpoint. A parallel group, double-blind, placebo-controlled trial design is recommended for the evaluation of new medicinal products. **Conclusion.** The existence of standard requirements and their implementation ensures that safe and efficient medicinal products for treatment of diabetes are placed on the market.

ANXIETY IN HOSPITALIZED PATIENTS WITH AND WITHOUT DIABETES

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ABSTRACT

Introduction. The connection between diabetes mellitus (DM) and anxiety is demonstrated. Anxiety in people with DM is associated with increased risk of complications, reduced quality of life, and increased disability. **Patients and methods.** The descriptive study includes 250 patients (83 with DM type 1(DM1), 117 with DM type 2(DM2) and 50 without DM), hospitalized in IMSP SCR "Timofei Moşneaga", Chisinau, Republic of Moldova between August-December 2022. Hamilton, HADS and STAI scales were used for evaluation. **Results.** Among those 200 patients with DM, according to the Hamilton scale anxiety is present in 91% (of which 40% is severe(22%

DM1 and 18% DM2), 34% moderate (12% DM1 and 22% DM2) and 17% mild (6% DM1 and 11% DM2)) and absent in 9% (1.5% DM1 and 7.5% DM2); and according to the HADS scale, anxiety is present in 63.5% (27.5% DM1 and 36% DM2), extreme in 19.5%(11% DM1 and 8.5% DM2) and absent in 17% (2.5% DM1 and 14.5% DM2). In patients without DM, according to the HADS scale, anxiety was present in only 24%, extreme in 2% and absent in 74% patients. According to the STAI questionnaire 66% of patients have anxiety as a state. **Conclusion.** Anxiety in patients with diabetes is more common, usually moderate or severe, and is quantified as a state. Anxiety is more severe in patients with type 1 diabetes.

SLEEP APNEA SYNDROME IN PATIENTS WITH AND WITHOUT DIABETES TYPE 2

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ABSTRACT

Introduction. The association of sleep apnea syndrome (SAS) in patients with diabetes mellitus type 2 (DMT2) worsens the evolution of diabetes by increasing cardiovascular disease morbidity and mortality. **Material and methods.** The descriptive study includes 210 patients: 150 with DMT2 and 60 without DMT2, hospitalized in the „Timofei Mosneaga” Clinical Hospital. The STOP-BANG and EPWORTH questionnaires were used. **Results.** According to the STOP-BANG questionnaire, in DMT2 patients 56,6% (23,3% women; 33,3% men) have a high risk for SAS; 31,3% (18% women; 13,3% men) have an intermediate risk and 12,1% (8,7% women; 3,4% men) have a low risk. In patients without DMT2, according to the STOP-BANG questionnaire:

26,6% (10% women; 16,6% men) have a high risk for SAS; 38,4% (11,7% women; 26,7% men) have an intermediate risk and 35% (28,3% women; 6,7% men) have a low risk. According to the EPWORTH questionnaire 72% (35,4% women; 36,7% men) of DMT2 patients have daytime sleepiness; 2,6% (2% women; 0,6% men) severe daytime sleepiness and 25,4% (12,7% women; 12,7% men) absent daytime sleepiness. In patients without DMT2, according to the EPWORTH questionnaire, 68% (33,3% women; 35% men) have daytime sleepiness, 32% (16,7% women; 15% men) absent daytime sleepiness. **Conclusion.** Most patients with diabetes have high (men-predominated) and intermediate risk for SAS; and those without diabetes – intermediate and low. Daytime sleepiness was present in both groups of patients.

OBESITY AND COVID-19 OUTCOMES IN YOUNG PATIENTS

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ABSTRACT

Introduction. Obesity, defined as an excess of body fat causing prejudice to health, is a major risk factor for adverse outcomes after infection with SARS-CoV-2. The **purpose** of this study aimed to provide evidence of the relationship between obesity and clinical outcomes in young patients with COVID-19. **Material and methods.** A literature search for various terms such as "obesity", "overweight", "young" and "SARS-CoV-2" was conducted. A total of 13 articles were eligible. Extracted data included anthropometric and metabolic parameters such as fasting glycaemia, lipids, liver function and renal function. **Results.** Assessment of excess body weight among the study population showed that the severe group with COVID-19 had a higher BMI and an increased

risk of mortality (class I obesity compared with class III, $P < 0.0001$; class II compared with class III, $P = 0.008$). Evaluation of metabolic indices showed that patients with severe forms had higher fasting glucose, although patients have no previous history of diabetes, higher level of low-density lipoprotein cholesterol and a lower level of high-density lipoprotein cholesterol compared with moderate cases (all $P < 0.01$). The liver function was more affected in severe group, with higher ALT and AST compared with patients with moderate cases (all $P < 0.01$). Regarding renal function, the severe group had higher levels of creatinine (84.40 vs. 60.90 $\mu\text{mol/L}$), uric acid (398.75 vs. 293.35 $\mu\text{mol/L}$) compared with the moderate group. **Conclusions.** We found a significant positive linear association between increasing BMI and outcomes in young patients with COVID-19.

NON-ALCOHOLIC FATTY LIVER DISEASE AND ADVANCED LIVER FIBROSIS IN PATIENTS WITH TYPE 2 DIABETES

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ABSTRACT

Introduction. Non-alcoholic fatty liver disease (NAFLD) is recognized worldwide as the most prevalent chronic liver disease with a high frequency among patients with type 2 diabetes (T2DM). This study aimed assessing the frequency of non-alcoholic fatty liver disease and advanced liver fibrosis in patients with type 2 diabetes. **Material and methods.** The cross-sectional study included 300 patients with T2DM (174 women and 126 men, with an average age of $58,94 \pm 8,55$ years), hospitalized between January and December 2022, in IMSP SCR "Timofei Moşneaga", Chisinau, Republic of Moldova. For evaluation were used the FLI calculator and the NAFLD Fibrosis Score.

Results. Among the 300 patients included in the study, NAFLD is present in 75,67%. Analysis of the frequency of NAFLD according to gender showed no statistically significant differences between women and men. Analysis of the distribution of NAFLD according to BMI indicated that 76,2% of patients are obese. Using the NAFLD Fibrosis Score in patients with T2DM and NAFLD, it was found that advanced liver fibrosis (AdLF) was present in 18,50% patients (F3-F4), in 17,18% AdLF was excluded (F0- F2), and 64,32% patients presented an indeterminate score for AdLF. **Conclusion.** NAFLD is present in most patients with type 2 diabetes and especially in those with obesity. Most patients with NAFLD have an indeterminate advanced liver fibrosis score.

CURRENT TECHNIQUE OF ENDOSCOPIC TRANSFORAMINAL PERCUTANEOUS DISCECTOMY FOR LUMBAR DISC HERNIATION

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ABSTRACT

Introduction. Transforaminal percutaneous endoscopic discectomy (DEPT) is an innovative technique with local anesthesia and minimally invasive incision from lateral approach, allows safe removal of lumbar disc herniations under endoscopic visualization with early rehabilitation.

Objective. To analyse the efficiency of surgical treatment in patients with lumbar disc herniation using the transforaminal percutaneous endoscopic method. **Material and methods.** This is a prospective study of 55 patients (39 males, 16 females) with different localizations of lumbar disc herniation: level L5 - 25 subjects, level L4 in 28 subjects, level L3 - 2 patients; central, paracentral, intraforaminal extraforaminal herniations were found in nine (16.36%), 18 (32.72%), 26 (47.27%) and two (3.63%) cases, using exclusion criteria.

Patients' age range 20–62 years, mean ± 38 years. Follow-up at 1, 3, 6, 12 months after DEPT was done using VAS and MacNab scales. **Results.** The findings of our study showed that MacNab score was excellent 47 (85.45%) cases, good seven (12.72%) cases, and satisfactory one (1.81%) case. The preoperative mean was VAS 6.71 ± 1.52 , postoperative mean VAS 3.1 ± 1.3 and rebound 2.2 ± 1.3 ($P < 0.0001$). Regarding complications, recurrence occurred in two (3.63%) patients, but there were no cases of conversion to open surgery, infection or discitis. The operating time 58 ± 4.6 min and intraoperative hemorrhage 9 ± 1.2 ml. Average verticalization in 2.2 ± 0.5 hours. Same-day or next-day discharged with normal activity in 7-10 days postoperatively. **Conclusion.** DEPT is safe and complete removal of lumbar disc. Superiority in outcomes, gives the potential as a golden standard for lumbar disc disease.

ENDOSCOPIC SPHINCTEROTOMY IN THE TREATMENT OF BENIGN DISTAL BILIARY STRICTURES

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ABSTRACT

Introduction. Studies have shown that benign distal biliary strictures (BDDBS) may be associated with scarring due to an episode of gallstone passage. Commonly, patients with BDDBS present with recurrent cholangitis and mild jaundice. This study aims to assess the efficacy of endoscopic sphincterotomy (EST) guided by endoscopic retrograde cholangiopancreatography (ERCP) for the definitive treatment of BDDBS. **Material and methods.** The paper included 79 patients with BDDBS diagnosed by specific clinical symptoms, laboratory tests, and imaging studies. Of these patients, 67 were women (84.8%) and 12 – men (15.2%), with the mean age 63.2 ± 7.8 years (range 34-78 years). The history of cholecystectomy had 57 (72.2%) patients, including 9 (11.4%) with

additional common bile duct stones clearance. Of the 22 non-operated patients, gallbladder stones were diagnosed in 17 (77.3%). **Results.** All patients underwent endoscopic therapy, including duodenoscopy, cannulation of the major duodenal papilla (MDP), ERCP and EST. The use of a certain sphincterotome ("pull-type", "push-type", "needle-type") depended on the location and anatomical shape of MDP, as well as the length and degree of stricture. In all cases, BDDBS was eliminated and normal bile flow was restored. Complications, mainly pancreatitis, were noted in 8 (10.1%) cases. **Conclusions.** ERCP-guided endoscopic sphincterotomy is an effective and relatively safe method for treatment BDDBS with recurrent cholangitis and, in selective cases, may serve as an alternative to open surgery.

POLYPHARMACY ASPECTS IN POST-STROKE REHABILITATION MANAGEMENT

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ABSTRACT

Introduction. Although not always harmful, polypharmacy is a growing concern for rehabilitation physicians as it presents an increased risk of undesirable effects for patients with multimorbidity that may affect the rehabilitation management. **Material and Methods.** A total of 50 medical records and prescription lists of post-stroke patients enrolled in rehabilitation programs were analysed in order to identify the number of medicines prescribed and their potential harmful combinations. **Results.** The study showed that the number of medical conditions in post-stroke patients varied from 4 to 11; hypertension, diabetes, atrial fibrillation or arthrosis being the most common. The number of medications prescribed to patients ranged from 5 to 12. Analysis of drug combinations prescribed for pharmacological

treatment of medical conditions such as pain, spasticity, incontinence and others, revealed a lot of undesirable combinations. Some of these potential dangerous combinations have been identified and discussed. **Conclusions.** Rehabilitation physicians have to analyze carefully the medicines combinations used for pharmacological treatment during rehabilitation post-stroke patients. Some of them can have drug interactions that may potentially lead to ineffective pharmacological treatment, side effects and negative impact on patient balance, coordination and finally increase a risk of falls. It is important to apply only acceptable combinations of medicines, or take into account the priority in solving medical problems encountered in rehabilitation of post-stroke patients. In some cases the number of medications may need to be reduced, and alternative treatments may need to be considered.

ASSESSMENT OF ACTIVITIES OF DAYLY LIVIG (ADLs) AMONG POST COVID PERSONS IN REHABILITATION FACILITY

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ABSTRACT

Introduction. "Post COVID syndrome" or "Long COVID" is a term used to describe the presence of various symptoms, even weeks or months after acquiring SARSCoV-2 infection. Fatigue, cough, chest tightness, breathlessness, anxiety, depression and other clinical manifestations have an important influence on the patient's functional status and the level of participation in their day-by-day activities. Aim of the study: Assessment of Activities of Daily Living (ADL) in people with post COVID syndrome in specialized medical rehabilitation programs. **Material and methods.** The study included 116 people who endured the mild to moderate forms of SARS Cov-2 infection at an average of 148 days from the acute period. All individuals were included in rehabilitation programs (14 days) with assessment of ADL by applying the Post-COVID-19 Functional Status

Scale (PCFS) and the level of depression and anxiety by the Hospital Anxiety and Depression Scale (HADS) until treatment and discharge. **Results and discussions.** The people included in the study were between 42 and 70 years old, at an average period of 148 days after the acute phase of the disease. According to the PCFS, mild functional limitations were recorded in 53.4% of cases, insignificant - 41.4% and moderate - 5.2% cases with improving for 55.2% of patients with "no functional limitations" on discharge. Borderline cases of anxiety and depression (HADS) were registered at the 71 persons before treatment (61.2%), but at discharge, the level of normal psycho-emotional status increased by 13.8%. **Conclusions.** Specialized medical rehabilitation programs have improved ADL in people with post COVID syndrome by enhancing functional and psycho-emotional status.

THE IMPACT OF TREATMENT ON SLE PATIENTS IN CONDITION OF THE COVID-19 PANDEMICS

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ABSTRACT

Introduction. Treatment strategies for patients with SLE have been a topic for discussion in period of Covid 19 pandemic due to the consideration that some of the drugs are influencing the immune disease. **Material and methods.** In this analytical study, the PUBMED database was used to select bibliographic sources using specific keywords (Covid-19, Systemic lupus erythematosus, treatment), resulting in 145 articles. **Results.** Studies have shown that SLE patients who contract COVID-19 are at increased risk of developing severe disease and complications. Steroids are largely used for acute management of SLE and Covid-19 infection apart, but there are not sufficient data to confirm efficiency of GCS in SLE and Covid-19. There are many controversial studies about HCQ

treatment. Currently, there is no evidence that HCQ improves outcomes for COVID-19 in patients with SLE. However, in patients already taking HCQ as basic treatment, it was shown no negative effect on infection, hospitalisation and severe infection rate. There are insufficient data about mycophenolate mofetil, cyclophosphamide and azathioprine. Some sources suggest that treatment with CYC increase the susceptibility for infections, others do not confirm this statement. The basic treatment with immunosuppressive drugs is recommended to be continued in case of Covid-19 infection. **Conclusion.** The vigilant management of the disease is essential in patients with SLE in the period of Covid-19 pandemic. No stop of treatment strategy is recommended in case of infection.

CHRONIC MUSCULOSKELETAL PAIN IN POST-STROKE PATIENTS: REHABILITATION INTERVENTIONS

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ABSTRACT

Introduction. Chronic musculoskeletal pain can have a significant impact on the quality of life and daily activities of post-stroke patients. **Aim of the study.** Estimation of musculoskeletal pain in post-stroke patients in the medical rehabilitation process. **Material and Methods.** Chronic musculoskeletal pain in 145 post-stroke patients was assessed. It was evaluated initially and after the rehabilitation interventions - pain according to the Visual Analogue Scale, the number of painful regions according to the Nordic Questionnaire and ADL according to the Barthel Index. **Results.** It was found that initially chronic musculoskeletal pain was presented by 145 patients (100%), of which 34 patients (23.4%) presented

insignificant pain, 94 patients (64.8%) moderate pain and 17 patients (11.7%) severe pain. After the rehabilitation interventions, the pain decreased in 74.9% cases, of which 57.2% cases presented moderate pain and 17.9% cases - insignificant pain. The number of painful regions being on average 4.782 regions, the standard deviation being 1.5010. After rehabilitation interventions, the number of painful regions decreased to 2,012 regions. Barthel index averaging 78.145. After rehabilitation interventions, it increased to 86,154. **Conclusion.** Medical rehabilitation can be an important component of the treatment of chronic musculoskeletal pain in post-stroke patients and can be useful in managing symptoms, improving function and quality of life.

THE IMPACT OF MEDICAL REHABILITATION PROGRAMS ON POST-COVID-19 PATIENTS WITH MUSCULOSKELETAL PAIN

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ABSTRACT

Introduction. Medical rehabilitation programs can have a significant impact on post-COVID-19 patients suffering from musculoskeletal pain by improving joint mobility and reducing pain, which can improve quality of life. **Aim of the study.** Estimating the impact of medical rehabilitation programs on post-COVID-19 patients with musculoskeletal pain. **Material and Methods.** Musculoskeletal functional impairments were assessed in 124 patients with SARS-Cov-2 infection and musculoskeletal pain. Pain according to the Visual Analogue Scale and Health Questionnaire - EQ-5D-5L were assessed initially and after the rehabilitation interventions. **Results.** Musculoskeletal pain was initially detected in

84.4% of cases, of which 16.2% of cases presented insignificant pain, 49.2% of cases moderate pain and 19.1% of cases severe pain. After the rehabilitation interventions, pain decreased in 38.4% of cases, of which 15.3% of cases presented moderate pain and 26.1% of cases - insignificant pain and 1% of cases severe pain. Health questionnaire - EQ-5D-5L initially presented level-1 2.41%, level 2- 22.5%, level 3-68.5%, level 4-5.6%, level 5- 0.80%. Final level 1 4.8%, level 2- 44.3%, level 3 -45.1%, level 4- 4.8%, level 5- 0.80%. **Conclusion.** Medical rehabilitation programs can have a significant positive impact on post-COVID-19 patients suffering from musculoskeletal pain by improving baseline functional status, reducing pain, and improving quality of life.

ASSESSMENT OF FERRITIN LEVELS IN YOUNG PEOPLE: A PROSPECTIVE STUDY

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ABSTRACT

Introduction. Iron deficiency anemia (IDA) is a major public health problem with important medico-social impact in both developing and developed countries. According to the WHO data, there are more than 2 billion of anemic people, about 50% being attributed to iron deficiency (ID). This condition is associated with poor nutrition, intense growth, increased needs, increased blood losses, etc. **Material and methods.** 176 medical students (48 males and 128 females) were enrolled in prospective study and evaluated in the 1st and 5th academic years. The interventions consisted of taking a detailed history, physical examination, laboratory investigations. Prelatent ID was diagnosed by serum ferritin estimated as <15ng/ml in females and < 30ng/ml in males. The average age was 19,7±0,09 years

in the first year and 24,7±0,09 years in the fifth year. **Results.** The average level of ferritin (M±m) at the first evaluation was 19,5±1,91ng/ml, being 12,0±0,781ng/ml in females and 39,6±3,13ng/ml in males. The lowest ferritin values showed significant differences between the sexes: 0,53ng/ml in females and 2,48ng/ml in males. During the second evaluation, the average level of ferritin increased to 23,9±1,55ng/ml, mostly on males' account (47,7±4,37 ng/ml), while the lowest values (15,0±1.00 ng/ml) were observed in females. The average ID rate was 61,9% (CI-95%:61,0-62,8); in females 69.5% (CI-95%:68,2-70,8) and in males 41.7% (CI-95%:39,0-44,3). **Conclusions.** The prevalence of prelatent ID was high in our cohort (61.9%), predominantly among females, exceeding published WHO data for Eastern Europe. Our results support the need to prevent the IDA by supplementation or fortification of food with iron.

AUTOSOMAL RECESSIVE POLYCYSTIC KIDNEY DISEASE (ARPKD) IN REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Autosomal recessive polycystic kidney disease (ARPKD) is a rare genetic disorder that affects the kidneys and, in some cases, the liver. CT with contrast (CECT) has been found to be an effective method to identify complications associated with ARPKD. **Material and Methods.** Retrospective analysis of patients treated for ARPKD at the Institute of Mother and Child in Republic of Moldova between 2018 and 2023. The study included 6 patients, of which 1 in 2018, 2 in 2019, 1 in 2021, and 2 in 2023. **Results.** All patients underwent CECT, were detected renal and hepatic conditions. Regarding the patients diagnosed with ARPKD at the institution, all 6 patients (100%) were female, of which 3 patients (50%) were between 0-7 years old and 3 patients

(50%) were between 8-13 years old. CECT identified that 5 patients (83.33%) had renal cysts, 5 patients (83.3%) had portal hypertension, 5 patients (83.33%) had Caroli syndrome, 5 patients (83.3%) had splenomegaly, and 3 patients (50%) had hepatic fibrosis. **Conclusions.** Understanding ARPKD pathology is essential for doctors, researchers, and patients because this condition can equally affect the kidneys and liver, being a rare and potentially devastating disease. In the last 5 years, only female children up to 13 years old have been referred to the Institute of Mother and Child in Republic of Moldova, with an incidence of 1-2 patients per year. The use of CECT has proven to be useful in the evaluation and management of patients with this condition, thus obtaining early diagnosis and treatment, preventing serious complications and improving the prognosis of patients.

CHALLENGES IN ANTI-COVID-19 IMMUNIZATION IN PRIMARY HEALTH CARE CENTERS OF THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. The introduction of anti-COVID-19 vaccination has brought a variety of challenges in the vaccination campaign. The aim was to identify challenges at the primary health care (PHC) institutions with respect to the national anti-COVID-19 vaccination campaign in the Republic of Moldova. **Material and methods.** The study was included 61 medical worker respondents from 39 PHC vaccination centers, between October and November 2021. The list of evaluated centers was proposed by the Ministry of Health. The activities were carried out using the World Health Organization supportive supervision tool. **Results.** The analysis of the interview results identified that the medical staff reported being overworked, physically and morally

exhausted. Only 2/3 of the interviewed staff felt safe in performing immunization procedures, a substantial part being unsure of the effectiveness of personal protection measures at the workplace. The most common challenges in the management of anti-COVID-19 immunizations were the refusal of the population to be vaccinated due to a lack of trust in the vaccine, caused by the negative influence of social networks, cult servants, myths and fake news, insufficient involvement of public administration in promoting vaccination and lack of vaccines preferred by the population. **Conclusions.** Immunization against COVID-19 has caused challenges for PHC. Overworked staff, insufficiently informed population, myths, as well as the lack of vaccines requested by patients, generated the greatest challenges in achieving vaccination.

CLINICAL AND FUNCTIONAL ASSESSMENT FEATURES OF MUSCULOSKELETAL PAIN IN REHABILITATION MEDICINE

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ABSTRACT

Introduction. Musculoskeletal pain is a common condition that affects individuals of all ages and backgrounds. In rehabilitation medicine, clinical and functional assessment features play a crucial role in identifying the underlying causes of musculoskeletal pain and determining appropriate treatment plans. **Methods.** The study included 50 patients with musculoskeletal pain who were referred to the neuro- rehabilitation department. All patients underwent a comprehensive clinical evaluation, including a medical history, physical and functional examination, using the Visual Analog Scale (VAS) and the Nordic questionnaire. **Results.** The results of the study showed that the majority of patients (80%) reported moderate to severe pain intensity on the VAS scale, with a mean score of 6.8 out of 10. The most commonly reported

sites of pain were the lower back (40%), followed by the knee (22%) and shoulder (18%). The Nordic questionnaire revealed that the majority of patients (70%) reported moderate to severe disability. The most commonly reported functional limitations were related to lifting and carrying heavy objects, walking, and standing for prolonged periods. Patients received a combination of nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, physical and kinetotherapy which have improved the patient's pain syndrome (a mean score of 3.8 out of 10) and the clinical and functional outcomes. **Conclusion.** These assessments of musculoskeletal pain through these 2 methods help to evaluate the patient's functional abilities, and determine the most appropriate treatment plan. With proper evaluation and management, patients with musculoskeletal pain can recover their function and regain their quality of life.

CRANIOSYNOSTOSIS SURGICAL TREATMENT ASPECTS

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ABSTRACT

Introduction. Craniostenosis is a major health issue in pediatric pathology. These malformations are characterized by premature closure of one or more cranial sutures, which have repercussions for intracranial content. The incidence is about 1:2000 of newborns. **Material and methods.** The study has analysed the surgical treatment outcomes of 66 children, 45 male and 21 female (ratio 2.1:1) aged from 3 months to 5 years, diagnosed with craniostenosis, admitted to "Natalia Gheorghiu" Pediatric Surgery Center of PMHI Mother and Child Institute from 2018-2022. Of which, dolichocephaly (sagittal suture synostosis) was found in 40 (60%) children, trigonocephaly (metopic suture synostosis) in 18 (27.2%), plagiocephaly (unilateral coronal suture synostosis) in 6 (9%), acrobrachycephaly (bilateral synostosis of the coronary suture) in 1 (1.5%) child and turricephaly (synostosis of sagittal metopic and

both sides of coronal sutures) in 1 (1,5%) child. Preoperative planning included brain CT with 3D skull reconstruction, craniometric measurement, and neurological examination. **Results.** Currently, no standard surgical intervention is used in craniostenosis, whereas the craniectomy is carried out according to each type. Craniectomy allows for normal cranial expansion and thus, brain development. Moreover, it prevents an increase in intracranial pressure and provides good functional and cosmetic results. In cases of dolichocephaly, bilateral paramedian craniotomy was performed; in patients with trigonocephaly, plagiocephaly, acrobrachycephaly, and turricephaly, as well as in those with complex bone deformities, wide bifrontal osteotomy and remodeling of the frontal bone were carried out. **Conclusions.** The present study has shown that early surgery prevents or suppresses the increase in the intracranial pressure, as well as provides good functional and aesthetic results.

ASSESSMENT OF HYPERURICEMIA IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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ABSTRACT

Introduction. Hyperuricemia (defined as a serum uric acid level >7 mg/dl in males and >6 mg/dl

in women) is common in *chronic kidney disease (CKD)* as a result of reduced urinary excretion of uric acid and is considered as a risk factor for cardiovascular disease. **Material and methods.** We involved in the study 205 patients with CKD, 116 (56,9%) of them under chronic hemodialysis from *Municipal Clinical Hospital Holy Trinity*, 2019-2021. CKD was defined as abnormalities of kidney structure or function, present for >3 months, with implications for health. The kidney function were assessed by estimated glomerular filtration rate (eGFR). **Results.** The age average of the 205 patients was 62,06± 4,32, between them: male - 103(50,24%)

and female - 102(49,75%). In the study group were revealed diabetes mellitus - in 179(83,32%), anemia in the 147(71,70%) and coronary heart disease - in 124 (60,49%) cases. The average value of uric acid of the studied patients was increased: 9,15± 3,2 mg/dl, (median-7, 61 mg/dl, quartile 75% - 10,38 mg/dl, quartile 25% - 6,55 mg/dl, lowest - 3,50 mg/dl, highest - 15,67 mg/dl). Uric acid level was correlated with eGFR ($r = -0,32$; $p < 0,001$) and with proteinuria ($r = 0,12$; $p < 0,001$). There were 87 dead patients in the study group. Compared with survivors, the deceased patients had more increased value of uric acid and was estimated an association between the (≥ 75 th) percentiles of uric acid and the patients mortality ($p < 0,001$). **Conclusion.** Elevated serum uric acid levels are seen in patients with CKD and severe reduced glomerular filtration rate and was associated with all-cause mortality.

HOW DID THE COVID-19 PANDEMIA INFLUENCE THE PREVALENCE AND INCIDENCE OF GENITOURINARY DISEASES IN PMSI MTA BOTANICA, CHISINAU MUNICIPALITY?

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ABSTRACT

Introduction. The continues activity of family doctors is complex and diverse, and the monitoring and supervision of patients with chronic diseases remains a priority. The COVID-19 pandemic, being a new challenge for the medical system, has limited both addressability and access to medical services, including the patients with chronic genitourinary diseases, especially during the quarantine period. **Material and methods.** The annual statistical reports (F-12), of the Centers of Family Physicians (CFPh), later centralized at the Botanica Territorial Medical Association level, served as research material. The reference period included the years 2019-2022. **Results.** The prevalence of the genitourinary system diseases in 2019 was 684.9‰, with a decrease in the pandemic

2020 of 518.3‰, followed by an easy increase in 2021- 644.3‰ and in 2022 -663.3‰. The same evolution was also observed when analyzing the incidence dynamics: in 2019 - 277.8‰, with regression in 2020 till 198.8‰, with an increase in 2021 - 293.4‰ and in 2022 until 310.1‰. In the structure of genitourinary diseases during the reference period, tubulointerstitial diseases, including children and adolescents, are maintained in the ranking, followed by prostate diseases and kidney and ureter lithiasis. **Conclusions.** The COVID-19 pandemic influenced both the incidence and the prevalence of genitourinary diseases, being lower in the pandemic year. It requires increasing the continuous vigilance of the family doctor's team in the adequate monitoring of chronic patients with genitourinary diseases.

INFORMATIONAL RECORD OF BIO-SPECIMENS WITHIN THE BIOBANK

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ABSTRACT

Introduction. Informational support systems have demonstrated their practical utility in the era of medicine digitization. After studying the latest achievements in the field, the initiative team from SUMPH "Nicolae Testemițanu" set out to build and implement an information system within the project "Information record of bio-specimens within SUMPPh Biobank "Nicolae Testemitsanu" (Project 21.70086.37ȘD). **Material and methods.** Relevant articles were searched in PubMed and EMBase databases from 2018 to March 2023 according to the keywords "biobank" (n=217), "informational system" (n=3040), "biorepositories" (n=18), as well as their combinations (n=820). **Results.** After analyzing the search results, a number: 820 publications were identified by the keywords used by the authors. Publications from the authors were compared to exclude duplicates. The collection was reviewed and articles were filtered by title and abstract content. The remaining

articles were assessed in full to exclude case-control studies or articles without relevant conclusions. **Conclusions.** Starting from the processed publications, it is obvious that information systems can have a decisive role in the modernization of biobanks and medical records by ensuring the integrity and quality of biological data, promoting and increasing the efficiency of scientific research. Information systems also encourage collaboration between biomedical research entities. The academic environment also touches on the issue of ensuring the confidentiality and security of data which is particularly important in the current era of medicine digitization. Therefore, the development and implementation of information systems in the activity of biobanks in general and in the SUMPPh "Nicolae Testemițanu" biobank particularly, can exponentially increase the impact of these institutions in the practice of personalized medicine and the advancement to the stage of preventing health problems.

THE MEDICAL USE OF MÁLAKA WINE AND COLA NUTS IN LATE 19TH-EARLY 20TH CENTURY IN GREECE

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ABSTRACT

The lands of Malaka in Spain are known for their wine since the 8th century BC. Malaka wine gained popularity among merchants and consumers since 17th century to become one of Europe's favorites. The seeds (nuts) of the African plants of *Cola acuminata* had been used in daily life as an invigorating and stimulating chewing or eating delicacy. In late 19th century, Stamatios Krinos who had opened the first (or one of the firsts) pharmacy in Athens during 1836 and his son Athanasios, produced an Elixir named Krinos Cola Wine to treat neurasthenia, chlorosis, anemia, indigestion, gastralgia, chronic diarrhea, cardiopathies, weakness and infertility. The properties of both the wine and the nuts, as well as cola chemical compounds were known since mid-19th century and Krinos

family exploited them to introduce a novel herbal drug (cola seeds) to the Hellenic pharmacology. The properties which had been attributed to Krinos elixir (medical wine) are de novo and in depth validated today by a series of studies in modern medicine. Treatises in pharmacology by Georgios Photeinos, Pyrros Dionysios Thettalos and Theodoros Afentoulis in the eve of modern Hellenic pharmacopeia did not mention cola nuts, while later on, after Krinos introduction, books by Theodoros Afentoulis and Spyridon Miliarakis recorded the plant and its properties. The fact that the Hellenic pharmacology textbooks of the era did not include cola as a therapeutic agent, most probably signifies that Krinos made an innovative addition in the timelessly popular Hellenic herbal medicine.

MORTALITY PREDICTION SCORES IN ICU

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ABSTRACT

Introduction. Mortality rate prediction in severely ill patients plays a key role in establishing an adequate therapeutic conduct and allocation of necessary resources into the early identification of high risk mortality. **The aim.** Comparative evaluation of mortality prediction scores and identification of the areas of most efficient use of prognostic tools in ICU (SAPS, APACHE, SOFA, MODS). **Material and methods.** We have analysed multiple analytical and descriptive studies, identified via searches on the databases Medline and Pubmed, in the period between 2000 and 2022, which evaluates the performance of mortality prediction models for patients hospitalised in ICU (SAPS, APACHE, SOFA, MODS). **Results.** The most worthwhile scores in clinical practice

are held by APACHE II > SAPS II > SOFA (Δ SOFA). The APACHE II score offers the highest accuracy and is the most efficient in the analysis of the evolution of intoxicated patients. The SOFA score provides a specificity for patients with sepsis, whereas, Δ SOFA characterises the reflection of therapeutic strategies in ICU. At the admission of critical patients with uncertain diagnosis, the calculation of SAPS II and APACHE II scores presents the excellent calibration of their evolution during hospitalization. SAPS III score has a superior research value, thus being more used in retrospective cohort studies. MODS score estimates the mortality in ICU, hospital acquired mortality and the duration of hospitalization in ICUs. **Conclusions.** All mortality prediction scores or a combination between them are available for use in ICUs, but each of them displays limitations.

BREAST FIGURES, FROM ANCIENT HELLENIC WORLD TO MODERN MEDICAL IMAGING

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ABSTRACT

The importance of the female breast for the survival of man, fertility and healthy growth of the neonatal was an axiom known since the beginning of human evolution. Since antiquity it was a symbol of divine power, connected to primary female goddesses, a symbol of a suitable mother or wet nurse, connected to a robust nutrition in the early stages of life. A series of pathological entities of the human breast were known, including breast cancer. Medical breast imaging begun in ancient Greece through art with sculptures and anthems, which in some cases evolved medical sculptures from medico-philosophical schools of Asia Minor. Physicians of the Hellenic world, millennia ago, had recognized a cluster of deformities of the breast, with the most common being asymmetry, an abnormality with a broad differential diagnosis, including tumors,

cysts, or congenital etiology. The most known example is the little clay sculpture from Hellenistic time, which depicts a female torso with a bigger and longer left breast. One of the most common cases of breast cancer in ancient Greek art is the little clay sculpture of Imperial times, depicting a female torso with atrophic breasts and a right breast smaller and in higher position than the left breast. Breast imaging had later passed to medical atlases since Middle ages and during Renaissance and gradually male breasts attracted medical interest too. The origins of modern breast imaging as we interpret it today was the discovery of x-rays by the German physicist Wilhelm Röntgen. This documentary research endeavors into diving deeper into the history of medical breast imaging, trying to depict a timeline of figures of breast up to nowadays.

RAYMOND DE VIEUSSENS. A CHEVALIER PAVES THE WAY TOWARDS MODERN CARDIOLOGY

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ABSTRACT

The French anatomist and physician Raymond de Vieussens (1641-1715) is one of the most inspiring figures in the history of the so called “French School”. Forming the backbone of modern cardiology, his groundbreaking and exemplary work was treasured among the greatest anatomy and surgical books for more than two centuries. In the setting of the 18th century, Vieussens indulged in his passion, delving into the structure and movement of the heart, through autopsy based and clinically correlated studies. The *Novum vasorum corporis humani systema*, published in 1705, marked the dawn of his scientific breakthrough. In his book, Vieussens described the mapping of the coronary circulation using saffron dye, a process that led to the discovery of the “ducti carnosi”; which were subsequently named as “Thebesian veins”. A year later, he released his magnum opus, *Nouvelles Découvertes*

sur le Coeur. Among his numerous observations was an anastomotic vessel between left and right coronary circulation, called “Vieussens’ arterial ring”, serving as a collateral pathway in case of coronary occlusion. Additionally, he identified the valve at the junction of the great cardiac vein and coronary sinus, and the prominent oval margin of the fossa ovalis, called the “valve of Vieussens” and the “Vieussens Annulus” respectively. In 1715, the *Traité Nouveau de la Structure et de la Cause du Mouvement Naturel du Coeur*, contained detailed data about the structure of the myocardium and pericardium, and the patho-anatomical changes attributed to cardiac tamponade, mitral stenosis and aortic regurgitation. The anatomical descriptions provided by Vieussens, some of which carry his name, persist in present times and bear testimony to the long-lasting influence of his work on contemporary medicine.

THE IMPACT OF NITRIC OXIDE ON HEPATIC HEMODYNAMICS

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ABSTRACT

Introduction. The hepatic arterial and portal venous blood flows have the role of maintaining a constant total hepatic perfusion and ensuring the oxygen requirement. The primary role has nitric oxide, because the portal venous and hepatic arterial endothelial cells contain NO-synthase. Vascular resistance can change both in the portal system and in the hepatic arterial system. **Material and methods.** The study included 46 patients-32 men, 14 women, average age- 39 ± 0.21 years. Linear parameters studied by color Doppler. **Results.** The study of the blood parameters in the liver vessels established the increase in the resistance index

in the hepatic artery by 1,4%, the increase in the pulsation index by 6,3%, the volume of the blood flow speed in the portal vein by 7,7%. Dilation of the diameter of the hepatic artery was observed in 65% of the patients, associated with a decrease in the diastolic speed (38%) and a increase in the volume speed (57%) of the blood flow. The spatial speed of portal blood flow in group I increased to 990 ± 69 ml/min, of the group II was 1188 ± 34 ml/min. **Conclusions.** Nitric oxide increase vascular resistance in both portal and hepatic arterial system. The ptogressive increase in the resistance index of the hepatic artery in patients indicates increasing intrahepatic vascular resistance.

ESTIMATION OF ANTIBIOTIC RESISTANCE IN PATIENTS WITH URINARY INFECTIONS

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ABSTRACT

Introduction. The detection of antibiotic-resistant bacteria results in increased morbidity and mortality among patients with urinary tract infections, as well as length of hospital stay and antibiotic treatment approach. **Material and methods.** A retrospective analysis of 604 patients with positive urine cultures and 18 strains of microorganisms detected from the MC Sfinta Treime, dept. Nephrology was performed. **Results.** Laboratory investigations of 634 patients detected 604 urine positive cultures with isolated 1618 microorganisms (48.3%) from bio substrates with positive significance. Gram-negative microorganisms prevails-16 strains (66.6%) and 6 stains gram-positive (33.3%). The gram-positive microorganisms- St. Coagulase-negative -183

(11.3%), St. aureus - 8 (0.5%), St A, B, C, G -16 (0.98) and gram-negative- Enterococcus spp. 460 cases (28.4%), Kl. pneumoniae 277 cases (17.1%), Ps aeruginosa -72 (4.45%), E. coli 482 (29%), candida 170 (10.5%), Proteus spp. 70 (4, 32%). From total of 604 samples, 460 (76.2%) strains were sensitive, 144 samples (23.8%) - resistant to antibiotics. A higher resistance to antibiotics was found in strains of gram-negative microorganisms K. pneumoniae, E. coli, Ps. aeruginosa). Gram-negative microorganisms in 39.12% were resistant. Gram-positive microorganisms showed resistance in 22.20% of the samples and in 77.8% of the samples they were sensitive. **Conclusion.** A higher resistance to antibiotics was found in strains of gram-negative microorganisms K. pneumoniae, E. coli, Ps. aeruginosa), increased sensitivity to quinolones, carbapenems.

THE SOCIETY OF PHYSICIANS AND NATURALISTS OF IASI AND THE IDEAL OF ROMANIAN UNITY

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ABSTRACT

Iasi Society of Physicians and Naturalists (SPN) was established in 1830-1833. It was the first scientific association in South-East Europe. Its founders – Dr. Mihail Zotta, from Bukovina, and Dr. Iacob Czihak, from Bavaria– aimed at covering scientific, particularly medical, development and overall progress of Moldavia and Wallachia. Concurrently Romanian born scientists from Banat, Transylvania, Bukovina and Bessarabia became SPN members along with scholars illustrating other ethnic groups and states. Besides Count Kisseleff, other famous SPN honorary members were Humboldt, Berzelius, Haeckel, Hufeland, Koch, Waldeyer, Bright, Guthrie, Liston, Schönlein, De Martonne, a.s.o. Outstanding Moldavian SPN members openly supported Unification of Moldavia and Wallachia. Not haphazardly in the SPN headquarters the unionist party appointed Alexandru Ioan Cuza as

the sole candidate to Moldavia's throne, on January 3, 1859. On January 5, Cuza was officially elected the Principality Ruling Prince and on January 24, he was equally voted as Wallachia's Prince: "Small Romania" emerged. In March 1918, a Bessarabian delegation representing the Moldavian Democratic Republic came to Iasi, headed by Prime Minister Daniel Ciugureanu, a medical doctor and urologist, and President Ion Inculet, a doctor in physics. Petru Poni, Romanian Academy President, and Constantin Bacaloglu, SPN President, among others, welcomed the guests, inviting them to visit the SPN building and its small Museum reminding Cuza's triumph in 1859. A prominent politician and a hero, Dr. Ciugureanu worked as a urology specialist both in Bessarabia and Romania. Indeed, many doctors not only promoted modernity and sciences, but also defended dignity, liberty and spiritual ideals.

CHALLENGES OF CAREGIVERS OF PATIENTS WITH MULTIMORBIDITY DURING COVID-19 PANDEMICS

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ABSTRACT

Introduction. Multimorbidity is a common phenomenon and a big challenge in patients' families or formal caregivers, however, the available data on the impact of patients' multimorbidity on caregivers are controversial. **Material and methods.** The study aimed to assess caregivers' perspectives on the management of multimorbid patients during the COVID-19 pandemic. We conducted 20 semi-structured interviews with family members who are in charge of caring for multimorbid patients for at least 5 days a week, for the last 12 months. The caregivers' opinion was analyzed using a framework analysis approach. **Results.** In the study were 15 females, and 5 males, and caregiver relationship to the patient's spouse in 7 cases and in 13 cases a family member. The age of the patients with 2 or

more chronic conditions was $62,2 \pm 8.7$ years old, while their caregivers were 57 ± 10.2 years old. All the caregivers reported an increased degree of stress and uncertainty during the pandemic. They were concerned about access to medical services, or the availability of necessary medication for their relatives. The limitation of carrying out the daily routine worsened the patient's health status in 40% of cases, and they fill more susceptible to dependency and vulnerability. Also, more than 60% of caregivers mentioned problems managing finances, caring for others family members especially children, and supplementary home obligations during the lockdown. **Conclusions.** During the COVID-19 pandemic caregivers' burden was high amongst families of multimorbidity patients and the challenges targeted all studied domains.

ANTIOXIDANT PROPERTIES OF MEADOW HONEY FROM SERBIA AS A PREDICTOR OF HEALTH BENEFITS

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ABSTRACT

Introduction. Honey is a natural food item whose activity differs in the first place depending on the type, origin and commercial brand. Meadow or flower honey is one of the highest quality kinds since bees visit many meadow plants and other flowering plants. Serbia is a traditional high-quality honey-producing country, and the southeastern part has characteristic flora, and meadows are rich in medicinal herbs. This study aimed to determine the total phenolic content (TPC) antioxidant activity (AA) of nine meadow multi-floral honey samples from southeastern Serbia. **Material and methods.** Raw honey is provided directly by local beekeepers, and commercial honey is purchased from local shops. TPC and AA using 1,1-diphenyl-2-picrylhydrazyl (DPPH) scavenging and ferric-reducing antioxidant power (FRAP) assays were measured by spectrophotometer. **Results.** TPC in meadow kinds of honey ranged from 369.68 mg gallic acid equivalents (GAE)/kg (commercial, sample No. 9) to 899.56 mg GAE/kg (raw, sample No. 1). The average TPC in filtered raw honey is higher compared with this content in commercial

samples, 654.87 mg GAE/kg and 524.11 mg GAE/kg. The mean radical scavenging activity measured by the DPPH method in raw and commercial meadow honey was 0.83 and 0.25 mmol Trolox equivalents (TEAC)/kg, respectively. The corresponding FRAP value was 2.82 and 1.77 mmol Fe²⁺/kg. Among the different samples analyzed in our study, unprocessed meadow honey (sample No. 1) from the foothills of Stara Planina mountain exhibited the highest TPC and superior radical scavenging activities, 1.43 mmol TEAC/kg and 4.32 mmol Fe²⁺/kg, respectively. Pearson's test revealed a very high correlation between TPC and AA activity measured by the DPPH assay ($r = 0.97$) and TPC and AA activity determined by the FRAP assay ($r = 0.81$). DPPH and FRAP assays were in a high correlation with each other ($r = 0.79$). **Conclusions.** Meadow honey has increased in popularity due to its high nutritional properties and unique, delicate taste. Our study demonstrates that some of the investigated raw meadow honey samples from southeastern Serbia are good sources of total phenolic compounds with high antioxidant properties and therapeutic potentials in oxidative stress management.

THE ROLE OF THE NURSE IN CHRONIC HEART FAILURE PATIENTS’ MANAGEMENT

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ABSTRACT

Introduction. Chronic heart failure (CHF) is a progressive syndrome that results in a poor quality of life for the patient and requires complex interdisciplinary management. As part of the health care team, nurses seem to play an important and increasing role in management of CHF patients. The aim of the research was to observe the role of the nurse in chronic heart failure patients’ care in different settings. **Material and Methods.** We have accomplished a simple bibliographic study, searching for the key words: “nurse” or “medical assistant”, “chronic heart failure”, “patients’ management” through the searching system of the date-base of PubMed, looking for the articles for the last 5 years. As a result, we have found 85 sources, and we selected 17 of them, that refers at the role of nurse in management of CHF patients.

Results. In the clinic, hospital, nursing home or patients’ home, the nurse has a role in detecting, identifying and treating heart failure, which is variable in different countries. According to the review results, in hospitals we have observed that nurses’ assessment skills and comprehensive knowledge of CHF are important to optimize patient care and improve outcomes from initial emergency department presentation through discharge and follow-up. The implementation of outpatient CHF clinics improves functioning and modestly lower hospitalizations. In addition, the nurse has a crucial role in educating patients on self-care maintenance, self-care monitoring and self-care management. **Conclusions.** Nurses play different roles in management of chronic heart failure patients according to the type of medical settings, practices and regulations at the national level.

ROLES OF PHARMACISTS IN THE PALLIATIVE CARE SYSTEM

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ABSTRACT

Introduction. The limited life expectancy and functional capabilities of palliative patients with various diagnoses require effective pharmacotherapy that provides a balance of benefits and risks against the backdrop of a changing clinical picture. Given the fact that up to 70% of non-oncological palliative patients have a type 1 diabetes in their medical history, adequate pharmacotherapy and pharmacocorrection of the main disease improves the quality of life, increases the period of functional independence and comfort for a terminally ill person. **Aim.** This study aims to analyze the role of the pharmacist in the system of palliative care; identify promising directions for the development of pharmaceutical care for palliative patients in Ukraine and other countries where palliative care is in its infancy and development. **Methods.** The study of the role of the pharmacist in the provision of palliative services was carried out by content analysis of the literature for the period 2009-2019 (n=342) in International Scientometric

Databases using established descriptors in English: pharmaceutical palliative care; the role of pharmacist in palliative care, palliative patients with type 1 diabetes. **Results.** As a result of the analysis there were identified literature sources from a range of countries that are leaders in providing pharmaceutical palliative care: the USA, Great Britain, Australia. Some publications (Poland, Japan, Scotland, Canada) identified big roles of the pharmacist in pain management and palliative care. The most important tasks of a pharmacist is informing the interdisciplinary team about the availability of medicines, the legal aspects of their use, pharmacotechnological possibilities, as well as advising patients/caregivers regarding the rational use and storage of medicines. **Conclusion.** It was found that the most effective is the interdisciplinary model of pharmaceutical care. The main areas of practical pharmaceutical care are identified, which cover administrative, organizational, clinical, therapeutic and informational and educational areas of activity in the palliative care.

THE IMPACT OF OCCUPATIONAL THERAPY IN INCREASING THE QUALITY OF LIFE IN PATIENTS WITH RHEUMATOID ARTHRITIS

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ABSTRACT

Introduction. A marked impact in increasing the quality of life in patients with RA is brought by occupational therapy, which aims to improve the performance of daily tasks, facilitating successful lifestyle adjustments and preventing loss of functions. **Objective.** Estimating the effectiveness of occupational therapy techniques in increasing quality of life for patients with rheumatoid arthritis. **Methods.** The study was conducted on patients with rheumatoid arthritis, randomly divided into 23 people in Lot1 and Lot 2. The patients in Lot 1 benefited from conventional rehabilitation treatment, and for the patients in Lot 2 the treatment was associated with occupational

therapy techniques. The quality of life was assessed by applying the SF-11 questionnaire, and the ADLs by the HAQ questionnaire. **Results.** After 30 days of functional treatment the HAQ score demonstrated a decrease in the score, expressed by the improvement of functionality from 1.96 ± 0.41 to 1.27 ± 0.23 LOt 1 ($p < 0.05$) and from $1, 98 \pm 0.56$ to 1.03 ± 0.34 for Lot 2 ($p < 0.05$); the analysis of SF-11 parameters revealed the improvement of physical functions from 34.3 ± 4.3 to 39.2 ± 5.2 ($p > 0.05$) conventional points for Lot1 and from 25.3 ± 3.8 to $53, 2 \pm 3.6$ ($p > 0.05$) points for Lot 2. **Conclusion.** Occupational intervention enhances quality of life and allows patients to learn to apply techniques in their daily performance, occupational repertoire, and professional activities.

OCCUPATIONAL THERAPY TECHNIQUES IN THE FUNCTIONAL REHABILITATION OF PEOPLE WITH RHEUMATOID ARTHRITIS

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ABSTRACT

Introduction. Occupational therapy programs aim to increase quality of life, manage movement, decrease pain, fatigue and anxiety for people with rheumatoid arthritis. **Objective.** To estimate the effectiveness of occupational therapy techniques in the functional rehabilitation of the hand for patients with rheumatoid arthritis. **Methods.** The study was performed on patients with rheumatoid arthritis, randomly divided by 23 people in Lot1 and Lot 2. Patients in Lot 1 received conventional rehabilitation treatment; patients in Lot 2 received the treatment combined with occupational therapy. Gripping forceps were assessed by applying the Sidenco and Frost (2005) tests; muscle strength was assessed manually according to the International

Muscle Strength Assessment Scale from zero to five. **Results.** After 30 days of functional treatment in Lot1, the muscular strength of the hand increase by 0.57 conventional points, in Lot 2 by 0.96 points. Two-digital forceps decreased in score from 7.27 ± 0.33 to 6.47 ± 0.31 in Lot1 and from 7.47 ± 0.29 to 4.34 ± 0.33 in Lot 2 ($p < 0.05$), the three-digital forceps had decline in Lot 2 - from 3.52 ± 0.15 to 1.84 ± 0.17 ($p < 0.05$) compared to Lot1 - from 3.67 ± 0.21 to 3.07 ± 0.11 ($p < 0.05$), and the score for palmar grip decreased from 5.77 ± 0.29 to 4.85 ± 0.27 ($p < 0.05$) in Lot 1 and from 5.65 ± 0.24 to 2.18 ± 0.21 ($p < 0.05$) in Lot 2. **Conclusions.** The application of occupational self-management programs with physical activity sessions lead to the improvement of hand functions.

ASSESSMENT OF HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH PRIMARY BILIARY CHOLANGITIS

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ABSTRACT

Introduction. Primary biliary cholangitis (PBC) is a chronic and progressive liver disease that negatively affects the health-related quality of life (HRQL) of patients. The benefits of UDCA for PBC-associated symptoms are not clearly defined. The present study aimed to assess the HRQL of patients with PBC focusing on the cognitive, emotional, social and functional aspects. **Material and methods.** The PBC-40 and itch numerical rating scales were used to evaluate the symptoms and HRQL of patients. 21 patients with PBC, receiving treatment with UDCA for at least 6 months, were interviewed. **Results.** Fatigue (85,7%) and pruritus (80,5%) are the most common symptom encountered in the questioned patients. The itching had a negative effect on the

patients' sleep (63%) and their well-being (68%). For the most part, the daily routine of the patients (64,7%) was disturbed by chronic asthenia and 71% of patients have reported the inability to do the daily activities. The impairment of cognitive domain was frequently identified: 75% of patients have been related the loss of memory and 63% decrease in concentration. Our data shows the impact of itching on social and emotional domains, described by patients as anxiety, fear, social isolation. **Conclusions.** The HRQL of patients with PBC was significantly impaired by itching and fatigue, although they were on UDCA treatment. Most patients show signs of anxiety or depression, therefore, psychological treatment, moral help and support targeting these factors should be provided to improve the HRQL of patients.

LIVER CIRRHOSIS INDUCED BY DELTA VIRUS: CLINICAL AND EVOLUTIVE PECULARITIES IN PATIENTS ON THE WAITING LIST FOR LIVER TRANSPLANTATION IN REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Evolution of liver cirrhosis induced by delta virus is more severe in comparison with monoinfection HBV being grevated by numerous complications. **The aim** of this study was to compare clinical evolution of patients with liver cirrhosis induced by delta and B viral infection that are on the waiting list for liver transplantation in Republic of Moldova. **Material and Methods.** In side of the national transplant program was performed a retrospective study on two groups of patients with liver cirrhosis that are on the waiting list for liver transplant since february 2013 to December 2022. In each group were included 40 patients (1st group – patients diagnosed with liver cirrhosis of HBV/HDV etiology, 2nd group - patients diagnosed with liver cirrhosis of HBV etiology). **Results.** After the analysis of the groups, statistical difference was recorded on the average age of the patients (group I vs group II being 48.55 ± 9.01 vs 55.81 ± 5.85 , $p = 0.01$). The mean MELD score at inclusion in

the waiting list was 16.15 ± 3.91 group I vs 15.11 ± 3.26 points for group II ($p = <0.0001$). The statistical difference between clinical development and the presence of complications from the time of inclusion in the waiting list has not been identified. Thus, ascites were recorded in 77.5% patients in group I vs 54.5% group II ($p = 0.8$); upper digestive haemorrhage - 40% group I vs 18% group II ($p = 0.9$); HCC - 20% group I vs. 15% group II ($p = 0.41$); portal vein thrombosis - 18% group I vs. 4.5% group II ($p = 0.5$); spontaneous bacterial peritonitis - 2% group I vs 0.9% group II ($p = 0.2$). Patients in group I (35%) vs group II (17%) had lower survival ($p = 0.014$). **Conclusion.** Although VHD infection is not an independent mortality predictive factor, it imparts a more aggressive course of evolution. The complications appeared were not influenced by the etiology of the disease. Patients with liver cirrhosis HBV / HDV during the follow-up period had significantly less survival compared to patients with HBV liver cirrhosis ($p = 0.014$).

THE IMPACT OF TELEMEDICINE IN THE CARE OF LIVER CIRRHOSIS

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ABSTRACT

Introduction. The development of complications defines the transition from compensated to decompensated liver cirrhosis, a change that is associated with a marked decrease in survival. The integration of telemedicine holds promise in expanding access to health care, promoting liver cirrhosis management, and facilitating monitoring of care visits. **Aim of the study.** To analyze the bibliographic data regarding the impact of remote surveillance in patients with liver cirrhosis. **Methods and material.** An advanced search was performed in the PubMed, and Medline databases, taking into account relevant articles, published in the last 5 years. The search English terms used were: "cirrhosis," "remote surveillance," "telemedicine," "telemonitoring". **Results.** In relation to other diseases, there is a lack of literature elucidating the impact of telemedicine on liver diseases. Patients with cirrhosis frequently require emergency

hospitalizations and may have prolonged hospital stays and frequent readmissions. Many of these hospitalizations could be avoided if patients received more education and access to remote interactions with their medical teams, thereby empowering them to participate in managing their own disease, including changes in sodium intake or medication titration. And not only publications are limited, but gastroenterology specialists also have the lowest level of use of telemedicine methods (7.9%, AGA) in their work with patients. The application of telemonitoring of patients with liver cirrhosis will reduce costs in the health system, increase the overall satisfaction of the patient and increase survival rates as observed in studies with virtual consultations in other fields. **Conclusion.** Telemedicine may prove to be the guiding force in inter-episode care coordination for patients with cirrhosis. More resources are needed to evaluate telemedicine interventions and to develop the care infrastructure for patients with cirrhosis.

CLINICAL AND GENOTYPIC ASPECTS IN PATIENTS WITH WILSON'S DISEASE FROM THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Wilson disease (WD) is an inherited disorder caused by ATP7B gene mutation associated with considerable variation in clinical and genotypical presentations. **Aim.** The study aims to evaluate the clinical and genotypic aspects of patients with Wilson's disease in the Republic of Moldova. **Methods.** There were analyzed retrospectively 60 patients with WD, between 2006 and 2021. The Leipzig score ≥ 4 was used to confirm the diagnosis. The age and the symptoms at presentation were used as key phenotypic markers. The genetic test was performed in 23 cases (13 women and 10 men) by the Sanger sequencing method, examining exons with a high and moderate frequency of mutations. **Results.** The mean age was 29 years (range 3-69 years), and

the female-male ratio is 1:1.09. The patients mostly originate from the center (44%) and south (44%) of the country. In 15 cases (25%), the diagnosis was suspected in childhood. Hepatic onset was more common in females ($p < 0.01$) and neurologic presentation in males ($P < 0.05$). The most frequent variants detected in patients are identified at exons 8, 14, and 20. In 35% of patients the homozygous recessive p.H1069Q mutation was detected, in 26% compound heterozygous mutations with different associations were observed, in 8 patients (35%) only 1 mutation was identified and in 1 patient (4%) - no mutation was identified. **Conclusions.** In the Republic of Moldova, the most frequent p.H1069Q mutation is associated with a hepatic onset predominant in women and a neurological onset predominant in men.

THE IMPACT OF TELEMEDICINE IN THE CARE OF LIVER CIRRHOSIS

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ABSTRACT

Introduction. The development of complications defines the transition from compensated to decompensated liver cirrhosis, a change that is associated with a marked decrease in survival. The integration of telemedicine holds promise in expanding access to health care, promoting liver cirrhosis management, and facilitating monitoring of care visits. **Aim of the study.** To analyze the bibliographic data regarding the impact of remote surveillance in patients with liver cirrhosis. **Methods and material.** An advanced search was performed in the PubMed, and Medline databases, taking into account relevant articles, published in the last 5 years. The search English terms used were: "cirrhosis," "remote surveillance," "telemedicine," "telemonitoring". **Results.** In relation to other diseases, there is a lack of literature elucidating the impact of telemedicine on liver diseases. Patients with cirrhosis frequently require emergency

hospitalizations and may have prolonged hospital stays and frequent readmissions. Many of these hospitalizations could be avoided if patients received more education and access to remote interactions with their medical teams, thereby empowering them to participate in managing their own disease, including changes in sodium intake or medication titration. And not only publications are limited, but gastroenterology specialists also have the lowest level of use of telemedicine methods (7.9%, AGA) in their work with patients. The application of telemonitoring of patients with liver cirrhosis will reduce costs in the health system, increase the overall satisfaction of the patient and increase survival rates as observed in studies with virtual consultations in other fields. **Conclusion.** Telemedicine may prove to be the guiding force in inter-episode care coordination for patients with cirrhosis. More resources are needed to evaluate telemedicine interventions and to develop the care infrastructure for patients with cirrhosis.

INTERDISCIPLINARY MODEL OF CARE FOR FATTY LIVER DISEASE

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ABSTRACT

Introduction. Non-alcoholic fatty liver disease (NAFLD) is now the leading cause of chronic liver disease globally and requires multidisciplinary care. **Material and methods.** We systematically searched the peer-reviewed literature with the aim of identifying published examples of comprehensive models of care for fatty liver disease. In interdisciplinary model of care, it is important to find what kind of service are provide, where are they provided, who is offering them and how are they coordinated. **Results.** Non-invasive predictive model Fatty Liver Disease Index (FLDI) have been proposed as options for screening fatty liver

disease for population with high risk for fatty liver disease (obesity, diabetes mellites type 2). In primary care settings using score FLDI it is possible to make risk stratification for interdisciplinary model of care for fatty liver disease. This model should play a role in improving health outcomes in patients with fatty liver disease and aimed at policy-makers and practitioners designing and implementing models of care. **Conclusions.** Fatty liver disease is a complex, multisystem disease that requires a multidisciplinary approach to prevention, diagnosis, treatment and care. The risk stratification for fatty liver disease using FLDI it is a part of interdisciplinary model of care.

AUTOIMMUNE HEPATITIS OVERLAP PHENOTYPE

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ABSTRACT

Introduction. Overlap between autoimmune hepatitis (AIH) and primary biliary cholangitis (PBC) or primary sclerosing cholangitis (PSC) is not rare disorder and usually progresses to cirrhosis and liver failure without adequate treatment. Although variant autoimmune liver disease syndrome has extensively been reported, it is still difficult to diagnose and treat this clinical phenotype. **Material and methods.** The aim of this paper was to systematically review the available literature data for autoimmune hepatitis overlap syndrome with PBC/PSC. Searches were carried out in electronic databases Scopus, MEDLINE, Cochrane Library. **Results.** Some patients with AIH have concomitant features of cholestasis. The diagnosis of overlap syndrome requires the features of classic AIH (positive ANA/SMA, elevated Ig G, interface hepatitis) and findings of PBC or PSC. These disorders can present either

simultaneously or sequentially, patients being classified according to the predominant disease. The "Paris criteria" have been proposed for the diagnosis of overlap syndrome with PBC, and treatment with immunosuppressive therapy alone or in combination with ursodeoxycholic acid may be recommended. Existing data suggest that Paris criteria may not include all patients who have less pronounced cholestatic laboratory features. AIH–PSC overlap requires supplementary the typical features of PSC by cholangiography or evidence of small-duct PSC on histology, and up to 45% may be associated with ulcerative colitis. **Conclusions.** AIH overlap phenotype tends to be more aggressive; treatment response is poorer and should be directed at the predominant component - immunosuppressive therapy alone or in combination with ursodeoxycholic acid. Further research is needed to define the overlap syndrome and to standardized treatment recommendations.

NEW PROGNOSTIC SCORES FOR LIVER TRANSPLANT WAITING LIST

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ABSTRACT

Introduction. Liver transplantation allocation policy has evolved significantly in recent years. Thus, the implementation of new prognostic scores aim to increase equity, reduce deaths and optimize outcomes from the liver transplant waiting list. **Material and methods.** Between February 2013 and January 2022, we evaluated 265 patients with chronic liver disease, age \geq 18 years, included on the liver transplant waiting list. UKELD, iMELD, refitMELD, refitMELD-Na, upMELD, MELD 3.0 scores were used. Prognostic abilities for predicting 90-day mortality were investigated by applying receiver-function-characteristic-curb

analysis. **Results.** 39 patients (34%) died of whom (male 28, female 21, mean age 48 years) on the liver transplant waiting list within 90 days of listing. However MELD score 3.0, had the best acceptable prognostic performance with areas below Roc-curve(AUROC = 0.836). All scores achieved an average quality score of 75.1%. In 51.66% of patients, however, there was an increase in the prognostic score than the MELD score. **Conclusions.** Thus, the MELD 3.0 score effectively predicts short-term mortality among patients with liver cirrhosis and specifically addresses gender disparities on the liver transplant waiting list while improving post-transplant survival.

THE IMPORTANCE OF IMMUNOLOGICAL INVESTIGATIONS FOR THE DIAGNOSIS OF CELIAC DISEASE

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ABSTRACT

Celiac disease (gluten intolerance) is a condition with an immune mechanism triggered and maintained by the ingestion of gluten in genetically predisposed individuals. The consumption of gluten by intolerant people leads to damage to the small intestine through the destruction of enterocytes, a condition called gluten enteropathy. The incidence of this disease worldwide is 1:100 people. Symptoms in celiac disease vary, affected individuals may be asymptomatic or extraintestinal symptoms may predominate. Three observations were included in the study with subjects who had IgA type anti-transglutaminase antibodies above 200 μm . The particularities of the studied cases are the late diagnosis, the high values of anti-tissue transglutaminase type IgA antibodies that allowed, according to international guidelines, diagnosis without biopsy, to which is added the age under 3 years. Physiological personal antecedents are insignificant From the pathological personal

antecedents we mention developmental disorder, raising the suspicion of autistic spectrum disorder, does not speak, attention deficit. At the clinical examination we mention dry skin, poorly represented subcutaneous cellular tissue, weathered abdomen, otherwise balanced on devices and systems. Routine analyzes revealed non-specific changes. The positive diagnosis was established by the dosage that had values 10 times higher than normal. However, the determination of anti-endomysium antibodies would also have been necessary. After more extensive biological investigations in the studied subjects, for the safety of the diagnosis, it was proposed to the family to perform an intestinal biopsy. The results confirmed the clinical and immunological diagnosis of celiac disease based on the intestinal lesions that they considered compatible with the diagnosis of celiac disease (Marsh score 3b), in the appropriate clinico-serological context. Eliminating gluten from the diet was followed by a spectacular improvement in symptoms.

SARCOPENIA IN DECOMPENSATED LIVER DISEASES

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ABSTRACT

Introduction. Decompensated liver disease (DLD), liver cirrhosis (LC) is the most prevalent condition that can develop sarcopenia, a strong prognostic/predictor of patients' mortality. **The aim** was to highlight the new aspects regarding the sarcopenic syndrome (SS) through a current approach to the diagnosis and management in LC. **Material and methods.** A contemporary literature analysis focused on the main databases was performed, 40 bibliographic sources were reviewed: PubMed, Hinari, SpringerLink and Scopus. The key word used was *Sarcopenia*. Inclusion criteria served clinical practice guidelines, scientific articles: pathophysiology, management and medical treatment of sarcopenia. Exclusion criteria were articles that did not meet the current requirements and information provided for patients.

Results. DLD is characterized by muscle wasting, malnutrition and functional decline, while 17-43% of patients develop frailty. Frail versus non-frail patients have higher MELD scores, lower sodium and albumin levels. Sarcopenia is associated with a high degree of systemic inflammation, reported by the increase of pro-inflammatory cytokines, the development of oxidative stress, mitochondrial dysfunction, manifesting the basic role in sarcopenia pathogenesis. The SS pathogenesis involves 3 main causes: inadequate dietary intake, metabolic disturbances and malabsorption. Pretesting patients with frailty measurements demonstrated improved predictability and decreased mortality. **Conclusions.** Management of sarcopenia requires tailored to the individual requirements and specifics, focusing on high protein intake, regular meals, physical exercise, treatment of the liver disease.

ASSESSMENT OF RISK FACTORS FOR VARICEAL HAEMORRHAGE

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ABSTRACT

Introduction. Oesophageal variceal haemorrhage in patients with liver cirrhosis remains a major medical emergency, with a still high mortality. Patient assessment with identification of risk factors, appropriate prophylaxis and treatment of variceal bleeding are essential to reduce morbidity and mortality. The aim of this study was to identify clinical, laboratory and endoscopic findings that predict the variceal haemorrhage in patients with cirrhosis. **Material and methods.** The study investigated 80 patients with liver cirrhosis and oesophageal varices, of whom 40 developed bleeding from varices. Odds ratio (OR) was calculated to identify factors, associated with the risk of variceal bleeding. **Results.** The mean age of patients was 56 ± 3 years and the incidence of variceal bleeding was more common in male (70%). The study findings suggest that problematic alcohol consumption, which has an

OR=3.1 and advanced Child-Pugh class (OR=6.9) are independent predictors for variceal bleeding. Similarly, the presence of „endoscopic red marks" OR=7.8 and degree of varices, varicose veins grade III-IV, OR=5.7, have been shown a strong association with risk of variceal hemorrhage. Among the biological tests, the low platelet count of $87.3 \times 10^3 / \mu\text{L}$ or less was associated with the risk of having variceal haemorrhage - OR=3.8. Lack of non-selective beta-blocker medication or insufficient propranolol dose, less than 20 mg/day, were associated with the risk of having variceal haemorrhage - OR=6.2. **Conclusions.** Alcohol consumption, large esophageal varices, advanced Child Pugh class, thrombocytopenia and insufficient NSBBs treatment were the most important factors associated with variceal bleeding. Primary prophylaxis with NSBBs in optimal doses has a major role in effective control of variceal bleeding.

CLINICAL AND GENOTYPIC ASPECTS IN PATIENTS WITH WILSON'S DISEASE FROM THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Wilson disease (WD) is an inherited disorder caused by ATP7B gene mutation associated with considerable variation in clinical and genotypical presentations. **Aim.** The study aims to evaluate the clinical and genotypic aspects of patients with Wilson's disease in the Republic of Moldova. **Methods.** There were analyzed retrospectively 60 patients with WD, between 2006 and 2021. The Leipzig score ≥ 4 was used to confirm the diagnosis. The age and the symptoms at presentation were used as key phenotypic markers. The genetic test was performed in 23 cases (13 women and 10 men) by the Sanger sequencing method, examining exons with a high and moderate frequency of mutations. **Results.** The mean age was 29 years (range 3-69 years), and

the female-male ratio is 1:1.09. The patients mostly originate from the center (44%) and south (44%) of the country. In 15 cases (25%), the diagnosis was suspected in childhood. Hepatic onset was more common in females ($p < 0.01$) and neurologic presentation in males ($P < 0.05$). The most frequent variants detected in patients are identified at exons 8, 14, and 20. In 35% of patients the homozygous recessive p.H1069Q mutation was detected, in 26% compound heterozygous mutations with different associations were observed, in 8 patients (35%) only 1 mutation was identified and in 1 patient (4%) - no mutation was identified. **Conclusions.** In the Republic of Moldova, the most frequent p.H1069Q mutation is associated with a hepatic onset predominant in women and a neurological onset predominant in men.

THE EFFECTIVENESS OF OXIGEN THERAPY AT PATIENTS WITH COVID-19 INFECTION ASSOCIATED ACUTE RESPIRATORY FAILURE

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ABSTRACT

Introduction. Patients with COVID-19 infection can develop pulmonary and cardiac complications in addition to mild and moderate forms of the disease. Patients with comorbidities are at increased risk of developing ARDS, and require oxygen therapy. Oxygen concentrators provide a continuous flow of oxygen to patients with breathing difficulties by removing nitrogen and producing concentrated oxygen. Thus, the progression of ARDS and the need for assisted ventilation is prevented.

Objective. Early detection of patients with severe forms of COVID-19 requiring oxygen therapy as a medical treatment. **Methods.** The study included 51 patients with severe forms of the COVID-19 infection, admitted to the Toma Ciorbă Clinical Hospital of Infectious Diseases on February-April 2022, which had ARDS in the first 24 hours after admission ARF was registered (SpO₂ ≤94%). In the same time patients received medicamentous treatment and oxygen therapy, being connected to oxygen concentrators with a continuous flow of 8-10 liters/minute through the facial mask or nasal cannula. All patients signed informed consent for research and for publication. **Results.** Patients age ranged from 18 to 90 years, with average of 65.5 years. In the study group, 35 (68.6%) were women and 16 (31.4%) were men, 28 (54.9%) patients were vaccinated with the complete vaccination schedule.

The most patients had comorbidities. Hypertension was diagnosed in 42 (82.4%) patients, other chronic cardiac diseases – in 26 (50.9%), diabetes – in 15 (29.4%), bronchial asthma and/or chronic obstructive pulmonary disease – in 7 (13.7%), chronic hepatitis – in 4 (7.8%), chronic kidney diseases and neurological diseases – in 3 (5.9%) patients. During oxygen therapy, the average level of oxygen saturation increased from 92.5% on the 1st day of admission to 95.7% on the 5th day (p < 0.0001) the average frequency of heart contractions decreased from 85, 4 beats/minute on the 1st day to 75.8 –on the 7th day of admission (P < 0.0001), the average respiratory rate decreased from 21.97 breaths/minute on the 1st day to 19.45 on the day the 7th day of admission (P < 0.0001). On the 5th day of oxygen therapy 15 (29.4%) patients and on the 7th day – 23 (45.1%) patients were disconnected from the O₂ source (P < 0.0001). The duration of hospitalization of the patients in the study was 14.94 days/bed. During the treatment, 3 (5.9%) patients with SpO₂ ≤85% were transferred to the intensive care unit. **Conclusion.** In patients with COVID-19 infection with ARDS, as a result of oxygen therapy associated with drug treatment, oxygen saturation increased, hemodynamic indices improved, inflammatory markers decreased and the duration of hospitalization was reduced.

CLINICAL AND EPIDEMIOLOGICAL FEATURES OF COVID-19 IN PEDIATRIC PATIENTS

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ABSTRACT

Introduction. The epidemiological and clinical patterns of COVID-19 are not fully known, especially among children. Serologic surveys indicate children of all ages were sensitive to COVID-19. **Aim of the study:** Evaluation of the clinical, epidemiological and evolutionary peculiarities of COVID-19 in children hospitalized in the Municipal Clinical Hospital of Contagious Diseases for Children (MCHCDC). **Methods.** Descriptive transversal epidemiological study was conducted, included all children (n=1326) hospitalized with COVID-19 from March, 2020 to March, 2021 in the MCHCDC. **Results.** School and preschool age were mostly of children, the infection occurred through family contact

(62.0%). Moderate forms of the disease prevailed. Complications and comorbidities were detected in 990 (74.6%) patients: pneumonia (22.0%), including acute respiratory failure I-II (8.6%), bronchitis (5.6%), toxic infectious heart disease (1.5%), central nervous system damage (1.5%), toxic hepatitis (2.1%), pancreatitis (1.2%), others (40.6%). The elimination of SARS-CoV-2 RNA in the nasopharyngeal swab varied, the shortest - in children 0-3 years (by the 15th day of illness onset), the longest – children of 11-18 years, not depend on the severity of the disease. The treatment complied with the national clinical protocol. **Conclusions.** Clinical and evolutionary particularities evaluation of COVID-19 is one of the most important conditions in developing of therapeutic management in the paediatric.

EFFICACY OF VALGANCYCLOVIR IN THE TREATMENT OF PATIENTS WITH CONGENITAL CYTOMEGALOVIRUS INFECTION

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ABSTRACT

Introduction. Infection with cytomegalovirus (CMV) is considered the most common maternal-fetal infection, which can cause serious repercussions on the fetus and is a significant threat to public health. **Material and methods.** Cross-sectional descriptive study of 51 patients with symptomatic congenital infection with CMV, hospitalized in the Municipal Clinical Children Hospital of Contagious Diseases (SCMBCC), during 2021-2023, treated with Valgancyclovir. **Results.** Average age of the research group - 6.5 ± 2.2 months, 45.1% girls and 54.9% boys, including 27.5% premature. Valgancyclovir was indicated taking into account the clinical manifestations, but also the viral load detected by PCR in blood and urine (viremia - mean values 6,133.5 copies/ml, viruria - 5,545,642

copies /ml). Valgancyclovir indicated in a dose of 16 mg/kg per bone, every 12 hours. In 11 patients (21.6%), the dose was halved (8 mg/kg, every 12 hours), taking into account the development of neutropenia (7 patients) or thrombocytopenia and/or increased serum transaminase values (4 patients). Antiviral treatment lasted an average of 2.7 ± 0.75 months. In all cases clinical parameters improved. CMV DNA negativity in plasma after 30 days of treatment - in 47 children (92.2%), in urine in 30 (58.8%), and on the 90th day - in plasma in 50 (98.1%) , and urine - in 48 (94.2%) children. **Conclusion.** Treatment with Valganciclovir in congenital CMV proved to be effective, presenting important pay-off in eliminating CMV DNA in blood and urine. Adverse effects were reported in about 1/5 of the cases, but were easily overcome by reducing the administered dose.

GENERAL ASPECTS OF TUBERCULOSIS AT HOSPITALIZED CHILDREN IN THE MUNICIPAL CLINICAL HOSPITAL OF FTIZIOPNEUMOLOGY

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ABSTRACT

Introduction. Tuberculosis (TB) is an endemic, chronic, and widespread infection in the population, including children and adolescents. Children and adolescents have a high risk of progression to the disease following exposure to an infectious case of tuberculosis and subsequent infection. **Aim.** Determining the general aspects of tuberculosis at hospitalized children in the Public Medical-Sanitary Institution (PMSI) of the Municipal Clinical Hospital of Physihopneumology (MCHP) for the period 2020-2021. **Material and Methods.** Descriptive transversal epidemiological study was conducted, included all children (n=490) hospitalized from 2020 to 2022 in the MCHP. **Results.** In the age structure of hospitalized children in MCHP dominated children aged 8-14

years – 179 patients (36.53%), followed by age category 1-3 years – 105 patients (21.43%), age category 15-18 years – 90 patients (18.37%), age group 4-7 years – 86 patients (17.55%) and 1-12 months – 30 patients (6.12%). The most common hospitalization diagnosis of children in PMSI MCHP was lymph node TB (49.18%), followed by infiltration pulmonary TB (20.61%) and primary tuberculous complex (17.35%). The treatment of pediatric patients with tuberculosis is complex, the most commonly used were the drugs of first line (isoniazid, rifampicin, ethambutol, pyrazinamide, streptomycin). **Conclusion.** The largest share of children hospitalized in 2020-2022 were from age categories of 8-14 year and 1-3 years. Almost half of the hospitalized children had the diagnosis of the lymph nodes TB (49.18%).

THE UNDULING EVOLUTION OF SALMONELLA ENTERITIDIS INFECTION IN A 3-YEAR-OLD CHILD - A CLINICAL CASE

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ABSTRACT

Introduction. Acute diarrheal diseases are a major problem among preschool children. It is estimated that in recent years, diarrhea accounted for 9.9% of the 6.9 million deaths among children under 5.

Material and methods. Is presented the clinical case of a child with salmonellosis hospitalized in the Municipal Clinical Hospital for Contagious Diseases Children. **Results.** A 3-year-old girl presented on the 2nd day of illness with complaints of fever up to 39°C, 8 stools/24 hours (Bristol -7), abdominal pain, pronounced weakness, hyporexia, thirst, headache, and vertigo. Antimicrobial therapy with Nifuroxazide and symptomatic therapy was initiated. On the treatment background, the condition was improved, with the reduction of the number of stools up to 1-2/24h, the fever decreased. On the 7th day, the condition worsened, the fever reappeared up to 38.8°C, 5 liquid stools/24h

and vomiting (7 times/24h). The bacteriological examination revealed *Salmonella Enteritidis* sensitive to imipinem, cefepime, cefotaxime, ceftazidime, ceftriaxone, chloramphenicol, ciprofloxacin, ertapenem, levofloxacin, meropenem, moxifloxacin, ofloxacin, piperacillin-tazobactam, trimethoprim-sulfamethoxazole. In the initial treatment, the antimicrobial therapy was changed to Cefatoxime, and symptomatic therapy continued. On the treatment background, liver and inflammatory markers in regression. The child was discharged on the 14th day, with the clinical diagnosis: Salmonellosis caused by *Salmonella Enteritidis*, gastroenterocolitic form, severe evolution. Reactive pancreatitis. Toxic hepatitis. Nutritional anemia 1st degree. **Conclusions.** Diarrheal diseases have a negative impact on health. In order to avoid the occurrence of long-term disabilities, it is necessary to identify the causative agent and the multidisciplinary approach.

EVOLUTIONARY CHARACTERISTICS OF PARVOVIRUS -B 19 INFECTION IN CHILDREN - CLINICAL CASE

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ABSTRACT

Introduction. Parvovirus B19 (B19V) is a single-stranded DNA virus from the family Parvoviridae, the genus Erythrovirus. The 5 syndromes associated with PV-B19 are: erythema infectiosum (5th disease), athroopathy, transient aplastic crisis, fetal infection leading to fetal hydrops, red blood cells aplasia. It occurs in outbreaks among school-aged children, although it can also occur in adults. **Clinical case.** We report the clinical case of a 16-year-old child, previously healthy, who came to the Emergency Department of the Municipal Clinical Hospital of Contagious Diseases for Children, with low fever 37.5 °C, rash, odynophagia, repeated vomiting, headache, general weakness, with an onset 4 days earlier. In outpatient department was administered antipyretics and desensitizers, without improvement. The physical examination revealed an erythematous rash, "slapped" appearance on the face, with circum-oral pallor. Subsequently, pruriginous, reticular eruptions with lacy edges appeared on the trunk

and extremities. At the periarticular level of the hands and feet, the eruption gets a papulo-purpuric appearance, "gloves and stockings". The clinical examination revealed follicular purulent deposits on both tonsils and enlarged, mobile laterocervical lymph nodes. As a result of clinical and laboratory investigations (excluding Yersiniosis, infection with EBV, CMV, HSV, rheumatoid arthritis, allergic dermatitis) the diagnosis of Parvovirus-B-19 infection was established. Erythema Infectiosum (B19V DNA positive by PCR). The treatment included hypoallergenic diet, desensitizers, antibiotic therapy, antipyretics. The eruptions subsided 2 weeks after the onset of the disease. **Conclusion.** Parvovirus B19 infection manifests most often in school-aged children, as a mild, self-limited prodromal illness with an erythematous rash on the face. In adolescents and young adults, it develops with the papulo-purpuric „gloves and stockings” syndrome, located periarticularly with distinct edges on hand and ankle joints, sometimes associated with transient arthropathy.

IMPORTED MALARIA IN THE LAST FIVE YEARS IN REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Currently, malaria continues to be a pathology with a major impact worldwide due to the intense migration of the population.

Methods. A retrospective and prospective study was conducted on malaria cases, hospitalized in the "Toma Ciorbă" Clinical Hospital for Infectious Diseases in the last 5 years. **Results.** Over the last 5 years, 14 cases of imported malaria were registered in the Republic of Moldova: in 2018 – 1 case, in 2019 – 3, in 2021 – 3, in 2022 – 7. Of the 14 patients, 3 were with *Pl. ovale*, and 11 with *Pl. Falciparum*. Malaria patients contacted the disease in West and South Africa. Only 4 received chemoprophylaxis, and developed the medium form of disease. Patients requested medical assistance on average at 5.57±0.91 days with symptoms: fever

38°-40°C, chills, sweating, asthenia, muscle pain. Parasitological examination revealed the presence of parasitemia with *Pl. falciparum* between 720 and 1,520,000/mkl of blood. The evolution of the disease was medium in 6 patients, and in 8 patients - severe. Clinical examination revealed: hepatomegaly in 8 patients, splenomegaly in 4, pneumonia in 6 and 2 patients - cerebral edema, accompanied by polyorganic failure, which death. The biological tests: hypertransaminasemia – 8 patients, anemia - 2, thrombocytopenia - 11. The treatment consisted of combined antimalarials. The average duration of hospitalization was 6 days. Recurrences of malaria were determined in 5 patients. **Conclusion.** Chemoprophylaxis is important to prevent severe forms and the precocity of treatment determines the evolution of disease; the frequency of relapses is relatively high.

NON-INVASIVE EVALUATION OF LIVER FIBROSIS FOLLOWING TREATMENT WITH DIRECT-ACTING ANTIVIRALS IN CIRRHOSIS WITH HEPATITIS C VIRUS: THE EXPERIENCE OF A CENTER

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ABSTRACT

Introduction. Liver fibrosis is a marker of the evolution of hepatitis C virus (HCV) infection. Non-invasive methods for assessing fibrosis (APRI and Fib-4), give us the opportunity to monitor the progression of liver fibrosis. The aim of the study was to evaluate non-invasive indications of liver fibrosis in patients with HCV cirrhosis after treatment with direct-acting antivirals (DAA).

Material and methods. The study enrolled 144 patients with liver cirrhosis, divided into two groups, depending on the duration and treatment regimen: group I - Sofosbuvir and Daclatasvir / Ledipasvir with Ribavirin, for 12 weeks, group II - Sofosbuvir and Daclatasvir / Ledipasvir for 24 weeks. **Results.** Following the evaluation of the

fibrosis stage by Fibroscan, it was established: stage F3 – 12 (8.3%) patients, stage F4 – 132 (91.6%) patients. After treatment, the average APRI score decreased from 2.6 to 0.6, and the average Fib-4 score from 6.9 to 3.2. Between evaluation at the baseline of antiviral therapy and evaluation at 6 months, there was a significant decrease in APRI and Fib-4 scores ($p < 0.001$). Fib-4 values greater than 3.25 were equivalent to the results obtained by Fibroscan. Biochemical response was achieved in both groups, with the transaminase profile improving at the end of treatment. The sustained virological response was present in 136 (94.4%) patients. **Conclusions.** The results of the study showed an improvement in liver fibrosis after therapy with DAA, regardless of the scheme and duration of treatment.

PROGRESS, RISKS AND THREATS THE COVID-19 PANDEMIC REVEALED

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ABSTRACT

The COVID-19 pandemic revealed unexpected aspects of epidemics in today's globalised world. Studies on this biomedical, social-economic and political event were analysed. Some authors redimensioned the coronavirus family and SARS-CoV-2 strains, whereas others discussed clinical manifestations, treatment and prevention of the illness. Concurrently ethical, legal and deontological challenges arose, connected with therapeutic and prophylactic strategies, scientific results accuracy and negative infodemia, as well as with physicians' overall attitudes and burnout syndrome, with population behaviour, mentalities and fear or panic control. Epistemological approaches stemmed out, too. The COVID-19 pandemic was interpreted within pathocenoses or as a syndemic. Pathocenosis (Grmek, 1969) - "morbid environment" - explains disease emergence in time and space, outlining specific transitions and interdependences between dynamic pathologies. As a syndemic (Singer, 1996) - "synergistic epidemic" -, COVID-19 could evolve

in the same patient in parallel with preexistent comorbidities or coinfections, and against a certain cultural background, under the pressure of social and financial disparities, medical and sanitary vulnerabilities, hygiene precariousness, environmental impairment. Endangered age groups -the elderly and the children- particularly suffered from isolation and marginalisation. Often neglected non-COVID-19 patients required prioritisation of emergencies and chronic conditions. Various types of anti-Sars-Cov-2 vaccines were soon available. Political and economic involvement was obvious. Vaccines produced outside the U.S.A. and E.U. seemed invalid in the Western world. Other countries refused "Western" immunising agents, while others couldn't afford any. Controversial adverse drug reactions, still under evaluation, appeared. Conclusions outline multifaceted issues concerning pandemics, epidemic intelligence, health policies and manipulation risks to further consider from complex interdisciplinary perspectives.

DIGESTIVE MANIFESTATIONS IN PATIENTS WITH COVID-19

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ABSTRACT

Introduction. The pandemic Sars-Cov2 virus infection significantly marked our lives and still represents a health problem. Our aim was to portray the most frequent digestive manifestations (DM) and laboratory changes that may occur in patients with COVID-19. **Methods.** A retrospective and analytical study was conducted between January 1st 2020-December 31st 2022, collecting 120 patients admitted in a medical department of County Emergency Hospital in Oradea. The patient's data were collected through archived files and the information was analysed on Excel file. **Results.** We enrolled 120 patients (72 men) with COVID-19 and DM, over 3 years. A higher incidence was in urban cases (55%) and in the 6th-7th (58%) decades of life. Most frequent symptom was diarrhea (37%), followed by nausea (29%), vomiting (18%)

and abdominal pain (12%). Only 4% presented other GI symptoms such as odynophagia or upper GI bleeding. Regarding the liver damage, 25.83% of the patients had high levels of ALT, 20.83% of AST, 15.18% of total bilirubin and 10% of GGT. The most common comorbidities were: high blood pressure (62.5%), obesity (48.3%) and diabetes (35.83%). Based on CT scans, mild (53%), moderate (39%) and severe (8%) forms of disease were observed. The evolution under treatment was favorable in 81 cases (67%). The patients with isolated DM had a better evolution than those with associated respiratory symptoms. **Conclusions.** COVID-19 remains a significant problem due to its fast spreading and the variety of correlated symptoms. Beside respiratory symptoms, DM are representative and highly correlated with outcomes in COVID-19 patients.

THE EFFECTIVENESS OF OXIGEN THERAPY AT PATIENTS WITH COVID-19 INFECTION ASSOCIATED ACUTE RESPIRATORY FAILURE

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ABSTRACT

Introduction. Patients with COVID-19 with comorbidities are at increased risk of developing ARDS, and require oxygen therapy. Oxygen concentrators provide a continuous flow of oxygen to patients with breathing difficulties. **Methods.** The study included 51 patients with severe forms of the COVID-19 which had ARDS in the first 24 hours after admission (SpO₂ ≤94%). **Results.** Patients age ranged 18-90 years, with average of 65.5 years. In the study group, 35 (68.6%) were women and 16 (31.4%) were men. The most determined comorbidities were hypertension - 42 (82.4%) patients, other chronic cardiac diseases - 26 (50.9%), diabetes - 15 (29.4%), chronic obstructive pulmonary disease - 7 (13.7%), chronic hepatitis - 4 (7.8%), chronic kidney diseases and

neurological diseases - 3 (5.9%) patients. Oxygen therapy increased the level of SaO₂ from 92.5% on the 1st day of admission to 95.7% on the 5th day (p < 0.0001), the respiratory rate decreased from 21.97 breaths/minute on the 1st day to 19.45 on the day the 7th day of admission (P < 0.0001). On the 5th day of oxygen therapy 15 (29.4%) patients and on the 7th day - 23 (45.1%) patients were disconnected from the O₂ source (P < 0.0001). The duration of hospitalization of the patients in the study was 14.94 days/bed. **Conclusion.** In patients with COVID-19 infection with ARDS, as a result of oxygen therapy associated with drug treatment, oxygen saturation increased, hemodynamic indices improved, inflammatory markers decreased and the duration of hospitalization was reduced.

INTERFERON THERAPY FOR PRIMARY MYELOFIBROSIS AND ESSENTIAL THROMBOCYTHEMIA IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Primary myelofibrosis (PM) and essential thrombocythemia (ET) are included into the group of Ph-negative myeloproliferative neoplasms (MPN) with similar changes, especially thrombocytosis in the complete blood count (CBC). Despite numerous studies in the field of MPN, the etiology and treatment options are still not determined. **Objective.** The aim of the study was the assessment of treatment results in patients with PM and ET. **Material and Methods.** 450 patients with PM and 176 patients with TE were diagnosed in Moldova by the peripheral blood molecular-genetic analysis and bone marrow biopsy. The study included 16 PM cases and 17 ET cases, who were treated with interferon alpha and followed up at the Institute of Oncology from Moldova between

2019-2022. **Results.** The median age of patients with PM was 38 years, and that one of patients with TE – 39 years. We achieved symptoms relief and CBC normalization in 33.3 % of cases with PM. Treatment was suspended in 33.3 % of cases with PM and only in 17.6 % of cases with ET. Interferon therapy combined with hydroxyurea was administered in 8.3 % of PM patients. The tumor process stabilization was achieved in 8.3 % of cases with PM. In the group of patients with ET, the CBC was recovered to normal in 64.8 % of cases, and the platelets count remained stable in 17.6 % of cases during the treatment. **Conclusions.** This study shows that interferon alpha is an effective treatment option for MPN, particularly in young people or in cases of intolerance to the other anti-cancer medications.

IMMUNE COMPONENT IN NON-HODGKIN'S LYMPHOMAS

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ABSTRACT

Introduction. The relationship between the immune system and non-Hodgkin lymphomas (NHL) is complex. Immune complications can be assessed: before NHL, with lymphoma diagnosis, and later after treatment. **Material and methods.** The study included 62 NHL's patients with immune component (IC), average age 62.3±3 years, women-43 (69%), men-19 (31%), treated within the Hematology Center, Republic of Moldova (2020-2021). The association was analyzed according to NHL type, onset and period of association. **Results.** The IC: indolent NHL 33 (58%), aggressive NHL 29 (42%) patients. Regardless of the type of NHL, immune hemolytic anemias (IHA) (31.1% and 22%), immune thrombocytopenias (IT) (12.9% and 3.8%) and immune thyroiditis (10.3% and 2.6%) prevailed. SLE independent of the NHL type was present with the same frequency (1.3%). Vasculitis,

vitiligo-only in the indolent NHL, but psoriasis only in the aggressive NHL. In 82.8% of cases the association of 1 IC was appreciated, and in 17.2% multiple associations. The IC was appreciated in nodal (51.6%) and extranodal (48.4%) onset NHL, such as: spleen 23 (35.9%), thyroid gland and soft tissues (3.1% each), nasopharynx, skin, stomach and vertebra in only 1.5% each. IC developed during the NHL predominated (67.5%): IHA-51.9%, IT-14.2%, autoimmune thyroiditis 1.3%. SLE, vasculitis, psoriasis, RA, vitiligo developed until NHL. **Conclusions.** A predominance of the immune component was demonstrated in indolent NHL with nodal, spleen onset, which developed more frequently during the disease, being predominantly manifested by IHA, IT and autoimmune thyroiditis. SLE, vasculitis, psoriasis, RA, vitiligo developed only until the diagnosis of NHL was confirmed.

LES ASPECTS DE LA DIFFUSION DES LYMPHOMES NON HODGKINIENS AGRESSIFS EXTRA-GANGLIONNAIRES

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ABSTRAITE

L'Introduction. Les lymphomes non hodgkiniens (LNH) sont des tumeurs malignes qui se développent à partir de cellules hématopoïétiques situées extramédullaire. L'indice de morbidité pour les LNH en République de Moldavie est de 4,1 pour 100000 habitants. **Des matériaux et des méthodes.** Les méthodes suivantes ont été utilisées : statistiques descriptives, comparatives, cliniques et analytiques. **Des résultats.** Le LNH extra-ganglionnaire agressif a tendance à disséminer plus fréquemment dans les ganglions lymphatiques – 42,8 %, suivi par les tissus mous – 20 %, l'anneau lymphatique Waldeyer – 11,42 %, le foie – 8,57 %, le SNC – 5,71 %, les tissus pulmonaires – 5,71 %. Les lymphomes extra-ganglionnaires ont la tendance à disséminer à des zones anatomiques spécifiques en

fonction de l'emplacement primaire de la tumeur. Le TGI se propage plus souvent aux ganglions lymphatiques – 35%, suivi du foie – 30%, de la rate – 10%. L'anneau lymphatique de Waldeyer dissémine aussi plus souvent dans les ganglions lymphatiques – 70 %, les sinus paranasaux – 20%. Dans le cas des lymphomes avec la peau primaire et les tissus mous, la tendance de diffusion a été observée dans les ganglions lymphatiques - 28%, tissus mous - 25%, SNC - 20%. **Des conclusions.** Parmi les formations extra-ganglionnaires, le LNH agressif implique plus souvent dans le processus le TGI, suivi par l'anneau lymphatique de Waldeyer. Le plus fréquemment, le LNH agressif extra-ganglionnaire se propage aux ganglions lymphatiques. Le stade IV du LNH extra-ganglionnaire agressif a une plus grande tendance à disséminer que les autres stades.

ASSESSMENT OF THE SERUM VALUES OF THE PRO AND ANTI-INFLAMMATORY CYTOKINIC PROFILE IN PATIENTS WITH CORALIFORM NEPHROLITHIASIS AND CALCULOUS PYELONEPHRITIS

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ABSTRACT

Introduction. Chronic pyelonephritis plays a rather important role in the formation of stones as an etiopathogenetic point. In 92% of cases, coralliform nephrolithiasis occurs with a permanent background of pyelonephritis attacks. This is due to many underlying factors, including uremic environment, increased levels of circulating pro-inflammatory cytokines, oxidative stress, increased incidence of infections. An increased production of cytokines occurs due to oxidative stress, which occurs when there is an excessive production of free radicals or a low level of antioxidants. **The aims.** To evaluate some pro-inflammatory and anti-inflammatory cytokines in patients with coralliform nephrolithiasis and calculous pyelonephritis and their pathogenic role. **Material and methods.** The research was carried out on 81 patients all presenting with kidney stones. Serum levels of IL-1 β , IL-6, TNF- α and the anti-inflammatory action of IL-10 were evaluated. The data were compared

with those obtained in 40 healthy subjects (control group). **Results.** The levels of IL-1 β , IL-6, TNF- α were increased in patients with coralliform nephrolithiasis and calculous pyelonephritis above the reference values. Thus, IL-1 β was increased above 49.101 pg/ml (reference values \leq 5pg/ml), IL-6 values exceeded 145 pg/ml (reference values \leq 9.7pg/ml), TNF- α levels have exceeded 30.4 pg/ml (reference values \leq 8.1pg/ml), and IL-10 values were also increased and exceeded 78 pg/ml (reference values \leq 9.1pg/ml), compared to the control group witness **Conclusions.** Measurement of IL-1 β , IL-6, TNF- α , and IL-10 is reasonable in patients with coralliform nephrolithiasis and calculous pyelonephritis to assess the severity and frequency of inflammation and to elucidate their pathogenic role. Further research is needed to determine the most effective ways to reduce the negative impact of inflammation and to develop new targeted therapeutic options based on the pathophysiological mechanisms underlying nephrolithiasis.

COMPARATIVE STUDY OF THE QUALITY-OF-LIFE IN MALES AND FEMALES WITH CHRONIC KIDNEY DISEASE

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ABSTRACT

Introduction. The issue regarding the quality-of-life in patients with chronic kidney disease (CKD) has become quite important, and with a lack of data between males and females. **Material and methods.** There were studied 150 patients with CKD, of which 75 were men and 75 women. The diagnosis was made on the basis of clinical and paraclinical picture (glomerular filtration rate <60 ml/min/1.73 m²). The mean age of the patients was 47.5 years (18 to 77 years). The SF-36 questionnaire was used in the study. The comparison was carried out after patients were categories in different age groups: 18–27 years old (n = 8), 28–37 years old (n = 28), 38–47 years old (n = 34), 48–57 years old (n = 42), 58–67 years old (n = 22), 68–77 years old (n = 16). **Results.** The physical health score in males with CKD (38.4 ± 10.04) was lower than in females (41.5 ± 5.89 , $p = 0.0225$), while the total psychological score of health in

males (50.8 ± 11.31) did not differ from females (54.7 ± 17.02 , $p = 0.1005$). The following indicators were significantly higher in males than females with CKD: physical functioning (45.4 ± 8.14 and 50.8 ± 18.77 , $p = 0.0237$), role physical functioning (45.8 ± 4.41 and 50.3 ± 15.23 ; $p = 0.0151$), pain intensity (45.8 ± 13.86 and 50.3 ± 4.2 ; $p = 0.0079$), general health status (46.6 ± 9.85 and 50.8 ± 9.12 , $p = 0.0075$), according to the vitality scale (12.04 ± 3.22 and 13.15 ± 2.92 , $p = 0.0285$) and social functioning (1.24 ± 0.26 and 1.13 ± 0.35 , $p = 0.0305$). Parameters of psychological health (10.36 ± 4.19 and 11.01 ± 5.7 ; $p = 0.4275$) and emotional health (0.64 ± 0.16 and 0.59 ± 0.31 , $p = 0.2165$) in patients with chronic kidney disease in males did not differ from females. **Conclusions.** Males with chronic kidney disease suffer greater than females according to the physical health parameters, while the psychological health parameters show a lesser difference between sexes. Social adaptation is equally reduced in both sexes.

GOUT AND RENAL DYSFUNCTION

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ABSTRACT

Introduction. One in 10 people with chronic kidney disease has gout, and an even higher percentage of people with gout have kidney disease [kidneyfund.org]. **Objective of the study.** Analysis of renal dysfunction in patients with gout in different age groups. **Material and methods.** 237 patients with gout (males 60 ± 8.0 years, females 63 ± 9.0 years). The patients were separated into two groups: the age of onset up to 59 years (group I, 91 people) and the age of onset after 60 years inclusive (group II, 146 people). **Results.** The renal function was mostly preserved in patients from group I – 51% had a level of glomerular filtration rate (GFR) corresponding to stage 2 of chronic kidney disease (CKD), stage 4 of CKD was determined in only

2 patients from group I. A pronounced decrease in kidney function was determined in group II – significantly more often there was stage 3 of CKD (16 (22%) in group I and 59 (46%) in group II, $p = 0.001$). In 12 participants in group II, GFR was below $29 \text{ ml/min/1.73 m}^2$. Only in 6% of cases, a slight decrease in GFR was determined, which was 4 times lower than in group I. **Conclusions.** With increasing age, the frequency of risk factors for gout increases, especially for people with kidney damage: taking small doses of acetylsalicylic acid increases the risk from 6 to 40%, diuretics from 18 to 44%, alcohol consumption from 14 to 28%, hypertension from 44 to 78%, consumption of foods saturated with purine from 51 to 68%, overweightness and obesity from 58 to 76%.

IMPACT OF CHRONIC PAIN ON POST-STROKE FUNCTIONAL REHABILITATION

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ABSTRACT

Introduction. Chronic pain is a common problem experienced by stroke patients that can negatively affect their functional outcomes during rehabilitation. This study aimed to investigate the impact of chronic pain on functional outcomes in stroke patients. **Methods.** We analyzed data from 270 stroke patients who were divided into three pain status groups: none, acute, and chronic. The mean Barthel Index scores were compared among the groups using ANOVA to examine the differences in Barthel Index scores between each group. **Results.** Data from 270 stroke patients were analyzed, and they were divided into three groups according to their pain status: none, acute, and chronic. The mean Barthel Index scores were

72.7 (SD± 7.8), 70.1 (SD± 9.4), and 57.9 (SD± 12.7) for the none, acute, and chronic pain groups, respectively. The ANOVA scores among the three pain groups showed a significant main effect of pain status on Barthel Index scores, $F(2, 267) = 11.218$, $p < .001$. Post-hoc tests revealed that patients with chronic pain had significantly lower Barthel Index scores compared to those without pain. **Conclusions.** Chronic pain has a significant negative impact on functional outcomes in stroke patients. During rehabilitation should prioritize the management of chronic pain in stroke patients and develop individualized rehabilitation plans that incorporate pain management strategies to optimize functional outcomes in stroke patients experiencing chronic pain.

SOCIAL AND DEMOGRAPHIC FACTORS IN POST-STROKE PATIENTS WITH CHRONIC MUSCULOSKELETAL PAIN

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ABSTRACT

Introduction. Post-stroke patients often suffer from chronic musculoskeletal pain, which can significantly impact their quality of life. Understanding the social and demographic factors that influence chronic musculoskeletal pain in these patients can help enhance effective interventions. This study aimed to investigate the demographic factors associated with chronic musculoskeletal pain in post-stroke patients. **Methods.** This retrospective study was conducted on 270 post-stroke patients. Demographic factors analyzed were age decade, age category, gender, residency, and VAS pain score. The VAS pain score was used to measure pain intensity. **Results.** Out of 270 patients, 56 reported chronic musculoskeletal pain. The most prevalent age group was patients between 60-69

years (42.9%). Patients over the age of 65 reported chronic musculoskeletal pain more frequently than those between the ages of 40-65. Male patients reported having pain more frequently than female patients (67.9% vs. 32.1%). Rural inhabitants had a higher prevalence of chronic musculoskeletal pain (53.6%) compared to urban inhabitants. Men reported higher pain intensity than women, with a mean VAS score of 5.05 and 4.06, respectively. **Conclusion.** Older age, male gender, rural residency, and higher pain intensity were associated with a higher prevalence of chronic musculoskeletal pain. Healthcare professionals should develop tailored interventions for post-stroke patients with chronic musculoskeletal pain. However, further research is needed to investigate the social factors associated with chronic musculoskeletal pain in this patient population.

THE EFFECT OF DEMENTIA ON THE BULGARIAN PATIENTS – PILOT STUDY

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ABSTRACT

Introduction. Dementia is a group of different progressive diseases that currently has no cure. In diseases with limited disease modifying therapy, success of treatment is often measured by improving the QOL of the individual. Dementia causes a decrease in cognitive function, so QOL has historically been reported by proxies such as family members or health-care providers. The aim was to conduct a systematic review of the literature to determine how QOL was assessed in adults, 65 years and older with dementia, and identify factors that influence the reported scores. **Methods.** A systematic review of full-text articles addressing QOL in older adults with dementia, published in English from January 2000 to September 2020, was conducted using PubMed and PsycINFO. We included studies that assessed QOL and involved participants 65 years and older. Studies were evaluated for inclusion by 2 independent pairs of reviewers. Study characteristics and findings were summarized. We identified social and clinical

factors influencing QOL scores. **Results.** 19 of the 928 articles found met the requirements for inclusion. These 19 studies, with sample sizes ranging from 32 to 1,366, included 6,279 dementia patients. The participants' average age ranged from 77.1 to 86.6 years. Five measuring tools were identified: DEMQOL (health-related QOL for people with dementia), QUALIDEM (a dementia-specific QOL instrument), Quality of Life in Late-Stage Dementia (QUALID), and Quality of Life in Alzheimer Disease (QOL-AD). In terms of QOL, self-ratings were superior to proxy ratings. Depression, functional impairment, and polypharmacy were among the factors that frequently affected how well people rated their own quality of life. Functional impairment, the prevalence of neuropsychiatric symptoms, cognitive impairment, and caregiver strain were frequently found to have an impact on proxy assessments. **Conclusion.** Self- and proxy reports may work together to evaluate QOL in dementia and make sure that all viewpoints are taken into account.

OBSTETRICS AND GYNECOLOGY

OBESITY IN PREGNANCY – IMPLICATIONS ON PREGNANCY EVENTS

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ABSTRACT

Introduction. In the majority of developed nations, obesity and being overweight are important health issues. Every year, a greater proportion of young women who are overweight become pregnant. The risks to the mother and the unborn child during pregnancy and after delivery are brought up by this. **The goal of this study** is to identify the health risks associated with being an overweight woman, particularly the chance of giving birth prematurely. **Resources and methods.** The University Hospital «Maichin Dom» outpatient clinic is the setting for this prospective and retrospective study. In our study, 91 pregnant women with a BMI within the normal range served as the control group and 105

pregnant women with a BMI less than 25 kg/m² served as the case group. **Results.** The case group's mean BMI was 34.79 3.71 kg/m², while the control group's was 20.20 2.24 kg/m². We recorded 24.8% (n = 26) of the 105 women in the case group who delivered their babies before term. 17.6% (n = 16) of the 91 women in the control group experienced preterm deliveries. We discovered a strong link between higher BMI and the chance of higher systolic and diastolic blood pressure. In addition, we discovered comorbidities in 24.2% of controls and 43.8% of cases. **Conclusion.** Preterm birth and pregnancy problems are more likely in women who are overweight or obese during pregnancy. In order to help women, lose weight before this critical stage of life, extra efforts should be done.

OBSTETRICS AND GYNECOLOGY

FLUORIDE IN THE DRINKING WATER AS A RISK FACTOR FOR THE DEVELOPMENT OF SUBCLINICAL HYPOTHYROIDISM

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ABSTRACT

Introduction. It has been scientifically proven that there is an association between subclinical hypothyroidism (SCH) during pregnancy and hypertension in pregnancy, preterm birth and impaired cognitive development of children. There are data on the consumption of fluoridated drinking water and the development of subclinical hypothyroidism during pregnancy. **Material and methods.** Fluoride in drinking water increases the risk of subclinical hypothyroidism. The study conducted in Canada divided pregnant women into euthyroid (n=1301), with subclinical hypothyroidism (n=100) and primary hypothyroid (n=107). There were measured fluoride levels in consumed water and in some urine samples, and was estimated the impact of fluoridated water consumption on pregnant women in the described groups. In the Republic of Moldova, the data on

the fluoride content, taken from the registers of the Public Health Centers, for the period 2010-2017, were analyzed. In the Republic of Moldova there are districts where the fluoride concentration essentially exceeds the normative limit. **Results.** Among women with normal antiTPO levels in Canada, the risk of primary hypothyroidism increased with increasing fluoride-containing water intake (OR water fluoride concentration: 2.85; 95% CI: 1.25, 6.50). At the same time, the data analysis of 150 pregnant women from different regions of the Republic of Moldova demonstrated the higher incidence of subclinical hypothyroidism in pregnant women living in districts where the fluoride content in the water is high (Ceadir-Lunga, Ștefan-Vodă). **Conclusions.** Additional research is needed for the regions of the Republic of Moldova to establish the rapport between fluoride in drinking water and subclinical hypothyroidism in pregnant women.

OBSTETRICS AND GYNECOLOGY

MATERNAL AND PERINATAL OUTCOMES ASSOCIATED WITH TWIN VERSUS SINGLETON PREGNANCIES AFTER IN VITRO FERTILIZATION

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ABSTRACT

Introduction. Originally developed for untreatable tubal conditions, in vitro fertilization (IVF) is now widely applied for the treatment of infertility from various causes, including endometriosis, male factor and indeterminate infertility. Today about 3-5% of all births in developed countries are due to IVF. Twin pregnancy and delivery differ from those with singleton pregnancies and is influenced by the course of pregnancy and complications associated with multiple pregnancy. **Material and Methods.** The study included 580 patients who gave birth between 2019-2023 at IMSP IMC and IMSP SCM "Gh. Paladi". **Results.** Patients had obstetric history complicated by miscarriages - 14% cases, medical abortions - 7.8%, stalled pregnancies -

8.2% and ectopic pregnancies - 15.5% cases. Most of patients included in the study had singleton pregnancies - 62.2% cases, twin pregnancies - 37.8%. The results of the study showed that most frequently pregnancies were completed at 37-40 weeks in 71% of cases. Preterm birth occurred in 28.1% cases. Emergency caesarean section (CS) was the way of finishing the birth in 49% cases, followed by flat CS - 37% cases, and only 14% of pregnant women gave birth naturally. **Conclusions.** Twin pregnancies conceived by IVF are more commonly associated with higher rates of CS and low birth weight. Increased use of assisted reproductive technologies and a general increase in the incidence of multiple pregnancies leads to the need for increased monitoring of mother and fetus.

OBSTETRICS AND GYNECOLOGY

DEEP ENDOMETRIOSIS, DIAGNOSIS AND CLINICAL FEATURES

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ABSTRACT

Introduction. Deep endometriosis (DE) has the widest spectrum of localizations, the most pronounced clinic, it mimics many diseases, is the most often missed in the diagnostic process, it undergoes rarely drug treatment, progresses during pregnancy, unlike other forms of endometriosis (E). The ENZIAN score for DE, used in this study, brings diagnostic criteria in addition to previous classifications, specifying the compartment of the lesion based on the «4D» clinic. **Material and methods.** A case-control study was carried out on 141 patients hospitalized in IMSP SCM NR.1, with the diagnosis of E confirmed laparoscopically, divided into 2 groups: DE and other forms of E. **Results.** The use of the ENZIAN classification during laparoscopy in the

group of patients revealed a 54.61% incidence of DE. The study demonstrated the statistically true correlation between dyspareunia and compartment B by ENZIAN ($p < 0.001$), dyschezia and comp. A and C ($p < 0.001$), associated with rectal tenesmus in 33.76%, defecation disorders in 37.66%, dysmenorrhea and comp. FA ($p < 0.001$), associated with menorrhagia in 25.97%, dysuria and comp. FB ($p < 0.001$), associated with bladder tenesmus in 18.2% and hematuria in 9.09% compared to the control group where the basic symptom was infertility and moderate dysmenorrhea, associated with cystic formations on the ovaries. **Conclusions.** However, the symptoms presented by patients in DE may indicate the compartment of the affection after ENZIAN, thus requiring multidisciplinary diagnosis and approach.

OBSTETRICS AND GYNECOLOGY

ENDOMETRIOSIS AND BLADDER PAIN SYNDROME

Nadejda CODREANU, Igor CODREANU, Elena IVANOVA

ABSTRACT

Introduction. Pelvic pain syndrome associated with bladder pain syndrome is common in women with endometriosis (E). Bladder involvement with E is often unrecognized. Such women are treated for a long time from cystitis. International studies show that in the case of chronic pelvic pain associated with a pain bladder syndrome, simultaneous laparoscopy and cystoscopy under the same anesthesia is recommended as the most optimal method of diagnosis and treatment. **Material and methods.** A case-control study was carried out on 318 infertile patients hospitalized in IMSP SCM NR.1 during 3 years, with the diagnosis of E confirmed laparoscopically. **Results.** In 55 women

(17.3%), E of the bladder was found, which the gynecological team only stated without surgical treatment. 58% of these patients were repeatedly treated for chronic cystitis due to the presence of bladder pain syndrome and hematuria. The rest of the women were asymptomatic. In 20% of patients with E of the bladder with secondary infertility, during pregnancy there were hydronephrosis and repeated pyelonephritis, which required stenting of the ureters, which may be an indirect sign of ureteral E. **Conclusions.** Thus, the presence of bladder pain syndrome in young women with infertility may be a sign of deep E, which is an indication for a multidisciplinary approach to reduce diagnostic and therapeutic errors.

THE COMPARATIVE VALUE OF MACROGLOBULINE AND INTERLEUKINE-6 IN THE WOMEN WITH PRETERM AND TERM BIRTH

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ABSTRACT

Introduction. Preterm birth is the leading cause of neonatal morbidity and mortality and is one of the major challenges of modern obstetrics and still lacks an efficient treatment. Although the underlying causes of pregnancy-associated complication are numerous, it is well established that infection and inflammation represent a highly significant risk factor in preterm birth. In fact, a sophisticated interaction occurs between contractile and immuno-inflammatory pathways, whereby proinflammatory amplification is intensified by collaborative connections between cells, ligands, and tissues. However, despite the clinical and public health significance, infectious agents, molecular trigger(s), and immune pathways underlying the pathogenesis of preterm birth remain underdefined and represent a major gap in knowledge. **Objective.** To estimate the comparative value of the serum levels of α -Macroglobuline and proinflammatory cytokines as a Interleukine-6. **Methods.** The study comprised 65 women with spontaneous preterm labor and 65 women with term labor. Maternal plasma concentrations of α -Macroglobuline and Interleukine-6 were detected by standard test system Enzyme-like Immunosorbent Assay Kit for α -Macroglobuline and Best-Vector A-8768 for Interleukine-6 Ref 3307 which (GmbH Co,

Germany) gave an analytical sensitive of 0,35ng/ml U/ml for α -Macroglobuline and 0.131 pg/ml for Interleukine-6. The numerical values of the parameters were numbered in Excel table, after which – imported into the statistical analysis software R studio, using descriptive, variation, and correlational analysis. Applied statistic tests: nonparametrical Mann-Whitney test and p Spearman test were used as appropriate. P values less than 0.05 were considered statistically significant. **Results.** The results of this study demonstrated increase plasmal levels of the α -Macroglobuline (min. 5.06 pg/ml, max. 99.88 pg/ml, $\mu_{median} = 46.97$ pg/ml) in the women with preterm compared to the control group, women with term delivery (min. 0.76 pg/ml, max. 80.84 pg/ml, $\mu_{median} = 1.10$ pg/ml) (p0.001).

At the same time, the study found a increase plasmal levels of the Interleukine-6 (min. 0.99 pg/ml, max. 192.93 pg/ml, $\mu_{median} = 51.90$ pg/ml) in the women with preterm compared to the control group, women with term delivery min. (9.65 pg/ml, max. 137.97 pg/ml, $\mu_{median} = 21.51$ pg/ml) (p0.001). **Conclusion.** The study findings suggest that plasma levels of the α -Macroglobuline and Interleukine-6 in women with preterm labor may be considered as a promising early biomarker for preterm labor.

OBSTETRICS AND GYNECOLOGY

ASSESSMENT OF THE ROLE OF APRI INDEX IN WOMEN WITH INTRAHEPATIC CHOLESTASIS OF PREGNANCY

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ABSTRACT

Introduction. Intrahepatic cholestasis of pregnancy (ICP) is a condition characterized by increased liver function tests and the presence of cutaneous pruritus. The aspartate aminotransferase to platelet ratio index (APRI) has been shown to be a useful tool in diagnosing and predicting the progression of liver cirrhosis and fibrosis. At the same time, there are few studies, which would focus on the assessment of APRI level in women with ICP. **Material and Methods.** In a prospective study 71 clinical cases complicated by ICP (group A) were compared to 71 cases without ICP (group B). The APRI was calculated using the formula: $\{(AST/\text{upper limit of the normal values}) \times 100\} / \text{number of platelets } (10^9/L)$. The arithmetic means and standard deviation (M (SD)) were calculated,

a t-test to compare two means was applied. Besides that, Pearson's correlation was assessed. **Results.** Mean values of APRI in group A were 1.2 (1.2) compared to group B – 0.3 (0.1), 95% CI 0.61 - 1.18, $p < 0.0001$. By analyzing the correlation between APRI and indicators assessed in the study a negative correlation with term of pregnancy at which delivery occurred ($p = 0.01$) and with delivery duration ($p = 0.01$) was identified. Positive correlation was also found with the presence of meconium-stained amniotic fluid ($p = 0.01$), caesarean section rate ($p = 0.01$) and the amount of postpartum blood loss in women recruited in the study ($p = 0.01$). **Conclusions.** The results of our study revealed the correlation between APRI value and the presence of specific conditions related to pregnancy, that may be an important step in the management of cases of ICP.

PERINATAL OUTCOMES IN WOMEN WITH POLYCYSTIC OVARY SYNDROME

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ABSTRACT

Introduction. Pregnancy in women with polycystic ovary syndrome (PCOS) is associated with maternal and neonatal complications, such as hypertensive disorders, gestational diabetes, pregnancy loss, premature delivery, and spontaneous abortion. Fetal and neonatal outcomes suggest that PCOS may be linked to prematurity, increased neonatal morbidity, birth weight variations (high or low for gestational age), fetal growth restriction, and transfer to the neonatal intensive care unit (NICU). **Material and Methods.** We conducted a retrospective comparative study of 120 pregnant women treated at IMSP SCM "Gheorghe Paladi", divided into two groups: 60 with PCOS and 60 without. We compared the outcomes of pregnancy and used SPSS 29.0.0.0 software and Excel to conduct statistical analyses. **Results.** The mean

age in the PCOS group was 31.5 ± 5.37 years and 29.95 ± 5.7 years in the control group. Pregnancy was associated with hypertensive disorders in 25% of the PCOS group vs. 10% ($p < 0.05$) of the control group, gestational diabetes in 28.3% vs. 5% ($p < 0.001$), prematurity in 13.3% vs. 0% ($p < 0.01$), and spontaneous abortion in 11.7% vs. 0% ($p < 0.01$). The results of the study regarding delivery and neonatal outcomes show that induced delivery occurred in 75.47% vs. 40% ($p < 0.001$), cesarean section was performed in 62.26% vs. 21.7% ($p < 0.001$), macrosomia was observed in 26.43% vs. 0% ($p < 0.001$), and an Apgar score of 7-8 was recorded in 38.3% vs. 0% ($p < 0.01$). **Conclusion.** Strict antenatal monitoring of pregnancy with risk factors such as hypertensive disorders and gestational diabetes remains the gold standard for favorable perinatal outcomes in women with PCOS.

OBSTETRICS AND GYNECOLOGY

IMPACT OF WEIGHT GAIN DURING PREGNANCY IN OBESE WOMEN ON PERINATAL OUTCOMES

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ABSTRACT

Introduction. Obesity during pregnancy is increasing worldwide, frequently representing a challenging situation in obstetrics due to maternal complications and perinatal outcomes. **Material and methods.** In a retrospective case-control study, medical records of 240 pregnant women who gave birth between 2016-2019 were analyzed. The main group represented 120 obese pregnant women and the control group- 120 normal-weight women. The information collected was statistically analyzed using SPSS 23 and Microsoft Excel. **Results.** According to the obtained data, the average time of birth was 39,5 weeks in obese women, and 38,4 weeks in normal-weight pregnant women. Cesarean section was performed more in obese

pregnant women, 74 cases (61,6%) and 54 cases (45%) in normal-weight women. The weight of the newborn from the researched group was 3825 ± 294 grams, and respectively in the control group was 3110 ± 218 grams. The mean Apgar score in the first and fifth minutes of life was 7/8 for children of obese women and 8/9 for children of normal-weight women. Admission of children to the intensive care unit was carried out in the study group in 13 cases (10,8%) and in the control group in 6 cases (5%). The research group spent 1.3 more days ($p=0.002$) in hospital than normal weight women. **Conclusions.** Obesity is a factor that alters the health of the pregnant woman, although, the results of the study did not show big differences in the condition of newborns regardless of the mother's weight.

HELLP SYNDROME – A COMPLICATED PREGNANCY CHALLENGE

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ABSTRACT

Introduction. HELLP syndrome is a multiple organ dysfunction that occurs in perinatal period, that may cause serious complications and even death. **The aim of the study.** To assess the complications of HELLP syndrome. **Material and methods.** A retrospective study was carried out, which included 85 obstetric patients with HELLP syndrome, managed in the Intensive Care Unit during the years 2017-2020. The diagnosis of HELLP syndrome was established based on clinical data (severe preeclampsia, eclampsia, obstetric hemorrhage complications) and laboratory data (thrombocytopenia, increased liver enzymes, hemolysis etc.). The complications were determined based on clinical, paraclinical and laboratory data. **Results.** The average age of the patients was 28±9.63 years. Primiparous were in 54.65%, multiparous in 45.35% cases, at 25 and

39 weeks of gestation. The patients developed complications as: neurological – central nervous system – 80.8% (cerebral edema – 68.2%, stroke – 4.7% (ischemic – 75%, hemorrhagic – 25%), seizures – 7.7%), visual disturbances (reversible posterior leukoencephalopathy syndrome) – 28.9%, blindness due to retinal detachment – 1.2%), and peripheral nervous system – 76.9% (hyperesthesia – 45.8%, hyperreflexia – 13.5%); pulmonary: acute respiratory distress syndrome – 26%, thrombosis – 21.2% and pulmonary atelectasis – 3.9%; acute kidney injury – 29.4%, anasarca – 96.5%; disseminated intravascular coagulation syndrome – 64.7%; intrauterine growth restriction and fetal death – 70.6%. **Conclusion.** HELLP syndrome can lead to different complications and multiple organ dysfunctions, that are determined by disseminated microangiopathy, capillary leakage syndrome with anasarca, and increased procoagulant status.

OBSTETRICS AND GYNECOLOGY

PREDICTIVE FACTORS OF POST-CAESAREAN INFECTION. A PROSPECTIVE COHORT STUDY

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ABSTRACT

Introduction. Cesarean section (CS) is the most common surgical intervention. Like any surgery the risk of infection is present. Infectious complications represent a socio-economic burden on the health system, prolong the duration of hospitalization, increase the costs of medical assistance. Lately, there is considerable interest in the clinical application of pro-inflammatory biomarkers to predict infection, with particular attention to the neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) as biomarkers or predictors of infection. NLR has been identified as an additional marker of infection and a potential parameter for predicting bacterial infection. NLR and PLR was significantly higher among postoperative patients in the first 24 hours. NLR and PLR were found to be independently associated with post-cesarean infection control for

the duration of surgery. **Material and methods.** A prospective cohort study was developed within the IMSP SCM No. 1. The following blood variables were analyzed: hemoglobin, erythrocytes, leukocytes, neutrophils, lymphocytes, platelets. **Results.** NLR and PLR taken shortly after surgery, may be associated with the development of postoperative infections. The application of this test is readily available and easy interpretation can help in its context of early identification of infection. **Conclusions.** The analysis of research articles and the results presented by their authors allows us to conclude that NLR and PLR, taken shortly after CS can be associated as independent predictive factor for the development of postoperative infections, data supported by meta-analyses and primary studies. Awareness of this readily available tool and interpretation of its results in the correct context can help in timely detection of postoperative infections.

OBSTETRICS AND GYNECOLOGY

NEW BIOMARKER FOR RISK DETERMINATION OF THE APPEARANCE OF PREECLAMPSIA

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ABSTRACT

Introduction. Preeclampsia remains a challenge in obstetrics, various biomarkers have been studied that could predict early preeclampsia and reduce its complications. Recently, the marker hypoxia-inducible factor 1 α (HIF-1 α), which is a mediator of the hypoxic stress signal, has been studied, and the HIF-1 α protein level may be increased in preeclampsia. **Material and methods.** The concept of the study consists in the development of the prognostic model that is able to predict the probability of occurrence of preeclampsia using HIF-1 α as a covariate. A prospective cohort study was carried out, in which 96 pregnant women in the third trimester of pregnancy were included, which was divided into two groups: the study group - 48

pregnant women with preeclampsia, the control group - 48 pregnant women without preeclampsia. **Results.** According to the coefficients obtained through the regression and resampling analysis, the proposed equation is recommended for use in practice, including the risk estimation for each pregnant woman. Has been established: Nagelkerke R Square = 0.734 (73.4%), calibration ($\chi^2 = 13.498$, $df = 8$, $p = 0.096$) and discrimination (Sensitivity 93.8%, Specificity 90.2%), HIF-1 α (B = 0.013, 95% CI 0.008, 0.018), OR = 1.013 (95% CI 1.008, 1.018). **Conclusions.** Taking into account the characteristics of the model, it can be considered relevant, and HIF-1 α , in turn, can be considered a new biomarker for predicting the risk of preeclampsia.

OBSTETRICS AND GYNECOLOGY

ANALYSIS OF ESSENTIAL RISK FACTORS IN THE OCCURRENCE OF PREECLAMPSIA

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ABSTRACT

Introduction. Preeclampsia is a systemic disorder of pregnancy, and constitutes a major danger for both the mother and the fetus. Establishing the most frequent risk factors in the occurrence of preeclampsia is an essential task in obstetrics, to select patients who are likely to develop preeclampsia and eclampsia, and to prevent severe complications.

Material and methods. Searches were performed in the PubMed, Medline, Cochrane databases for studies published in 2020-2023, publications analyzing risk factors for the occurrence of preeclampsia were included, using the keywords: preeclampsia, risk factors, eclampsia. **Results.**

After analyzing the studies, it was established that the most frequent risk factors for the occurrence of preeclampsia cited in the national and international literature are: pre-existing hypertension, chronic kidney diseases, insulin-dependent diabetes, body mass index greater than 30 before pregnancy, personal history of preeclampsia, nulliparous and advanced maternal age >40. For a more accurate determination of pregnant women who are in the risk group, maternal personal risk factors can be combined with the performance of specific biomarkers for preeclampsia. **Conclusions.** Early identification of pregnant women in the risk group is very important, because it allows us to carry out prophylaxis and avoid severe complications.

OBSTETRICS AND GYNECOLOGY

SURGICAL TREATMENT METHODS WITH UTERUS PRESERVATION IN POST-PARTUM HEMORRHAGES.

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ABSTRACT

Introduction. Postpartum hemorrhage (PPH) is defined as blood loss of ≥ 500 ml during delivery and ≥ 1000 ml during cesarean section from the genital tract in the first 24 hours after delivery. The most common causes of PPH are multiple pregnancies, fetal macrosomia, hydramnios, prolonged labor, multiparity (≥ 5), intra-amniotic infection, which can lead to uterine atony (90%) resulting in PPH. PPH is a major cause of maternal and fetal morbidity and mortality. Globally, more than 125 thousand women die each year from this pathology. **Material and Methods.** The surgical method used was the triple ligation of the uterine artery, round ligament, and suspensory ligament of the ovary with some personalized technical modifications based on the Tsirulnicov method. This treatment was used in 7 parturients with uterine atony found

during cesarean section, following the failure of medical treatment. **Results.** According to our data, in 5 patients, the surgical intervention ended with the cessation of massive bleeding, but in 2 patients, the bleeding persisted and required a hysterectomy for hemostasis. Data from the literature mention that these interventions end in 50% of cases with hysterectomy for hemostasis. Moreover, we have a documented case of the occurrence of a twin pregnancy and birth by cesarean section. **Conclusion.** We provide an updated perspective on the significance of surgical interventions that aim to preserve the genital organs and fertility in cases of postpartum hemorrhage. The indication for this method is the failure of appropriate medical treatment. Overall, our findings highlight the effectiveness of this modified surgical approach as a simple and potentially life-saving treatment option for PPH.

THE COMPLEX INTERPLAY BETWEEN ENDOMETRIAL MICROBIOME, INFLAMMATION AND PRIMARY INFERTILITY

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ABSTRACT

Introduction. The endometrium is a complex tissue that meets many functional processes in human reproduction, namely the implantation of the embryo, the formation of the placenta, the normal development of the embryo, and so on. In recent years, thanks to new discoveries in the field of reproductive health and with the development of medicine, knowledge about the structure and functional efficiency of the endometrium has subsequently been refined and expanded. **Purpose of the study.** The study of microbiological, immunological and morphological aspects of the endometrium in patients with primary infertility. **Material and methods.** A prospective cohort study was conducted with 96 patients divided into 2 groups. The main group (L1) consisted of 48 patients with an established diagnosis of primary infertility, the control group (L0) consisted of 48 fertile patients. Endometrial sampling was performed using a Pipelle aspiration curette in the proliferative phase of the menstrual cycle. The endometrial microbiome was studied by PCR reaction using the Femoflor-16 reagent kit. Cytokines IL1 β , IL8, IL10, IL4 were

evaluated from endometrial fluid. For histological examination of endometrial biopsies, hematoxylin-eosin staining was used. Research Ethics Committee of the State University of Medicine and Pharmacy. *Nicolae Testemitanu*, (Chisinau, Republic of Moldova) approved the study protocol (No. 79/62 dated April 26, 2017). The patients signed an informed consent to participate in the study. Statistical data was processed in SPSS 20 and Microsoft Excel 2016. **Results.** The presence of *Lactobacillus* spp. L1 75%, $\chi^2 = 0.236$; $p = 0.627$; followed by *Ureaplasma urealiticum* + *parvum* in L1 37.5% vs L2 6.3%, $\chi^2 = 13.714$; $p < 0.001$; *Atopobium vaginae* L1 25% vs L0 14.6%, $\chi^2 = 1.640$; $p = 0.1$; *Enterobacteriaceae* L1 18.8% vs L0 0%, $\chi^2 = 9.931$; $p = 0.001$, in the main group, which led to inflammatory changes in the endometrium in L1 79.2% vs L0 31.3%, $\chi^2 = 22.238$; $p < 0.001$. The level of pro-inflammatory cytokines IL1 β and IL 8 was higher in the endometrium of patients with primary infertility. **Conclusion.** The study demonstrated the presence of a pathological microbiome in the study group of patients, which led to disruption of local immunological processes, endometrial morphology, and as the final stage in the development of endometrial dysfunction.

OBSTETRICS AND GYNECOLOGY

THE IMPACT OF PREECLAMPSIA ON LATE CARDIOVASCULAR RISK

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ABSTRACT

Introduction. Preeclampsia is a significant issue in contemporary obstetrics. The purpose of this study is investigated the impact of preeclampsia on maternal-fetal morbidity and mortality, as well as the long-term maternal risk of the condition.

Material and Methods. The study was conducted at the Department of Obstetrics and Gynecology SCM-1 in mun. Chisinau, and included 98 pregnant women whose pregnancy was complicated by preeclampsia. The women were evaluated using a questionnaire, and their serum cardiac troponin I levels were measured to determine diagnostic value. **Results.** The study showed that preeclampsia is a significant issue that can lead to maternal and fetal morbidity and mortality. In the study was a high incidence of HELLP syndrome

(21.4%), embedded normal placental detachment (11.2%), and DIC with bleeding syndrome (7.1%). The study found that levels of troponin I, which is the best-known indicator of minor myocardial injury, were higher in pregnant women with severe preeclampsia. The study also showed that there is a strong correlation between a history of preeclampsia and the risk of developing ischemic heart disease later in life. **Conclusion.** This study demonstrated that preeclampsia is associated with an increased risk for maternal and fetal morbidity. The identification of sensitive biochemical markers of cardiac ischemia in pregnancy and postpartum depending on the severity of preeclampsia may serve as an additional marker in the diagnosis of preeclampsia severity and the prophylaxis of myocardial infarction during childbirth and the postpartum period.

QUELQUES ASPECTS DU TRAITEMENT COMBINÉ DANS LE LNH DIGESTIF

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Oncologie et radiothérapie, Hématologie et transfusion sanguine

ABSTRAITE

Introduction. Le tractus gastro-intestinal est la localisation la plus fréquente du lymphome extranodal et, en raison de symptômes non spécifiques, le diagnostic peut être longtemps retardé. Un traitement combiné ou complexe permet un bon contrôle tumoral. **Le but du travail.** Présentation de données sur certains aspects du traitement du LNH digestif. **Matériel et méthodes.** Les aspects cliniques et thérapeutiques sont présentés de 37 patients atteints de LNH digestif. **Résultats.** Il a été déterminé que les LNH digestifs survenaient le plus souvent chez les patients âgés de 51 à 60 ans (38 %). La localisation gastrique était la plus fréquente, et

malgré le fait que l'atteinte de l'œsophage soit exceptionnellement rarement découverte, un cas a été rencontré durant cette période. Selon les stades, la plupart des patients ont été diagnostiqués au stade IV, démontrant une adressabilité tardive et un pronostic défavorable dans le futur. Le traitement réalisé était le plus souvent constitué d'une chimiothérapie, suivie de l'association d'un traitement chirurgical. Un traitement complexe a été réalisé dans 5 cas (14%), la radiothérapie étant utilisée dans le but de consolider l'effet, avec un bon contrôle de la tumeur ou dans un but palliatif. **Conclusions.** Un traitement combiné et complexe peut augmenter considérablement l'efficacité du traitement et diminuer la fréquence des rechutes, ce qui peut améliorer les taux de survie.

MINIM-INVASIVE COMPLETE MESOCOLIC EXCISION FOR RIGHT COLON CANCER

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ABSTRACT

Introduction. Complete mesocolic excision (CME) is a concept in surgical treatment of right colon cancer (RCC) that is set up to improve oncological outcomes. The technique is based on 3 main principles: dissection in the embryological plane, central vascular ligation and resection of a sufficient length of bowel. However, CME is a technically demanding procedure and is not universally adopted due to concerns of higher morbidity. This study aims to analyze the safety of laparoscopic CME colectomy compared to standard colectomy for right-sided colon cancer. **Material and Methods.** This retrospective study examined 170 patients with RCC treated minim-invasively with radical intent between January 2019 and November 2022 in our Trust. The patients treated by surgeons not performing

D3 dissection were excluded from the study. The choice regarding extension of lymphadenectomy was at the operating surgeon discretion. **Results.** No differences in oncological and clinical characteristics were observed between the CME and standard right colectomy groups. Also, no statistical differences were shown in terms of blood loss, intraoperative complications, conversion rate, and operative time. The postoperative morbidity rate (Clavien-Dindo grade III-IV) was 9.77% in conventional surgery group and 4.87% in CME group. The number of lymph nodes harvested was significantly higher in the CME group (27 vs. 17, $P = 0.037$). **Conclusion.** Minim-invasive CME surgery appears safe and does not result in increased complication rates in this single institution cohort. However, further randomised control studies are needed to examine long term outcomes.

RETROPERITONEAL ANGIOMYOLIPOMA – CASE REPORT

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ABSTRACT

Introduction. Angiomyolipoma is a benign tumor composed of mature fat cells, thick-walled blood vessels, and muscle cells. Angiomyolipoma is the most common renal mesenchymal neoplasm described by perivascular epithelioid cells that coexpress smooth muscle and melanogenesis markers. Retroperitoneal involvement is rare. It is quite difficult to diagnose such a tumor before surgery because such a location is more common for testicular tumors, lymphomas, leiomyosarcomas, and schwannomas. **Case report.** *The patient, 59 years old, went to the Oncology Institute with complaints of epigastric pain in the belt, general*

weakness, and weight loss of about 4 kg, she is considered ill for about a month when the itching and dark urine appeared. According to the MRI data, a volume formation is visualized on the lower contour of the pancreatic head with the effect of compressing the medial duodenal wall. Excision of the 3x2x1.5 cm tumor is performed, and the histopathological examination with the conclusion of retroperitoneal angiomyolipoma, SMA (+), caldesmon (+patchy), ERG(-), CD68(-), S100(-), ER (-), Ki-67-3%. **Conclusion.** Angiomyolipoma is a rare benign mesenchymal tumour, that preferentially reaches the kidney, however the extra-renal location is possible, but extremely rare.

VALIDATION OF THE IMPACT OF CONVENTIONAL PROGNOSTIC SCORES IN NON-HODGKIN'S LYMPHOMAS WITH NODAL INVOLVEMENT

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ABSTRACT

Introduction. Non-Hodgkin lymphomas (NHL) represent a heterogeneous group of malignant lymphomas that develop from the malignant proliferation of the lymphatic tissue. Different prognostic scores (PS) are proposed to be used to determine NHL prognosis. The present study aims to estimate the utility of conventional PS for the determination of NHL overall survival (OS).

Material and methods. 78 patients diagnosed with nodal NHL have been evaluated. International Prognostic Index (IPI), The combined index of hemoglobin, albumin, lymphocyte, and platelet (HALP), Platelet to Lymphocyte Ratio (PLR), Neutrophil to Lymphocyte Ratio (NLR), albumin/globulin ratio(A/G), Charlson comorbidity index (CCI), were calculated as in the original references.

Results. Out of the patients enrolled in the study, 67 developed B cell NHLs and 11 T cell NHLs. The mean age of the patients was 58(range 22-83 years); The most frequent area of primary lymph node(ln) involvement was peripheral ln (84.61%), mediastinal ln (10.25%), and abdominal ln (5.12%); Aggressive NHLs were diagnosed in 73.07% of patients and indolent NHL in 26.93%; By using ROC analysis it was determined that the most sensitive score for determining OS was IPI (AUC=0.745), followed by HALP (AUC=0.652), PLR (AUC=0.625); NLR (AUC= 0.605); CCI (AUC=0.635); A/G (AUC=0.588). **Conclusions.** Among the evaluated prognostic tests, the IPI score and the HALP score proved to be the most sensitive results in the prognostication of the OS of NHL patients.

THE LEVEL OF CORRESPONDENCE THE DIAGNOSIS IN THE PRECANCEROUS CONDITIONS OF THE MAMMARY GLAND

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ABSTRACT

Introduction. Precancerous conditions of the mammary gland are a series of changes that occur in the mammary glands and, if not treated, can turn into cancer. About one in two women shows symptoms of the presence of a formation in the breasts. cancer compared with atypical hyperplasia, which is consistent with a significantly increased risk. **Material and methods.** A retrospective hospital-based study was conducted in the Oncology Institute, Department of Mammology, Chisinau, Republic of Moldova. In the study were included 374 patients, from 2021 – 178 patients and from 2022 – 196 patients. There were 354 female patients, which constitutes 94.65%, in the remaining 20 cases – male (5.34%). **Results.** In our research, patients with the following precancerous conditions were included: localized fibrocystic

mastopathy (n=221; 59.09%), intraductal papilloma (n=84; 22.45%), gynecomastia (n=20; 5.34%) and lipogranuloma (n=49;13.1%). For detection, the following investigation methods were performed: palpation of the mammary gland - 374 cases (100%), USG - 344 cases (92%), mammography - 148 cases (39.57%), cytology through fine-needle aspiration - 290 cases (77.54%) and by smear-on the slide – 84 cases (22.45%). The level of correspondence of the primary diagnosis with the definitive clinical diagnosis in the case of fibrocystic mastopathy was 60% (n=133 out of 221), intraductal papilloma - 83% (n=69 out of 84), lipogranuloma - 95% (n=47 out of 49) and gynecomastia – 90% (n=18 of 20). **Conclusion.** In over 60% of cases, the primary diagnosis corresponds to the definitive clinical diagnosis, in the rest of the cases, benign tumors or even cancer are detected.

SURGICAL TREATMENT OF BORDERLINE OVARIAN TUMORS (CASE REPORT)

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ABSTRACT

Introduction. Borderline ovarian tumors are non-invasive neoplasms characterized by atypical epithelial proliferation and increased levels of mitotic activity, "on the border" between benign and malignant ovarian tumors. These tumors are usually diagnosed at an early stage and only 25% of cases are in stages II-IV. Their survival is better than that of ovarian cancer, in the early stages being about 83-91% at 10 years. **Case report.** 28-year-old, nulliparous patient, prophylactic gynecological ultrasonographic examination revealed a 4cm ovarian mass with papillomatous growths, immunologically CA125- 23.2, HE4-75.1, Rome Score 17.9 (N- <11.4). An ovarian mass on the right with suspicion of malignancy is confirmed at resonance. She underwent volume-conservative surgical treatment of ovarian cystectomy on the

right side without breaking the tumor capsule, with a biopsy from the peritoneum and omentectomy. Histopathological and immunohistochemical examination: serous borderline ovarian tumor without peritoneal metastases, moderate p53-positive, moderate ER-positive, pronounced PR-positive, Ki-67-positive 2%. Dynamically evaluated over 3 and 5 years, she gives birth to two perfectly healthy children with no signs of progression at the moment. **Conclusion.** The role of conservative treatment for borderline tumors is to preserve the reproductive function of the woman, their evolution is unpredictable, but in cases with favorable evolution is reported, the possibility of ovarian cystectomy instead of adnexectomy and when invasive peritoneal implants are not confirmed, and if the patient wants to preserve her fertility. The prognosis is good, being approximately 83-91% at 10 years, but the recurrence cycle is long.

FOLLICULAR THYROID CARCINOMA FROM HURTLE CELLS - CASE REPORT

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ABSTRACT

Introduction. Thyroid Hurthle cell carcinoma (HCC) is a rare disease only 3% with high risk of invasion, metastasis and poor prognosis. **Case report.** *The patient, 53 years old, went to the Oncology Institute with complaints of local discomfort when swallowing and dyspnea. Ultrasound examination detects large thyroid nodules which suddenly increased. Total thyroidectomy was performed. Macroscopic: Thyroid gland - irregular shape: right lobe 6x4x3.5 cm, lobulated appearance, gray-pink, elastic. Left lobe 14x6x4.5 cm with the same appearance. Histopathological: both lobes are diffusely infiltrated by Hurthle cell (oncocytic) follicular carcinoma, partially encapsulated, angioinvasive, with trabecular pattern, with tumor invasion in the tumor's capsule, with infiltration of the thyroid capsule and adjacent*

*muscle tissue. Immunohistochemically, tumor cells are negative for chromogranin A and calcitonin. After 3 months, Radiotherapy treatment was performed at the thyroid lodge, bilateral cervical and supraclavicular nodes, superior-anterior mediastinum with DS-2Gy DT-40Gy. Over 3 years, the laterocervical lymph nodes on the left enlarge. Radical excision of cervical lymph nodes was performed. Histopathological: In 4 out of 6 lymph nodes metastases of thyroid follicular carcinoma from poorly differentiated Hurthle cells (oncocytic), with immunophenotype: PCK (+), CK7 (+), TTF1 (+), Thyroglobulin (-), INSM1 (-), mammoglobin (-). **Conclusion.** Currently, the diagnosis of Follicular Carcinoma with Hurthle cells, only by cytomorphology is difficult. Therefore, histopathology with immunohistochemistry is mandatory to confirm the diagnosis and ensure appropriate management.*

RETROPERITONEAL SARCOMA - A CHALLENGE OF DIAGNOSTIC AND TREATMENT

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ABSTRACT

Introduction. Retroperitoneal sarcomas (RPS) are a group of malignant tumours (PRT), arising in the retroperitoneal space and do not belong to an organ. RPS represent approximately 15.0% of all sarcomas in the human body. Caused by the vastity of retroperitoneal space and uncommon clinical behaviour, RPS is diagnosed late, clinical manifestations being caused by the compression or involvement of near organs. Although retroperitoneal tumours are easily detectable, due to their large size, the definitive diagnosis is based on the histopathological, immunohistochemical and immuno-genetic examination. **Material and methods.** We conducted a transversal study based on 118 adult patients with retroperitoneal tumours treated in Oncological Institute of Moldova between 2015 and 2020. All cases were

reviewed by an expert pathologist. **Results.** From the total of 118 patients with retroperitoneal tumours included in the study, 84 were proved to be primitive tumours, 46(54.76%) of which were sarcomas. The most common histological subtype of sarcoma was: liposarcoma in 20 cases (23.80%), followed by undifferentiated pleomorphic sarcoma - 6 cases (7.14%) and leiomyosarcoma - 4 cases (4.76%). The average size of the tumor was 16.25 cm (± 9.014 cm), Me=14.0 cm. Radical surgical treatment was performed in 31 cases (67.39%), in the other 15 cases (32.60%), cytoreductive excision or open tumour biopsy was performed. **Conclusions.** Surgical treatment remains the main treatment method with curative potential for retroperitoneal sarcomas. The possibility of excision of tumours with negative margins are one of the most important prognostic factors related to survival.

POSSIBILITIES AND LIMITS FOR THE TREATMENT OF COMPLICATED COLORECTAL CANCER

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ABSTRACT

Introduction. Colorectal cancer represents a matter of public health with an important impact related to morbidity and mortality, recent studies showing an exponential rise of this pathology over the last 2 decades. **Methods.** Between 2018 – 2022 there were 114 patients with colorectal cancer complicated with obstruction (78), perforation (24) and bleeding (12). with ages varying between 33 and 92 years old. Most of the patients were males, presented with advanced tumor stages (Dukes III

and IV). **Results.** The advanced age and tumor stage of the patients, important comorbidities and the character of urgency of surgical interventions led to postoperative complications and the rise of perioperative morbidity and mortality. **Conclusions.** Complicated colorectal cancer treatment has a high rate of morbidity and mortality and therefore demands a flexible strategie adapted to the age of the patients, type of complication, tumor localization, comorbidities, strictly following the oncological protocols.

SENSIBILITÉ ET SPÉCIFICITÉ ANALYTIQUE DE LA MÉTHODE CAST-PCR POUR L'IDENTIFICATION DES MUTATIONS DU CONDUCTEUR DE L'EGFR DANS L'ADÉNOCARCINOME PULMONAIRE

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ABSTRAITE

Introduction. Ces dernières années, le traitement des personnes diagnostiquées avec adénocarcinome pulmonaire avancé (LUAD) est devenu de plus en plus guidé par des biomarqueurs génétiques et les mutations conductrices du gène EGFR sont largement utilisées pour prendre des décisions thérapeutiques à base de petites molécules. La technique standard pour identifier ces mutations à partir de tissus fixés au formol et inclus en paraffine (FFPE) est la réaction en chaîne par polymérase (PCR). Souvent, l'ADN isolé du tissu FFPE contient une petite quantité de fragments fonctionnels, ce qui nécessite l'utilisation d'une méthode PCR avec une sensibilité et une spécificité élevées. Pour cette raison, nous avons entrepris de tester la sensibilité et la spécificité analytiques de la méthode Competitive allele-specific TaqMan PCR (cast-PCR) et de la valider *in house*. **Matériel et méthodes.** 29 échantillons de tissus FFPE provenant d'individus diagnostiqués histologiquement avec LUAD avec un minimum de 20 % de cellules néoplasiques ont été testés. L'ADN a été analysé pour les mutations EGFR ex19del (identification non spécifique de 19 délétions de l'exon 19), L858R et T790M par la méthode Cast-PCR et séquencé sur la base d'un panel de 22 gènes (dont le gène EGFR) par la technologie de séquençage nouvelle génération

(NGS) Torrent ionique. **Résultats.** Grâce à la méthode Cast-PCR, 16 échantillons positifs (55,18 %, 16/29) ont été identifiés : 27,59 % (8/29) des échantillons présentaient la mutation EGFR L858R et 24,14 % (7/29) - la mutation EGFR ex19del. De plus, un patient (3,45 %, 1/29) avait une double mutation de l'EGFR (L858R et T790M). Le séquençage NGS du panel de 22 gènes a fourni des résultats 100 % cohérents avec les résultats castPCR. De plus, il a été observé que sur les 7 échantillons biologiques positifs pour les mutations de l'exon 19, 4 étaient positifs pour la délétion c.2235_2249del et un échantillon positif pour c.2240_2257del, c.2240_2257del18 et c.2236_2250del. **Conclusion.** Nos données ont montré que la sensibilité et la spécificité analytiques de la méthode castPCR sont de 100 % dans les échantillons biologiques testés et peuvent être utilisées en pratique clinique pour identifier les patients susceptibles de bénéficier d'un traitement ciblé avec des inhibiteurs de la tyrosine kinase anti-EGFR. L'étude a été réalisée dans le cadre du programme d'État 2020-2023 avec le code 20.80009.8007.02 et du programme opérationnel Roumanie-République de Moldavie 2014-2020, par le biais de l'instrument européen de voisinage (ENI) "Réseau d'excellence pour le diagnostic et la recherche sur le cancer du poumon LUNGNEX-RD" avec numéro 2 SOFT/1.2/207 LUNGNEX-RD.

THE EPIDEMIOLOGICAL EVOLUTION OF ONCOLOGICAL DISEASES DURING THE COVID-19 PANDEMIC IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. The risk of being exposed to Covid-19 as well as the restrictions imposed on accessing certain medical services have caused many patients to delay or avoid seeking referrals for specialized medical care in the case of oncological diseases. **Aim.** Determination of the impact of the Covid-19 pandemic on the detection of new cases of cancer. **Material and methods.** We analyzed the statistical data from the National Cancer Registry regarding oncological diseases diagnosed between 2018 and 2022. The total number of patients and disease stages were compared for the specified period. **Results.** During the Covid-19 pandemic, the total number of detected cases decreased by 17.8% (n=1847), returning to pre-

pandemic levels in the post-Covid-19 period. For some cancer types, there was a significant increase in incidence compared to pre-pandemic data. The largest difference was recorded in the cases of breast, prostate, and colon cancer, which decreased by 13.7% (n=161), 18.36% (n=109), and 16% (n=117), respectively. Additionally, we observed an increase in the number of patients with locally advanced cancers, with prostate cancer exhibiting a 35% increase (n=109), breast cancer demonstrating a 22.6% increase (n=30), and lung cancer demonstrating a 14.7% increase (n=82). **Conclusions.** The Covid-19 pandemic has had a negative impact on timely access to specialized medical care, resulting in the diagnosis of patients at an advanced stage of disease.

SURGERY OUTCOME MODELLING IN EXOTROPIA STRABISMUS TREATMENT - A PILOT STUDY

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ABSTRACT

Introduction. Many surgical formulas have been developed and proposed based on the experience of surgeons to improve the predictability of strabismus surgery. However, the consent among strabismus surgeons regarding the dose effect of the extra-ocular muscle recession or resection was not achieved yet and the disagreement about the appropriate amount of strabismus surgery still exists. Our study aimed to elaborate a postoperative angle of deviation (PAD) predictive model using simple potential predictors in concomitant exotropia. **Methods.** The analytical prospective clinical study was conducted from April 2016 to July 2019, on a sample of 56 patients (aged between 4–58) with concomitant exotropia who underwent strabismus surgery in Clinical Republican Hospital "Timofei Mosneaga" and Children Hospital "Em Cotaga"

from Republic of Moldova. The correlations of patients' age, strabismus type, amblyopia degree, resection and recession length, preoperative angle of deviation (PreAD) with PAD were estimated using Pearson's correlation analysis. **Results.** Exotropia strabismus surgical treatment outcomes were correlated with the pre-operative angle of deviation ($p < 0.001$), age at surgery ($p < 0.011$); EOM recession length (mm) ($p = 0.015$), EOM resection length ($p < 0.001$), LRM and MRM insertion distance ($p=0.01$, and $p= 0.02$). A stepwise multivariate regression model revealed that preoperative angle of deviation EOM recession length and EOM resection length contributes meaningful information in the prediction of postoperative outcome **Conclusions.** In our study we propose a mathematical model as potential instruments for PAD modelling in concomitant exotropia surgery.

PATIENTS MISCONCEPTIONS ABOUT STRABISMUS SURGERY

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ABSTRACT

Study aim. To reveal the main reason for strabismus surgery delay and motivation for seeking surgical treatment in adulthood. **Material and methods.** Prospective survey among 91 adult patients, suffering from concomitant strabismus acquired in the childhood that underwent delayed strabismus surgery. **Results.** The mean age of participants was 24 years (from 16 to 58 years); 48 females (52.7%), and 43 males (47.3%). Strabismus surgery has been delayed for about 20 years in adult patients who could potentially benefit of it in childhood. The most common reasons for strabismus surgery delay, reported by patients, included the following: lack of awareness about surgery (37.4%); surgery was recommended but declined by patients' parents/guardians in their childhood (6.6%); fear of surgery (17.6%); eye specialists affirmation that surgery would not lead to strabismus improvement (27.5%);

previous poor surgical experience (6.6%); and non-affordability (4.4%). The main motivations for seeking strabismus surgery in adulthood among our patients were appearance improvement (38.5%), strengthening of self-confidence (30.8%), better social relationship (16.5%), better job opportunities (7.7%), and advice from family and friends (6.6%). **Conclusions.** About 80% of strabismus surgery delays in teenagers and adults were caused by lack of awareness regarding strabismus surgery and even the misconception among primary health care practitioners and some eye doctors who considered that surgery would not lead to strabismus correction. The main reasons for seeking strabismus surgery in adulthood were esthetical ones, self-confidence strengthening and building better social relationship. All factors mentioned below confirmed the negative impact of oculomotor disorders on patient's psychological condition.

ACUTE DACRYOADENITIS – THE FIRST MANIFESTATION IN SJOGREN SYNDROME

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ABSTRACT

Introduction. Sjogren Syndrome (SS) is a chronic and progressive autoimmune disease that primarily involves immune-mediated damage to the lacrimal and salivary glands [Carsons S. 2022]. The prevalence varies widely from 0.3-3.0%. Predominantly affects females (female/male ratio 9:1) in their fourth and fifth decades of life [Parisis D. 2020]. Lacrimal gland involvement occurs in form of dry eye in the majority of SS, while dacryoadenitis is an atypical and rare manifestation [Roszkowska A. 2021]. Usually, dacryoadenitis in SS presents a lacrimal gland swelling with eyelid redness, with bilateral presentation in 57% [Singh S. 2021]. **Case report.** A 45-year-old female developed acute left dacryoadenitis with poor response to local and general antibiotics for 3 months. To establish the etiology, the system workup of the patient included: ophthalmological, ORL, and rheumatological examination, laboratory tests, chest X-ray, contrast cerebral CT, and cerebral MRI. At ophthalmological examination:

visual acuity OD/OS= 1.0/1.0, OS erythema, and tenderness of superior eyelid. Enlargement of the lacrimal gland causing an S-shaped margin and the lateral impossibility of opening the palpebral slit, conjunctival chemosis. Schirmer test: OD/OS= 27 mm/22 mm. Laboratory findings as positive antinuclear antibodies, raised levels of rheumatoid factor, circulating immune complexes, autoantibodies to Ro (SS-A) and La (SS-B)-suggestive results in SS; others autoimmunity tests showed normal results (antiphospholipid antibodies, complement components C3 and C4). Imaging tests: enlargement of the left lacrimal gland, both portions (without extraocular muscles involvement). **Conclusions.** Dacryoadenitis is an atypical manifestation in SS and need an interdisciplinary collaboration with a broad spectrum of laboratory tests, which is essential to establish the etiology of non-infection dacryoadenitis. To control disease progression and inflammatory activity is required systemic corticosteroid therapy and immunosuppressive drugs.

ANTIGLAUCOMA SHUNT WITH VALVE: OCULAR IMPLANTATION STUDY

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ABSTRACT

Purpose. To evaluate the ocular tissue reaction to implanted antiglaucoma shunt with valve in rabbits.

Methods. The newly designed antiglaucoma shunt from PMMA which has inside a silicone valve was tested in a preclinical study. The studied group consisted of 5 New Zealand White rabbits in which was induced ocular hypertension. The PMMA antiglaucoma device was implanted unilaterally and observed for 3 months. The follow up was performed by a certified ophthalmologist using slit-lamp biomicroscopy. The histological evaluation was compared with a control group without any surgery treatment. It was performed

in both groups the hematoxylin and eosin, and trichrome staining. **Results.** The PMMA device caused a fibrotic capsule in the ocular tissue, and there were more fibroblasts in the study group than in the control group. There were no inflammatory cells in the samples (such as macrophages and lymphocytes). In all of the cases analyzed, the lumen of the antiglaucoma shunt with valve was devoid of inflammatory exudates or other impediments. Group A did not experience any negative effects for up to 90 days. **Conclusion.** The results of the histopathologic examination show that the antiglaucoma shunt with valve is safe and well tolerated, with no inflammatory reaction or detrimental consequences.

INTENSIVE GLYCAEMIC CONTROL AND TRANSIENT HYPEROPIA IN DIABETIC PATIENTS

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ABSTRACT

Purpose. Our aim was to look for any transient hyperopia during the rapid glucose reduction in patients with newly diagnosed diabetes and severe hyperglycemia. **Methods.** Five diabetic patients who acquired bilateral transitory hyperopia following the start of stringent insulin-controlled diabetes management are documented in a series of clinical cases. Overall, there were 3 women and 2 males, with a mean age of 46,2 years. With a sudden drop in plasma glucose, hyperopia developed within a short period of time. Refractive error was unaffected by cycloplegia. **Results.** In 5 patients who received insulin, the development of hyperopia began on average 6,

8 days after the start of treatment and peaked at 17, 2 days. After the initial evaluation, the prior refraction returned between 19 and 84 days later. The patient with myopia -3,0D was found to have a high hypermetropic change of 5.75D. During the course, there was no discernible change in the keratometry data, axial length, or anterior chamber depth. The plasma glucose concentration and HbA1c level at admission showed a positive connection with the maximum hyperopic change, with a p-value of 0.01 for each. These results might suggest that the lens's altered reflection index was what caused the refraction change. **Conclusion.** In newly diabetic patients, intensive glucose reduction may result in transitory changes in their hyperopia, which impairs their vision.

CORNEEA – ANATOMY AND PHYSIOLOGY

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ABSTRACT

Introduction. Cornea is a transparent avascular tissue that acts as a structural barrier and protects the eye against infections. The cornea performs several important functions: optical, barrier, reflex, immunological and metabolic. **Material and methods.** The literature review of scientific publications and articles on anatomy and physiology of cornea from PubMed and National Library of Medicine. **Results.** Cornea providing about two thirds of the eye's refractive power. The cornea is made up of cellular and acellular components. The cellular components include the epithelial cells, keratocytes, and endothelial cells. The acellular component includes collagen and glycosaminoglycans. Corneal layers include epithelium, Bowman's layer, stroma, Descemet's membrane, and endothelium. The epithelium is 5–6

layers structure with three types of cells: superficial cells, wing cells, and the basal cells. The function of the Bowman layer remains unclear and appears to have no critical function in corneal physiology. The stroma of the human eye contains 200–250 distinct lamellae. Descemet's membrane ultrastructure has been shown to consist of an interfacial matrix, anterior banded layer and a posterior non-banded layer. Endothelial cell density at birth is 3500 cells/mm². Human central endothelial cell density decreases at an average of approximately 0.6% per year. **Conclusions.** Important functions of cornea in the eye include protecting the structures inside the eye and contributing to the refractive power of the eye. Descemet's membrane plays an essential role in corneal structure. A structure with endothelial cells below 500 cells/mm² may be at risk of developing corneal edema.

POSSIBILITIES OF TREATMENT IN REDUCING DEPENDENCE ON GLASSES

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ABSTRACT

Introduction. The number of glasses wearers is increased and will increase. Till 2050 it will be a double number of myopes. **Material and methods.** There are different methods to rid glasses,

depending of type of refractive error and we use many of them. The good results, based on new technologies and modern equipments, encourage our team to use these methods. **Conclusion.** Presbyopia and the wish of rid glasses will promote many methods.

COMBINED TREATMENT EFICACITY OF PRE-MYOPES AGED 6-10 YEARS WITH FAMILIAL FACTOR

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ABSTRACT

Introduction. Myopia management is an exciting area with new research and technology advancements that will allow us to detect the pre-myope earlier and more accurately manage pre-myopia. **Material and methods.** Clinical retrospective study, that included 20 pre-myopes (40 eyes) aged 6-10 years with familial factor. The combined treatment (physiotherapy and anti-fatigue lenses-Rhein Vision's Facile) was applied for 2 years. **Results.** In base group with familial factor, the spherical equivalent increased (from

0.59 to -0.23 D) after 2 years of treatment, and the vitreous chamber depth increased (from 15,60 to 15,79 mm). In the control group, aged 6-10 years with familial factor the spherical equivalent has increased (from +0,66 to -0.76 D) after 2 years of treatment. The vitreous chamber depth has changed (from 16,59 to 17,02 mm) after 2 years. Between the basic group and control group, it was determined the statistical difference ($p > 0.05$). **Conclusions.** Significantly higher frequency of myopia onset was determined in the control group (21% of the combined treatment vs 74% of the control).

COMBINED TREATMENT EFICACITY OF PRE-MYOPES AGED 11-14 YEARS WITH FAMILIAL FACTOR

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ABSTRACT

Introduction. The International Myopia Institute defines pre-myopia as "a refractive state of an eye of $\leq +0.75$ D and > -0.50 D in children where a combination of baseline refraction, age, and other quantifiable risk factors provide a sufficient likelihood of the future development of myopia to merit preventative interventions."

Material and methods. Clinical retrospective study, that included 20 pre-myopes (40 eyes) aged 11-14 years with familial factor. The combined treatment (physiotherapy and anti-fatigue lenses-Rhein Vision's Facile) was applied for 2 years.

Results. In base group with familial factor, the spherical equivalent increased (from 0.51 to +0,01 D) after 2 years of treatment. The vitreous chamber depth increased (from 17,06 to 17,37 mm). In control group with familial factor the spherical equivalent has increased (from +0,22 to -1.11 D) after 2 years of treatment. The vitreous chamber depth increased (from 16,45 to 16,90 mm) after 2 years. Between the basic group and control group, it was determined the statistical difference ($p>0.05$). **Conclusions.** The combined treatment has been proved to be an efficient method of prevention of myopia appearance.

EFFICIENCY OF PSHYSIOTHERAPY IN THE TREATMENT AND PROPHYLAXIS OF UNCOMPLICATED ACQUIRED MYOPIA

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ABSTRACT

Introduction. Myopia is one of the most common eye pathologies, the prevalence of which is increasing globally. Physiotherapeutic treatment contributes to a better visual acuity, amplitude of accommodation, to the decrease in the speed of myopia progression. **Material and methods.** Clinical retrospective study, that included 20 myopes (40 eyes) aged 6-11 years with low and medium myopia, randomized into two other groups depending on the presence or absence of the familial factor. The physiotherapy was applied for 2 years. **Results.** The annual progression gradient according to the spherical equivalent in

the group with low myopia and familial factor has decreased (from -0,68 D to -0,1875 D) and in the group with low myopia without familial factor has decreased (from -0,58 D to -0,1625 D). The annual progression gradient according to the spherical equivalent in the group with medium myopia and familial factor has decreased (from -1,08 D to -0,3 D) from the beginning of treatment and in the group with medium myopia without familial factor has decreased (from -1,03 D to -0,075 D). Between the group with familial factor and without, it was determined the statistical difference ($p > 0.05$). **Conclusion.** The physiotherapeutic treatment leads to the decrease of the annual gradient of myopia progression by 80.49%

EFFICIENCY OF SCLERAL LENSES CLINICAL CASES

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ABSTRACT

Aim. To evaluate the effectiveness of scleral lenses in the correction of ametropia in patients with stabilized keratoconus. **Material and methods.** Clinical retrospective study, that included 68 patients (99 eyes) with stabilized keratoconus after Crosslinking. Stage I was registered in 16 patients (16 eyes), Stage II-28 patients (45 eyes), Stage III-24 patients (38 eyes). **Results.** In patients with Keratoconus Stage I, the visual acuity corrected with glasses was 0.96, and with scleral lenses 1.0. In patients with Keratoconus Stage II, the visual

acuity corrected with glasses was 0.39, whereas with scleral lenses was 0.91. In patients with Keratoconus Stage III, the visual acuity corrected with glasses was 0.28, while with scleral lenses was 0.79. **Conclusion.** The visual acuity in patients with Keratoconus Stage I there was no statistically significant changes between correction with glasses and scleral lenses. The visual acuity corrected with scleral lenses in patients with Keratoconus Stage II and Stage III was 0.51 (230,8%) and 0.52 (285.7%) higher than in the case of monofocal optical correction application.

POSTOPERATIVE REHABILITATION IN PATIENTS WITH RECURRENT PTERYGIUM GRADE III

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ABSTRACT

Introduction. Recurrent pterygium, grade III is clinically manifested by a triangular fold of the bulbar conjunctiva with the base towards the semilunar fold and the tip over the pupillary area. **Material and methods.** The study included 8 patients (4 men and 4 women) with recurrent pterygium aged 23-73 years, who underwent pterygium removal according to a modified method. Thus, during the surgical intervention, a movable, free, rectangular flap with sides 5 x 3 mm was prepared inferiorly paralimbally, which was fixed conjunctivally paralimbally, nasally in the area of the body of the pterygium translocated to the superior or inferior fornix. It is important to position the formed conjunctival flap with a limbal orientation. At the

end of the operation, a therapeutic lens is applied to the cornea for a period of 1 month. **Results.** The postoperative recovery was carried out during the first month, while a conjunctival hyperemia was maintained, determined by the suture fibers used to fix the conjunctival autograft. One month after the microsurgical intervention, a total epithelialization of the cornea was determined (the test with negative Fluorescein). 3 months after the operation, no signs of recurrence of the operated pterygium were detected. **Conclusions.** The microsurgical method proposed for the treatment of grade III recurrent pterygium is safe and effective, determining the lack of postoperative recurrence. The absence of recurrence of the postoperative pterygium would be due to the damming effect of the translocated conjunctival flap.

RETINOPATHY OF PREMATURITY. 17 YEARS IN THE FIELD.

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ABSTRACT

Retinopathy of prematurity is a multifactorial vasoproliferative condition of the retina that develops in premature or low birth weight newborns. The disease can manifest itself mildly or it may progress to retinal detachment and blindness. As the survival rate of premature newborns increases, so does the incidence of ROP. ROP has become a current problem for perinatologists and ophthalmologists in the prevention of blindness, given the breakthroughs made in the field of contemporary neonatology. According to the WHO, childhood blindness has a significant emotional, social and economic impact, especially when many causes of blindness, including ROP, can be prevented or treated. The screening and diagnosis of ROP was initiated in 2005 as part of a project under the auspices of the WHO - "Elimination of avoidable blindness

in children" with the financial support of LIONS CLUB. The ophthalmology service for premature babies was also supported by international donors: TIKKA, Kinder Sollen Sehen, IAPB. In 2015, the National Clinical Protocol "Retinopathy of Prematurity" was approved, based on which screening, monitoring and treatment of ROP is performed in the Republic of Moldova. According to the NCP, all children with a gestational age less than 34 weeks and/or with a birth weight less than 2,000 g are included in the mandatory screening. Since 2017, according to the NCP, the treatment for the aggressive forms of ROP are intravitreal Bevacizumab injections. Considering the specifics of the country and the increasing number in the risk groups, in 2 public medical institutions: the Mother and Child Institute and the Municipal Hospital "Gheorghe Palade", nearly all the children are subjected to the ophthalmological examination.

SCLEROANGULORECONSTRUCTION IN REFRACTORY GLAUCOMA SURGERY

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ABSTRACT

Introduction. Surgical treatment of primary glaucoma is recognized as the most effective in compensating the IOP and preventing the accelerated development of glaucomatous neuropathy. The most common failure is due to the healing process: filtration bubble (30%), scar adhesions of the scleral flap with its lodge (20%) and blockage of the filtration orifice with iris' root (20%).

According to the literature, repeated surgery requires from 3.2% to 30% of cases. It is debatable where it is the most optimal place to perform this repeated intervention. **Material and methods.** We performed the comparative examination of the results of repeated surgery (another sector and the sector of repeated surgery) and concluded that the success of surgery in compensating IOP and small early operative and postoperative complications is when the surgery is performed on the non-traumatized sector. We have been practicing this

SAR trabeculectomy option, applied it to a group of 56 patients (various stages) with refractive glaucoma, IOP ranging between 35-41 mmHG, age 35-66 years. **Results and discussions.** The observation period was 1 year, the patients being examined in a complex program after every 1-6-12 months. The IOP dynamics in the early postoperative period was within 16.5 ± 2 mmHg without medication, at a distance of 6 months IOP varies between 19.0 ± 2 mmHg, of which in 41 patients -73.2% without medication and 15-26.7% with medication; and at a distance of 1 year PIO was compensated (19.0 ± 2 mmHg) without medication in 34 patients 60.7% on the basis of drug treatment 19-33.9% and in 3 patients 5% on the basis of drug treatment undercompensated IOP. **Conclusions.** SAR surgery in refractive glaucoma surgery brings a stable hypotensive effect 94.6% (of which 60.7 %-without medication and 33.9 on treatment background). Compared to 7 other surgical techniques, there are fewer intra- and postoperative complications.

THE USE OF THORIC INTRAOCULAR LENSES IN TOTAL ASTIGMATISM NEUTRALIZATION

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ABSTRACT

Introduction. Astigmatism remains a current problem for active lifestyle patients, so refractive lens surgery is an eligible treatment option. **Objective of the study.** Evaluation of the use of refractive surgery of the lens with the implantation of toric IOL (toric intraocular lens) in the correction of astigmatism. **Material and Methods.** This study presents a review of clinical cases of patients receiving toric crystals with various

degrees of astigmatism operated in MC "Ovisus" in the last 3 months. ECE (extracapsular cataract extraction) was performed by phacoemulsification / phacoaspiration with Alcon SN6ATX toric IOL implantation. **Results.** Early and late postoperative refraction was achieved without complications. **Conclusions.** Preoperative pseudofacial techniques are effective in achieving adequate postoperative refraction in patients with pre-existing astigmatism. Toric lens implantation is an effective method of correcting overt clinical astigmatism.

VISUAL EVOKED POTENTIALS EXAMINATION IN CHILDREN AFTER MILD TRAUMATIC BRAIN INJURY

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ABSTRACT

Introduction. The aim of the study was to assess the impact power of mild traumatic brain injury (mTBI) in children of school age on the functional integrity of the visual pathways. **Material and methods.** Research has been undergone on 25 in- patients with mTBI associated to visual disturbances such as: blurred vision, flashing lights, transient diplopia, alterations in color perception. The examination has been performed using a pattern VEP model, in which the light and dark elements of the model were organized to form a chessboard. Both latency and amplitude of the P wave have been assessed as a primary goal, although a special attention was referred to the other two

negative components of the potential (N140 and N70). Normal mean value for P wave latency given by the laboratory was the interval of 115-125 ms. **Results** showed that 69.56% out of all patients had a decreased P wave latency for the right eye and 78.26% for the left eye. The latency interval for N2 wave has been established mostly for the 60-80ms: 91.3% for the right eye and 78.26% for the left eye. As for the N3 wave the values have been ranged mostly in the 130-160ms interval: 91.13% for the right eye and 73.98% for the left eye. **Conclusions.** Assessment of visual evoked potentials in the acute stage of mTBI may reveal possible complications and impose treatment correction, including drug therapy or interventional measures.

VISUAL EVOKED POTENTIAL CHANGES IN PATIENTS WITH DIABETIC RETINOPATHY

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ABSTRACT

Introduction. Visual evoked potential (VEP) is an electrophysiological exploration to detect the response to light stimulus and reveal visual pathways. **Material and methods.** VEP study in patients with diabetes mellitus (DM), assessment of cortical and retinal activity, and identifying the role of this investigation in the diagnosis of diabetic retinopathy. A case-control study conducted to investigate two groups: the first group included 108 patients (216 eyes) with different stages of diabetic retinopathy, and the second group included 108 patients without diabetic retinopathy (216 eyes). All subjects have been ophthalmologically and neurologically tested, also using visual evoked

potentials. The patients have been exposed to mono-ocular, non-patterned stimuli, using LED-goggles glasses. **Results.** A important increase in P100, N75 and N135 wavelength latency in diabetic patients has been observed when compared to control group ($p < 0.05$). In addition, the amplitude of the P100 wave has changed in patients with diabetic retinopathy in comparison to control group. **Conclusions.** Changes in latency of waves registered on the VEP pathway and the amplitude of the P100 wave have been observed in patients with diabetic retinopathy, which proved the importance of this study in the diagnosis of diabetic retinopathy and the possibility to examine the prognosis of this disabling disease.

SUCCESSFUL TREATMENT OF CHRONIC OSTEOMYELITIS IN A 68-YEAR-OLD WOMAN USING IV MAJOR OZONE THERAPY: A CASE REPORT

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ABSTRACT

Introduction. Osteomyelitis is a severe infection of bone and bone marrow, which can result from various causative organisms. Proximal phalanx of big toe osteomyelitis is a rare condition, but it can lead to significant morbidity and disability. Osteomyelitis is a challenging condition to treat, particularly in elderly patients. We report a case of a 68-year-old woman with chronic osteomyelitis in the left big toe's proximal phalanx, which did not respond to conventional treatment. **Material and Methods.** The patient with a medical history for diabetes mellitus, hypertension and hypercholesterolemia presented to our clinic with pain and swelling in the left big toe and foot. An x-ray confirmed the diagnosis of osteomyelitis in the big toe's proximal phalanx. The patient was started on intravenous major ozone therapy, which consisted of 10 sessions twice weekly, followed 5 sessions twice monthly maintenance therapy.

Each session 100 ml venous blood, together with an anticoagulant, is taken to an ozone-resistant bottle and exposed to 30 microgram/ml ozone-oxygen mixture for a few minutes, soon after which it is re-infused into the venous circulation. **Result.** Gradually, the swelling in the left big toe and foot subsided, and the patient stopped taking oral antibiotics. There were no signs of re-infection during the follow-up visits and an X-ray follow-up demonstrated total recovery, with no signs of osteomyelitis. **Conclusion.** Ozone therapy is a promising alternative treatment for chronic osteomyelitis, especially in patients who have not responded to conventional treatment methods. The therapy is safe, well-tolerated, and can be considered as a viable option in patients with chronic osteomyelitis who have limited treatment options. However, further studies are needed to confirm the efficacy of ozone therapy and its optimal dosing and administration regimens.

HIP REVISION ARTHROPLASTIES WITH BONE GRAFTING IN ACETABULAR DEFECTS

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ABSTRACT

Introduction. Meta-analysis of studies shows that approximately 1/3 of patients with instability of acetabular components after primary hip arthroplasty have different grade of acetabular defects. The prevalence of hip revision arthroplasty is 7-18%. **Aim of our study** was to analyze the possibilities and effectiveness of acetabular defects restoration using bone grafting in hip revision arthroplasty. **Material and methods.** A descriptive study was performed in the period 2017-2022 on a group of 92 patients (100 hips) admitted to Department of Big Joints Replacement within the Clinical Hospital of Traumatology and Orthopedics

from Chisinau. Patients underwent radiographic examination and computed tomography. **Results.** Acetabular defects were distributed according to the W. G. Paprosky Classification. Depending on the degree of the defect, the patients were distributed as follows: type I - 22 (18,9%), type II - 48 (51.8%) and type III - 30 (29,1%). It should be noted that according to the Paprosky classification, good results were obtained in the treatment with allografts in all the types, notwithstanding the more advanced defects in the type II and III. **Conclusion.** These results suggest that despite the degree of acetabular bone deficit, we can obtain good results, even in type III, having at hand the technical possibility of bone grafting and the revision implant.

SURGICAL OPTIONS IN WRIST INSTABILITIES

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ABSTRACT

Introduction. The instability of the wrist joint leads to deforming osteoarthritis, painful and limited range of motions, decreased strength and impaired hand function. There are some surgical options, one of them is arthrodesis, when by losing the amplitude of movements we can achieve a stable wrist, without pain and to restore gripping power. **Material and methods.** Our experience is based on the treatment of 146 patients with wrist instabilities of different etiology aged between 17 and 70 years who underwent various selective arthrodesis. Kienbock disease was diagnosed in 47 patients, pseudoarthrosis of the scaphoid complicated by deforming osteoarthritis in 75 cases, 10 rotational subluxation of the scaphoid, 6 trapezium-trapezoid-scapoid osteoarthritis and

8 malunion of the distal radius fracture. **Results.** In total was performed the following surgeries: 51 lunate-capitate-triquetrum-hamate arthrodesis, 32 scapho-trapezium-trapezoid, 18 Graner procedure, 13 total wrist arthrodesis, 9 capitate-scapoid, 5 scapho-capitate, 5 radial-semilunar, 5 removing of the first row of carpal bones, 5 scaphoidectomy, and 3 radial-scapoid. Long-term results were followed up in 53 patients: good (20), satisfactory (27). Unsatisfactory outcomes were in 6 cases because of absence of the ankylosis and presence of the pain. **Conclusions.** Selective wrist arthrodesis is indicated in deforming osteoarthritis grade II or III, when outstanding amplitude movements are up to 50% of normal range. Each case of wrist arthrodesis is chosen individually according etiology and patient activity.

RETROPHARYNGEAL ABSCESS

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ABSTRACT

Introduction. Oral suppurations as a starting point from the retropharyngeal space represent a category of rare conditions, but which can lead to very serious complications. The most life-threatening of it can be suffocation on the background of accentuated edema, as well as purulent mediastinitis. **Material and methods.** The anamnestic, objective, clinical, paraclinical data were taken from medical records. The patients were investigated by laboratory analysis, electrocardiography, medical imaging. The children were consulted and treated multidisciplinary. The specialized literature on similar cases was studied. **Results.** The patients were treated in the Clinic "Em. Coțaga", ENT Department. During the period of 2018-2023 years, 6 children were treated, of which 5 in the last 12 months. Patients had presented severe clinical

symptoms with intoxication syndrome, dyspnea, odynophagia, dysphagia, persistent fever, forced head position, etc. Laboratory analyzes showed: leukocytosis, increased VSH, increased fibrinogen, high CRP. 4 patients required intensive therapy with double or triple antibiotic therapy, rheological, anti-inflammatory, anticoagulant, disaggregating, vitamin therapy. In the first 72 hours 2 persons need consultations. Between 3 and 5 days, 3 patients called for help. After 5 days a patient was admitted and treated. The success rate was 100%, all patients were discharged home in satisfactory condition. **Conclusions.** Retropharyngeal abscess is a rare condition and is frequently diagnosed in the late stages. To avoid possible complications, the necessary investigations, diagnosis and treatment must be initiated in time, because this pathology can have such complications as: mediastinitis, septicemia, asphyxia, etc.

EVALUATION OF THE QUALITY OF LIFE IN PATIENTS WITH CHRONIC HYPERTROPHIC RHINITIS PRE- AND POST-OPERATIVE

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ABSTRACT

Introduction. Chronic hypertrophic rhinitis (CHR) is a fairly common condition, characterized by hypertrophy of the lower nasal turbinates, and, therefore, the blocking of air flow to the lower airways. **The purpose** of the research is to evaluate the effectiveness of the laser surgical treatment carried out by analyzing the quality of life of the patients of the research groups in postoperative dynamics. **Methodology.** 60 children with CHR, aged 7-17, were included in the study. Depending on the surgical treatment applied, the patients included in the study were divided into two groups. Group I consisted of 30 patients with CHR operated by the cauterization method of the inferior nasal turbinates. Group II was made up of 30 patients with the same pathology, treated by the laser surgery method. In our study, we evaluated the quality of life of children with the mentioned pathology even after surgical treatment.

The quality of life was assessed according to the SN-5 questionnaire. **Results and discussion.** Analyzing the obtained data, we can conclude that both the domain scores and the total score indicate a significant improvement in the quality of life after the surgical intervention in both groups. This improvement was more pronounced in group II patients, with a statistically significant difference between groups ($P < 0.05$). It can be seen that in study group I, preoperatively the average total score was 25.9 points, and postoperatively 13.6. In study group II, preoperatively the total score was 25.8 points, and postoperatively 11.6 points. **Conclusions.** The impact of CHR in the children in the study on the quality of life was significant, and the surgical operations applied, especially those in the II investigation group, contributed to increasing the quality of life of the patients, a fact that is confirmed by the data of the statistical analysis manifested by the reduction of the SN-5 score.

THE EVOLUTION OF TYMPANIC PARAGANGLIOMA IN A PATIENT POST COVID-19

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ABSTRACT

Introduction. We will discuss about symptoms exacerbation and subsequent accidental diagnosis in a patient with paraganglioma of the middle ear, a usually benign vascular tumor, clinically presenting with pulsatile tinnitus, cranial nerve pathology, hearing loss, dizziness and hypertensive crises.

Material and methods. Woman, 65 years old, with no medical or surgical history, who presented with mild hearing loss in the last 3 years, intermittent tinnitus in the left ear, after complex treatment of CoV infection, in the intensive care unit, the patient notices the worsening of the mentioned symptoms, the appearance of hypertensive crises with high, uncorrectable values. On examination: otalgia, absent otorrhea, and the presence of a rhythmically pulsating red mass, behind the intact tympanic membrane, we suspected the presence

of a VP, the imaging revealed volume mass in the left ear, the angiography revealed a hypervascular tumor, fed from left superficial temporal artery.

Results. After confirming the diagnosis of left tympanic paraganglioma, it was decided to perform embolization of the main vessel feeding the tumor and surgical laser excision 24 hours after the procedure, with the aim of preventing intraoperative hemorrhage, diagnosis confirmed by biopsy. **Conclusions.** The damage to the vascular endothelium caused by the CoV infection worsens the evolution of chronic vascular pathologies, in this clinical case the increasing of the disease symptoms requiring the patient to be referred to a specialist, which allowed the successful diagnosis and treatment of the pathology, the absence of intra- and postoperative complications specific to the mass effect of large paragangliomas.

SENSORINEURAL HEARING LOSS IN PATIENTS WITH LONG-COVID-19. LITERATURE REVIEW

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ABSTRACT

Introduction. The sensorineural hearing loss represents a disease that is caused by injury of the inner ear (cochlea) or the damage of the acoustic nerve. The Coronavirus pandemics have resulted in a great number of respiratory system affection but also the Long-Covid syndrome is described. Among other common symptoms of long-Covid syndrome the sensorineural hearing loss is described.

Material and methods. There were reviewed multiple articles describing the observations on the sensorineural hearing loss in patients with Long-Covid Syndrome and the therapeutic management that was considered. The articles date between 2021-2022. **Results.** There were several studies performed that were described in the literature. The vast majority of hearing loss was observed

in adults. The hearing loss could be unilateral either bilateral and there was no correlation found between the severity of disease and the manifestation of otological symptoms. There were also other symptoms associated like dizziness and tinnitus. The therapeutic management including corticoid therapy with local (intratympanic use either systemic) has showed a positive outcome.

Conclusions. Long-Covid syndrome can affect the inner ear or the acoustic pathway. The patients with this kind of manifestation before the Sars-Cov-2 infection did not present any hearing sensorineural deficiencies. The correct diagnosis of the patients with thorough examination (audiogram, tympanometry, otoacoustic emission tests, auditory evoked brainstem potentials) should be performed. The pathophysiological mechanisms remain unknown.

IMPACT OF THE COVID-19 PANDEMIC ON THE VOLUME OF CHRONIC SUPPURATIVE OTITIS MEDIA SURGERIES IN REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Chronic suppurative otitis media (CSOM) remains one of the most common chronic infectious ear diseases worldwide, especially in developing countries. Surgery is still the definitive management for CSOM that intends to eradicate the infection and improve the hearing conduction system. The COVID-19 pandemic has put colossal pressure on the global health care system, including re-schedule the activity of the surgical departments at most hospitals. **Methods.** A retrospective study on chronic suppurative otitis media patients. This study was compared the number of surgeries from April to December 2019 and 2020. Statistical analysis used the t-independence and linear

regression test with $p < 0.05$. **Results.** The elective surgeries for OMCS decreased by 81.4% between 2019 and 2020. There were 195 surgeries (2019) vs 36 (2020). The average number of surgeries per month in 2019 and 2020 was 28 ± 6 patients and 4 ± 2 patients, respectively ($t = 2.365$; $p < 0.001$). Almost all cases that underwent surgery in 2020 were cases with complications. 3 patients who underwent surgery during the pandemic were confirmed COVID-19 based on the PCR swab examination. **Conclusion.** The volume of chronic suppurative otitis media surgeries substantially decrease during the COVID-19 pandemic. The delayed surgery increases the risk disease progression complication, especially CSOM with cholesteatoma.

MODERN APPROACH TO ENDOSCOPIC LASER DACRYOCYSTORRHINOSTOMY

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ABSTRACT

Introduction. The pathology of the lacrimal apparatus still remains one of the current problems for ophthalmology and rhinology, as the affections of the lacrimal ducts are frequent. The share of this pathology in able-bodied people is 71-85%. In recent years, with the development of endoscopic surgery and laser surgery, endoscopic endonasal dacryocystorhinostomy is increasingly preferred. The given procedure has a number of advantages, being as effective as the classic external dacryocystorhinostomy. The efficiency, advantages and possible complications of this method are discussed and compared. Many specialists believe that endoscopic dacryocystorhinostomy is more justified, because the surgical method shortens the time of the surgical intervention. One of the advantages of endoscopic dacryocystorhinostomy is the lack of external incisions at the level of the nasal pyramid. The disadvantage of the classic external dacryocystorhinostomy is the use of cold instruments and the lack of hemostasis. Surgeons coagulate the mucosa with bipolar cautery. The

most common cause of unsatisfactory long-term results of endonasal DCR is scarring of the artificial anastomosis. **Material and methods.** Selective literature was studied to determine the most effective methods of preoperative diagnosis, indications and contraindications, surgical technique and correction of concomitant ENT pathologies, peculiarities of postoperative period management. **Results.** Recent evidence suggests that laser DCR is a viable and well-tolerated treatment option for patients suffering from nasolacrimal duct obstruction with favorable outcomes and shorter operative time. In these cases, the proposed treatment of choice consists in restoring the normal nasolacrimal flow. More recent studies suggest improvements in success rates compared to older studies. At the same time, additional well-designed comparative studies are needed. **Conclusions.** Laser endoscopic endonasal dacryocystorhinostomy is a minimally invasive high-performance operation that allows one-stage correction of concomitant ENT pathologies and can be successfully implemented in the clinical practice of the ENT department.

IMPACT OF ELECTRODE DESIGN IN COCHLEAR IMPLANTATION

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ABSTRACT

Introduction. Cochlear implants (CI) are considered to be the most effective treatment for patients with severe sensorineural hearing loss. CI are composed of three important parts: the external sound processor, the internal stimulation circuit, and the electrodes. In Otorhinolaryngology Clinic of Hospital "Timofei Moşneaga" the patients benefited CI with different electrode design, depending on the manufacturer. **The aim** of the work was to evaluate the post-implantation results according to the type of electrode. **Material and methods.** A group of 30 implanted patients in period 2014 - 2022 were distributed in 2 groups. The 1st group – patients what benefited from a cochlear implant with an electrode with

active length of 19-20mm (10%), the 2-nd group benefited an CI with active length of 25-27mm (90%). Post-operatively, after one month, the audio processors were activated, fittings were made on time. **Results.** After 6 months, we did the audiological balance, the frequency bands that are stimulated by the distributed intracochlear electrodes were evaluated. It was established that at patients from the first group, the entire natural range of sound frequencies was stimulated. At patients from the 2-nd group, only medium to high frequencies was stimulated. **Conclusion.** To provide an accurate perception of a sound, the cochlear implant electrode array has to be long enough to cover the whole cochlea, to stimulate the full natural range of sound frequencies.

UVULOPALATOPHARYNGOPLASTY IN THE MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA: THE ENT CLINIC "TIMOFEI MOSNEAGA" EXPERIENCE

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ABSTRACT

Introduction. Sleep is a reversible physiological process characterized by a decrease in sensitivity and reaction to external stimuli. Apnea is defined as a stop of breathing at least 10 seconds, and this can have obstructive or central cause. **The aim** of the work was to evaluate the role of laser assisted uvulopalatopharyngoplasty (Laser-UPPP) in the treatment of obstructive sleep apnea syndrome (OSAS) using endoscopy data before and after surgery. **Material and methods.** A group of 30 patients diagnosed with OSAS, were operated in our clinic in period 2019-2022. The videoendoscopy is a complementary diagnostic tool that can be

easily performed, especially for surgeons who need to know where and how the obstruction occurs. We used for diagnosis sleep endoscopy before treatment. All patients benefited by Laser-UPPP. After 6 months we examined all patients by an 70° rigid endoscope to examine the velopharyngeal space. **Results.** After Laser-UPPP surgery, at endoscopic examination we determined sufficient velopharyngeal space enlargement. Using a clinical questionnaire, the patients reported that sleep quality was significantly improved and appreciate a beneficial effect after surgery. **Conclusion.** The minimally invasive surgical technique - Laser-UPPP is ideal option for management of snoring and OSAS with high success treatment rate.

SURGICAL REHABILITATION OF AUDITORY FUNCTION IN PATIENTS WITH CHRONIC SUPPURATING OTITIS MEDIA

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ABSTRACT

Introduction. Chronic suppurative otitis media is a chronic inflammation of the mucoperiosteum of the middle ear, which is characterized by the presence of persistent otorrhea, perforation of the tympanic membrane and hearing loss. According to WHO data, about 3%-4.7% of the population suffers from chronic suppurative otitis media, of which 60% (200 million) suffer from moderate and severe hearing impairment. **Material and methods.** A randomized clinical trial during the years 2020-2022 was realized. I group consisted of 10 patients with chronic suppurative otitis media (2 patients- status after radical surgery) and 8 patients in remission after tympanoplasty type I. Group II - control group was made of 10 patients (2 after radical surgery with auditory prosthesis) and 8

patients with chronic suppurative otitis media in remission, stable form (conservative treatment). All the patients had transmission hypoacusis and mixed moderate and severe form. **Results.** The first 2 patients after radical surgery underwent BoneBridge type bone implantation surgery, of which in 2 patients the FMT was inserted on the dura mater (middle cerebral fossa), in 4 patients it was inserted in the mastoid region. In 4 patients after type I tympanoplasty, a VibrantSoundbridge type middle ear implant was performed with the placement of the coupler on the short apophysis of the incuss. **Conclusion.** In all 10 cases there was an improvement in hearing with a difference of over 20dB-35dB. Surgical rehabilitation of auditory function in patients with transmission and mixed hearing loss caused by chronic suppurative otitis media represents a real challenge for otologists.

MORBIDITÉ DE LA PAPILLOMATOSE RÉCIDIVANTE DU LARYNX CHEZ L'ENFANT

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ABSTRAITE

Introduction. La papillomatose respiratoire récurrente est une maladie respiratoire rare, secondaire à une infection chronique au HPV type 6 ou 11, déclarée dans l'enfance ou à l'âge adulte. L'incidence réelle et la prévalence de la papillomatose récurrente ne sont pas connues et peuvent varier selon l'âge, la présentation, le pays et le statut socioéconomique de la population étudiée. **Matériaux et méthodes.** L'objectif de l'étude est d'évaluer la dynamique et la structure du PL. Mettre en évidence les aspects cliniques-épidémiologiques et médicaux-sociaux. **Résultats.** L'étude a porté sur 198 patients atteints de papillomatose laryngée qui ont été admis et traités entre 1981 et 2013. Chez les enfants, la répartition par sexe est similaire

entre les garçons et les filles. Notre groupe d'étude comptait 98 enfants de sexe masculin (49,5 %) et 100 enfants de sexe féminin (50,5 %). Cent trente-trois patients (environ 67 %) ont éprouvé les premiers symptômes avant trois ans. En analysant les premiers symptômes pour lesquels ils se sont adressés à un service spécialisé, nous avons constaté que: La dysphonie était présente en 98 (49,5 %), la dyspnée inspiratoire en 19 (9,6 %), en 81 (40,9 %) de patients, dysphonie et dyspnée inspiratoire. **Conclusions.** Les taux d'incidence estimés pour la papillomatose de l'enfant concordent avec d'autres études épidémiologiques basées sur la population. La distribution entre les garçons et les filles est à peu près égale et il n'y a aucune différence apparente dans les fréquences chirurgicales, le sexe.

CURRENT TRENDS IN THE TREATMENT OF RECURRENT LARYNGEAL PAPILOMATOSIS

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ABSTRACT

Introduction. Airway papillomatosis is caused by the human papillomavirus (HPV), of which subtypes 6 and 11 account for the highest rates of disease. Airway papillomatosis is characterized by the proliferation of benign squamous papillae in the respiratory tract. Papillomas can develop at any site in the airway but are most common in the larynx and vocal cords, with rare diffuse involvement in the lungs. **Material and methods.** The purpose of this study was to evaluate the different surgical and adjuvant therapies available for the treatment of this condition reported between 2019-2022. **Results.** A literature review was conducted through surveys based on electronic data in public areas

such as PubMed. Thirty seven articles involving 1120 patients with laryngeal papillomatosis met the criteria. Of these, 22 articles research the use of adjuvant therapies and 15 surgical treatment. In the literature there has been an increase in the options of adjuvant therapy for PL in recent years. Treatment with bevacizumab and cidofovir can increase the interval between surgical procedures and decrease the number of procedures per year. **Conclusions.** Adjuvant therapies may be a viable option for prolonging the duration of RRP remission and improving the quality of life of patients and their families. However, more research is needed to assess effectiveness and adverse effects in different populations.

TUMORS WITH EXTENSION IN THE MIDDLE EAR AT CHILDREN

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ABSTRACT

Introduction. The most common pediatric head and neck malignancies include non-Hodgkin lymphomas, Hodgkin lymphomas, rhabdomyosarcomas, thyroid malignancies, nasopharyngeal carcinomas, salivary gland malignancies, and neuroblastomas. Malignant tumors of the temporal bone have an incidence in adults of less than 0.2% among all head and neck cancers, primary temporal involvement without systemic involvement is rare. **Materials and methods.** We present the experience of Pediatric Otorhinolaryngology Department, Institute of Mother and Child, Emilian Coțaga Clinic during last 3 years. And discuss 2 cases, a 6-year-old child

with primary non-Hodgkin's lymphoma of the temporal bone, paresis of facial nerv, and a 4-year-old patient with cerebral angiosarcoma, paresis of facial nerv. **Conclusion.** Incidence of head and neck tumors in pediatric age group is relatively rare, but they are on the rise, childhood cancer is second only to accidental trauma as a cause of death in children over 5 years of age, according to the United States National Cancer Institute. Children with tumors of the head and neck have nonspecific symptoms, the diagnosis often is missed until the disease is at an advanced stage. The clinician must retain a high index of suspicion, persistent and severe symptom, should be considered as a malignant presentation. Diagnosis and treatment need complex multidisciplinary attentions.

REHABILITATION OF IMPLANT-PROSTHETIC TREATMENT FOR EDENTULOUS DENTAL ARCHES WITH SEVERE LATERAL ATROPHY

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ABSTRACT

Introduction. The implant-prosthetic rehabilitation of dental arches with severe lateral atrophy is currently a vast challenge for dental practitioners. This issue is extensively discussed at various specialized scientific forums. The goal is to restore lost functions due to extensive edentulism with severe lateral atrophy, which causes difficulties in the insertion of endosseous dental implants limited by adjacent anatomical formations such as the maxillary sinus and mandibular canal. The possibility of inserting implants without bone augmentation procedures was proposed in 1993 by P. Malo as an alternative for the rehabilitation of dental arches. The above considerations led us to study the particularities of implant-prosthetic treatment using the protocol proposed by the aforementioned author. **Material and methods.** To achieve the aim of the study, 30 patients with complete maxillary edentulism and severe lateral atrophy were included, with an age range of 50-60 years and without acute or chronic somatic diseases in an acute phase. Among them, there were 17 men (57%) and 13 women (43%), with 10 having bimaxillary edentulism and 20 having unimaxillary edentulism (10 in the mandible and 10 in the maxilla). Each patient received 6 implants in the maxilla and 4 in the mandible. The total number

of implants inserted was 200: 120 in the mandible (60%) and 80 in the maxilla (40%). The implants were inserted with a force of 35-45 N. All implants received primary stability of -3;-5 on the periosteal value, which allowed for their immediate loading with temporary acrylic prosthetic works. After the operation, prophylactic treatment was administered (antibiotic therapy: amoxicillin and clavulanic acid - 1000 mg, antifungal: fluconazole - 150 mg, pain reliever: nimesulide - 100 mg, saline water baths, and Trachisan antiseptic, chlorhexidine - 0.05%). All patients underwent clinical and paraclinical examination (CT; CBCT) to evaluate the effectiveness of the treatment. **Results.** Following the clinical and paraclinical examination, it was found that: 28 implants had a 0.2 mm resorption in the first year post-implantation, which is a normal physiologic resorption acceptable according to Albrektsson, while in 8 implants, the resorption was more pronounced at 2 mm. These pre-implant patients showed signs of periodontal disease, which once again, demonstrates that implantation is contraindicated in acute periodontal disease. Gingival recessions were detected in 18 implants, all with a lack of keratinized gingiva. **Conclusions.** The implant-prosthetic rehabilitation protocol proposed by P.Malo has proven to be sufficient in rehabilitating patients with severe lateral bone defects without the need for surgical bone augmentation procedures.

OSTEOCHONDROMA IN CHILDREN

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ABSTRACT

Introduction. Osteochondroma is the most common benign bone tumor in children and adolescents. It is a solitary osteocartilaginous tumor located in the metaphyseal area of the bone and increases in volume simultaneously with the child's growth. **Material and methods.** The study included 27 children hospitalized during 2022 in the Pediatric Orthopedics Department, "Natalia Gheorghiu" National Center for Pediatric Surgery, with the diagnosis of osteochondroma. Patients were examined clinically and radiologically (X-rays, scintigraphy, and/or CT). **Results.** The distribution of children by age was as follows: 0-5 years - 1 (3.7%), 6-11 years - 6 (22.22%), 11-14 years -10 (37.03%), 15-18 years -10 (37.03%). The distribution of patients by sex was as follows: 18 boys

(66.66%) and 9 girls (33.33%). Osteochondromas were mainly located in the proximal tibia - 9 patients (33.33%), distal femur - 8 (29.6%), proximal humerus -3 (11.11%), iliac bone - 2 (7.4%). There were cases with a rare localization of osteochondroma (rib, distal tibia, hallux, scapula, finger; 1 patient each - 3.7%). All the children were subjected to surgical treatment. A bone tumor is an absolute indication for surgical intervention. The intervention involves marginal resection of the affected bone, the removal of the osteochondroma and histological examination of the removed tissue. **Conclusions.** Osteochondroma is a benign osteocartilaginous tumor that is more common in boys aged between 11 and 18 years. The most common location is the region proximal to the tibia and distal to the femur. Surgery is the treatment of choice, the bone tumor being removed.

SURGICAL TREATMENT OUTCOMES OF MYELOMENINGOCELE

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ABSTRACT

Introduction. Neural tube defects are the most serious and frequent anomalies of the central nervous system, thus occupying an important place in pediatric neurosurgical pathology. Myelomeningocele (spina bifida cystica) is a protrusion of the intraspinal contents (meninges, nervous tissue) through a closing defect of the posterior vertebral arch, showing an incidence of 1-4 cases per 1000 newborns. **Methods and material.** The study is based on the surgical treatment outcomes of 61 children aged from newborns to 3 years old, diagnosed with meningomyelocele (MM) and admitted to "Natalia Gheorghiu" Pediatric Surgery Center of PMHI Mother and Child Institute between 2016 and 2022. MMs were determined and classified based on their localization, the most common being the lumbar MM 45 patients (73.7%), followed by thoracic 9 patients (14.7%), lumbosacral 6 patients (9.8%) and cervical localizations 1 patient (1.6%).

Out of the total number of MMs, 42 (68.8%) weren't associated anomalies and 19 (31.1%) were hydrocephalus-associated ones. **Results.** The patients under study underwent the following procedures: myelomeningocele repair in 42 (68.8%), myelomeningocele repair and insertion of the ventriculoperitoneal shunt (VPS) in 14 (22.9%), and insertion of the ventriculoperitoneal shunt in 5 (8.1%) patients. Postoperative mortality made up 11% (7 deaths). Following an overall assessment, it revealed that the main cause of high mortality rate were the concomitant conditions, especially those associated with bacterial infections, the TORCH infections being the most common ones due to maternal transmission and negative impact on the prognosis. **Conclusion.** Satisfactory treatment outcomes were directly related to the antenatal diagnosis of congenital malformations, interdisciplinary collaboration, proper pregnancy and childbirth management, as well as specialized surgical assistance provided in optimal terms.

RARE CASES OF PENETRATING ABDOMINAL INJURIES IN CHILDREN

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ABSTRACT

Introduction. Traumatic injuries represent the main cause of death in children and adolescents. Cases of penetrating abdominal trauma in children account for approximately 5% of all abdominal injuries and are becoming more frequent. The main cause of these injuries is accidents, assaults, and physical self-harm. The well-developed abdominal wall musculature creates difficulties in accurately determining the depth of the wound. This necessitates careful exploration to avoid overlooking occult injuries to abdominal viscera. The organs most commonly affected are parenchymal organs, while gastric injuries are rarer (3%) and are associated with other visceral injuries. **Material and Methods.** During the past 3 years, among the total number of traumatized children, 6

cases of anterolateral abdominal wall wounds were detected. Clinical signs included localized pain in the injured area, muscular defense, and weakly positive peritoneal signs. Diagnostic tools used were panoramic radiography, abdominal ultrasound (USG), and computed tomography (CT). **Results.** Six cases of penetrating trauma were analyzed, all of which required urgent surgical intervention with clear signs of peritonitis (2 cases), omentum evisceration (1 case), hemorrhage and shock, and hemodynamic instability (3 cases). The aim of surgical treatment is to quickly identify and treat the source of bleeding and peritoneal contamination. **Conclusions.** The contemporary trend of conservative treatment of abdominal trauma is not useful in penetrating abdominal wounds. Delaying surgical intervention in penetrating wounds can lead to serious complications.

ANALYSIS OF URINARY TRACT ANOMALIES IN ANORECTAL MALFORMATIONS

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Project: "Optimization of diagnostic and treatment of pelvic functional disabilities in
children operated for colo-recto-anal, perineal and spinal neural axis malformations".

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ABSTRACT

Introduction. In the groups of patients with anorectal malformations (ARM) was marked a phenotypic variability, with the coexistence of reno-urinary anomalies in 30-40%, simultaneous evolution of which causes the worsening of the somatic status, limits the possibilities of radical surgical treatment, increases the incidence of postoperative morbidity. **Aim of study.** Evaluation of incidence and impact of congenital reno-urinary anomalies associated with ARM. **Material and methods.** The medical records of 54 children born with an ARM in the period 2018-2022 were retrospectively studied in our clinic: documentation of diagnosis, screening method, urological anomalies, treatment, complications. **Results.** The overall incidence of urological anomalies was

recorded in 24% of cases: in 9,26% - congenital hydronephrosis; 3,70 %- hypospadias; 3,70%- renal agenesis; 3,70%- deformation of the scrotum. Also, in 27,7% of all cases was determined a recto-urethral/ bladder/ prostatic fistula. Presence of the urological anomalies in patients with ARM there are a predictive factor for the occurrence of septicoinflammatory processes of the reno-urinary system which negatively influences the somatic status of newborns and also delayed the stages of surgical correction of anorectal malformations. **Conclusions.** Urological anomalies are frequently seen in patients with ARM. The presence of concomitant pathologies explains the necessity of the amount of invasive treatments these patients require, but timely identification of newborn with ARM reduce risk of renal failure and may be significant for renal survival.

CURRENT VIEW ON PROLONGED AND CHRONIC COUGH IN CHILDREN

PEDIATRICS

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ABSTRACT

Cough is universal in childhood. International guidelines define acute cough (< 3 weeks duration), 'prolonged acute' (3-8 weeks), either of which can be recurrent; and chronic cough variably defined as 4-8 weeks duration. In all cases, the clinical state and degree of illness of the child is as critical in the decision as to when and how to investigate [Thorax. 2008;63:Suppl 3:iii1-iii15]. It is essential to know the range of normal coughs and respiratory infections [BMJ. 2013;347:f7027]. There are five diagnostic categories of chronic cough in children; (1) normal child (commonest, and the hardest diagnosis); (2) a serious illness such as cystic fibrosis (rare, but essential to get right); an 'asthma syndrome' (cough variant asthma is very rare and frequently over-diagnosed; minor problems such as rhinitis or gastro-oesophageal reflux; and (5) the overanxious (often first-time) parents. Clinical skills are needed to distinguish these, a careful and focused history and physical examination, supplemented by targeted tests when appropriate. Treatment is of the underlying cause if known, and blind therapeutic trials should be avoided. If the paediatrician feels such a trial is essential (usually this is inhaled corticosteroids for a supposed asthma diagnosis), then a short trial (e.g. six weeks) is given, and then if the child's symptoms have improved, the treatment is discontinued and only resumed if the cough recurs. This prevents spontaneous resolution of cough being mistaken for a therapeutic response. Do not recommend "cough medicines", they are expensive placebos, and remember the environment, especially exposure to tobacco and vapes. It should be remembered that isolated chronic dry cough without breathlessness

is rarely due to asthma, and usually resolves eventually without treatment. Chronic wet cough, which must be distinguished from recurrent acute cough with viral colds, which usually does not betoken a serious illness, should always be taken seriously. The differential diagnosis is wide, and includes cystic fibrosis, primary ciliary dyskinesia, aspiration syndromes, and persistent bacterial bronchitis (PBB)-idiopathic bronchiectasis spectrum. This latter is a diagnosis of exclusion [<https://doi.org/10.3389/fped.2017.00264>]. PBB may be a precursor of established bronchiectasis and is characterised by chronic airway infection with any combination of *H Influenza*, *St aureus* and *Moraxella Catarrhalis*, and neutrophilic airway inflammation [Chest 2006;129:1132-41]. Treatment is with a 2-4 week course of antibiotics [Lancet Resp Med 2021;9:11219]. There is a wide differential diagnosis of bronchiectasis [Lancet 2018;392:866-879] and recent ERS Guidelines and standards of care have been published [Eur Respir J. 2021;26;58:2002990; Eur Respir J. 2022;59:2200264; Eur Respir J 2021 58: 2101657; Eur Respir J. 2022;60:2200300; Breathe (Sheff). 2022;18:220144]. In summary, most children who cough do not have any disease; they should be assessed with a good history, a thorough physical examination and occasionally simple tests. Blind trials of treatment and cough medicines should be avoided; treat the underlying cause if you can find one. For sure, most children who cough without wheeze or breathlessness do not have asthma. But you must be on your guard for the rare child whose cough is the presentation of a serious illness.

PRESCHOOL WHEEZING SYNDROME: GUIDELINES AND BEYOND

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ABSTRACT

Background and aims. One in three children has at least one episode of wheezing before their third birthday, and the cumulative prevalence of wheezing is almost 50% at the age of 6 years. 15 years have elapsed from the first publication of the ERS Guidelines on preschool wheezing (Brand P, 2008 & 2014). **Methods.** Letters with the request to indicate the 3 most important recent publications in the preschool wheeze adding a short comment on the choice were sent to opinion-leading academic pediatric pulmonologists including active co-authors of the ERS Guidelines. **Results.** Answers from 11 of 30 invited pediatric pulmonologists were received. Half of the responded active researchers was between 40 and 115. There was almost no consensus in the selected papers. In contrast, looking at the comments on the choices there were more similarities than differences. The major recent

research developments indicated were as follows: no distinctions in lower airway inflammation between different clinical phenotypes, i.e. multiple trigger wheeze and episodic viral wheeze do not differ in lower airway pathology, rhinovirus, but not RSV as a cause of acute bronchiolitis can be a marker for chronic asthma and response to OCS, first successful attempt to personalize wheeze therapy was done with old instruments – skin prick tests and blood eosinophil count, more evidence that some phenotypes of preschool wheeze can be related to the chronic obstructive pulmonary disease, cluster analysis as a new instrument to move from phenotype to endotype based stratification, indicating the necessity to change the taxonomy and to personalize the treatment. **Conclusions.** 15 years after the publication of the first ERS Guidelines we are still a long way from understanding and management of wheezing syndrome in preschool children.

GASTROESOPHAGEAL REFLUX DISEASE FROM NEWBORNS TO ADOLESCENTS

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ABSTRACT

Gastroesophageal reflux (GER) is usually defined as a physiological passage of stomach contents back into the esophagus. It is most prevalent in infancy, and occurs in up to 90 % of infants. The prevalence gradually decreases with age. Gastroesophageal reflux disease (GERD) is a complication of GER when it creates troublesome symptoms. It is estimated that GERD can be diagnosed in up to 20 % of adolescent population, which is close to adult numbers. GERD can present in a wide range of esophageal and extraesophageal symptoms. A detailed clinical and family history and a thorough physical examination are usually enough for diagnosis of GERD. When diagnosis is unclear or complications are suspected investigations could be performed: upper gastrointestinal (GI) endoscopy with biopsies, pH/impedance monitoring,

abdominal ultrasound, laryngoscopy, sometimes contrast radiography, brain MRI, etc. The differentiation of GERD should be between GI diseases of different etiology: anatomical defects, inflammation, allergy, stress and extraesophageal diseases: brain tumors, hydrocephalus, psychiatric disorders, metabolic diseases, intoxication, kidney failure, etc. The first-line treatment of GERD in children and adolescents includes modifying the diet and lifestyle (reduction of psychological stress and gaming, increasing sleep duration, appropriate physical activity, etc.). The main medications are proton pump inhibitors which poorly works in infants and are quickly metabolized in children so needs high doses. In milder cases alginates could be used. New medications failed to reach good response in the treatment of GERD (prucalopride, intrapyloric Botulinum toxin injections, neuromodulators, etc.).

THE ROLE OF MICROBIOTA IN CHILDREN GROWTH

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ABSTRACT

Gut microbiota has an intimate relationship with the various health conditions of the human body. From early life to adulthood, the microbiota plays a crucial role on the child's physical and mental development. The intestinal microbiota takes part in a wide range of mechanisms regulating the process of growth, which is reflected in the rate and magnitude of changes in child body size over time. Dysbiosis, reduced diversity in the gut microbial community, or microbial immaturity are involved in several intestinal and metabolic diseases that affect growth. The gut microbiota composition and structure depend on many host and microbial factors. The mediating role of gut microbes in growth consists of participation in

metabolic processes through the secretion of enzymes and the production of biologically active metabolites (e.g., short-chain fatty acids) as well as in the metabolism of human milk oligosaccharide and bile acids, participation in the hormonal activity of the host. One of the most interesting mechanisms that could explain the relationship between gut microbiota composition and linear and ponderal growth of children involves the role of intestinal microbes in the promotion of growth hormones. All the mechanisms do not explain the complexity of the relationship between the course of intestinal succession and the course of children's growth. Because of the wide range of interactions between the gut microbiota and growth processes, intestinal dysbiosis may negatively affect patterns of child growth.

OSTEOARTICULAR SYMPTOMS IN PEDIATRIC HEMATO-ONCOLOGY FIELD

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ABSTRACT

Both in malignant and benign hematology as well as in pediatric oncology, the involvement of the osteo-articular system is of major importance, starting from the very early symptoms of the disease up to the extreme manifestations that accompany the evolution of some entities. In pediatrics, in advanced-stage lymphomas and in acute leukemias, some signs can mimic several rheumatological conditions. Musculoskeletal pain may be present in 10% to 50% in all cases of childhood acute leukemia and is more common in acute lymphoblastic leukemia (ALL) than acute myeloid leukemia (AML). As first symptom of leukemia, they could precede the classic manifestation of the disease by months, being one of the causes of the diagnostic delay that occurs, when the characteristics of the disease are absent. Clinical abnormalities of the musculoskeletal system may include manifestations of anemia and hemorrhagic diatheses, sickle cell

hemoglobinopathies, hemophilia, Willebrandt's disease or other coagulopathy syndromes. Patients with these diseases show a variety of osteoarticular features. Pain crisis is the most common manifestation of disorders in sickle cell anemia, but avascular necrosis, osteomyelitis or various forms of arthritis are also common. Oncological diseases are strongly expressed by primary or secondary bone tumors (metastases) in osteosarcomas, Ewing tumors, sarcomas, neuroblastomas, nephroblastomas, retinoblastomas, histiocytosis. Symptoms of bone metastases are often nonspecific and depend on variety of factors, such as type, stage and tumor primary site, as well as age and general condition. They include: bone pain at night or at rest, bone fractures, spinal cord compression injury, loss of bowel and bladder control. The extended panel of osteo-articular manifestations requires a tailored approach and complete investigations, as severe hematological and oncological abnormalities could be revealed.

MEDICINES WITH A PLANT COMPONENT APPLIED AMONG CHILDREN

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ABSTRACT

The practical application of herbal compounds for medical purposes is gaining popularity on a global scale. The use of herbal supplements can be used to treat a variety of ailments, including dyspepsia, hepatic and biliary diseases, cardiovascular disease prevention and treatment, and infectious disease treatment, in addition to restoring bodily functioning. They are some of the pharmaceuticals that parents and pediatricians recommend. The World Health Organization (WHO) announced the spread of the new coronavirus in January 2020,

a development with a significant global impact. A few studies from the past year have described the use of Chinese herbal remedies for COVID-19 prophylaxis and prevention. There is information about the use of pharmaceuticals to treat infectious diseases and fever but real evidence for their impact on the SARS-CoV-2 virus is still insufficient. Therefore, the purpose of this study is to establish how many of the medicines sold without a prescription containing a plant component are used among very young children in Bulgaria and if these phytoproducts can be used to treat pediatric patients with COVID-19.

ANTIBIOTIC RESISTANCE: THE DANGER FOR THE CHILDREN

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ABSTRACT

The threat of antibiotic resistance to public health is of the utmost concern, particularly for young children. According to data from the WHO, infections brought on by multidrug resistant bacteria result in 700,000 deaths worldwide each year, including about 200,000 infant deaths. The multifaceted foundations of this escalating problem are unique to children's ages. For instance, the dearth of pediatric-specific data and studies also contributes to the harmful overuse and misuse of

antibiotics (for incorrect diagnosis and indications, or at the incorrect dosage). The introduction of antibacterial agents led to a revolution in the management of bacterial infections. Unfortunately, today we are facing an emerging and increasing resistance to antibiotics that become a threat to public health in Europe and globally. Infections in children are an important topic because children are highly susceptible to infections and hard to treat. That is why it is very important to lower resistance.

PILOT STUDY OF OVER-THE-COUNTER DRUGS APPLIED AMONG THE PEDIATRIC POPULATION IN BULGARIA

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ABSTRACT

Through their traditional use in a particular or cultural setting, herbal medicines have developed. Herbal medicines' pharmacological benefits are not attributable to their «natural» origins, but rather to the complexity of biologically active chemicals. Pediatricians are starting to combine complementary and alternative medicine treatments with standard medical care. The study's primary objective was to examine over-the-counter (OTC) medications

(OTCDs) containing a plant component. The secondary goal was to look into the composition and nosology of OTCDs for Bulgaria's pediatric population. Registered OTC drugs with a herbal component for children are prescribed for the treatment of colds, pain, gastrointestinal diseases, mild sleep disorders, neurovegetative dystonias and kinetosis, urinary tract inflammation, liver disease, and are also applied topically to inflammation, trauma, urticaria and scars.

BACTERIAL ETIOLOGICAL AGENTS ASSOCIATED WITH ACUTE RESPIRATORY INFECTIONS IN CHILDREN UNDER 5 YEARS OF AGE IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Acute respiratory infections such as acute otitis media, sinusitis, bronchitis, and community-acquired pneumonia are the leading cause of morbidity and mortality among children worldwide. **Objective.** The objective of our study was to identify bacterial agents associated with acute respiratory infections in children under 5 years. **Methods.** The proposed study is a descriptive, prospective laboratory-based survey of children aged from 2 to 59 months, with acute respiratory infections, hospitalized in the period 2021-2022. All 138 biological samples were taken using the nasopharyngeal aspirate technique before the initiation of antibiotic therapy. The study was carried out in the framework of the project „The impact of immunization on the morbidity and mortality of children with respiratory diseases in the Republic of Moldova” (20.80009.8007.08).

Results. *Moraxella catarrhalis* was the most prevalent bacteria (32.3%), followed by *Staphylococcus aureus* (23.2%) and *Streptococcus dysgalactiae* (14.6%). *Streptococcus pneumoniae* was identified in 7.7% of cases, and *Haemophilus influenzae* in 9.2%. In 12.6% of cases extremely resistant bacteria were identified, such as methicillin-resistant *Staphylococcus aureus*, *Burkholderia cepacia*, *Acinetobacter lwoffii*, and *Klebsiella pneumoniae*. In 20% of cases, mixed bacterial growth has been identified, while in 23.6% of cases, bacterial growth was absent. **Conclusion.** Our study reports the profile of bacterial pathogens among children under 5 years with acute respiratory infections. The low prevalence rates of *Str. Pneumonia* and *H. influenzae* reflect national vaccination policies. These data are essential to increase the effectiveness of public health strategies, including vaccination and prevention of antimicrobial resistance.

A MULTIDISCIPLINARY APPROACH TO CRANIOECTODERMAL DYSPLASIA

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ABSTRACT

Introduction. Craniectodermal dysplasia is a rare autosomal-recessive ciliopathy associated with skeletal defects, dysmorphic facial features, growth deficiency, and ectodermal defects. **Material and methods.** A 3-year-old female patient was included in the study. **Results.** The girl was admitted for frequent infections, recurrent episodes of fever, gastrointestinal problems (feeding difficulties, recurrent vomiting, constipation), and marked arthralgias associated with muscle weakness and morning stiffness. Detailed history revealed frequent, but uncomplicated URTI. A regular follow-up didn't reveal any data to suspect an autoinflammatory condition. Clinical examination revealed a child with severe growth deficiency and dysmorphic features, presenting with the following stigma: prominent forehead, dolichocephaly, sagittal craniosynostosis, high anterior hairline, hypertelorism, low set ears, skin laxity, brachydactylia, abnormal nails, and teeth. Also,

the patient had neuromuscular, but no cognitive or language delay. The physician's attention was caught by the abnormal nails, brittle hair, and small, dysmorphic teeth. Another unusual finding was the presence of persistently increased levels of ALT, AST, and GGT levels, impaired phosphorus-calcium metabolism (low Ca and vitamin D3, high P levels), and AMA2-positive antibodies (revealed at age of 2). Taking into account presence the of autoimmune hepatitis, APCED was considered. Nevertheless, clinical laboratory data were not consistent with the diagnosis. The immunological assay revealed a low absolute CD19 fraction and relatively unchanged immunoglobulin levels. Karyotype, genetic metabolic panel, SNP microarray, and whole genome sequencing were negative. Craniectodermal dysplasia was suspected based on suggestive findings. **Conclusion.** Frequent infections may hide a complex syndrome, as well as a rare disease. Such patients require a multidisciplinary approach for timely and correct diagnosis.

MEASURING CLINICAL OUTCOME TO METHOTREXATE TREATMENT IN JIA

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ABSTRACT

Introduction. The most widely accepted criteria to define an improvement in patient disease course in response to a therapeutic intervention are the American College of Rheumatology Pediatric response criteria developed in 1997. The genetic mutations in MTHFR gene are as well considered a background for improvement outcome difficulties. **Aim of study.** To assess the relationship between MTHFR gene mutations in JIA patients using methotrexate and the ACR Pedi 30% Index. **Material and methods.** An observational case-control study involved 68 patients using methotrexate for JIA treatment. The genetic polymorphism was tested and the appreciation of improvement was assessed after 24 weeks from treatment onset. **Results.** There has

been examined 68 children, in whom the genetic testing revealed 23 (33,8%) cases of MTHFR combined C677T/A1298C (9 (39,1%)) and T677T (14 (60,9%)), and 45 (66,2%) cases of no mutations samples. The gender distribution was 37 (54,4%) girls and 31 (45,6%) boys with a mean age of 133,8 months CI 95% [0,81-0,97]. From the sample in which genetic polymorphism was found, only 2 (8,7%) children achieved low activity or disease remission, compared to 24 (53,3%) children from the mutation free sample, according to ACR Pedi 30% ($\chi^2=12,842$, $p=0,0001$). **Conclusion.**

There has been determined a significant relationship between the MTHFR genetic background and the methotrexate response assessment over ACR Pedi 30% Index use in children with JIA.

CLINICAL FEATURES OF STATUS EPILEPTICUS IN CHILDREN

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ABSTRACT

Introduction. The aim of this research was evaluation of clinical and etiological profile of refractory status epilepticus (RSE) among children. Status epilepticus is defined as a neurologic emergency in which there is at least 5 minutes of seizure activity or recurrent seizures with a return to baseline between seizures. **Material and methods.** We performed a study that has been done between 2019 -2022. All children were admitted with convulsive status epilepticus (SE), with evolution in RSE (refractory status epileptic). We try to identify the main characteristics of children with RSE and those without an evolution in RSE. **Results.** 55 children, out of whom 32 boys with SE were enrolled in the study, of which 20 children

(36%) developed RSE. CNS infections were the most common causes in SE and development of RSE (51% in SE and 53% in RSE, $p > 0.05$). Noncompliance of antiepileptic medication served as the second cause for evolution in RSE. The overall mortality rate was 10.9%, the chances of death in RSE (20%) being higher than in SE (5.7%). The unfavorable prognosis was seven times higher in children with RSE, compared to children who developed SE (PR= 7.0; 95% CI :1.6-22.3). **Conclusions.** In the management of CNS infections, pediatricians should be aware of the high risk of developing RSE. In addition, the possibility of developing RSE should be considered and promptly managed in an intensive care unit in order to reduce the risk of mortality and morbidity of this severe neurological condition.

THE FREQUENCY OF SEIZURES IN CHILDREN WITH SARS-CoV-2 INFECTION

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ABSTRACT

Introduction. Few studies have investigated seizure prevalence and characteristics as the main symptom in children with COVID-19. The rate reported varies between 1.0 and 14.6%. **The aim.** To study the frequency of neurological complications in children with SARS-CoV-2 infection, and to determine the type and frequency of epileptic seizures. **Material and Methods.** We carried out a systematic retrospective study by analyzing the medical records of children (aged 4 months to 15 years) at the Institute of Mother and Child and the Infectious Diseases COVID-19 department from August 01, 2022, to March 01, 2023. We divided convulsive seizures into febrile and non-febrile. Results of clinical and paraclinical examinations were extracted from electronic medical records. Statistical methods used: t-student test and 95CI confidence coefficient. **Results.** Out of the 521

children confirmed with SARS-CoV-2 infection, 56 cases (10.7%; 95 CI 12.06-9.34) presented specific neurological complications, of which 8 (14.3%; 95 CI 18, 98-9.62) – seizures: febrile seizures at the onset of the disease – 3 (5.4%; 95CI 8.41-2.39); 5 (8.9%; 95CI 12.71-5.09), in children with pre-existing neurological disease (malformations of the central nervous system, periventricular leukomalacia, epilepsy, cerebral hypoxia, etc.). One child developed convulsive status epilepticus. In seven out of eight cases, the seizures were tonic-clonic, and in one case – focal tonic seizure. Most patients suffered from a non-severe form of COVID-19. **Conclusions.** Epileptic seizures may be the first manifestation of COVID-19 in children, they are often tonic-clonic and can develop status epilepticus. We suggest testing the children presenting with new febrile seizures or exacerbation of previous epilepsy to recognize SARS-CoV-2 infection.

PRIMARY MITOCHONDRIAL DISORDERS: NEUROGENETIC ASPECTS

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ABSTRACT

Introduction. Primary mitochondrial disorders (PMD) are a heterogeneous group of multisystem disorders that mostly involve severe nervous system manifestations. This phenomenon can be explained by the increased need of neurons for energy, a process that is affected in mitochondrial diseases. **Aim of the study.** Understanding the neuropathogenesis and recognizing the early symptoms in order to facilitate the diagnosis of patients with PMD, through a clinical case study. **Methods.** The study was conducted by reviewing the literature and describing the clinical case of a 3-year-old girl with MELAS syndrome. **Results.** A 3-year-old girl, presented to the hospital with the following complaints: superior paraplegia, balance disorders, aphasia. From the history of the disease: at one year and 8 months on the background of pneumonia, she develops the first convulsive crisis for which anticonvulsant drugs are administered. Clinically it manifested by right hemiparesis and motor dysphasia. Cerebral MRI showed signs of ischemic

stroke with postischemic encephalomalacia, and left cerebrovascular malformation. After about a year, based on the results of next generation sequencing by target panels (pathogenic variants m.3243A>G, m.3271T>C in the MT-TL1 gene and m.13513G>A in the MT-ND5 gene) and the multisystemic affect, the diagnosis of mitochondrial encephalopathy, MELAS syndrome with multisystemic affect is confirmed based on the clinical manifestations as well as the genetic test (m.3243A>G). In the process of following the patient, other diagnoses were evaluated and excluded. **Conclusions.** The neurogenetic aspects of mitochondrial disorders involve cognitive impairment, neurodevelopmental disorders, especially when the symptoms start early. At the same time, vascular or convulsive episodes can cause brain damage with the subsequent impairment of central and peripheral nervous system functions. Thus, CNS involvement requires a thorough study of symptoms for early detection and effective management.

CLINICAL-GENETIC AND NEUROLOGICAL ASPECTS IN DIGEORGE SYNDROME: CLINICAL CASE

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ABSTRACT

Introduction. Velocardiofacial syndrome, or Di George (22q11.2 deletion), is the most common microdeletion syndrome encountered in humans. In infants, it usually presents with the triad: immunodeficiency, congenital cardiac anomalies, and hypocalcemia due to hypoparathyroidism. **Aim of the study.** To highlight the clinical-genetic and neurological aspects of Di-George syndrome by studying a clinical case based on determining the association between the neurological picture and the characteristic genetic mutation. **Results.** Patient A.M. age 11.9 years, was admitted for generalized tonic seizures in the paediatric neurology ward. History: term-born, weight 3700 g., delayed neuropsychological development during the period up to referral (walked at ~1.8 years, started to say first words at 3 years. He was investigated for recurrent wheezing attacks at ~5 years. He underwent adenoidectomy, tonsillectomy,

and tear duct dilation. At school age, he presented with learning disabilities. Physical examination: coarse facial appearance, elongated face, narrow forehead, small low-set ears, nasal voice. Chvostek and Trousseau signs - positive. Laboratory data: hypocalcemia (6 mg/dl) and hyperphosphatemia (10mg/dl); parathyroid hormone (PTH) - low level (13.3pg/ml); thyroid hormones, cortisol, prolactin, and follicle stimulating hormone - values in the norm. The deletion 22q11.2 was detected. **Conclusions.** There is no clear phenotype-genotype association in Di-George syndrome (22q11). However, multiple phenotypic variabilities are observed even among family members with the same mutations. Thus, early diagnosis can be difficult, based on clinical features (characteristic facial features and level of neuropsychological development). But genetic diagnosis cannot provide information about the severity of neurological manifestations in compromised patients.

POLYCYSTIC KIDNEY DISEASE IN THE CHILD ASSOCIATED WITH RENAL LITHIASIS

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ABSTRACT

Introduction. Autosomal dominant polycystic kidney disease (ADPKD) described as the most common hereditary renal disease, can be associated with nephrolithiasis in 20% of cases, 5–10 times more than the general population. Approximately 3% of children with ADPKD-causing mutations have either very-early-onset or unusually rapid progressive disease, however, urolithiasis is rare in childhood. **Material and methods.** Anamnestic, clinical and paraclinical data were taken from the patient's observation sheet, hospitalized in the Nephrology Department of the Mother and Child Institute. **Results.** An 15 years-old boy, admitted with complaints of low back pain with irradiation in the lower abdomen and periodic dysuria. Primary manifestation of about 1.5 years. The disease evolves on the background of aggravated hereditary-collateral anamnesis, with polycystic kidney disease

and urolithiasis in the father and the death of the grandmother from chronic kidney disease. At the objective exam: asthenic constitutional type, periorbital edema, bilateral positive Giordani sign. Urinalysis showed erythrocyte 10-12 f/w. Serum biochemistry with no changes. The abdominal ultrasonography showed both kidneys larger than normal, and bilaterally, numerous cysts, up to 13 mm, associated with calculus on the right, 6 mm. Abdominal CT confirms the presence of multiple intraparenchymal renal cysts, some with bilateral subcapsular enlargement. Diathesis urica on the right. In the 24 hour urine examination, increased excretion of uric acid. **Conclusions.** Complications of ADPKD associated with urolithiasis, as well as ADPKD itself, require the exclusion of age limits with complex evaluation and monitoring of all children with kidney disease and the presence of risk factors.

THROMBOTIC COMPLICATIONS IN A CHILD WITH NEPHROTIC SYNDROME

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ABSTRACT

Introduction. Nephrotic syndrome (NS) is associated with a hypercoagulable state. The incidence of thromboembolic complications in children with NS varies between 2 and 5%. Cerebral venous sinus thrombosis (CVST) is less frequent than other complications, with a incidence rate of 0.67/100,000. **Material and methods.** Data were collected from the patient's observation sheet, hospitalized in the intensive care unit of Institute of Mother and Child. **Results.** A 6-year-old child with a one-month history of NS, was admitted in the pediatric emergency care unit, with headache and 4-5 times vomiting. On the corticosteroid therapy with prednisolone 2 mg/kg/24h, 4 days ago, the general condition worsens. On admission, respiratory rate was 27 /min, blood pressure up to 138/90 mm/Hg, pulse 120 beats/min. On physical examination pallor, dehydration, photoreactive

pupil, edema, and no signs of meningeal irritation. Laboratory exams revealed leukopenia with severe neutrophilia 72%, C-reactive protein of 25.9mg/dL, serum albumin of 2,2 g/dl, blood urea nitrogen 5,5 mmol/l, creatinine 0,056 mmol/l, heavy proteinuria of 5,5g/d. The coagulogram showed aPTT- 28.50sec.; fibrinogen-8.65 g/l; INR-0.94; prothrombin-119%; PT-49,4sec.; PTT-35.6 sec. Computed tomography of the head showed filling defects in the superior sagittal sinus, pansinusitis. The treatment of choice is anticoagulation with heparin followed by oral warfarin, fresh frozen plasma, albumin, antibacterial therapy, diuretics, antihypertensive drugs, prednisolone 2 mg/kg/24h. **Conclusion.** Early diagnosis of thromboembolic syndrome in NS is critical for timely introduction of anticoagulant therapy and good prognosis. CVST should be considered when there is a history of glucocorticosteroid use at high doses, increased coagulation function, and infections.

THROMBOSIS OF THE RENAL VEIN ON THE RIGHT IN THE NEWBORN

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ABSTRACT

Introduction. Renal vein thrombosis (RVT) is one of the most common forms of neonatal thrombosis, accounting for 15-20% of systemic thromboembolism, which manifests at an average age of 2-3 days. Predisposing factors for RVT in newborns include: dehydration, sepsis, asphyxia, polycythemia, maternal diabetes, congenital defects of the renal vein, umbilical venous catheters. **Material and methods.** Description of a clinical case of RVT in the newborn based on the information collected from the medical sheet.

Results. A 12 days-old baby girl, born on term, admitted in serious condition, with hematuria. On physical examination, the skin and mucous membranes were clean, normal in color. The abdomen was soft to palpation, in the right flank with signs of crepitation. Diuresis was 4.9 ml/kg/hour. Laboratory examination showed leukocytosis with left deviation (WBC- $27.0 \times 10^9/l$, non-

segmented $-19.0 \times 10^9/l$), thrombocytopenia $-112 \times 10^9/l$, hematocrit -46, fibrinogen -2.89 g/l, prothrombin index -78%, ASAT -62.3 U/L, total protein - 51.0 g/l, serum creatinine -91 $\mu\text{mol/l}$, blood urea -5.4 mmol/l, proteinuria - 3.0 g/l, and gross hematuria (unchanged erythrocytes cover the field of view). On ultrasonography was found that the right kidney is enlarged-70x44mm, parenchyma 16 mm, irregular contour, increased echogenicity. Renal angiography provided data for thrombosis of the inferior vena cava and right kidney with pathological changes characteristic for global renal infarction. The treatment included anticoagulants, correction of the fluid, electrolytes, and acid-base imbalance. **Conclusion.** Patients with RVT remain at higher risk of morbidity and/or long-term mortality, including hypertension and chronic kidney disease (CKD), which requires monitoring and dynamic supervision to initiate early intervention and prevent complications.

OCCULT HEPATITIS B INFECTION ASSOCIATED WITH CHRONIC VIRAL HEPATITIS C IN A YOUNG CHILD

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ABSTRACT

Introduction. The association of occult hepatitis B infection (OBI) and chronic viral hepatitis C (HVCC) has a worldwide prevalence of 1-15%, being another underestimated one in children.

Material and methods. The data of a patient diagnosed with OBI associated with HVCC with minimal HCV viremia, based on the outpatient medical record F112/e, are presented. **Results.** Boy aged 2 years, 10 months, diagnosed with HVCC at the age of 2 years and referred to a pediatric gastroenterologist for consideration of antiviral treatment. The child's mother is under surveillance with chronic HBV infection for more than 3 years. At birth, the child was vaccinated in the first 24 hours with anti-HVB1 with the concomitant administration of anti-HVB-specific immunoglobulin Ig, followed by 3 doses of anti-

HVB vaccines. At the age of 5 months, the child underwent surgery for capillary-cavernous hemangioma at the base of the scrotum. The immunoserological examination of the child at the age of 2 showed cytolysis of the first degree with an increase of ALT and AST 2 times compared to the reference values, HBsAg (-), anti-HBcor summary (+), anti-HBcor IgM (-), anti-HBs (+), HBe Ag (-), anti-HBe (-), negative quantitative HBV DNA, summary anti-HCV (+), positive HCV RNA 409 367 IU/ml. The diagnosis of OBI seropositive form ("occult" phase) and HVCC genotype 1b with minimal viremia was established, being eligible for antiviral treatment. **Conclusions.** The concurrent evolution of HBV and HCV infection in children requires complex evaluation with the determination of the priority viremia induced by the 2 viruses and the correct selection of the antiviral treatment scheme.

THE PARTICULARITIES OF THE METABOLIC SYNDROME IN OVERWEIGHT/OBESE CHILDREN

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ABSTRACT

Introduction. The increasing prevalence of metabolic syndrome (MS) in children requires early detection of risk factors and regular follow-up to prevent cardiovascular diseases. **Aim of the study.** Estimation of risk factors contributing to the onset of MS in overweight/obese children. **Material and methods.** The results are obtained from the project entitled "*Evolutionary aspects of the metabolic syndrome in children under treatment with gastrointestinal lipase inhibitors*", number 20.80009.8007.33, within the State Program 2020-2023, carried out in the scientific laboratory of pediatric cardiology of IMSP Institute of Cardiology, Republic of Moldova. The study included 43 children with MS (IDF 2007) aged 10-18 years (general research group) and 50 normotensive/normoweight children of similar age - the control group. Were determined the risk factors, the lipid, carbohydrate profile, some adipokines/cytokines. The study protocol was approved by

the Medical Ethics Committee. **Results.** Most of the children were sedentary, exposed to chronic stress and passive smoking, had a poor diet, as well as a hereditary history aggravated by obesity and hypertension. Among the MS components, 62.8% (n=27) were diagnosed with arterial hypertension. Increased serum triglyceride values were present in 27 (62.8%) of the children, hypo-HDL-C - 35 (81.4%) of the children, and 16 (37.2%) of the children had a modified fasting blood glucose. Serum level of insulin (23.6 ± 1.96 vs 14.8 ± 1.03 μ U/mL), leptin (35.4 ± 2.61 vs 7.9 ± 0.23 ng/ml; $p < 0.001$), hs-CPR (3.0 ± 0.44 vs 0.2 ± 0.01 mg/l; $p < 0.001$) and TNF α (9.1 ± 0.43 vs 3.1 ± 0.09 pg/ml; $p < 0.001$) was obtained higher, and that of adiponectin (5.1 ± 0.38 vs 11.0 ± 0.33 μ g/ml; $p < 0.001$) lower in children with MS, compared to the control group. **Conclusion.** The high rate of MS risk factors imposes the need for their mandatory screening in all overweight children, and biomarkers integrating metabolic and inflammatory signals can be used as tools for the early diagnosis of MS components.

FAMILY FOOD HABITS OF CHILDREN WITH METABOLIC SYNDROME

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ABSTRACT

Introduction. Eating unhealthy foods can be associated with the development of metabolic syndrome (MS). The present study analyzed the familiar eating habits of children with metabolic syndrome. **Material and methods.** The results are obtained from the project entitled "Evolutionary aspects of the metabolic syndrome in children under treatment with gastrointestinal lipase inhibitors", number 20.80009.8007.33, within the State Program 2020-2023, carried out in the scientific laboratory of pediatric cardiology of Institute of Cardiology, Republic of Moldova. The study included 43 children with MS (IDF 2007) aged 10-18 years. The study protocol was approved by the Medical Ethics Committee. **Results.** Family breakfast is served regularly only by 6 (14%) children. Spreads (n=15; 34.9%) or buns (n=11; 25.6%) are eaten most often for breakfast. It is

preferably consumed in the second half of the day (n=42; 97.7%), while watching TV or playing on the computer (n=24; 55.8%), moderately salty food (n=22, 51.2%) or salty (n=20; 46.5%) and unhealthy products. Sweets are consumed 3-4 times a week by 23 (53.5%) children; sausages - 27 (62.8%) children, fast food products - 30 (69.8%), carbonated drinks - 19 (44.2%). Milk and milk derivatives are only occasionally consumed (n=23; 53.5%), nuts, hazelnuts, seeds (n=23; 53.5%). Vegetables are used most frequently 1-2 times a week (n=21; 48.8%) or occasionally (n=10; 23.3%). Cereals are also consumed most frequently 1-2 times a week (n=23; 53.5%) or occasionally (n=11; 25.6%). Fish (n=34; 79.1%), eggs (n=29; 67.4%), lean meat (n=37; 86%) are more frequently consumed 1-2 times a week. **Conclusion.** Establishing healthy eating habits early is an effective way to maintain weight and prevent metabolic syndrome.

PULMONARY DAMAGE IN THE EVOLUTION STAGES OF COVID-19 INFECTION

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ABSTRACT

Introduction. The SARS-CoV-2 virus has an increased affinity for the respiratory system in children, affected in 18% of all cases. Lung CT is useful to assess bronchopulmonary lesions, which has a sensitivity of 97% in detecting the type, volume and location of post-COVID19 lung involvement. **Aim.** To assess the consequences of post-COVID-19 lung damage in children who sustained moderate and severe SARS-COV2 infection. **Methods.** The study includes 88 children aged 0-17 years, hospitalized in the Pneumology department Mother and Child Institute, March 2021-December 2022. All children were examined by chest CT (Toshiba Aquilion PRIME 80). The database is statistically processed by IBM SPSS Statistics 22 program. **Results.** According to the imaging data, 68% of children had pulmonary changes and only 32% of children had a normal

CT scan. The most vulnerable were infants, who had CT changes in 65% of cases. The most affected areas were the basal segments (S6, S8, S9). Areas of fibrosis is appreciated in 44%:95%CI 35.2-52.7, and the appearance of "ground glass", especially located bilaterally basally, had a weight of 21%:95%CI 16.8-25.1. A complication of pulmonary involvement was atelectatic areas, in 30%:95%CI 24.1-35.9 cases. Other imaging changes are consolidation-type opacities - 34%, air bubbles - 13%, pleuropulmonary adhesions - 7%, single cases of micronodules and traction bronchiectasis. **Conclusions.** The consequences of lung damage in children who suffered from the COVID-19 infection are mainly characterized by fibrotic changes in 44% according to CT. Consolidation and "ground glass" opacities were found in every third child, and the atelectasis was evident in 30% of children at post-COVID stages.

RESPIRATORY AND EXTRA-RESPIRATORY INFECTIONS IN PRIMARY IMMUNODEFICIENCY

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ABSTRACT

Introduction. Patients with primary immunodeficiencies (PID) present an increased risk of bacterial and viral infections with localization mainly in the respiratory system, but also in other systems. The infections most frequently have a severe evolution, with complications and chronicity in the evolution. **Material and methods.** An observational, transversal study was conducted, based on the retrospective evaluation of 18 patients hospitalized in the Pneumology Clinic, IMC. They were included and grouped according to the updated classification of PID (IUIS). **Results.** 55.6% of patients were male, with an F:B ratio of 1:1.25. The mean age at the time of the study was 12.35 ± 11.8 years, with a consanguinity rate and family history of 0%. The most frequent

types of PID were the well-defined ones (56%), followed by those due to antibody deficiency-28%, combined-11%, phagocyte defects 5%. In the clinical manifestations of the patients, the most frequent infections were recorded: pneumonia-72%; bronchiolitis-50%; sinusitis 27.7%; skin infections 27.7%; intestinal infections 30%; meningitis-17%; urinary tract infections-27.7%; septicemia 27.7%. According to the location, respiratory ones were more frequent: in antibody deficits 63.3% 95% CI (43.8;80.07); in well-defined IDPs 36.6% 95% CI (12.2;45.8). Extrarespiratory infections were more frequent in antibody deficiencies 35.2% 95% CI (14.2;61.6). **Conclusion.** Infections, especially respiratory ones, are a frequent manifestation in primary immunodeficiencies, mainly among patients with antibody deficiencies.

CORPS ÉTRANGERS ORGANIQUES DANS LES VOIES RESPIRATOIRES CHEZ L'ENFANT - CARACTÉRISTIQUES BRONCHOSCOPIQUES

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ABSTRAITE

Introduction. L'aspiration de corps étranger (CE) est un problème de santé important qui entraîne souvent des complications potentiellement mortelles. **Matériel et methods.** Il s'agit d'une étude prospective descriptive qui a inclus 52 enfants avec aspiration de corps étranger qui ont été hospitalisés à la clinique de pneumologie et évalués par bronchoscopie rigide ou fibrobronchoscopie au cours de la période 2019-2022. **Résultats.** L'âge moyen était de $1,72 \pm 0,63$ ans, les garçons constituant 55,76 %. 65,38% étaient d'origine rurale. La période de l'année où il y avait le plus de cas était septembre-octobre. Dans 91,3% des cas, le CE a été extrait lors de la première bronchoscopie. Les modifications endoscopiques identifiées étaient l'endobronchite catarrhale-purulente -

86,53%, l'œdème local de la muqueuse bronchique - 92,3%, les granulations - 23,07%, les saignements locaux légers - 15,38%. Les corps étrangers trachéobronchiques étaient majoritairement de nature organique, végétale, dans 40,38% des cas il s'agissait de graines de tournesol, dans 17,3% de fragments de noix. **Conclusions.** L'intensité des processus inflammatoires-infectieux dépend de l'étiologie. Les corps étrangers organiques, qui sont plus fréquents et qui, de plus, sont sujets à des processus de putréfaction, contiennent des huiles qui irritent les muqueuses, sont sans contraste à la radiographie et, en l'absence d'anamnèse d'aspiration, ils sont diagnostiqués tardivement et entraînent des complications telles qu'une endobronchite catarrhale-purulente et la formation de granulations au fil du temps.

IRON-DEFICIENCY ANEMIA AT CHILDREN: CONTEMPORARY INTERPRETATIONS, PRINCIPLES OF TREATMENT

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ABSTRACT

Introduction. Iron deficiency anemia is the most common cause of the nutritional disorder worldwide, having major negative effects on the health on short and long-term, the most exposed being: children and women of reproductive age. **Objective of the study.** Elucidation of the contemporary interpretations and principles of treatment in iron deficiency anemia at children. **Materials and methods.** A group of 37 patients with the clinical diagnosis of iron deficiency anemia, hospitalized during 2022. **Results.** The general condition at admission was average severity in 20(54.05%) and serious condition in 17(45.95%) cases. According to comorbidities, approximately 51% of children were diagnosed with chronic gastritis, and 45.9% with duodenitis.

Symptoms at the time of admission: anemic and sideropenic syndrome 100% cases. According to the degree of anemia we obtained: anemia gr.I – 1(2.7%) patient, anemia gr.II – 21(56.7%) patients, anemia gr.III – 15(40.6%) patients. Treatment of anemia in 13(35.1%) cases was initiated with transfusion of erythrocyte concentrate followed by iron preparations, and in 24(64.9%) cases with iron preparations, mostly: ferroprotein 40 mg – 17(45, 9%) cases, ferrum Lek 100 mg (Fe³⁺) – 4(10.8%) cases, ferrimax syrup 50 mg/5 ml – 11(29.8%) cases. **Conclusions.** Gastrointestinal tract pathology is a disease that causes issues in iron absorption. Patients are addressed in severe and moderate states of anemia, the initiation of treatment, sometimes, must be through the transfusion of erythrocyte concentrate.

SCREENING TESTING TO ANTI-tTG IgA FOR CELIAC DISEASE IN CHILDREN IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Celiac disease (CD) is an autoimmune disease, with onset in childhood and develops in those with a genetic predisposition, sensitized by foods rich in gluten. **Material and methods.** Within the framework of the CD SKILLS DTP 571 Project funded by the European Union, we performed anti-tTG IgA rapid test screening testing of 439 children aged between 9 months and 18 years who had suggestive digestive signs for CD. 41 of these children showed recurrent abdominal pain, being from the risk group - 30 with type I diabetes; 3 - autoimmune thyroiditis; 1 - with Down syndrome; 3 - with juvenile rheumatoid arthritis; 4 - with autism). At the same time, 100 adults aged between 19-65 who showed

clinical signs of damage to the digestive system were tested. **Results.** Positive IgA anti-TG were detected in 1.03% (6 children) of cases, including: 4 (0.91%) children with clinical signs of abdominal pain and unstable stools and in 2 (4.87 %) children with type 1 diabetes. The complex examination confirmed celiac disease in all positive anti-tTG IgA cases with rapid tests. Adult patients screened for IgA anti-tTG were negative. **Conclusion.** Anti-tTG IgA screening with the use of rapid IgA anti-tTG tests proved to be positive in 1.03% of cases and is recommended at the initial stage of specifying the diagnosis of celiac disease in children. The definitive diagnosis of celiac disease requires examination and confirmation of the diagnosis according to the criteria approved by ESPGHAN 2020.

L'IMPACT DE LA MIGRATION PARENTALE DE TRAVAIL SUR LA SANTÉ PSYCHO-SOCIAL DES ENFANTS

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ABSTRAITE

Introduction. Le nombre total d'enfants laissés sans protection parentale à la suite de la migration, selon les données du Ministère de la Santé de la République de Moldavie pour l'année 2021 était estimé 29186. **Matériel et méthodes.** L'échantillon étudié a représenté 280 personnes, qui a été stratifié en 4 groupes. Les paramètres enregistrés ont été: la santé physique et la santé psychosociale. **Résultats.** Chez les enfants du groupe témoin, une valeur inférieure de la santé psychosociale a été détectée chez ceux âgés de 13-18 ans - 45,9 points, et une valeur plus élevée chez les ceux âgés de 5-7 ans -

53,9 points. Les parents des enfants marqués par la migration, appréciés la qualité de vie de ses enfants avec des valeurs inférieures que les enfants eux-mêmes, les résultats obtenus reflète la variation des valeurs dans le groupe étudié, sur le module de santé psychosociale de 42,4 points pour les parents d'enfants âgés de 8 à 12 ans, jusqu'à 45,2 points pour parents d'enfants âgés de 5 à 7 ans. **Conclusions.** Les enfants marqués par la migration parentale de travail ont des valeurs très faibles sur tous les modules et caractéristiques intégrales de la qualité de vie. À tous les groupes d'âge des enfants d'migrants leur santé psychosociale avait des valeurs très faibles de qualité de vie.

LES EFFETS DE LA MIGRATION DE TRAVAIL PARENTALE SUR LA SANTÉ MENTALE DES ENFANTS ET ADOLESCENTS

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ABSTRAITE

Introduction. Selon les données du Ministère de la Santé de la République de Moldavie pour l'année 2021, le nombre total d'enfants laissés sans protection parentale à la suite de la migration était estimé 29186. **Matériel et méthodes.** L'étude a inclus 400 enfants dans plusieurs districts de la République de Moldavie avec un incidence plus élevée d'enfants marqués par la migration de travail des parents (selon les questionnaires élaborés par l'auteur). **Résultats.** 97,75% des enfants rapportent la présence de souffrance psychologique déclenchée après le départ des parents. 50,0% des enfants ont ressenti de la tristesse et de la dépression, 14,25% ont ressenti de l'anxiété et de l'insomnie, 2,75% des enfants ont ressenti de la souffrance motivée

par agression; 0,75% des enfants ont exprimé leur intention de se suicider. Ils ont également montré l'isolement et l'indiscipline 8,5%; 4,75% des enfants l'agression. 28,0% des enfants ont enduré d'intimidation, 25,5% de violence mentale, 22,4% violence physique et 1,2% des enfants violence sexuelle. **Conclusions.** Les enfants séparés de leurs parents en raison de la migration de travail souffrent depuis les premiers jours de migration parentale - états émotionnels exceptionnels, pouvant déclencher un déséquilibre de statut psycho-émotionnelle et la santé mentale. Ceux rapportés évoquent la nécessité d'appliquer une assistance spéciale neurologique ou en cas de besoin une assistance psychiatrique au moment du lancement de la migration de travail.

PRESENTATION OF A CASE OF PRENATAL DIAGNOSIS OF SIRENOMYELIA WITH CLOACAL DYSGENESIS AND A SINGLE UMBILICAL ARTERY

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ABSTRACT

Introduction. Sirenomyelia is a very rare (incidence 0.8-1 case:100 000) and severe congenital anomaly, usually fatal, characterized by fusion of the lower extremities associated with urogenital, gastrointestinal, cardiovascular anomalies or abdominal wall defects. It was first described by Rocheus in 1542 and Palfyn in 1553 as *Mermaid syndrome*, because the fusion of the lower limbs gives the appearance of a mermaid's tail. The severity of the defect varies from a simple cutaneous fusion of the lower extremities to absence of all long tubular bones except the femoral bones. Approximately 300 cases worldwide are reported in the literature till now. **Material and Methods.** We present a case of sirenomyelia diagnosed during the 1st trimester of pregnancy associated with cloacal dysgenesis, agenesis of both kidneys and solitary umbilical

artery. The patient was investigated by abdominal and transvaginal ultrasonography. **Results.** 27-year-old patient with unremarkable medical and family history, third pregnancy. On ultrasound examination a viable fetus was detected with CRL 67 mm, nuchal translucency 2.0 mm, nasal bone 2.1 mm; head, trunk, upper limbs normal. Lower limbs were fused at the legs. A cystic structure 9.3*7.1 mm with echogenic structure suggestive of cloacal dysgenesis was visualized in the abdominal and pelvic cavity. The kidneys were not visualized denoting bilateral kidney agenesis. Color Doppler visualized a solitary umbilical artery. After the parents were counseled about the unfavorable prognosis of Siren's syndrome, they opted to end the pregnancy. **Conclusion.** Prenatal diagnosis of sirenomyelia is possible, offering the parents' the option to terminate pregnancy early.

OCCULT HEPATITIS B INFECTION IN CHILDREN: IMPORTANT PUBLIC HEALTH ISSUES

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ABSTRACT

Introduction. Occult hepatitis B infection (OBI) is defined as the presence of replication-competent HVB DNA in the liver, in the presence or absence of HVB DNA in the blood of HBsAg-negative individuals. **Material and methods.** Estimation of the importance of immunoserological markers characteristic of OBI in children and their role for practical medicine based on 6890 bibliographic sources Wiley Online Library, of which 12 were selected with reference to pediatric patients. **Results.** The prevalence of OBI in children due to mother-to-child transmission despite maternal anti-HBV immunoprophylaxis remains controversial and is still little known. In Egyptian children, OBI was determined in 31% of HCV- positive cancer patients. The detection of OBI requires the use of

tests of the highest sensitivity and specificity, with a lower detection limit for HBV DNA <5-10 IU/mL, and for HBsAg - <0.1 ng/mL. The presence of elevated transaminases in children with HBsAg (-) should prompt their evaluation for occult viral hepatitis B. In patients detected with summary anti-HBcor and anti-HBs (+) at levels <100 mIU/ml, testing is required quantitative HBV DNA. If a liver biopsy is possible, HBVcccDNA testing in the sampled tissue is required. **Conclusion.** The global prevalence of OBI varies significantly in different populations depending on the factors of increased risk for infection, the epidemiological situation in the region. Existing epidemiological data indicate the need to identify the pediatric population at increased risk for OBI, with the aim of determining appropriate preventive and management strategies.

EVALUATION OF THE INFORMATION OF ADVERTISING PROSPECTS USED IN THE PROMOTION OF MEDICINES

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ABSTRACT

Introduction. In the Republic of Moldova, the publicity and promotion of medicines is regulated according to the legislative framework. The medical representatives use various methods of promoting medicines, but, unfortunately, the unethical and even aggressive promotion of medicines is increasingly being highlighted, regardless of the status of their release. The ethical pharmaceutical damage caused by the trade virus has particularly serious consequences for society, influencing the prescription, recommendation, rational use of medicines, controlled self-medication, etc. **Material and methods.** The study was based on the analysis and evaluation of 100 advertising leaflets developed by pharmaceutical companies and used to promote medicines to the general public and specialists in field according to the requirements of the Regulation on the ethical promotion of medical devices, approved by Government Decision no. 944/2018. **Results.** The most common errors in

the content of advertising prospectuses are: and the information about the indications and the method of administration does not correspond to that in the summary approved product characteristics (2%), lack of contraindications and special warnings (2%), suggest that the effect of the treatment is guaranteed or does not cause side effects (32%), leaves the information to whom the prospectus is destined (47% for Rx and 20% OTC), missing the number of the registration certificate and the date of issue (39%) and the address of the holder of the certificate of registration (29%), etc. **Conclusions.** Advertising prospectuses intended for the promotion of Rx and OTC drugs on the territory of the Republic of Moldova do not fully comply with the requirements of the Regulation. Only 29% of the evaluated advertising leaflets can be used by medical representatives with promotional purposes, which are also approved by the Agency for Medicines and Medical Devices of the Republic of Moldova.

THE INFLUENCE OF ANIONS ON THE COORDINATION MODE OF SALICYLALDEHYDE S-ALKYLISOTHIOSEMICARBAZONES IN PALLADIUM(II) COMPLEXES

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ABSTRACT

Introduction. Thiosemicarbazones are important compounds due to their valuable biological properties and catalytic activity. Coordination of thiosemicarbazones with metal ions often enhances their properties and can lead to the emergence of new ones. **Material and methods.** In this study, we synthesized and characterized two new coordination compounds of palladium(II) with salicylic aldehyde S-methylthiosemicarbazone, aiming to investigate the coordination mode of the ligand and advance these compounds for biological activity research. The synthesis was carried out using $K_2[PdCl_4]$ and $K_2[Pd(NO_2)_4]$ salts and thiosemicarbazone derivatives of salicylaldehyde (H_2L), which were obtained from commercial sources. Basic crystallographic data were collected using a KUMA KM4CCD diffractometer at 120K.

Results. X-ray diffraction study of the synthesized coordination compounds revealed that the organic ligand in the $[Pd(HL)Cl] \cdot H_2O$ complex coordinates with Pd(II) through the ONS donor atoms. However, in the case of complexation with $K_2[Pd(NO_2)_4]$, S-methylisothiosemicarbazone of salicylaldehyde undergoes conformational rearrangements and coordinates with palladium(II) *via* the ONN donor set. **Conclusions.** Our results indicate that the presence of a methyl group on the sulfur atom does not affect the coordination mode of the ligand. However, replacing the salt $K_2[PdCl_4]$ with $K_2[Pd(NO_2)_4]$ leads to a modification of the coordination mode of the S-methylthiosemicarbazone of salicylic aldehyde. It is worth noting that such changes in the coordination mode were not observed in other thiosemicarbazones of salicylic aldehyde.

EVALUATION OF SOME TECHNOLOGICAL PARAMETERS FOR ACTIVE PHARMACEUTICAL INGREDIENT AND EXCIPIENTS IN THE PREFORMULATION PROCESS OF COMBINED POWDER

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ABSTRACT

Introduction. Powder represents a solid pharmaceutical form, which according to its composition, can be simple (has only one active pharmaceutical ingredient (API)) and compound (has more than one API). To ensure optimal stability and pharmacokinetics of APIs, excipients (E) are added to the powders as the diluents, lubricants, glidants, sweeteners, stabilizers. **The aim of the work.** Evaluation of technological parameters for Es and their mixtures in combination with APIs at the stage of the powders preformulation. **Material and methods.** Individual Es such as: microcrystalline cellulose, lactose monohydrate, d-mannitol (Cel.; Lact.; Himedia), citric acid (Chem-Lab), saccharin (Zah.; Sigma-Aldrich) were used; model M1-M12 mixtures of E and combinations of E with APIs (potassium aspartate, magnesium aspartate and potassium orotate (Sigma-Aldrich) and spironolactone, (Acros Organic)) were prepared; RADWAG

analytical electronic balance, ERWEKA tapped density tester, VP12A powder flow speed tester were employed. **Results.** Mechanical mixtures of Es without APIs and with them were prepared according to the technological rules of powder preparation and analyzed in terms of the basic technological parameters, the values of which should not exceed the established limits: Carr's Index (<26%), Hausner's Ratio (<1.35), Angle of repose (<35°), Flow speed (<100g/25s). Following the conducted research, those combinations of model mixtures, corresponding to these established limits for the technological parameters: M3 (SA-23.6%, Cel-50%, Lact-16.4%, Zah-10%), M5 (SA-23.6%, Cel-66.4%, Zah-10%), M8 (SA-23.6%, Cel-50%, Lact-26.4%) were analyzed. **Conclusions.** Following these studies, the technologically optimal Es for the formulation of the compound powders were selected and three formulations were chosen, which will be used for the next stages of analysis.

MEDICATION ADMINISTRATION ERRORS BY THE ELDERLY AT HOME

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ABSTRACT

Introduction. Polymedication or polypharmacy defines the use of several drugs at the same time, a phenomenon encountered more frequently among elderly people. Studies show that 90% of older adults use at least one medication weekly, and 40% - administer more than eight medications weekly. Pharmacists, together with other health specialists, contribute to minimizing the risks to which the elderly are subjected in the case of polymedication in outpatient settings. In this sense, the paper aims to evaluate the problems faced by the elderly in the use of medicines at home in order to develop behavioral algorithms in the provision of specialized geriatric pharmaceutical care. **Material and methods.** The intended descriptive study is ongoing. At this stage, 168 questionnaires intended for the elderly are collected, which contains 31

questions, describing the difficulties encountered by the elderly in administering medicines at home. **Results.** The results of the questionnaires' analysis denote that in 60% of the answers, the elderly commit administration errors: on their initiative they change the treatment and his duration, the way of administration, and the doses of the medicines. More than 50% of the answers show that the elderly practice uncontrollable self-medication and there are cases of polypharmacy, they are not physically able to administer the medicine and they do not read/understand the leaflet of the medicine. In about 30% of cases, the elderly administered expired medicines and gave their personal medicines to others. **Conclusions.** Administration errors are common among the elderly, and the implementation and application of specialized geriatric pharmaceutical care will help reduce their frequency.

THE APPEARANCE OF ADVERSE REACTIONS IN CHILDREN AND ADOLESCENTS

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ABSTRACT

Introduction. While the statement „*children are not miniature adults*” has been around for some time, most doses in children are still extrapolated from adult studies. The lack of pediatric clinical trials and dosing information has been highlighted by the US Food and Drug Administration and the European Medicines Agency as areas of clinical need, and there is now a requirement for more pediatric data in the evaluation of new drugs. In the absence of data, the use of many drugs in children, especially neonates, is often off-label. Off-label use of drugs is associated with an increased risk of side effects, especially in patients under two years of age. The **aim** was to analyze the correlation between drug dose and the occurrence of adverse drug reactions in children in different countries. **Material and methods.** To achieve the proposed goal, a literature

review was carried out, using electronic databases, including PubMed, Medline, Springer Link and Google Scholar. **Results.** Following the review of the literature, it was identified that the most frequently suspected drugs of adverse effects in children are: *Methylphenidate* (5.5%), *Ibuprofen* (2.3%) and *Palivizumab* (2.0%). Regardless of the drugs applied, vomiting (5.4%), urticaria (4.6%) and dyspnea (4.2%) were the most frequently reported side effects. For children aged 0-1 years, drugs for the treatment of nervous system disorders and fetal exposure during pregnancy were most commonly reported. Medicines for the treatment of nervous system disorders ranked first among the reporting of side effects of "off-label" prescribed drugs. **Conclusions.** This analysis emphasizes the importance of highlighting the number of reports of side effects of a drug in the context of its prescription.

SOCIO-DEMOGRAPHIC ASPECTS OF PATIENTS WITH A PRIMARY DIAGNOSIS OF HIV/AIDS

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ABSTRACT

Introduction. HIV (*human immunodeficiency virus*) is a virus that attacks cells in the human body that fight infection, making a person more susceptible to disease. HIV infection within the first six months of entering the body is called primary infection. This period, immediately after the initial infection, is associated with a number of virological and immunological events, which have been shown to influence the long-term course of untreated infection, including the severity and rate of disease progression. **Material and methods.** Epidemiological data from the Public Medical-Sanitary Institution Dermatology and

Communicable Diseases Hospital of patients with primary HIV diagnosis during the period 2018-2022. **Results.** The analysis established that from 2018 to the end of 2022, 4227 new patients with an average age of 37.9 years were detected. Of the total number -2474 are male and 1753 are female. According to place of residence, rural areas prevail with 2200 new cases and urban areas with 2027 new cases. **Conclusions.** This study confirms that HIV disease remains a public health challenge and further demonstrates the pathway strategies designed to irradiate infection. Ensuring access to information, training, prophylaxis and prevention materials would be a solution to minimize the spread of the disease among the population.

THE IMPORTANCE OF NANOTECHNOLOGY IN COSMETIC FORMULATION DEVELOPMENT

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ABSTRACT

Introduction. Currently, nanocosmetic formulations are considered to be the newest and most promising trends, through the use of nanoparticles that offer deep skin penetration and long-lasting effects. **Material and methods.** The bibliographic sources of scientific journals from the Pubmed, Scopus, Medline databases on the field of application of nanomaterials in cosmetics technology served as materials. **Results.** Currently, the development of nanocosmetic formulations with topical application is a central objective for scientists from the pharmaceutical and cosmetic industry, due to their multiple advantages on the skin. Some nanosystems that include vesicular nanostructures, liquid nanoemulsions, nanoparticles, nanotubes, liposomes, etc. are used to encapsulate a variety of chemical compounds.

Nanocarriers are used in sunscreens, moisturizers, perfumes, antiaging and hair care products. These carriers increase the effectiveness of the formulation and promote the controlled release of the active ingredients. Polymeric or lipid nanocarriers contained in sunscreens offer increased protection against ultraviolet rays, as well as protect unstable ingredients from degradation. Nanosystems can act as penetration activators for charged active ingredients and play an important role in modifying the compact structure of the stratum corneum and improve skin permeability. **Conclusions.** Nanocosmetic formulations, grace of high-performance and modern technologies, have the ability to improve the properties of the cosmetic products and their retention for a longer time on the skin, showing rejuvenating, protective and healing effects.

PHYTOCHEMICAL ANALYSIS AND ANTIOXIDANT ACTIVITY OF RUBUS FRUTICOSUS L. FROM REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. *Rubus fruticosus* (blackberry) leaves provide extracts used in traditional medicine as a mouthwash against thrush, gum inflammations, mouth ulcers, and sore throat, they have long been utilized to treat a variety of respiratory issues. **Material and methods.** The plant raw material consisted of dried blackberry leaves of the Arapaho variety, harvested from the SPCFMP collection. The extracts were obtained with 70% ethanol by maceration with stirring and concentration of on the rotative evaporator. The total content of hydroxycinnamic acids was measured in dried

extract by spectrophotometric method, with Arnov's reagent. Antioxidant activity of the dry extract was determined by DPPH method. **Results.** The total of hydroxycinnamic acids, expressed in caffeic acid, in dried blackberry leaves was 0,83%, and in the dried extract was determined in ten times more 8,02%. The dried extract of blackberry leaves showed high radical scavenging activity ($IC_{50} = 11,46 \mu\text{g/ml}$), compared to the reference substance Trolox ($IC_{50} = 3,15 \mu\text{g/ml}$). **Conclusions.** This study showed that blackberry leaf extract, with a high content of hydroxycinnamic acids, can be used as a natural antioxidant for medical purposes.

IDENTIFICATION OF MISCELLANEOUS DERIVATIVES IN CYNARA SCOLYMUS L.

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ABSTRACT

Introduction. Artichoke leaf (*Cynarae folium*) extracts are known as traditional herbal medicinal products rich in secondary metabolic substances such as: polyphenols, flavonoids, bitter principles and others. The study aimed to investigate in addition the miscellaneous content of artichoke grown in the Republic of Moldova to evince its nutraceutical potential. **Material and methods.** The leaves of *C. scolymus* were collected from the SPCFMP of *Nicolae Testemitanu* SUMPh and subjected to phytochemical analysis through LC-HRMS/MS on an Agilent 1200 HPLC system. The chromatographic separations were carried out

with a mobile phase consisting of 0.1% formic acid and 0.1% formic acid in acetonitrile at a flow rate of 0.2 mL/min. **Results.** A number of seven peaks were characterized as fatty acid derivatives. Four of them were putatively labeled as hydroxylated or oxidized species of octadecatrienoic acid (C₁₈H₃₀O₂). The other fatty acids were tentatively assigned as trihydroxyoctadecadienoic acid, trihydroxyoctadecenoic acid and hydroxyoctadecadienoic acid. **Conclusions.** This study demonstrated the presence in *Cynarae folium* hydromethanolic extracts miscellaneous derivatives which induces an increase in the plant's usage spectrum.

ANTIBACTERIAL AND ANTIFUNGAL ACTIVITIES OF AGRIMONIA EUPATORIA L. EXTRACT

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ABSTRACT

Introduction. One of the challenges for the pharmaceutical industry is the discovery of new pharmacologically molecules, including those of plant origin as antibacterial and antifungal agents. **Material and methods.** Vegetal product: *Agrimoniae herba* was harvested from the SPCFMP collection and the extract was obtained with 60% ethanol by maceration and concentration on the rotative evaporator. The antibacterial and antifungal activities were evaluated by the successive dilution method, which allows the determination of minimum inhibitory concentration and minimum bactericidal concentration of the extract

in dilutions: 5; 2.5; 1.25; 0.625; 0.312; 0.156; 0.078 mg/ml. Tests were performed on reference strains: *Staphylococcus aureus* ATCC 25923; *Bacillus cereus* ATCC 11778; *Escherichia coli* ATCC 25922; *Acinetobacter baumannii* ATCC 17978 and the yeast *Candida albicans* ATCC 10231. **Results.** *Agrimonia eupatoria* extract showed bactericidal activity against Gram-positive strains: *S. aureus* (MIC- 0,156; MBC-0,625) and *B. cereus* (MIC- 0.312; MBC-0, 625 mg/ml). Antifungal activity against *C. albicans* was not shown. **Conclusions.** Antimicrobial activity of *A. eupatoria* extract could be related to the content of phenolic compounds as well as their interaction with the susceptibility of the pathogenic microorganism evaluated.

COMPARISON OF ALTERNATIVE METHODS OF CALCULATING THE SUN PROTECTION FACTOR (SPF) OF SELECTED UV FILTERS

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ABSTRACT

Introduction. As the number of melanomas and skin cancer cases due to unprotected UV radiation is increasing worldwide, the regular use of sun protection products is emphasized by healthcare workers. The sun protection factor (SPF) depends on the applied concentration of UV filters and is used to express the effectiveness of sunscreens. **Material and methods.** Ethanol solutions of different UV filters and their concentrations were prepared: 4% homosalate, 8% homosalate, 4% ethylhexyl methoxycinnamate, 8% octinoxate, 4% benzophenone-4, 8% benzophenone-4, 4% homosalate + 4% octinoxate, 4% homosalate + 4% benzophenone-4, 4% octinoxate + 4% benzophenone-4 and 4% homosalate + 4% octinoxate + 4% benzophenone-4. *In vitro* calculation of SPF was performed spectrophotometrically using the Mansur equation. For *in silico* predictions, the

BASF "Sunscreen simulator" software was used. Correlation analysis was performed using the SPSS software. **Results.** The results showed that there is a strong correlation between the SPF values obtained *in vitro* and calculated *in silico* (Spearman's coefficient = 0.91). The lowest SPF was calculated for 4% homosalate – 2.8 (*in silico*) and 1.81 (*in vitro*). The highest SPF value was obtained with the combination of UV filter homosalate, octinoxate and benzophenone-4 in both cases. The *in silico* calculated value for this combination was 14.9 while the *in vitro* calculated value was 14.4. **Conclusions.** While the *in vivo* method represents the gold standard for calculating SPF, alternative methods that would not involve volunteers and direct UV exposure, such as *in vitro* and *in silico*, are being evaluated. Our results showed a high degree of correlation between obtained *in vitro* and calculated *in silico* values for given concentrations and combinations of UV filters.

THE ANALYSIS OF AZOLE-DERIVATIVES ANTIFUNGAL PHARMACEUTICALS PRODUCTS USED IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. Over the past 25 years, the incidence of fungal infection has increased at an alarming rate across the world, due to a significant growth in the prevalence of resistance to antifungal agents. Azole derivatives are of increased interest in the development of new antifungal products with the ability to overcome drug resistance, reduce toxicity and improve pharmacokinetic profiles. **Material and methods.** According to the State Nomenclature of Medicinal Products registered in the Republic of Moldova and the National Price Catalogue of Medicinal Products Manufacturers, we selected and analyzed by ATC code azole-derived medicinal products in the Republic of Moldova. **Results.** According to ATC, azole derivatives are included in group D01AC (imidazole and triazole derivatives) – 19 TN and J02AC (triazole derivatives) – 65 TN. The

market leader in Moldova is Fluconazole 58 (69%), followed by Ketoconazole 8 (10%), Clotrimazole 5 (6%), Itraconazole 5 (6%), Bifonazole 2 (3%), Fenticonazole, Isoconazole, Sertaconazole, Voriconazole, Posaconazole 1 each (1%). 18 TN (21%) are autochthonous (Fluconazole 15, Clotrimazole, Ketoconazole, Sertaconazole each 1). The leading DRC holder is SC Balkan Pharmaceuticals SRL with 10 TN. Importing countries with a high rate are: India (24%), Turkey (12%), Romania (11%). By pharmaceutical form the most prevalent are Capsules (44%), Tablets (18%), Cream (16%). **Conclusions.** There are 84 Trade Names registered in the Republic of Moldova. The leader is Fluconazole by 58, but many strains are resistant to it, so new antifungal agents with fewer adverse effects are needed, which reduce resistance, toxicity, improve bioavailability and antifungal spectrum.

MANAGEMENT OF OPIOID DRUGS ASSISTANCE IN THE PALLIATIVE CARE SERVICE

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ABSTRACT

Introduction. The most common and serious symptom experienced by patients requiring palliative care (PC) is pain. Adequate and barrier-free access to opioid medication for medical purposes and the availability of medication in inpatient and outpatient settings have a major impact on patients' quality of life. **Material and methods.** The analysis of treatment schemes, the consumption of opioid drugs, the pharmaceutical assistance of patients in the PC process and the evaluation of the influencing factors of this process in inpatient and outpatient conditions. **Results.** A methodology was developed to estimate the need for opioid analgesic drugs and the plan of pharmaceutical assistance with them for patients who require PC in inpatient and outpatient conditions. Various methods were proposed for

calculating the consumption coefficient for each drug in this group based on the average number of bed-days (inpatient) or the number of patients planned for treatment (outpatient) and the maximum dose of drugs for one day. For additional outpatient conditions, the average number of days of administration was taken into account. Methodical recommendations were developed regarding the practical application of calculation methods. The methodology was approved and recommended for use in medical practice by order of the Ministry of Health of the Republic of Moldova no. 268 of 31.03.2017. **Conclusions.** The methodology for calculating the need for opioid analgesics and pharmaceutical assistance for patients undergoing PE treatment in inpatient and outpatient conditions was developed, which proved to be accessible, efficient, truthful and easy to implement.

INVESTIGATION OF THE STABILITY OF DIOXOINDOLINONE UNDER STRESS CONDITIONS

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ABSTRACT

Introduction. In addition to efficacy, purity and safety, stability is an important component for ensuring the quality of a drug. **Objective of the study.** Evaluation of the stability of dioxoindolinone under stress. **Material and Methods.** Stability testing methodology ICH Topic Q1A (R2); 3 series of dioxoindolinone in bulk; Shimadzu UV-1800 spectrophotometer; solvents, reagents in accordance with the European Pharmacopoeia. **Results.** In conditions of oxidative, hydrolytic, thermal, acid-base, photocatalytic stress, it was determined by the UV-VIS spectrophotometric method that the substance is stable in humidity and in an acidic

environment. Dioxoindolinone degrades under the influence of the oxidant, it is unstable in a basic environment. The influence of light as well as the simultaneous action of high temperature and have been demonstrated. By experimental storage using the "Accelerated Degradation" method at 40 °C and 60 °C with concentration determination using the UV-VIS spectrophotometric method, the shelf life for the substance was calculated to be 5 years. **Conclusion.** The results obtained will also be confirmed by real-time stability studies. Currently, the substance is stored under normal conditions (25°C; 65% RH) for 4 years and 10 months. So far, the medicinal substance corresponds to all the quality criteria stipulated in the draft specification.

DETERMINATION OF SOME STANDARDIZATION PARAMETERS FOR THE VEGETAL PRODUCTS OF SOLIDAGO SPECIES

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ABSTRACT

Introduction. The standardization of vegetal products plays an important role in ensuring the quality and safety of herbal medicines. **Material and methods.** European goldenrod *Solidago virgaurea* and Canadian goldenrod *S. canadensis* plants, harvested in the flowering phase from the central area of the Republic of Moldova, served as biological material. Determination of some specific tests: Loss on drying, Total ash and Ash insoluble in hydrochloric acid, was carried out according to the European Pharmacopoeia 10th edition (Ph. Eur. 10.0). **Results.** The following data were obtained for Loss on drying parameter: for vegetal product *Solidaginis virgaureae herba* – 11.2% (Ph. Eur. – maximum 12.0%), and for vegetal product

Solidaginis canadensis herba – 9.6% (Ph. Eur. – maximum 10.0%). The results for Total ash test reveal a value of 4.8% for *Solidaginis virgaureae herba* (Ph. Eur. – maximum 8.0%), and an ash content of 3.5% for *Solidaginis canadensis herba* (Ph. Eur. – maximum 7.0%). For the parameter Ash insoluble in hydrochloric acid, the subsequent data were determined: *Solidaginis virgaureae herba* – 0.8%, *Solidaginis canadensis herba* – 0.5% (Ph. Eur. – maximum 1.0%). **Conclusions.** Determination of some standardization parameters for the vegetal products of *Solidago* species pointed out results that are in full agreement with the requirements described in the Ph. Eur., which represent starting points for the development of the Pharmacopoeial Monograph projects for these vegetal products.

OPTIMIZATION OF COMPOUNDED POWDERS IN THE FLU TREATMENT

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ABSTRACT

Introduction. Respiratory infections are among the leaders in morbidity worldwide, being frequently caused by the influenza virus. In this sense, the development of drugs against flu is an important task for the pharmaceutical field. **Material and methods.** The prescriptions of the doctors from the *Vasile Procopișin* UPhC for the period of 2022 served as materials. **Results.** The study of the specialized literature using the Medline and PubMed databases shows that, currently, there are effective anti-influenza preparations on the world pharmaceutical market, but doctors frequently opt for magistral formulations, which allow the individualization of doses and combinations of

compatible medicinal substances, in formulations without industrial analog. In the Republic of Moldova, during the year 2022, magistral compounded powders were frequently prescribed for adults, with the composition: rutin 0.02, ascorbic acid 0.3, acetylsalicylic acid 0.5, diphenhydramine 0.03 and calcium gluconate 0.3, recommended to be administered for 10 days. The stability studies of these powders carried out in the drug technology department demonstrated their physico-chemical stability for up to 30 days. **Conclusions.** The use of compounded anti-influenza formulations have proven to be very effective, stable and well tolerated by patients and also prevent the further development of the disease and the appearance of possible complications.

EVALUATION OF ANTIBIOTIC CONSUMPTION IN HOSPITALS

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ABSTRACT

Introduction. Antibiotic consumption is increasing worldwide, especially in low- and middle-income countries. Studies have shown that the choice of antibiotic or its duration is incorrect in 25% to 75% of cases. Optimizing the use of antibiotics is critical to effectively treat infections, protect patients from harms caused by unnecessary antibiotic use, and prevent antibiotic resistance.

Material and Methods. Statistical data, results of centralized public procurement for 64 public health institutions in the Republic of Moldova, for the years 2018-2021, according to the Center for Centralized Public Procurement in Healthcare, using the defined daily dose (DDD) as the unit

of measurement recommended by the World Health Organization for drug utilization studies.

Results. As a result of the systematization of the antibiotic consumption data for 4 years, an increase of the following groups of antibiotics is shown: for 2018 (Cephalosporins and Imidazole derivatives), for 2019 (Carbapenems, Glycopeptides, Nitrofurans derivatives, Beta-lactam antibiotics, Penicillins), for 2020 (Macrolides, Cephalosporins, Tetracyclines), for 2021 (Fluoroquinolones, Lincosamides) etc, the data obtained are expressed in DDD/1000 hospital days. **Conclusion.** This study reflects the fact that it is necessary to create and introduce an antimicrobial stewardship program in hospitals and continue to monitor antibiotic consumption, prescribing habits and antibiotic resistance.

GALIUM VERUM L. - SOURCES OF FLAVONOIDS

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ABSTRACT

Introduction. Lady's bedstraw (*Galium verum* L., Rubiaceae) is a spontaneously spreading plant from the Republic of Moldova. Based on the literature, phenolic compounds, flavonoids, essential oils, tannins, saponosides, coumarins and iridoid glycosides have been identified in the aerial parts of *G. verum*. **Material and methods.** *Galii veri herba* was harvested in the Bugeac steppe, during the blooming period. Flavonoids were extracted with 60% ethanol solution for 30 min, respecting the ratio of 1:10, on water bath with condenser. Identification of flavonoids was carried out by thin layer chromatography in 3 systems. Total flavonoids

content was determined spectrophotometrically with $AlCl_3$, by six consecutive measurements at 430, 425 and 340 nm, expressed as rutoside, quercetine, apigenine equivalents (mg/100 g vegetal product). **Results.** Measurements determined a higher concentration of flavonoids in *G. veri flores*, with the highest concentration expressed in apigenin (21.7595 mg/g VP), quercetin (11.7467 mg/g VP) and rutoside (2.0044 mg/g VP), followed by herba, folia and stipites. **Conclusions.** The results confirm that *Galium verum* can be used as a source of flavonoids, and the total flavonoids content depends on the nature of vegetal products and concentration of the solvent.

EVALUATION OF PNEUMONIA ON SMOKERS

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ABSTRACT

Introduction. People who smoke are vulnerable to lung infections caused by a wide range of pathogens. The increased susceptibility to respiratory infections is explained both by the effect of cigarette smoke components on the airway epithelium, but also by the immunological changes in both cell-mediated and humoral immunity. **Objective of the study.** The presentation of clinical, imaging, bacteriological aspects on smoking patients with pneumonia. **Material and methods.** The clinical, paraclinical and imaging data of 74 patients hospitalized with community-acquired pneumonia, 53 of which are smokers and 21 - non-smokers. **Results.** The average age was 57 years (18-84 years). According to the CURB-

65 score, we found that community-acquired pneumonia with moderate and severe evolution prevailed on smokers, constituting 71.7% of cases, while on non-smokers prevailed pneumonia with mild evolution - 57.2% of cases. The radiological examination revealed the bilateral localization of the infiltrative process on 41.5% smoking patients, versus 33.3% on non-smokers. The cause of pneumonia on smokers was confirmed in 61.4% of cases, and on non-smokers in 52.4% of cases. The staphylococcal infection was present in 13.3% of smokers, versus 4.8% of non-smokers ($P < 0.05$). **Conclusions.** Pneumonia at smokers evolved with a higher degree of severity and bilateral localization. The broad etiological spectrum included bacteria that had a lower share on non-smokers.

BURDEN OF THE DISEASE IN PATIENTS WITH PSORIATIC ARTHRITIS IN MOLDAVAN STUDY

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ABSTRACT

Introduction. Studies performed on PsA showed a unique disease burden driven by its varied pathophysiological manifestations. **Material and methods.** A descriptive study was conducted selecting patients in a group of 46 subjects with the diagnosis of psoriatic arthritis. The **aim** was to assess the burden of the disease valued by PSAID-12 verifying its interpretability in clinical practice by relationship with other psoriatic measures. The PsA measures were assessed by DAPSA (Disease Activity in Psoriatic Arthritis), Psoriasis Area Severity Index (PASI), Health Assessment Questionnaire (HAQ) for physical function, SF-8 for Quality of life and PSAID-12 for burden of the disease. **Results.** Data reveal the mean \pm SD disease activity according to the DAPSA index of 27.33

\pm 15.76 points with wide v.i. - from 9.2 to 74.6 points. PASI was predominating with moderate values in 30 (65.22%) patients. The SF-8 mental and physical domain mean values of 40.72 and 43.04 were estimated for the quality of life. The HAQ questionnaire determined the mean value of 0.61 ± 0.48 (v.i. 0-1.4 p.). PSAID revealed the positivity of all twelve items. The most common parameters were coping (7.6p), anxiety (8p) and embarrassment (9.1p). The strongest correlation of PsAID was found with disease activity ($r=0.64$), followed by HAQ ($r=0.59$) and mental status of quality of life ($r=0.57$). **Conclusion.** The burden of the disease assessed by PsAID was influenced by both physical and mental components of patient's quality of life, correlating with psoriatic arthritis indices and confirming the reliability of this tool.

THE BURDEN OF THE COVID-19 PANDEMICS ON EARLY AND NON-EARLY SLE PATIENTS

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ABSTRACT

Introduction. Patients with chronic diseases were lack of clinical management in the period of COVID-19 pandemic due to strict limitations. The **aim** of the study was to determine the burden of COVID-19 limitations on patients with SLE with different disease duration in the Republic of Moldova. **Material and methods.** Two groups of SLE patients were examined by the activity of the disease (Patient Global Assessment, PGA) and Lupus Impact Tracker (LIT). The first group - 34 patients with a disease duration ≤ 2 years from diagnosis, and the second group - 67 patients with a disease duration > 2 years. Examinations were performed during the period of 01.04.2019 - 31.03.2020, by on-site visit, and 01.09.2020 - 01.09.2021 by phone. **Results.** Data showed the increase of PGA in both groups, (I group: 47.9 at

the first visit and 54.3 at the second visit; II group: 46.3 to 48.2 points) more significantly in patients with shorter disease duration. The disease impact on lupus patients was increased in both patient groups. I group showed an increase of the score from 50.0 to 62.5 (median), $r=0.92$, $p<0.0001$. In the II group, the median LIT value did not increase (47.5), but the correlation of values at different visits was found, and the tendency to values increase was observed, $r=0.87$, $p<0.0001$. Anxiety, depression, and difficulty concentrating had an impact on patients (LIT increasing), mostly those with shorter disease duration. **Conclusion.** The increased burden of the disease during the COVID-19 pandemic according to LIT, markedly on lupus patients with shorter disease duration was determined by considerable psychological symptoms.

IMPACT OF THE DISEASE IN PATIENTS WITH PSORIATIC ARTHRITIS IN MOLDOVIAN STUDY

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ABSTRACT

Introduction. Studies performed on PsA showed a unique disease burden driven by its varied pathophysiological manifestations. **Material and methods.** A descriptive study was conducted by selecting patients in a group of 46 subjects with the diagnosis of psoriatic arthritis. The **aim** was to assess the burden of the disease valued by PSAID-12 verifying its interpretability in clinical practice by the relationship with other psoriatic measures. The PsA measures were assessed by DAPSA (Disease Activity in Psoriatic Arthritis), Psoriasis Area Severity Index (PASI), Health Assessment Questionnaire (HAQ) for physical function, SF-8 for Quality of life, and PSAID-12 for the burden of the disease. **Results.** Data reveal the mean \pm SD disease activity according to the

DAPSA index of 27.33 ± 15.76 points with wide v.i. range (9.2 - 74.6 p.). PASI was predominating with moderate values in 30 (65.22%) patients. The SF-8 mental and physical domain mean values of 40.72 and 43.04 were estimated for the quality of life. The HAQ questionnaire determined the mean value of 0.61 ± 0.48 (v.i. 0-1.4 p.). PSAID revealed the positivity of all twelve items. The most common parameters were coping (7.6 p), anxiety (8 p), and embarrassment (9.1 p). The strongest correlation of PSAID was found with disease activity ($r=0.64, p<0.05$), followed by HAQ ($r=0.59, p<0.05$) and mental status of quality of life ($r=0.57, p<0.05$). **Conclusion.** The impact of the disease assessed by PsAID was influenced by both physical and mental components of the patient's quality of life, correlating with psoriatic arthritis indices and confirming the reliability of this tool.

ODONTOPHOBIA IN CARDIOLOGICAL AND RHEUMATOLOGICAL PATIENTS

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ABSTRACT

The aim of study. Assessment of Dental Anxiety and Fear in Patients Admitted in Institute of Cardiology. **Material and methods.** A descriptive study was conducted on a group of 37 patients, of which 22 with hypertension and valvular diseases (gr. 1) and 15 with arthritis (gr. 2). Assessment of dental phobia was quantified by the Mount Sinai Dental Fear Inventory (MSDFI) in 13 items, the pain was assessed by VAS. Quality of life by SF-8. **Results.** Data analyzing reveal the predominance of men in cardiology men/women 1,75:1 and prevalence of women in rheumatology, ratio m/w 1:2,75. The mean \pm SD quality of life SF-8 physical and mental was $52,55 \pm 12,66$ and $44,78 \pm 11,34$, respectively (v-i 34 to-66 points). The pain was $43,23 \pm 9,45$ (gr. 1) and $54,23 \pm 5,89$ v-i 0-98 mm,

average pain by VAS was $34,64 \pm 9,81$. We analyzed the results of MSDFI by VAS in three domains. Thus, during the waiting period for the dentist's consultation, 30.11% subjects did not show feelings of fear. At the same time, average fear was 27.94 mm, compared to pain, a positive discordance was found (VAS pain > VAS fear). During dental manipulations, 24.75% did not notice fear, but the mean fear constituted 65.51 mm characterized as negative discordance (VAS pain < VAS fear). In the period after the procedures, 67.15% of the respondents were not afraid, the average fear was 7.12 mm, positive discordance (VAS pain > VAS fear). **Conclusion.** Among examined group negative discordance was found among subject during the waiting and post-procedure period and positive during dental manipulation.

COVID-19 VACCINATION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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ABSTRACT

Introduction. Patients with systemic lupus erythematosus (SLE) are considered at higher risk of severe COVID-19 infection than the general population. Thus, the vaccination against SARS-CoV-2 infection is recommended. **Material and methods.** We performed PubMed literature research, addressing the link between SLE and Covid-19 vaccination. From 232 articles were selected 18 relevant scientific papers for further analysis. **Results.** The reviewed study data suggest that fatigue (<69%) and headache (<52%) were the most common systemic side effects. Other studies reported local pain, headache and fatigue - the most common adverse effects of COVID-19 vaccines. Small number of patients (<1.8%) had adverse events requiring emergency hospitalization, the same number of severe reactions were noted across studies. Different studies reported a flare

rate of 1- 13%, of which less than 4.6% were severe and required a change of medication. The vaccine efficacy is different across studies, thus in the EULAR COVAX registry, breakthrough COVID-19 infections were seen in 0.7% of the fully vaccinated SLE patients. Although in SLE patients, high-dose prednisone, MTX, MFM, RTX and vaccination resulted in lower seroconversion in some studies. Lupus patients appear to gain good protection from vaccination, although there may be reduced efficacy in those with high disease activity or those on immunosuppressive therapies, such as rituximab or high dose steroids. While the overall attitude of patients towards vaccination is positive (54-90%). **Conclusion.** COVID-19 vaccination is associated with no increased risk of side effects in any particular disease or drug therapy; therefore, vaccination should be encouraged in patients with rheumatic disease.

USE OF BIOLOGICAL MEDICINAL PRODUCTS AND TYROSINE KINASE INHIBITORS IN RHEUMATIC DISEASES AND COVID-19

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ABSTRACT

Aim. To investigate the effects of concomitant administration of biological medicinal products (BMPs) and tyrosine kinase inhibitors (TKIs) in patients with rheumatic diseases and COVID-19, by analyzing and systematically reviewing research articles published in the scientific literature.

Material and Methods. We conducted a systematic review of scientific publications by keywords in MEDLINE and Central Medical Library - Medical University Sofia databases for the period January 2020 - January 2023. The systematic review was conducted in accordance with the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA guidelines). Over a 3-year period,

168 scientific publications were identified, of which 9 fully met the specified criteria. We used descriptive statistical methods and the PICOS tool. **Results and discussion.** Concomitant use of biological medicinal products and tyrosine kinase inhibitors did not increase the risk of COVID-19 infection in patients with rheumatic diseases and did not affect the severity of the course in case of COVID-19 infection. Several cases of atypical and/or long-lasting COVID-19-induced pneumonia have been identified in patients treated with Rituximab, suggesting the need for caution in the use of this medicinal product. Further studies are needed to fully identify the potential impact of these medicinal products in rheumatology patients affected by COVID-19.

CARDIOVASCULAR SYSTEM IMPAIRMENT IN PATIENTS WITH CHRONIC KIDNEY DISEASE G5 PREDIALYSIS

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ABSTRACT

Objectives. Detecting the prevalence of cardiovascular impairment and anemia in patients with predialysis G5 chronic kidney disease. **Material and methods.** Retrospective study included 61 patients in the Nephrology Department, Republican Clinical Hospital „Timofei Mosneaga” during 2022, with the diagnosis of CKD G5 predialysis. **Results.** The lot of patients included 15 men (24.59%), aged 44-75 years, 46 women (75.49%), aged 33-79 years. Causes leading to CKD G5: Autosomal dominant polycystic kidney disease - 13 patients; DM type 2 - 11 patients; Chronic diffuse glomerulonephritis - 17 patients; Hypertensive nephropathy - 8 patients; Chronic pyelonephritis - 12 patients. Hypertension was present in 55 patients (90.16%), 38 (69.09%) patients were resistant to treatment. 50 patients (81.95%) developed heart disease: hypertensive

34 (55.73%), dysmetabolic 19 (31.14%) and ischemic 5 (8.19%). In the group there were 3 patients (4.91%) with permanent tachysystolic atrial fibrillation and 4 patients (6.55%) with stable angina pectoris class II. Valvular involvement was detected in 30 patients (49.18%), the most common being mitral valve insufficiency in 14 patients (22.95%) and tricuspid valve insufficiency in 12 patients (19.67%). All patients developed HF, predominantly NYHA Class II AHA/ACC stage B- 46 patients (75.40%). Anemia was detected in 45 patients (73,74%), mild anemia was dominant - 29 patients (64,44%). **Conclusions.** Patients with predialysis CKD G5 have frequent comorbidities and serious extrarenal complications, including damage of the cardiovascular system. These patients are more likely to develop hypertension, valvular damage leading to increased risk of mortality from cardiovascular causes.

CLINICAL EVOLUTION IN PATIENTS WITH ACUTE KIDNEY INJURY

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ABSTRACT

Introduction. Patients who develop acute kidney injury (AKI) have a worse course of the disease and poorer treatment outcomes. **The objective of the study.** Assessment of clinical evolution in patients with AKI. **Material and methods.** The study included 141 patients who required hemodialysis (HD) treatment in the Nephrology and Dialysis department, *Holy Trinity* Municipal Clinical Hospital during 2022. In total 1699 sessions of HD were performed in these patients. **Results.** 85 (60.28%) males and 56 (39.71%) females. A total of 30 (21.27%) patients had AKI, which required a total of 110 (6.59%) HD sessions. There were 10 (33.33%) females, in the age group of 61-73, the mean age was 72 years. The clinical evolution

was 3 (30%) discharges and 7 (70%) deaths. There were 20 (66.66%) males, aged 25-80 years, the mean age was 58 years. The clinical evolution was 11 (55.5%) discharges, 3 (15.0%) chronic HD and 6 (30%) deaths. The AKI cases outcome were as follows: 3 (10.00%) chronic HD, 14 (46.66%) were discharged, and 13 (43.33%) died. The distribution according to the causes of AKI was: acute intoxication - 1; acute alcohol intoxication- 1; intoxication of unknown etiology- 1; acute urine retention - 1; chronic glomerulonephritis - 1; hypovolemic shock - 2; acute pyelonephritis - 2; diabetic nephropathy - 3; chronic pyelonephritis - 4, unknown cause - 14. **Conclusions.** AKI has a high mortality rate, predominantly in the female and patients over 65 years old, thus early initiation of HD is necessary for treatment and survival.

MODULATION OF GUT MICROBIOTA BY PHYTOCHEMICALS – AN EMERGING THERAPEUTIC STRATEGY

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ABSTRACT

Introduction. The human gut hosts an impressive number of microorganisms (more than 10^{14}) with four bacterial phyla being predominant: *Firmicutes*, *Bacteroidetes*, *Actinobacteria*, and *Proteobacteria*. Gut microbiota metabolizes dietary components and drugs generating a wide array of metabolites which significantly impact the health condition of the host. Chronic diseases, such as cardiovascular and neurodegenerative diseases, obesity, type 2 diabetes are known to be associated with alterations in the gut microbiota. **Material and methods.** A literature review was conducted using various keywords (gut

microbiota, gut microbiota remodeling, dysbiosis, microbiota related diseases, phytochemicals) and databases such as Science Direct, Web of Science, Google Scholar, Scopus, and PubMed. **Results.** Numerous phytochemicals (resveratrol, curcumin, quercetin, catechins, berberine, polysaccharides) were found to modulate the gut microbiota thus attenuating biomarkers of various diseases/disorders.

Conclusions. The gut microbiota modulating effects of phytochemicals need more investigations for an appropriate valorisation as adjuvant therapy in the diseases associated with gut dysbiosis.

STUDY OF GENETIC AND NON-GENETIC FACTORS IN THE PROGRESSION OF AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE (ADPKD)

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ABSTRACT

Introduction. Autosomal dominant polycystic kidney disease (ADPKD) is an inherited, multisystem disorder characterized by the progressive and diffuse development of multiple, bilateral renal cysts, frequently progressing to chronic kidney disease (CKD), and variable association with extrarenal abnormalities. ADPKD is a heterogeneous genetic disease caused by mutations in PKD1, PKD2, GANAB or DNAJB11 genes. **Material and methods.** The study included 53 patients with ADPKD in the Nephrology Department SCR, Chisinau in 2022. Clinical and paraclinical manifestations were documented; renal function was established according to KDIGO standards by assessing glomerular filtration rate (GFR) and albuminuria level. Pedigree transmission, penetrance, anticipation, parental imprinting in patients' families were assessed. **Results.** The study revealed the age of clinical

manifestations onset- from 10 years to 65 years, duration of disease from 1 year to 50 years, clinical manifestations - 100% bilateral polycystic kidney disease, 73.5% arterial hypertension, 45% low back pain, 45% hepatic cysts, 26% urinary infections, 5.6% macrohematuria. 100% patients had CKD, 47.3% GFR <30ml/min/1.73 m² and 28.5% albuminuria >300mg/g, 15% had end stage CKD. 58.5% patients inherited the disease from mother, 43% had other first-degree relatives with polycystic kidney disease. Earlier/more severe onset of clinical manifestations was demonstrated in 26% of cases in offspring vs parents, of which 70% inherited the disease from the mother. **Conclusions.** ADPKD is characterized by variable intra- and interfamilial phenotypic expression; male sex, anticipation, inheritance of the mutant gene from the mother, age and size of renal cysts, arterial hypertension, proteinuria and extrarenal manifestations are factors in disease progression.

THE IMPORTANCE OF DIAGNOSIS IN EARLY PSORIASIS ARTHRITIS

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ABSTRACT

Introduction. Psoriatic arthritis (PsA) is an inflammatory disease of the joints, entheses and spine associated with psoriasis. **Objective of the study.** To evaluate the significance of inflammatory back pain (IBP), HLA-B27, and active sacroiliitis (ASI) confirmed by magnetic resonance imaging (MRI) for the early diagnosis of PsA. **Material and Methods.** The study included 29 patients with PsA 16 females and 13 males (average age 41,5). Presence of IBP according to the criteria ASAS, HLA-B27 and ASI signs on the MRI dates (bone marrow edema/osteitis). Calculated DAS28 (disease activity), the Yule coefficients of association (Q: level from -1 to +1) and Phi was calculated.

Results. In patients with PsA, ASI was detected by MRI significantly 41,4%. No correlation between the presence of ASI and DAS28. IBP was detected in 11 (38,6%) of 29 patients; it was long-term in 7 (63,6%) and episodic in 4 (36,4%) of patients. HLA-B27 was detected in 10 (34,5%) of 29 patients. In patients with PsA a very high level of association between ASI and IBP ($Q = 0,87$, $\Phi = 0,71$) and between ASI and HLA-B27 ($Q = 0,83$, $\Phi = 0,71$) was detected. **Conclusion.** ASI is detected by MRI significantly in patients with PsA. In patients with PsA, ASI is closely associated with IBP and HLA-B27. This fact can be used for differential diagnosis of PsA and rheumatoid arthritis. The activity level of arthritis doesn't affect detectability of ASI by MRI in patients with PsA.

FRAILITY IN PATIENTS WITH RHEUMATOLOGIC DISEASES

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ABSTRACT

Introduction. The prevalence of frailty among the rheumatologic population ranges from 23 to 60% cases. As rheumatic diseases are characterized by chronic inflammation, so frailty is an emerging concept in the identification of individuals, vulnerable to outcomes. **Material and methods.** The study included 23 patients hospitalized with rheumatic diseases between January and December 2022 with SLE, RA, PR, Takayasu, SS, PsA and OA. The mean age was 60.4 ± 1.65 (19-81) y.o, 19 (82.6%) women. Frailty was auto-assessed by the Edmonton score. **Results.** Different degrees of frailty were identified in 9 (39.1%), women: men ratio 2:1, the average age in frail group- 57.5 ± 2.53 y.o, Cognitive assessment by "imaginary clock" test detected minor mistakes in 22.2% and serious - 77.8% cases. Addressability noted that 55.6%

required medical assistance 2-4 times/year and 44% -5-8 times/year. Self-reported health status data was „acceptable” in 66.7% and „low” in 33.3 %, while „good” health hadn't been reported. Patients needed help at least for 2-4 activities - 55.6% and 33.3% with 5-8 daily activities. Permanent social support needed 2 (22.2%), occasional -7 (77.8%) cases. Drug administration of 5 and more drugs was in 88.8%, about 1/3 sometimes skip it. Loss of weight was reported by 2 (22.2%), the decrease of physical activity- 6 (66.7%), incontinence - 4 (44.4%), sleep five or less hours in 5 (55.6%) frail respondents. Feeling of sadness was noted in 66.7% cases. "Getting up and walking" test identified slow walk (≥ 10 s) in 77.8% patients. **Conclusion.** Frailty syndrome is common in rheumatic diseases estimated in our study group in 39.1% cases, affecting the four main domains: cognitive, clinical, physical and social.

COVID-19 AND LATE MUSCULOSKELETAL CONSEQUENCES: AN OBSERVATIONAL STUDY

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ABSTRACT

Introduction. Previous studies described that COVID-19 disease has considerable effects on the musculoskeletal system, causing excessive fatigue, myalgia, arthralgia, muscle weakness, and skeletal muscle damage. These symptoms can persist for months, decreasing the quality of life of numerous individuals. **Objectives.** Study of the pattern of rheumatic and musculoskeletal diseases (RMD) following COVID-19 disease. **Material and methods.** We performed an observational study of a group of adult patients with a new diagnosis of RMD in a time interval of 12 months after COVID-19 diagnosis. **Results.** The study included 47 patients (mean age 45.5±11.3 years, M: F ratio 1.8:1) consulted in the rheumatology clinic with new manifestations of articular, periarticular, bone, or inflammatory

symptoms. The majority of patients consulted for joint pain (93.6%), less frequently low fever, skin rashes, and sicca syndrome were reported (2.1% cases each). The mean duration of symptoms was 9.8±10.5 (range 1-42) weeks, and the time to onset after the diagnosis of COVID-19 was 4.9±4.1 (range 0-12) weeks. In 60.9% of cases, the severity of the COVID-19 disease was mild, 17.4% - moderate, and 21.7% - severe. They were diagnosed: reactive arthritis - 74.4%, Lupus-like syndromes - 6.8%, Sjogren's syndrome - 2.1%, avascular necrosis - 10.6%, rheumatoid arthritis - 4.2% and psoriatic arthritis at onset 2.1% cases. **Conclusions.** COVID-19 disease can lead to a variety of musculoskeletal manifestations in the time frame following its resolution; therefore, in the presence of joint symptoms or other signs that suggest an autoimmune disease, patients should be referred for a rheumatological check-up.

THE COMPLIANCE AT SELF-MANAGEMENT EXERCISE PROGRAM FOR KNEE OSTEOARTHRITIS

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ABSTRACT

Introduction. Knee osteoarthritis (OA) is a common chronic condition that requires a complex and long-term approach. Patient empowerment and self-management could be an effective strategy for OA; however, the effectiveness of these interventions remains controversial. **Material and methods.** The aim was to assess compliance with the self-management exercises program in patients with knee osteoarthritis. The study included 82 patients that fulfilled the ACR criteria for OA (63 females and 19 males), mean age of 61,8±9,2 years. All the patients received a 10-day exercise program which included also education for the implementation of the home exercise program. The patient's adherence was assessed 10 days over the rehabilitation program, and after 1 month of the self-management program. **The results.** During the 10-day rehabilitation program the

group established a high level of adherence in 42,7% of cases, mild level in 46,3% and low level in 11,0% of cases. After 1 month, at the follow-up visit, a high level of adherence was observed in 25,7%, a mild level in 31,7% and a low level in 28,0% of cases. To be noted that 14,6% of participants abandoned the self-management program. The factors that determine the level of compliance to the self-management program were: the effectiveness of the intervention, the individual perception of the disease and clinical manifestations, and the ability to integrate the routine of physical exercises into the daily program. **Conclusion.** The compliance with a self-management exercise program was lower than a rehabilitation program in a specialized clinic. Therefore, it is necessary to evaluate the factors that determine the compliance in order to increase the empowerment of patients and to improve osteoarthritis outcomes.

DISEASE AND COMORBIDITIES MONITORING CAN IMPROVES THE COURSE OF SYSTEMIC LUPUS ERYTHEMATOSUS

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ABSTRACT

Introduction. Based on the national guideline for the SLE patient, follow-up of the disease with the rheumatologist and the family doctor is recommended for the management of the disease and comorbidities. **The aim** of our study was to assess monitoring for renal involvement, blood pressure management, hydroxychloroquine (HCQ), and glucocorticosteroid (GCS) treatment in SLE patients. **Results.** In the retrospective study (02.2020- 02.2023), we analyzed the ambulatory records of 58 patients with SLE, hospitalized in a rheumatological department, 91.4% were women with a mean age of 42.32 ± 11.70 years. The screening

of asymptomatic kidney damage based only on the urine analysis revealed 18.97% abnormal values (pyuria - 11 and proteinuria 4 cases), but it was not managed. Blood pressure was monitored in 96.5% pts, and permanent antihypertensive treatment was recommended in 58.6% of patients. HCQ was prescribed regularly by 70.7% of patients while only 12.1% have consulted the ophthalmologist annually. GCS in a dose ≤ 7.5 mg was administered by 36.2% of patients with low disease activity. **Conclusions.** It was found that ambulatory monitoring of patients with SLE deviates from the national clinical guideline, which suggests further research to identify its causes.

SPECIFICITY OF CLINICAL TRIALS OF SOME OSTEOPOROSIS MEDICINES

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ABSTRACT

Introduction. Clinical trials of medicinal products used in the prevention and treatment of osteoporosis include all procedures, operations, methods, and means for gathering summary data and analyzing it to determine the nature of the procedures as well as specific relationships and dependencies of interest imposed by the relevant study. Characterizing linkages and dependencies, quantifying their significance, and modeling statistically significant interactions and dependencies are the key goals of the analysis. The data must be comparable, that is, based on clearly defined features and criteria for their internal content, in order to be used in statistical analysis. **Methods.** Collecting primary empirical data enables objectification of some facts, long-term analysis of events and phenomena in retrospect, and the ability to predict the course of development of clinical trial processes. The actions, operations, methods, and means for acquiring summary data and for their interpretation in order

to make clear the nature of the processes, as well as specific connections and dependencies, are covered by applied statistical analysis. **Results.** According to studies, the following restrictions apply to clinical trials of osteoporosis treatments: Although the disease affects both sexes, studies on female patients are more prevalent. Patients must be in the menopause, and in some studies, the presence of an osteoporosis-related fracture is a requirement. Patients' average ages range from 45 to 80 years. The state of bone density and bone structure is positively impacted by all medications that have been examined. **Conclusion.** All of the medicinal products under consideration have positive effects on the state of bone density and bone structure, but because the process is irreversible, early detection and prevention of the disease would result in earlier treatment measures in the early stages of the illness, which would save society money over the long term on indirect and difficult-to-estimate costs.

THE EFFECT OF MULTIPLE SCLEROSIS ON THE BULGARIAN PATIENTS – PILOT STUDY

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ABSTRACT

Objectives. To understand the impact of multiple sclerosis and improve care for affected patients, it is necessary to identify factors influencing QOL in MS. The aim of our study was to assess the influence of different clinical and demographic variables on quality of life (QOL) in patients with MS in Bulgaria. **Methods.** A pilot survey was conducted in a sample of 31 outpatients with epilepsy mean aged 53.05 from Sofia, Bulgaria who visited a neurology department between April and August 2020. Clinical and demographic characteristics were retrieved from medical records. Quality of life was measured by MSQOL-54 (Vickrey et al., 1995). The MSQOL-54 scale was translated into Bulgarian and standardized by forward translation, backward translation, and a pretest. The data collected were proceeded through SPSS 22. **Results.** Age is related to some components of the quality of life, and with each

of them the relationship is the opposite - with an increase in age, reduces the assessment of quality of life and that's it expected. Age is most strongly related to pain – Spearman's $\rho = -0.668$, and the relationship can be characterized as strong. Moderate the relationship with the MSQOL-54 score for physical health is stronger – Spearman's $\rho = -0.501$; with physical health – Spearman's $\rho = -0.497$, with a score measuring the limitations posed by physical problems - Spearman's $\rho = -0.481$ and satisfaction with sexual function – Spearman's $\rho = -0.415$. Relatively weaker is the relationship with the social function – Spearman's $\rho = -0.365$ and energy – Spearman's $\rho = -0.351$. The latter relationship is insignificant, due to the small sample size. The theory allows by virtue of relationship above 0.3, it should be interpreted regardless of the level of significance. **Conclusions.** The present study confirms that the situation of the Bulgarian patients with MS is the same like the rest of the Europeans from QoL point of view.

THE RESULTS OF COLORECTAL CANCER TREATMENT DURING THE COVID-19 PANDEMIC

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ABSTRACT

Introduction. With the implementation of safety regulations in the COVID-19 pandemic, there have been major disruptions in the care of patients with colorectal cancer (CRC). **Background.** Analysis of the impact of the COVID-19 pandemic on patients with CRC. **Methods and material.** Retrospective study on 376 patients treated in Emergency Hospital (Chisinau) during 2018-2021. Ratio M:W=1:1, mean age – 65.41±0.55 years. Patients were divided into 2 groups: I group (control) – 219(58.25%), (2018-2019), II group (pandemic) – 157(41.76%), (2020-2021). Demographic, clinical, intraoperative, pathological data and mortality were evaluated comparatively. **Results.** There was a 28.31% reduction in hospitalizations for CRC in the pandemic group ($p<0.01$). If the rate of emergency hospitalizations and the type of CRC complications were identical in both groups,

then the derivative procedures (colo/ileostomy) were higher in the pandemic group, 71(45.22%) *vs* 60(27.40%), ($p<0.05$). The advanced stages of the disease were recorded during the restrictions. Although the age indicators were not different, comorbidities were more common for patients in the pandemic group ($p<0.05$), 14.02% also endured SARS-Cov-2 infection until hospitalization, and 11(7.01%) were dignosed with COVID-19 during hospitalization for CRC, and mortality being significantly higher in the pandemic group – 20.38% *vs* 14.16%, ($p<0.05$). **Conclusion.** The COVID-19 pandemic has had a major impact on the care of colorectal cancer patients. The results of the more unfavorable clinical and pathological findings are still unknown, but extensive multicenter studies are needed in this area, which would lead to future the management of surgical pathologies, including CRC.

INITIAL EXPERIENCE OF PERCUTANEOUS MECHANICAL THROMBOASPIRATION IN ACUTE LIMB ISCHEMIA

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ABSTRACT

Introduction. Various approaches are currently available in the management of acute lower-limb ischemia (ALI), such as open surgery, endovascular or hybrid techniques. The aim of study: to evaluate initial experience of percutaneous mechanical thromboaspiration (PMT) with Penumbra/Indigo[®] system in ALI. **Material and methods.** The case series included 8 patients with ALI treated over a 4-month period; males – 5 (62.5%); median age – 71 (25%-75%IQR 64.5-76) years. Classification of ALI cases (Rutherford): grade I – 1 (12.5%), IIA – 4 (50%), IIB – 3 (37.5%). Duplex scanning (n=3) and computed tomography angiography (n=5) were used for preoperative diagnostics. Embolic etiology of ALI was registered in 3 cases, thrombotic – in 5. Localization of occlusion was at the level of native arterial segments in 6 observations – external iliac/common femoral (n=1), superficial femoral (n=4), and popliteal artery (n=1). In two other cases,

occlusion of autologous femoro-popliteal bypass and in-stent thrombosis of superficial femoral artery were identified. Endovascular access was through ipsilateral common femoral artery (n=6), crossover (n=1), or brachial artery (n=1). PMT was performed using dedicated CAT6[™] and CAT8[™] catheters. **Results.** There were no major periprocedural complications. Primary technical success rate of PMT was 87.5%. Completion angiography highlighted concomitant occlusive-stenotic lesions in all cases, required transluminal angioplasty (n=8) and stenting (n=4). Catheter-directed thrombolysis was used as an adjunct in one patient. There were no deaths or amputations at 30-day follow-up. **Conclusions.** PMT using Penumbra/Indigo[®] system seems to be safe and effective minimally-invasive technique for the treatment of ALI, which allows simultaneous correction of coexisting chronic peripheral arterial lesions.

OWN EXPERIENCE IN THE PREVENTION OF UPPER DIGESTIVE BLEEDING FROM ACUTE POST-LIGATION ULCERS

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ABSTRACT

Introduction. Upper gastrointestinal bleeding from acute post-ligation ulcers is a rare complication of endoscopic banding, with high morbidity and mortality. Its incidence reported in the literature varies between 2.3-18%, the therapeutic management recommendations being absent or sporadic. The aim of the research was to analyze the impact of thrombin injection during endoscopic banding of esophageal varices on the bleeding rate from post-ligation ulcers. **Material and methods.** In the study cohort, consisting of 18 patients (5 of whom underwent repeated banding, in 4 patients banding was performed for active bleeding), thrombin injection was performed in a volume of 2.5 ml., a total of 250 units, in 2-4 paravariceal points. The injection was performed

during endoscopic banding, adjacent to the hemorrhagic varix (acute hemorrhage) or the varix most suspected for rupture (primary or secondary prophylaxis). **Results.** One recurrence of bleeding (5.5%) was observed in the first 24 hours (banding was performed for active bleeding, the cause being the premature detachment of 2 bands out of 5 applied in total). In 17 patients, no recurrence was observed during the 28-day follow-up after banding. During the follow-up gastroscopy after 28 days, acute post-ligation ulcers at various stages of healing, as well as residual varices, were detected in these patients. **Conclusions.** The proposed method is reasonably applicable to patients who undergo repeated banding. It requires precise operator technique and a clearly visible injection point, which involves the initial cessation of the hemorrhage with the Sengstaken-Blakemore tube.

MEDICAL STAFF FACE TO FACE WITH THE BURN-OUT SYNDROME (BOS)

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ABSTRACT

Introduction. There is a strong correlation between medical activities and stress accumulated over years of work. However, the COVID-19 pandemic has highlighted the importance of the mental state of medical workers and highlighted the need to assess the degree of BOS. **The aim of the study:** to evaluate BOS among ICU medical staff in the tertiary hospital. **Material and methods.** A number of 62 doctors, nurses and auxiliary personnel were interviewed, divided into 2 groups (ICU-COVID-19 and ICU-non-COVID-19 units), from Intensive Care Unit (ICU). The Maslach questionnaire was applied, including 25 items divided according to: emotional exhaustion, depersonalization, and personal achievements. **Results.** BOS was determined in both groups (53.3% in ICU-COVID-19 vs 46.67% in ICU – non-COVID-19). The high level of BOS was found

in all medical staff in ICU-COVID-19, therefore, medium level was almost equally distributed in both groups. ICU-COVID-19 doctors showed the high level of emotional exhaustion in 100%, and nurses revealed this aspect in 58.3% cases vs. 20% ICU-non-COVID-19. The depersonalization was assessed in 45% of ICU-non-COVID-19 medical staff (doctors – 20%, nurses – 25%). The ICU-COVID-19 doctors were more empathetic towards patients' suffering (66.7%), and 60% of ICU-COVID-19 nurses showed reduced personal achievements. ICU-COVID-19 nurses are twice more affected in this field compared to ICU-non-COVID-19 nurses (60% vs 25%). The data showed that nurses were more affected by BOS regardless the units they are working in. **Conclusion.** Medical staff in ICU units are affected by BOS. ICU-COVID-19 medical personnel are more affected. Doctors have the highest degree of BOS.

CONTEMPORARY TREATMENT OF HEMORRHOIDS

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ABSTRACT

Introduction. Most patients with hemorrhoidal disease in Moldova are treated by classic traumatic surgical methods. Postoperative period is characterized by increased risk of postoperative complications and severe pain syndrome. Thus, the minimally invasive surgical method of transanal ligation of the hemorrhoidal arteries with the use of ultrasound dopplerometry with mucopexy (HAL-RAR) has been of particular interest. **Material and methods.** The results of surgical treatment were evaluated in 150 patients in the years 2014-2022 with the diagnosis: chronic mixed hemorrhoids gr. III-IV. Group I (LI) of patients was treated by traditional classical excisional surgical methods – 50 patients, Group II (LII) - by the combined method (HAL/HAL-RAR) with excision of external hemorrhoidal nodules / skin tags) – 50 of patients, group III (LIII) - by the HAL-RAR method – 50 patients. **Results.**

The branches of the superior hemorrhoidal artery were most frequently detected at hours 1, 3, 5, 7, 9, 11. In all patients after performing the HAL-RAR (L3) method, the pain syndrome was less pronounced in comparison to the combined and classic method; no opioids were required. The duration of hospitalization varied from 3 to 5 days. No postoperative complications were detected. Postoperative pain VAS (visual analog scale: 0-10): Group I (6-10) > Group II (3-6) > Group III (1-4). Also, the patients in the Lot III group required a shorter period of hospitalization. Hospitalization days: Group I (4-7) > Group II (2-5) > Group III (1-3). **Conclusions.** The combined surgical treatment of hemorrhoidal disease is quite effective in patients with III-IV grade of combined hemorrhoids. The method is based on pathogenetic reasoning. It is more radical in comparison to modern minimally invasive methods and less traumatic than classical excisional surgical methods.

THE IMPACT OF PSYCHO-EMOTIONAL DISORDERS ON THE OUTCOMES OF LAPAROSCOPIC ANTI-REFLUX SURGERY IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE

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ABSTRACT

Introduction. Gastroesophageal reflux disease (GERD) can present clinically in many different ways and with varying intensities of symptoms among patients. Recent studies have found that there is a significant overlap in the symptoms experienced by those with GERD and those with other conditions such as dyspepsia, functional heartburn, and psycho-emotional disorders. This study aims to investigate the impact of psycho-emotional disorders on the outcomes of laparoscopic anti-reflux surgery in patients with GERD. **Material and methods.** The study included 77 patients who underwent laparoscopic anti-reflux surgery (LARS) from 2016 to 2019 in Clinical municipal hospital „Gh. Paladi”. Of these patients, 54 were women (70.1%) and 23 were men (29.9%). Using standardized questionnaires (PHQ-9, PHQ-15, SADS), the presence of

psycho-emotional disorders was identified in 13 patients. Patient-related outcomes were measured using the HRQL questionnaire and Visick scale with a follow-up period of 36 months. **Results.** Of the 13 patients with psycho-emotional disorders, 5 had worse postoperative HRQL scores and more Visick grades 3-4 compared to only 3 out of the remaining 64 patients without psycho-emotional disorders. Statistical analysis showed that patients with psycho-emotional disorders were significantly more likely to have worse postoperative outcomes compared to those without psycho-emotional disorders (Odds ratio = 0.1219; 95% CI = 0.0259 to 0.5746; P = 0.0078). **Conclusions.** The presence of psycho-emotional disorders may negatively impact the outcomes of laparoscopic anti-reflux surgery in patients with gastroesophageal reflux disease. Further research is needed to confirm these findings and to develop strategies to improve outcomes in this patient population.

POST-OPERATIVE DELIRIUM

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ABSTRACT

Introduction. Postoperative delirium (POD) - "acute brain dysfunction", a disorder of cognitive function and consciousness, developed in a short period of time (hours-days) after surgery with a variable character. POD occurs in 20-50% of patients after intensive care unit (ICU) surgery. POD is associated with a poorer prognosis, increased mortality and length of stay. **Purpose:** To assess the degree of identification of POD in post-surgical patients in ICU wards. **Material and methods.** A retrospective study of 1630 patients was performed. Medical records of post-surgical patients admitted to the ICU of IMSP SCR "Timofei Moşneaga" in 2022 were analyzed. **Results.** 196 patients (12.02%), all hyperactive type, developed POD. The hypoactive type was not assessed. Mean age:

60±9.6 years; >65 years - 36.84% and <65 years - 63.16%. Females - 84 (42.86%) and 112 males (57.14%). A number of 62 (31.67%) patients - POD developed in the first 24 hours after surgery. Assessed preoperatively: encephalopathy - 56 (28,57%) patients, stroke - 18 (9, 2%) patients, alcohol consumption - 22 (11,22%). In 64 (32,65%) patients tissue perfusion disturbances with low oxygen consumption ($VO_2 < 150$ dl/min) were determined intraoperatively or after transfer in to ICU. **Conclusions.** POD is underappreciated in patients after surgery in ICU. Hypoactive type POD is overlooked and not appreciated in a timely manner. In order to decrease diagnostic and therapeutic costs is necessary to assess the neurocognitive status in the surgical patient and to eliminate predisposing factors.

LIVER TRANSPLANT WAITING LIST MANAGEMENT

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ABSTRACT

Introduction. The increase in the number of patients with liver cirrhosis has necessitated revision of the widely used Model for End-stage Liver Disease (MELD), which predicts short-term mortality and determines priority on the liver transplant waiting list. **Purpose.** To evaluate new prognostic scores to increase equity, reduce deaths and optimize outcomes on the liver transplant waiting list. **Material and methods.** We evaluated 265 patients with chronic liver disease, aged ≥ 18 years, included on the waiting list for liver transplantation between February 2013 and January 2022. MELD, MESO Index, MELD-Na, UKELD, iMELD, refitMELD, refitMELD-Na, upMELD, MELD 3.0 scores were used.

Prognostic abilities for predicting 90-day mortality were investigated by applying receiver-operator-characteristic-curb analysis. **Results.** 39 patients (34%) died of whom (male 28, female 21, mean age 48 years) on the liver transplant waiting list within 90 days of listing. However the MELD 3.0 score, had the best acceptable prognostic performance with areas below the Roc-curve (AUROC = 0.836). All scores achieved a mean quality score of 75.1%. In 51.66% of patients there was however an increase in the prognostic score than the MELD score. **Conclusions.** Thus, the MELD 3.0 score effectively predicts short-term mortality among patients with liver cirrhosis and specifically addresses gender disparities on the liver transplant waiting list.

INTRALUMINAL MIGRATION OF GOSSYPIBOMA: A CASE REPORT

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ABSTRACT

Introduction. Textile foreign body retention following surgical procedures is a very serious but fully avoidable event. It is accepted that there are two main courses of such event: an acute exudative inflammatory reaction with abscess formation or aseptic with a fibrotic reaction that develops into a solid mass. **Material and methods.** A 54-year-old female was admitted after a previous open cholecystectomy with abdominal pain, nausea, vomiting and fatigability. She underwent emergency plain radiography, FAST ultrasonography and upper endoscopy. **Results.**

During upper gastrointestinal endoscopy procedure two gastric ulcers were revealed: acute and chronic and at the base of the chronic ulcer textile fibers were noted and by using a biopsy forceps a large abdominal mesh was extracted. **Conclusions.** In some very rare cases the extraction of gossypibomas was performed by colonoscopy or endoscopic sphincterotomy. In our case no signs of stomach wall perforation was noted probably because the foreign body was surrounded by a fibrotic reaction. Open surgery is a “Golden standart” for extraction of abdominal foreign bodies, but in some extremely rare cases endoscopic extraction is feasible as presented in our case.

SURGICAL TREATMENT OF THYROID NODULES

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ABSTRACT

Introduction. Thyroid nodules are common thyroid disorders that harbor in 5-15% malignancy. The concern about thyroid nodules besides thyroid cancer, regards compressive symptoms and thyroid dysfunction. Surgical treatment of nodules is recommended as a final diagnostic tool or as a radical method of treatment. **Material and methods.** We have studied 124 patients with a mean age of 46,79 years, mostly females (n=104) that presented refractory to conservative treatment thyroid nodules, with signs of compression on near structures, and with suspicious signs of malignancy at echography, scintigraphy, and fine-needle aspiration that were subjected to surgical treatment. **Results.** According to the hyperplastic, thyroiditic, cystic, or neoplastic nature of the nodules were performed total (n=28) and subtotal (n=5) thyroidectomies, unilateral hemithyroidectomies (n=73), nodules enucleation (n=3), isthmectomies

(n=3), combined - unilateral hemithyroidectomies and enucleation of the nodule or partial contralateral lobe resections (n=11) and total thyroidectomy with lymphadenectomy (n=1). An intraoperative frozen section of thyroid tissue was done for the precision of malignant diagnosis and for providing the appropriate volume of thyroidectomies. Complications of the intra- and postoperative period were not determined, except for one patient who developed transient paresis of a recurrent laryngeal nerve due to posttraumatic edema, with complete recovery after one month. The recurrence of nodules was not registered. **Conclusions.** Surgical treatment of thyroid nodules is indicated especially in those with highly suspicious signs of malignancy, but must also be considered in benign nodules with compressive symptoms due to large size, rapid growth, and with hyperthyroidism signs. The volume of surgery should be decided with the patient toward organ-preserving procedures and minimal complications.

PERFORATED GASTRODUODENAL ULCER IN A COVID-19 PATIENT

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ABSTRACT

Introduction. Peptic ulcer perforation presents the most serious complication of ulcer disease with mortality that varies significantly depending on the age and conditions. The aim of this study was to analyze the clinical parameters and immediate outcomes of patients with acute peptic ulcer perforation during the coronavirus disease pandemic. **Material and methods.** A retrospective cohort study was conducted in the Department of Surgery, *Institute of Emergency Medicine*, Republic of Moldova. The patients with COVID-19 undergoing surgical modality of peptic ulcer perforation from April 2020 to July 2022 had been incorporated in this study. **Results.** Eight patients with a median age of 63.63 ± 4.03 (95%

CI:54.08-73.17).years were included in the study (male – 62.5%). All the patients had a significantly elevated C-Reactive Protein and D-dimer prior to surgery. The age, Boey score, PULP score, duration of symptoms, surgery time and type of surgical treatment, length of hospital stay were comparable. The mean postoperative hospital stay was 13.0 ± 2.9 days (95% CI:5.96-20.04). The 30-day postoperative morbidity rate was 65.5%. **Conclusion.** Gastrointestinal manifestations were frequently reported in patients with COVID-19. However, gastroduodenal perforation is rarely reported in the literature. Understanding the gastrointestinal correlation to COVID-19 and the associated morbidities in the adult population is crucial in order to avoid fatal complications.



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HYPOPLASIA OF THE LEFT KIDNEY ASSOCIATED WITH CHRONIC KIDNEY DISEASE AND OBESITY

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ABSTRACT

Introduction. Kidney malformations are commonly identified in the antenatal period and account for 20-30% of all detectable anomalies. Both renal dysplasia and renal hypoplasia account for a significant proportion of chronic kidney disease (CKD) in children. Currently, their appearance is attributed to environmental factors in 10%, genetic and chromosome factors - 10%, and in 40-60% remain idiopathic. The disease may lead to glomerular hyperfiltration associated with hypertension, proteinuria and, in the long term, with chronic kidney failure. **Material and methods.** Presentation of a clinical case of late diagnosed renal hypoplasia associated with CKD. **Results.** 14-year-old male patient admitted to the Nephrology Department of Mother and Child Institute. On physical examination it was found pale, dry skin, with suborbital circles, reduced turgor and elasticity of the skin, obesity (BMI-

30.0), high blood pressure - 135/90 mm/Hg (99th percentile). Laboratory test results showed hypercholesterolaemia -7.05mmol/L, blood urea -6,6 mmol/l, creatinine -0,098 mmol/l, glomerular filtration rate (GFR)-77ml/min/1.73m². Urinalysis showed leucocytes 20-22 f/w. The imagistic exam with ultrasound detected small size of the left kidney (68x40 mm), the cortico-medullary layer 12 mm, with the pyelocalic structures deformed. Intravenous urography confirmed the small aspect of the left kidney, slightly rotated, without viewing the ureter and the function of concentration and evacuation slightly slowed. Subsequently evaluated by renal scintigraphy, was established a reduction of the function with 20% of the hypoplastic kidney. **Conclusion.** Children with unilateral kidney dysplasia have a higher risk for progression of CKD. The follow-up visits should include a physical exam, blood pressure measurement, proteinuria/albuminuria screening and a sonographic assessment of the kidney.

CLINICAL-PARACLINIC DIAGNOSIS IN RENAL TUMORS IN CHILDREN

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ABSTRACT

Introduction. Renal tumors are on the 4th place in the structure of malignant diseases in children, constituting between 5.5–7.0%. Nephroblastoma (Wilms Tumor) has the highest frequency, accounting for 500 children per year, according to reports from the United States. **Material and methods.** The study was carried out on a group of 11 patients with renal tumors treated in the Institute of Mother and Child, the National Scientific-Practical Center of Pediatric Surgery "Natalia Gheorghiu", the Urology Department and the PHI Oncological Institute, the Oncopediatric Department. **Results.** The diagnosis of renal tumor was established in 11 patients aged 2 -10 years. At the clinical examination, the common signs were: palidity and gray tint of the skin, asymmetry of the abdomen, enlargement in the hypochondrium

and the respective flank - tumor formation with lumbar contact. Pronounced vascular drawing on the abdominal wall with the appearance of venous stasis was determined in 9 patients. In all cases, renal ultrasound showed impressive dimensions from 4.8 x 5.2 to 9.5 x 8.4 x 7.9 with deformation and asymmetry of the flank of the abdomen. Computed tomography and magnetic resonance confirmed the clinical diagnosis. In 6 patients, the tumor was of large size requiring primary polychemotherapy, subsequently surgical. The histopathological examination detected the presence of nephroblastoma in 10 children, in 1 child - angiomyolipoma. **Conclusions.** Multidisciplinary approach in order to establish correct management, can ensure an increased rate of healing in children, with the prevention of the dissemination and metastasis of renal neoplasm.

MULTIMODAL IMPROVEMENT OF CALCIUM- PHOSPHORUS METABOLISM IN DIALYSIS PATIENTS

Petru CEPOIDA

ABSTRACT

Introduction. Mineral bone disease in dialysis population correlates with high morbidity, mortality and low quality of life. As a result its successful management is an important component of dialysis curriculum. **Material and methods.** During 08.2018 – 08.2019 Chisinau dialysis center with more than 300 chronic dialysis patients introduced the following medical interventions in order to improve mineral bone disease management: hemodiafiltration (24,6% patients), i.v. paricalcitol (14,2% patients) and special normal level calcium dialysis solution (24,3% patients). **Results.** The distribution of ionized calcium in serum (normal values 1,1-1,35 mmol/l) has changed from hypocalcemia / normocalcemia / hypercalcemia equal to 33,2%/65,4%/1,4% to 16,4%/82,4%/1,2% and of phosphatemia <1,78 mmol/l / 1,78-2,5

mmol/l / > 2,5 mmol/l equal to 31,7%/38,3%/30% to 44,2%/38,2%/17,6%. In the same time the number of patients with normal values (44-147 IU/l) of alkaline phosphatase has increased from 84% till 90,1% associated with simultaneous decrease in the numbers of patients with both increased (11% till 6,7%) or decreased (5% till 3,2%) activity. There was also determined an improvement of PTH profile in dialysed patients: PTH > 76 pmol/l (10,98% vs 5,8%), PTH 47,5-76 pmol/l (13,4% vs 10,4%), PTH 9,5-47,5 pmol/l (46,47% vs 59,9%), PTH < 9,5 pmol/l (29,41% vs 23,9%). During this period there was not registered any long bone fractures in study population, comparing with 2-3 yearly determined femoral fractures in previous years. **Conclusions.** Complex approach to mineral bone disease management permits to improve this conditions' manifestations in dialysis population.

ORIGINAL VS GENERIC ERYTHROPOIETIN COMPARISON IN DIALYSIS PATIENTS

Petru CEPOIDA

ABSTRACT

Introduction. Erythropoietin stimulating agents are the cornerstone of antianemic therapy in dialysis patients. While there is a significant variability in the prices of ESA it is important to know the comparative efficacy. **Material and methods.** Unicenter retrospective comparative study of Recormon (59 patients on chronic dialysis and 12 de novo), Relipoetin (48 and 5 patients correspondingly) and Repretin (121 and 9 patients respectively) was carried out during 4 weeks both in chronic and de novo dialysis patients. All included patients were clinically stable during the study with statistically similar demographic characteristics. **Results.** Mean ESA dose in de novo patients were 10.000UA/week vs 9200UA/week vs 9400UA/week (Relipoetin/Recormon/Repretin) and during 4 weeks there was determined an increase

in hemoglobin from 78,6±4,4 till 88,6±2,23 g/l (+10,0±2,55 g/l) vs 77,9±3,1 till 89,9±3,12 g/l (+12,0±2,02 g/l) vs 79,2±3,6 till 89,8±3,73 g/l (+10,6±2,67 g/l). Therefore, the comparative efficacy of Recormon is 12:(10*0,92)=1,30 vs Relipoetin and 12:(10,6*0,94)=1,20 vs Repretin in de novo patients. Mean ESA dose in chronic dialysis patients were 4.330UA/week vs 4640UA/week vs 4840UA/week (Relipoetin / Recormon / Repretin) and during 4 weeks there was determined a slight modification in hemoglobin from 106,75±1,75 till 104,8±1,73 g/l vs 104,88±1,98 g/l till 103,72±1,86 g/l vs 102,15±1,32 g/l till 102,64±1,22 g/l. As a result the mean maintenance dose of Relipoetin was increased till 4960UA/week, of Recormon till 4810UA/week and of Repretin till 4860UA/week. **Conclusions.** Recormon is slightly better than studied generic ESA especially in de novo dialysis patients.

THE ROLE OF MICROBIAL ADHESION PHENOMENON IN LITHOGENESIS

C. GUȚU, Mihaela IVANOV, E. PLEȘCA, N. LESNICENCO, E. CEBAN

Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova

ABSTRACT

Introduction. Researchers have focused their attention on the role of inflammatory processes in the development and progression of lithogenesis. The new Lithos-system technology has gained significant interest, based on the analysis of morphological model of crystalline and non-crystalline structures in dehydrated biological fluids. With this method, we can determine signs of bacterial and fungal infections, active process of lithogenesis, composition of urine crystals, acute candidiasis of the urinary system, glomerular disorders of kidneys and renal tissue sclerosis. **Aim.** This study was performed for evaluation microbial adhesion to urothelium in patients with nephrolithiasis. **Methods.** A drop of buffer solution (pH 7.2) is applied on a glass slide to which a drop of urine containing bacteria and urothelium is added, collected from patients with nephrolithiasis. The

preparation is placed in a humid chamber (37°C, 30 minutes), then dried at the same temperature, fixed with methanol, stained with methylene blue and observed microscopical. **Results.** In 26 patients with nephrolithiasis, negative adhesion (0-1.0) was detected in 7 patients without urinary infection. In 8 patients, medium adhesion (1-10.0) was detected with *E. coli* and *Pseudomonas* infection. In 11 patients with positive adhesion (>10.0), the concomitant infection was formed by *Proteus*, *Klebsiella* and staphylococci. **Conclusions.** The process of microbial adhesion to urothelium is more frequently encountered in the urine of patients with multiple and coral-shaped stones, with Gram-negative infections, *Proteus*, *Klebsiella*. The absence of adhesion process correlates with formation of urate and cystine stones. In urine with positive and medium adhesion, the chemical component was struvite.

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Extract din semințe de dovleac (standardizat la min 45% acizi grași polinesaturați)	300 mg (din care 135 mg acizi grași polinesaturați)	*
Zinc (sub formă de zinc citrat trihidrat)	10 mg	100 %
Vitamina E (alfa tocoferol)	12 mg	100 %

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TERAPIA COMBINATĂ CU TAMSULOSIN (PROFLOSIN[®]) ȘI SERENOA REPENS (PROSTAMOL[®] UNO) ESTE EFICIENTĂ ÎN TRATAMENTUL SIMPTOMELOR HBP ȘI A ÎMBUNĂȚIRII CALITĂȚII VIEȚII PACIENȚILOR CU HBP³

DENUMIREA COMERCIALĂ A MEDICAMENTULUI: PROSTAMOL[®] UNO 320 mg, capsule moi. **COMPOZIȚIA CALITATIVĂ ȘI CANTITATIVĂ:** Fiecare capsulă moale conține extract din fructe de *Serenoa repens* (*Serenoa repens* fructus extractum) (9-11:1) 320 mg. Agent de extracție: etanol 96%. Capsulele gelatinoase moi de formă ovală, cu înveliș opac, colorate roșu/negru cu un conținut lichid uleios de culoare brun-gălbui sau brun-verzui. **Indicații terapeutice:** Prostamol uno este utilizat ca medicament pe bază de plante tradiționale, pentru ameliorarea simptomelor tractului urinar inferior asociate cu hiperplazia benignă de prostată, după excluderea unor afecțiuni grave de către un medic. Produsul este un medicament pe bază de plante tradiționale, utilizat în indicația specificată, ce se bazează doar pe utilizarea de lungă durată. **Doze și mod de administrare:** Doze: 1 capsulă moale de Prostamol uno este luată zilnic, la aceeași oră în fiecare zi. Nu există o indicație relevantă pentru femei, copii și adolescenți. **Mod de administrare:** Administrare orală. Capsula moale trebuie înghițită întreagă, cu suficient lichid după masă. **Durata administrării:** Este posibilă utilizarea pe termen lung. Durata administrării depinde de natura, gravitatea și evoluția bolii și nu este limitată în timp. Administrarea zilnică regulată este foarte importantă pentru succesul tratamentului. Ameliorarea simptomelor poate fi observată după aproximativ șase săptămâni. Efect clinic complet poate fi atins nu mai devreme decât peste 3 luni. Dacă simptomele persistă în timpul utilizării medicamentului, trebuie să consultați medicul sau un specialist calificat. **Contraindicații:** Hipersensibilitate la substanța activă sau la oricare dintre excipienți. **Atenționări și precauții speciale pentru utilizare:** PROSTAMOL UNO ameliorază numai afecțiunile unei prostate mărite, fără a remedia mărirea acesteia. De aceea, se recomandă ca pacientul să consulte medicul urolog la intervale regulate. Dacă simptomele se înrăutățesc sau dacă în timpul utilizării medicamentului apar simptome precum febră, spasme sau sânge în urină, dureri în timpul urinării sau retenție urinară, trebuie consultat un medic sau un specialist calificat. PROSTAMOL UNO nu se va administra în stadiu de decompensare a hiperplaziei benigne de prostată. **Reacții adverse:** *Tulburări gastrointestinale:* Mai puțin frecvente: greață, vomă, diaree, dureri abdominale (în special când se administrează pe stomacul gol). *Tulburări ale sistemului imunitar:* Pot apărea reacții alergice sau de hipersensibilitate. Frecvența nu este cunoscută. *Tulburări ale sistemului nervos:* Pot apărea dureri de cap. Frecvența nu este cunoscută. Dacă apar alte reacții adverse care nu sunt menționate mai sus, trebuie consultat un medic, sau un specialist calificat. Raportarea reacțiilor adverse suspectate: Raportarea reacțiilor adverse suspectate după autorizarea medicamentului pe bază de plante tradiționale este importantă. Acesta permite monitorizarea în continuare a raportului beneficiu/risc al medicamentului pe bază de plante tradiționale. **Statutul legal:** Fără prescripție medicală. **NUMĂRUL CERTIFICATULUI DE ÎNREGISTRARE:** 26426. **DATA AUTORIZĂRII:** 11.08.2020. **DATA REVIZURII TEXTULUI:** August 2020.

DENUMIREA COMERCIALĂ A MEDICAMENTULUI: Proflosin 0,4 mg capsule cu eliberare modificată. **COMPOZIȚIA CALITATIVĂ ȘI CANTITATIVĂ:** Fiecare capsulă conține ca substanță activă clorhidrat de tamsulosin 0,4 mg. **FORMĂ FARMACEUTICĂ:** Capsule cu eliberare modificată. **Indicații terapeutice:** Simptomele tractului urinar inferior (STUI) asociate hiperplaziei benigne de prostată (HBP). Doze și mod de administrare Doze: Câte o capsulă 1 dată pe zi după micul dejun sau după prima masă. La pacienții cu insuficiență renală nu este necesară ajustarea dozei. La pacienții cu insuficiență hepatică ușoară până la moderată nu este necesară ajustarea dozei. Copii și adolescenți. La copii și adolescenți nu există indicație de tratament cu tamsulosin. Nu a fost stabilită siguranța și eficacitatea tamsulosinului la copii și adolescenți cu vârsta sub 18 ani. **Mod de administrare:** Administrare orală. Capsula trebuie înghițită întreagă și nu trebuie sfărâmată sau mestecată, deoarece afectează modul de eliberare al substanței active. **Contraindicații:** hipersensibilitate la substanța activă, inclusiv angioedemul iatrogen sau la oricare dintre excipienți, antecedente de hipotensiune arterială ortostatică; insuficiență hepatică severă. **Atenționări și precauții speciale pentru utilizare:** Ca și în cazul altor antagoniști ai receptorilor α_1 -adrenergici, administrarea tamsulosin poate determina scăderea tensiunii arteriale, care, în cazuri rare, poate determina sincopă. La apariția simptomelor inițiale ale hipotensiunii ortostatice (amețeală, slăbiciune), pacientul se va așeza sau se va culca, până la dispariția simptomelor. Înainte de inițierea tratamentului cu tamsulosin, pacientul trebuie examinat, pentru a exclude prezența altor afecțiuni care pot determina efecte similare cu hiperplazia benignă de prostată. Se va efectua examinarea prostatei prin tușeu rectal și, la necesitate, se va efectua Antigenul Specific Prostatic (PSA), care se va determina atât la începutul tratamentului cât și mai apoi, la intervale regulate. În cazul pacienților cu insuficiență renală severă (clearance-ul creatininei <10 ml/min) tratamentul trebuie efectuat cu precauție, deoarece la această grupă de pacienți utilizarea medicamentului nu a fost studiată. În timpul operației de cataractă sau glaucom, la câțiva pacienți care sunt sau au fost tratați anterior cu tamsulosin s-a observat apariția "Sindromului Intraoperator de Iris Flasc" (SIF) (SIF, o variantă a sindromului cu pupilă mică). IFS poate duce la creșterea complicațiilor procedurale în timpul operației de cataractă. Înainte de operația de cataractă sau glaucom, se consideră a fi utilă întreruperea pentru 1-2 săptămâni a administrării tamsulosinului, dar beneficiul întreruperii tratamentului nu a fost încă stabilit. SIF a fost, de asemenea, raportat la pacienții care au întrerupt tamsulosinul pentru o perioadă mai lungă înainte de această operație. Nu se recomandă inițierea tratamentului cu tamsulosin la pacienții care au fost programați pentru operația de cataractă sau glaucom. În timpul evaluării preoperatorii, chirurgiei și echipa oftalmologică, trebuie să ia în considerare dacă pacienții programați pentru intervenția chirurgicală pentru cataractă sau glaucom li se administrează sau li s-a administrat tamsulosin, în vederea asigurării unor măsuri imediate la apariția SIF în timpul operației. Tamsulosin nu ar trebui să fie utilizat în asociere cu inhibitori puternici ai CYP3A4 la pacienții care au fenotip metabolizator slab al CYP2D6. Tamsulosin trebuie utilizat cu prudență în asociere cu inhibitori puternici sau moderati ai CYP3A4. **Reacții adverse:** *Tulburări ale sistemului nervos:* frecvente – amețeală (1,3%); mai puțin frecvente – cefalee; rare – sincopă. *Tulburări oculare:* Necunoscută (frecvența nu poate fi estimată din datele disponibile) - Vedere încețoșată, Tulburări de vedere. *Tulburări cardiace:* mai puțin frecvente – palpitații. *Tulburări vasculare:* mai puțin frecvente – hipotensiune ortostatică. *Tulburări respiratorii, toracice și mediastinale:* mai puțin frecvente – rinită; Necunoscută (frecvența nu poate fi estimată din datele disponibile) - epistaxis. *Tulburări gastrointestinale:* mai puțin frecvente – constipație, diaree, greață, vomă; Necunoscută (frecvența nu poate fi estimată din datele disponibile) - xerostomie. *Afecțiuni cutanate și ale țesutului subcutanat:* mai puțin frecvente – erupții și prurit cutanat, urticarie; rare – angioedem; foarte rare – sindrom Stevens-Johnson; Necunoscută (frecvența nu poate fi estimată din datele disponibile) - eritem polimorf, dermatită exfoliativă. *Tulburări ale sistemului reproducător și ale țesutului mamar:* mai puțin frecvente – Tulburări de ejaculare, ejaculare retrogradată, lipsa ejaculării; foarte rare – priapism. *Tulburări generale:* mai puțin frecvente – astenie. În cursul operației de cataractă sau glaucom, s-a observat un sindrom de pupilă mică, cunoscut sub denumirea de Sindrom Intraoperator de Iris Flasc (SIF), asociat cu tratamentul cu tamsulosin, în timpul urmării produsului după punerea pe piață. În perioada de după punerea pe piață: în plus față de reacțiile adverse descrise mai sus, în timpul tratamentului cu tamsulosin au fost raportate și fibrilație atrială, aritmie, tahicardie și dispnee. Deoarece aceste evenimente raportate spontan provin din experiența după punerea pe piață la nivel mondial, frecvența evenimentelor și rolul tamsulosinului în relația de cauzalitate nu pot fi stabilite cu certitudine. **STATUTUL LEGAL:** Cu prescripție medicală. **NUMĂRUL CERTIFICATULUI DE ÎNREGISTRARE:** 26308. **DATA AUTORIZĂRII:** 22.07.2020. **DATA REVIZURII TEXTULUI:** Octombrie 2022.

1. PROSTAMOL[®] UNO RCP, August, 2020. 2. Proflosin RCP, Octombrie 2022. 3. Spivak LG, Getashvili VV, Vinarov AZ. *Andrology and Genital Surgery*. 2014;15(4):44-49

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COMPARATIVE ANALYSIS OF DIFFERENT FORMS OF INTRAVENOUS IRON ADMINISTRATION IN DIALYSIS PATIENTS

Petru CEPOIDA

ABSTRACT

Introduction. Intravenous iron is the only internationally recommended form of iron for erythropoiesis stimulation in dialysis patients. Therefore, considering a large difference in costs, it is important to test the equivalence of original and generic forms of intravenous iron in order to choose the right one. **Material and methods.** Retrospective open-label two centers comparative trial of 2 different forms of intravenous iron (Encifer and Venofer) has been performed at BB-Dializa S.R.L. **Results.** The study included 310 patients, 167 men and 143 women aged 23-71 years old. All these patients were clinically stable and had no hospitalizations, treatment gaps or

blood transfusions during the studied period of 24 weeks. During the first 12 weeks they got Encifer (generic formula of i.v. iron sucrose) and in the following 12 weeks – Venofer (original formula of i.v. iron sucrose). General rule was 100 mg i.v. iron every 4 weeks, with some modifications depending on the levels of serum iron and ferritin. Their mean hemoglobin levels did not changed significantly during the trial. Both mean weekly doses of erythropoietin (5040 UI vs 4980 UI) and i.v. iron (34 mg vs 35 mg) were not statistically different for Encifer and Venofer respectively. **Conclusions.** Both forms of intravenous iron sucrose administered in chronic dialysis patients have shown high and in the same time equivalent efficiency in studied population.

MANAGEMENT OF ASSOCIATED PELVIC AND URINARY TRACT INJURIES

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ABSTRACT

Introduction. The association of urinary tract injuries and pelvic fractures occurs in 4.4-17.26% of all associated lesions. Despite specialized medical care, some patients remain disabled. **Material and methods.** We performed a prospective study that included treatment outcomes in 62 trauma patients with pelvic fractures and urinary organs injuries. There were 57 males and 5 females. Mean patient age was $41,57 \pm 2,18$ years ($p < 0,05$). Cause of trauma: traffic accidents (79%), fall from height (16,2%) and massive collapse (4,8%). Pelvic fractures type A (AO/Tile classification) were in 6.77% ($n = 4$), type B - in 33 (55.93%), type C - in 25 (37.3%), all of them being hemodynamic unstable. Urinary organs were damaged in all 62 cases. Urinary bladder contusion was in 23 (37,1%)

patients, bladder wall lesions - in 38 (61,3%), urethral ruptures - in 12 (19.4%), in 7 cases bladder rupture was associated with kidney injury. The initial management of the patients included antishock measures - bleeding stopping, perfusion and transfusion therapy, pelvic ring stabilization. **Results.** The main tactical aspects in trauma care were identified: patient stabilization, temporary pelvic fixation with external device, urinary bladder repair, packing of the lesser pelvis and drainage and control over pathological accumulation of urine in the pelvic cavity. **Conclusions.** The use of external fixation devices, for primary stabilization or for subsequent low-traumatic reposition of fragment displacements, allows to prevent possible complications associated with open osteosynthesis and provides early repair of urinary tract and quick patient mobilization.

LES CARACTÉRISTIQUES DE L'HYDRONÉPHROSE COMME PATHOLOGIE RÉNALE

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ABSTRAITE

Introduction. L'hydronéphrose se manifestant par la dilatation du bassinet, la diminution des fonctions rénales et l'atrophie du parenchyme rénal, peut apparaître de façon congénitale suite à un obstacle au niveau de la jonction pyélo-urétérale ou acquise après des complications rénales (lithiase urinaire, tumeur rénale, etc.). **Matériel et méthodes.** Pour mener à bien l'étude, on a réalisé l'analyse de sources bibliographiques au niveau européen, dans le domaine médicale publiées dans la période 2015-2022 disponibles en ligne. **Résultats.** L'hydronéphrose est détectée lorsque l'infection est associée, par hasard, à la palpation d'une tumeur fluctuante, à un traumatisme rénal, évoluant de manière asymptomatique. L'hydronéphrose évolue en trois degrés, en commençant avec la dilatation du bassinet sans

modifier la fonction rénale (la pyéloectasie), puis la dilatation du bassinet et des calices avec la diminution de l'épaisseur du parenchyme rénal et le dysfonctionnement rénal (l'hydrocalyose) et au stade terminal une atrophie du parenchyme rénal. La sécrétion et la réabsorption d'urine ne sont pas affectées, mais on constate une stagnation qui favorise l'accumulation d'urine dans le bassinet. En se dilatant progressivement, le bassinet comprime le parenchyme rénal, perturbe la circulation sanguine et lymphatique avec une atrophie rénale. **Conclusions.** En cas d'hydronéphrose unilatérale, les patients se considèrent en bonne santé pendant longtemps, car le rein controlatéral compense la fonction de celui qui est affecté, l'insuffisance rénale ne se produit pas. En cas d'hydronéphrose bilatérale, elle évolue progressivement vers une insuffisance rénale chronique et suit une urémie jusqu'au décès.

IMPACT OF SARS-COV2 INFECTION ON CHRONIC KIDNEY DISEASE

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ABSTRACT

Introduction. Patients with kidney diseases contracting SARS-CoV2 have an increased degree of severe evolution of the disease. According to studies, most patients who died due to complications of SARS-CoV2 infection had comorbidities, 20% of patients had pre-existing kidney diseases. **Aim of study.** Determination of the particularities of the evolution of SARS-CoV2 infection in patients with pre-existing kidney diseases. **Material and methods.** An analysis of articles published in the last 2 years, in the databases PubMed, SCOPUS and HINARI, was performed. The search terms were (in English): "kidney AND SARS-CoV2", "ckd AND covid-19". **Results.** Most of the studies performed have demonstrated that the most common renal complication in SARS-CoV2 infection is acute kidney injury. The severe form

of SARS-CoV2 infection was determined in 25% of people with pre-existing kidney diseases. Worsening of kidney function has been observed in patients with kidney disease who have endured COVID-19. Patients with chronic kidney disease are susceptible to any type of infection in its severe form, due to the immunocompromised state. Uremia causes a state of constant suppression of the immune system, and uremic patients have dysregulation of adaptive immunity to infections. The most common causes of death in patients with CKD associated with SARS-CoV2 infection were cardiovascular complications. **Conclusions.** All retrospective studies have identified 4 major risk factors for severe SARS-CoV2 infection: cardiovascular disease, hypertension, diabetes mellitus and chronic kidney disease. Compared to the other risk factors (CVD, hypertension, DM), CKD was found to be a major risk factor for death.

PROFESSOR DOCTOR EUGENIU PROCA (1927 - 2004) – “FATHER” OF THE RENAL TRANSPLANTATION IN ROMANIA

Nicolae – JIANU TEȘOIU

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ABSTRACT

Eugeniu Proca (Godeni, January 12, 1927 – Bucharest, March 7, 2004), educated as surgeon anatomist and as urologist and forged in the experimental laboratory in Bucharest, with stages in London, UK (1963 - 1964) and in Boston, USA (1967), Professor of Urology (1974) and Rector (1976 - 1978) at The Institute of Medicine and Pharmacy in Bucharest, Deputy Dean (1972 - 1975) at the Faculty of Specialization and Perfecting in Medicine and Pharmacy and Ministry of Health (1978 - 1985), reaches the pinnacle of his professional carrier by performing the first human renal transplantation in Romania, in 1980, at Fundeni Clinical Hospital in Bucharest, being awarded “The Star of Romania in rank of Great Cross”, and is elected President of The Romanian Society of Urology (1989 - 1998),

Full Member of The Academy of Medicine from Romania and Honorary Member of The Academy of Romania (1996). Reanal transplantation is continued in our country by two of his disciples: Ioanel Sinescu, Professor of Urologic surgery, University of Medicine and Pharmacy “Carol Davila”, at Fundeni Clinical Institute in Bucharest and Mihai Lucan, Professor of Urology, University of Medicine and Pharmacy “Iuliu Hatieganu”, at The Institute of Urology and renal Transplantation in Cluj-Napoca, as well as by Grigore Tinica, professor of Cardiovascular surgery, University of Medicine and Pharmacy “Gr.T. Popa” in Iasi and Associated professor of Cardiovascular surgery, University of Medicine and Pharmacy “*Nicolae Testemitanu*” in Chisinau, Republic of Moldavia, at The Institute of Cardiovascular Diseases “George I.M. Georgescu” in Iasi.

CHEMICAL COMPOSITION OF KIDNEY STONES IN PATIENTS WITH NEPHROLITHIASIS IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. The prevalence and incidence of urolithiasis vary among different countries and races and between the sexes. The lifetime incidence of urolithiasis in Middle Eastern and Western countries is 25% and 10%, respectively. However, the recurrence rates are high, reaching 50% worldwide. **Material and methods.** The study was performed in the clinic of Urology and Surgical Nephrology of "Nicolae Testemitanu" State University of Medicine and Pharmacy, "Timofei Moşneaga" Republican Clinical Hospital between January 1, 2016–2022. 120 kidney stones were analyzed; the researched material was sent to the Institute of Chemistry. The Spectrum 100 FT-IR Fourier transform infrared spectrometer

(PerkinElmer, USA) was used to determine the composition of urinary stones. **Results.** The most common were calcium oxalate calculi (total –54(45%); whewellite –45(37,5%); weddellite – 9(7,5%)), followed in frequency by uric acid (19,15,83%). Phosphate calculi were identified in 14(11,67%) cases, and contained: calcium phosphate –9(7,5%), struvite –4(3,33%), brushite – 1(0,83%) cases. Calculi of cysteine were 3(2,5%). In 30(25%) cases were identified stones of mixed composition. **Conclusions.** Calcium oxalate, uric acid and mixed uric acid and calcium oxalate calculi are the main types in Moldova. The analysis of kidney stone structure provides additional details that are crucial links to the pathogenesis. Such data would help in providing precise treatment and efficient metapylaxis.

HOUNSFIELD DENSITY ON COMPUTER TOMOGRAPHY ARE A PREDICTIVE FACTOR FOR EFFECTIVENESS OF URINARY STONES TREATMENT WITH EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY?

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ABSTRACT

Introduction. Extracorporeal Shock Wave Lithotripsy (ESWL) in nowadays is considered a successful method for treatment for kidney stones less than 2 cm and ureteral stones less than 1,5 cm. We analyzed how Hounsfield values density can influence on *stone free* rate after ESWL. **Material and methods.** Were analyzed retrospectively 224 patients who had diagnoses of urinary stones (kidney and ureter) and underwent ESWL. Urinary tomography of patients was processed and classified into 4 groups by Hounsfield units (Group 1, < 299 HU; Group 2, 300-599 HU; Group 3, 600-899 HU; Group 4, 900-1199HU) and 2 groups by stone size (Group A; < 1 cm, Group B; > 1 cm).

Results. Were analyzed in concordance with stone free rate after 3 sessions of ESWL. In Hounsfield unit Group 1 stone diameter was 6.5±3.5 mm, number of shocks was 4000 and number of treatments was 1.2±0.6. Group 2 stone diameter was 10.6±3.1 mm, shock amount was 1.9±0.9. Group 3, stone diameter was 14.7±2.0 mm, and number of treatments sessions was 2.1±1.2. Group 4, stone diameter was 16.7±2.0 mm, and number of treatments sessions was 3.1±1.1. **Conclusions.** The evaluation of Hounsfield density on computer tomography of urinary stones can be significant factor to stratify the correct indication for ESWL treatment, increase de *stone free* rate and significant minimize the development of major complications and unsuccessful procedure.

RESULTS ANALYSIS OF EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY IN URINARY STONE DISEASE AMONG CHILDREN

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ABSTRACT

Introduction. Urolithiasis is not a very frequent condition in the pediatric patients. According from epidemiologic and geographic variation, the general prevalence is from 1 to 3% of all urinary stones, with significant incidence in developed countries. **Material and Methods.** Retrospective data of pediatric urolithiasis patients who underwent ESWL between 2011 to 2022 were used in this retrospective observational study. Extracorporeal shock wave lithotripsy was done for 32 patients. The total number of 43 ESWL sessions were recorded. Radiologic and ultrasound was used to focalized and locate the stones during the ESWL session. This required the pediatric patient to be exposed to the least amount of radiation possible.

For X-ray positive stones, X-ray monitoring was used. All patients underwent Extracorporeal Shock Wave Lithotripsy (ESWL) treatment using the second generation Storz Modulith SLK device. **Results.** The mean overall treatment was 1.1 ± 0.4 sessions with mean stone length of 9.3 ± 6.3 mm of stone. The *stone free* rate after 2 sessions of ESWL was 94,5%. Complications included - urinary tract infections, kidney pain and abdominal pain. Severe complications such as hematoma, were not observed. The majority of complications observed were associated with urinary tract obstruction caused by stone fragments ("steinstrasse"). **Conclusion.** Extracorporeal shock wave lithotripsy has been shown to be a safe and successful minimally invasive therapy for kids with kidney stones in pediatric population.

EXTRACORPOREAL SHOCK-WAVE LITHOTRIPSY FOR TREATMENT OF RENO-URETERAL STONES – 12 YEARS OF EXPERIENCE

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ABSTRACT

Introduction. Approximately until 90% of reno-ureteral stones have for treatment indication Extra Corporeal Shock Wave Lithotripsy (ESWL). We like to report our 12 years of experience with over 7250 patients with reno-ureteral stones treated with ESWL. The success rate of treatment is very high, and depending on the stone composition, stone density in Hounsfield units, size and location of stones. **Material and methods.** The study included 7250 patients (4567 males, 2683 females, aged 18–85 years old) treated with ESWL between 2011 and February 2023. The stone diameter was in medium 14 mm. Like a therapeutic procedure, ESWL may be accompanied by complications. Most of these complications are minor complications, but in a lower percentage, major complications can be

developed. We statistical analyzed stone free rate, procedure time and complications. **Results.** After first episode of treatment the total stone-free rate was 67 %. From total number of 7250 patients, 9340 of ESWL procedures were made. After the second procedure, the stone free rate 83 % for ESWL. The mean operating time was 37(±5) min for ESWL. From the minor complications was: lumbar pain, hematuria and transitional fever. Major complications – acute obstructive pyelonephritis in 1,1 % of patients, renal subcapsular hematoma 0,57 % and „steinstrasse” in 5,8 % of patients. The unsuccessful rate after ESWL was 17 %. **Conclusions.** ESWL is a safe method to treat stone disease with high rate of “stonefree” when proper indications are followed. In majority of cases after procedure the complications are minor but can appear and the major complications.

THE NEW POSSIBILITIES TO EVALUATE THE RENAL VASCULARIZATION USING ULTRASOUND COLOR DOPPLER AFTER TREATMENT WITH ESWL IN PATIENTS WITH KIDNEY STONES

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ABSTRACT

Introduction. The data from the several studies have observed and was demonstrated tissue damages after ESWL in treated kidneys, such as pathologic changes - interstitial hemorrhage and parenchymal edema, damage of renal tubular cells and vascular spasms. **Material and methods.** Trying to confirm and further to investigate this clinical pathogenetic possibility, we apply the Doppler ultrasound evaluation to demonstrate the changes of renal blood flow velocity in 45 patients with renal stones who underwent ESWL treatment for kidney stones. The studies were conducted before, immediately after and 2 weeks after an ESWL treatment. **Results.** Were evaluated and was demonstrated the kidney blood flow velocity decreased significantly in the area where was applied shock wave lithotripsy after the treatment and returned to the initial stage levels after 2 weeks. The changes were not detecting significant in the

non-exposed area. Concomitant were observed significantly decrease of kidney blood flow velocity, significant increases of vascular resistive index, pulsatility vascular index and significant decreases of vascular ratio were observed. These parameters were evaluated by measuring of kidney blood flow velocity and its direct correlate with parenchymal vascular resistance. It's a high probability that the changes in kidney parenchymal blood flow velocity are triggered by the tissue damages exposure shock wave lithotripsy treatment. The recovery of kidney blood flow velocity can be in significant correlation to the recovery of the tissue exposure damages. **Conclusions.** The possibilities to use the ultrasound color Doppler method in clinical practice can be a novelty technology to evaluate the state of vascularization in kidney parenchyma after ESWL, and can be an important clinical factor to determine when to repeat and to minimize the development of major complications.

EFFICACY OF TAMSULOSIN VERSUS TADALAFIL AS EXPULSION TREATMENT IN PATIENTS WITH STONE FRAGMENTS IN THE LOWER THIRD OF URETER AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY

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ABSTRACT

Introduction. Extracorporeal Shock Wave Lithotripsy (ESWL) is a modern, minimally invasive treatment method of renoureteral lithiasis. Standard medical expulsive treatment (MET) are calcium channel blockers and alpha-1 adrenergics. Recently, 5-phosphodiesterase (PDE5) inhibitors, have also demonstrated relaxation of ureter. Combined medication had a better results in ureteral relaxation and the passage of residual stone fragments. **Material and methods.** The study was performed on a group of 130 patients in the period October 2021 - January 2023, diagnosed with renoureteral lithiasis treated through ESWL with the Modulith SLK Storz Medical lithotripter. Patients were divided into two treatment groups.

Group A administered tamsulosin 400 mcg daily and group B combined treatment with tamsulosin 400 mcg and tadalafil 5 mg daily. **Results.** The comparison of clinical data in the two groups was based on demographic characteristics, stone size, renal location, «stone free» rate. The mean size of the calculi was 13 mm in group A and 11 mm for group B. Patients included in the study didn't undergo any urological interventions for accelerating the elimination of fragments. The «stone free» rate after 3 sessions of ESWL was 89%. The total expulsion rate was 81.4% in Group A compared to 93% in Group B. **Conclusions.** The results of the present prospective study demonstrated that patients receiving combined treatment had a higher stone-free rate compared to tamsulosin monotherapy.

THE EFFICACY OF EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY IN PATIENTS WITH URINARY STONE DISEASE ON SOLITARY KIDNEY

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ABSTRACT

Introduction. Extracorporeal shock wave lithotripsy (ESWL), as a non-invasive treatment method used in the treatment of urinary stone disease for kidney stones less than 2 cm and ureteral stones less than 1,5 cm. This method of treatment it's also applied in case of patients with solitary kidney (renal and ureteral lithiasis). **Material and Methods.** Was performed a retrospective study of all patients with lithiasis on a solitary kidney, treated and followed-up in Urology department with endourology ward in Republican Clinical Hospital. All single kidney lithiasis patients who met the following criteria were included in the study: functional kidney without obstruction and

calculus ≤ 20 mm. A total of 75 patients were enrolled in the study. **Results.** Before applying the treatment by ESWL for all patients were performed ureteral stenting prior to ESWL to prevent obstructive complications and acute kidney injury. The stone free rate after ESWL was 92% and a total stone fragmentation was obtained after one or two lithotripsy shock wave sessions. **Conclusions.** Due to availability of a numerous methods of treatment options, the shock wave lithotripsy provided efficacy results, low incidence of complications, and high rate of stone-free (92%), it's taking in consideration that ESWL can be the appropriate therapy for urinary stone disease in solitary kidney.

ALTERNATIVE POSITIONING OF PATIENTS IN ESWL WITH URETEROLITHIASIS AND OBESITY

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ABSTRACT

Introduction. Shock wave lithotripsy (SWL) is considered the first choice in the treatment of renal-ureteral lithiasis. In addition to known contraindications, there are also factors that impede the SWL procedure - obesity, ureteral calculi at the level of the iliosacral ligament, radiotransparent calculi in the upper and middle ureter, and skeletal deformities. Overcoming these factors increases the possibilities of applying ESWL. In the Urology and Nephrological Surgery Clinic at USMF « Nicolae Testemițanu,» alternative patient positioning options have been proposed during SWL procedures. The patient's position is in semi-decubitus dorsal-lateral and lateral (with an adjusted degree of «inclination» in relation to the surface of the table). **Material and methods.** A total of 628 patients treated with ESWL using the modified position were evaluated at the Urology Clinic from 2017 to 2022. ESWL was performed with the MODULITH SLK «Storz Medical» lithotripter. Patients were divided into groups: those

with radionegative calculi in the upper ureter and morbid obesity - 386 cases (group 1), and those with radiopaque ureteral calculi located in the projection of the iliosacral ligament - 242 cases (group 2). Results were evaluated according to the «stone-free» rate, the need for other treatment methods, and complications. All patients were reexamined after five days of ESWL. **Results.** Group 1 - «Stone free» after the first SWL session was achieved in 257 patients (65.5%). Ureteroscopy was performed in 42 patients (10.8%). Retroperitoneal hematoma occurred in one patient (0.3%). Group 2 - «Stone free» after the first SWL session was achieved in 194 patients (80%). Ureteroscopy was performed in 11 cases (4.5%). Repeated lithotripsy sessions were performed in 124 patients from both groups. **Conclusions.** Alternative patient positioning allows for the extended application of ESWL in iliosacral, radiotransparent upper ureteral calculi, and obesity with equal efficacy. The results obtained are comparable to data from specialized publications.

PERCUTANEOUS NEPHROLITHOTOMY. CLINICAL EXPERIENCE FOR 4 YEARS

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ABSTRACT

Introduction. Percutaneous nephrolithotomy (PCNL) is a minimally invasive procedure to remove kidney stones by a puncture through the skin in lumbar region. This procedure is accepted as standard of care for patients with kidney stones that are large and resistant to other forms of urolithiasis. **Objective.** Stone free rate obtained in the clinic following PCNL intervention applied to patients with urolithiasis, during 4 years (2019-2023). **Material and methods.** The study was performed in the Department of urology and surgical nephrology of the State University of Medicine and Pharmacy «Nicolae Testemitanu», on a group of 175 patients with diagnosis of urolithiasis. **Results.** Anatomical distribution of renal stones: right kidney 81(46,3%) patients, left

kidney 94(53,7%) patients. The stones size ranged from 2 cm up to massive staghorn stones (>4,5cm). The after-surgery hospitalization period on average was 4,5 days. Four patients had solitary kidney. From the group of study, 5 (2,9%) of them were tubeless, 4 (2,3%) were with two puncture channels, and 1 (0,6%) patient was with three puncture channels. The stratification of the surgical after surgery complications was evaluated according to the Clavien-Dindo score. CDS I: 145(82,85%); patients CDS II: 26(14,85%) patients, CDS III: 4 (2,3%) patients. Patients with CDS IV and V were not detected. **Conclusions.** The success of PCNL is dependent on many factors such as stone composition, stone size, number of stones, localization, body mass index. The stone free rate was 91% and 100% following by "second look" procedure: ESWL, Ureteroscopy.

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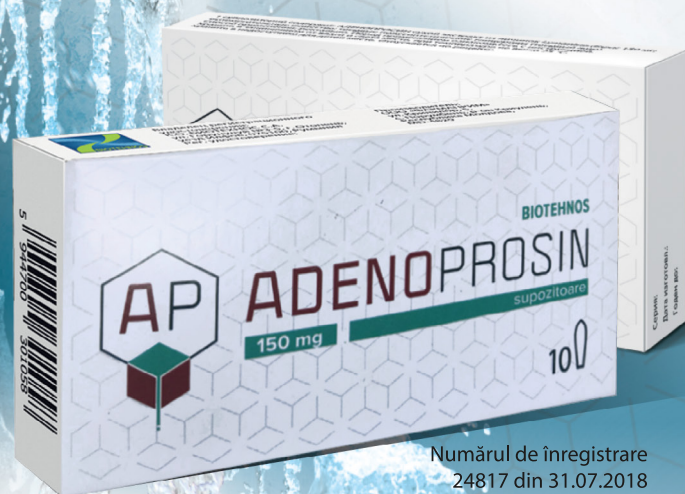
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LITHOTRIPSIE ENDOSCOPIQUE DE CONTACT AVEC TECHNOLOGIE LASER DANS LE TRAITEMENT DES CALCULS DE L'URETERE SUPERIEUR

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ABSTRAITE

Introduction. La lithotripsie de contact est une méthode de traitement prioritaire utilisée dans la lithiase urétérale. L'utilisation de cette méthode présente des avantages par rapport à l'ESWL, mais des complications peuvent survenir, telles que la migration du calcul dans le système pyélocaliciel du rein, la perforation de l'uretère, la pyélonéphrite aiguë par reflux, les sténoses urétérales. **But de l'étude.** Effectuer une analyse comparative de la fréquence des complications dans le traitement des calculs de l'uretère supérieur par LTC pneumatique et LTC laser. **Matériel et méthodes.** Étude rétrospective menée sur la période 2019-2020, dans la clinique d'urologie 196 chirurgies de LTC de calculs urétéraux ont été effectuées, dont 53 cas les calculs étaient situés dans le tiers supérieur de l'uretère, 143 cas - dans le tiers inférieur. La lithotripsie laser a été utilisée dans 27 cas, la lithotripsie pneumatique de contact chez 26 patients. Après la LTC pneumatique, la principale complication était la migration rétrograde du calcul

dans le système pyélocaliciel du rein (dans 76 % des cas). Lors de l'application de la technique laser au traitement des calculs dans le tiers supérieur de l'uretère, la migration du calcul ne s'est pas produite (dans 100 % des cas) en raison de la puissance élevée du laser, qui est capable de fragmenter les calculs en poussières, indépendamment de leur composition et de leur taille. Les patients soumis à la lithotripsie pneumatique de contact ont obtenu un taux d'élimination des calculs en utilisant deux méthodes de traitement (LTC + ESWL), ce qui a nécessité une hospitalisation plus longue de 2 à 3 jours pour la procédure ESWL. Pour la lithotripsie au laser, le taux d'élimination des calculs a été de 100 % en une seule procédure. La durée d'hospitalisation n'a pas dépassé 5 jours. **Conclusions.** La LTC au laser pour les calculs dans le tiers supérieur des uretères présente des avantages significatifs par rapport à la LTC pneumatique et permet aux patients d'avoir un taux significatif d'absence de calculs, ce qui réduit la durée d'hospitalisation et le nombre de complications qui peuvent survenir.

MINIMALLY INVASIVE APPROACH THROUGH PCNL IN HORSESHOE KIDNEY STONES

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ABSTRACT

Introduction. Percutaneous nephrolithotomy (PCNL) can be used to treat horseshoe kidney stones. However, the PCNL approach can be considered difficult due to the anatomical peculiarities of the horseshoe kidney, such as the specific calyceal shape and its malformed position.

Objective. To study the possibility of using PCNL in horseshoe kidney stones and its results.

Material and methods. 57-year-old patient diagnosed with congenital malformation-horseshoe kidney confirmed by CT of the urinary system organs with dynamic contrast Sol. Ultravist 370, urographic phase 15', with irradiation dose-2251 mGy/cm². Tomographic sections show kidneys: right-10.8cm (longitudinal), left-11.3cm (longitudinal); homogeneous parenchyma, corticomedullary layers intact, with parenchymal fusion at the lower pole with a diameter of 1.2cm, on the left calcareous

inclusion distributed in the middle, lower calyces and pelvis, size 5.5x3.85cm, density +1319UH, left renal pelvis 5.1x2.6cm. Paraclinical examination reveals a massive left coralliform kidney stone. Treatment: PCNL of the left horseshoe kidney.

Results. The state of «stone free» was obtained through the PCNL approach after one session, the result being confirmed by non-contrast CT: the corticomedullary layers are not altered, the renal pelvis is not dilated, without stones, solid or cystic volume formations. **Conclusion.** PCNL is a minimally invasive treatment technique in renal lithiasis on the malformed kidney. This approach may have limitations depending on the size of the stone and the conformational changes of the kidney. These particularities can make the intervention more difficult and increase the risk of complications, but the procedure can still be considered an effective treatment option in kidney stones on the horseshoe kidney.

ENDOSCOPIC LASER TREATMENT IN URETERAL UROLITHIASIS IN PREGNANT WOMEN

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ABSTRACT

Introduction. The active introduction of lasers in practical urology has become a strong factor in the development of minimally invasive surgery in the treatment of ureterolithiasis. Currently, laser contact ureterolithotripsy is one of the most effective ways to treat patients with ureteral stones, especially pregnant women. The search for new methods of treatment, including transurethral, for urolithiasis is of great practical importance. The paper presents the results of contact lithotripsy of ureteral stones in pregnant women. **Objective.** To study the possibility of using laser lithotripsy of ureteric stones in pregnant women with urolithiasis and its results. **Material and methods.** Retrograde contact ureterolithotripsy was performed in 10 pregnant women with urolithiasis between 16 and 28 weeks' gestation. The indications for this operation were

established each time individually together with the obstetrician and anesthesiologist. All operations were performed only under visual and ultrasound control using a semi-rigid ureteropyeloscope with a distal part size of 8 Ch and a laser device without the use of Rx control. **Results.** In all cases, crushing and complete removal of ureteral stones was possible. There were no complications associated with the ureteropyeloscope and contact crushing of the stone. The operation ended with the installation of a stent JJ ureteral for 10 days. All patients were followed until delivery. All women were able to achieve long-term uroculture sterility. **Conclusion.** The use of retrograde contact ureterolithotripsy in the second trimester of pregnancy is a reasonable, minimally invasive surgical method for the treatment of urolithiasis, which avoids long-term stenting of the ureter or the installation of a nephrostomy.

ENDOSCOPIC TREATMENT OF URETERAL STONES IN ANOMALIES OF URETERAL DEVELOPMENT

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ABSTRACT

Introduction. Congenital abnormalities in urology are very common. Ectopic ureter, ureterocele, strictures and ureteral diverticula as well as duplex systems are the most common in this respect. The combination of abnormalities and stones is of clinical importance. The question arises as to whether the standard procedures for calculi also apply to stones in abnormal ureters. **Objective.** Let us review our experience with ureteroscopy in treating patients with abnormal ureters and evaluate the effectiveness of this approach. **Material and methods.** Four patients with abnormal ureteric stones who were treated by ureteroscopic procedures were identified. Information, preoperative calculus burden, operative information (ureteroscope size, lithotrite used, instruments used, duration of surgery, complications, stenting), follow-up

imaging, and complications were obtained from the medical record. This information was analyzed to determine the most commonly used tools and stone-free rates. **Results.** Four patients were included in the study. The mean age of the patients was 58 years. The average operating time for the laser lithotripsy procedure was 40 minutes. Ureteral stricture was detected in 3 patients, ureterocele in 1 patient. Three of the patients (75%) were «stone free» in 2 weeks after ureteral stent extraction. None of the patients had changes in back pressure, gross hematuria, or abdominal pain during the follow-up period. Hospital stay varied between 5 and 7 days. **Conclusion.** Ureteroscopy with laser lithotripsy a reasonable alternative to shock wave lithotripsy in the management of patients with abnormal ureteral stones. The procedure is safe and effective and avoids the complications of open surgery.

ENDOSCOPIC MANAGEMENT OF URETERAL STONES – EXPERIENCE OF THE UROLOGY DEPARTMENT OF THE EMERGENCY MEDICINE INSTITUTE

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ABSTRACT

Endoscopic lithotripsy is first-line therapy for complicated upper urinary tract calculi and for patients who fail primary extracorporeal shock wave lithotripsy. A retrospective study conducted in urosurgical department in Emergency Medicine Institute from 2020 to 2022 aims to identify the need for use of laser lithotripsy and/or other ureteroscopic equipment in patient undergoing ureteroscopy for ureteric stone management. In the study was included 522 patients treated by ureteroscopy. The mean age of the patient was 43,4 years. Ureteroscopy had done in the right side in

273 patients, left side in 249 patients, and bilateral ureteroscopy in 16 patients. Ureteric stones found in upper ureter in 118 patients, middle ureteric stone seen in 57 patients, and lower ureteric stone founded in 347 patients, whereas 27 patients had stones at more than one location. Ureteric stone measuring 6 - 18 mm in largest diameter. Average duration of endoscopy was 23 minutes. A 92.7 % stone – free rate was obtained. No major complications occurred. Double J stent had been used in 98 patients and had been removed after 3 to 6 weeks. In conclusion ureteroscopy requires a good equipment, technical skills and vigilance of the performing urologist.

THE TECHNIQUE OF EVACUATION OF HYPERPLASTIC PROSTATIC TISSUE AFTER THUYAG LASER WITH A NON-MORCELLATING APPROACH

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ABSTRACT

Introduction. Currently, most of the prostate enucleation techniques are based on laser energy. Enucleated tissue usually is removed from the urinary bladder through morcellation. Considering the high risk of morcellation, we tried the modified non-morcellation evacuation technique, which means the resection or vaporization of the enucleated prostate tissue. **Material and methods.** A retrospective evaluation of 54 patients undergoing ThuVEP from January 2019 to December 2021 was performed at our institution. In twenty-five patients morcellator was used while in other 29 patients the resection of the enucleated tissue on the pedicle was applied. The time of interventions, perioperative and postoperative complications according Clavien-Dindo (2004) classification

were also recorded. **Results.** There were no cases of gross hematuria, febrile UTI or ureteral orifice injury. Urinary bladder perforation was occurred in 1 case (1.9 %) of all cases. Superficial bladder lesions occurred in 3 patients (5.6 %) of all cases, thus only grade 1 complication were reported, and no specific treatment was required. After same time, no complications were reported in patients who supported resection of enucleated tissue. Comparisons of total operative time and enucleation time showed a slight difference between the two groups. The operating time with the morcellator was on average 75±9 min, without morcellator 87±11 min on average. **Conclusion.** Our modified technique is a safe and effective procedure for the treatment of BPH, avoiding the potential complications caused by the morcellator.

SAFETY AND EFFICACY OF MONOPOLAR AND BIPOLAR TRANSURETHRAL SURGERY IN THE TREATMENT OF VOLUMINOUS BENIGN PROSTATIC HYPERPLASIA ASSOCIATED WITH SEVERE LOWER URINARY TRACT SYMPTOMS

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ABSTRACT

Introduction. Benign prostatic hyperplasia (BPH) is a frequent condition in elderly men that induces severe lower urinary tract symptoms.

Objective. To evaluate the efficacy of monopolar and bipolar transurethral resection in the treatment of voluminous BPH. **Material and methods.** From 2020 to 2022, 110 patients with BPH were included in the study: TUR-P (60 patients) and bipolar TUR-P (50 patients). All patients were evaluated preoperatively and at 3 months postoperatively (IPSS, QoL, TRUS-P and uroflowmetry). Inclusion criteria were: prostate volume (PV) $\geq 80\text{cm}^3$, post-void residual volume (PVR) $\geq 50\text{ml}$, IPSS ≥ 25 , $Q_{\text{max}} \leq 10\text{ml/s}$, $Q_{\text{oL}} \geq 4$.

Results. There was no significant difference in the efficiency of the investigated methods at 3

months postoperatively: PVR - $12 \pm 8\text{ml}$ (TUR-P group) vs $10 \pm 4\text{ml}$ (bipolar TUR-P group), PV was $26 \pm 7\text{cm}^3$ vs $22 \pm 3\text{cm}^3$, respectively, in the groups. A comparable improvement in Q_{max} was found in the TUR-P group (+129%) and the bipolar TUR-P group (+137%). Patients reported a significant improvement in lower urinary tract symptoms in the postoperative examination after monopolar surgery (IPSS- 10 ± 3 , QoL- 2 ± 1) and bipolar surgery (IPSS- 9 ± 2 , QoL- 2 ± 1), with similar results. A notable difference was the duration of the surgical intervention, which was on average 94 ± 12 minutes for monopolar resection and 86 ± 9 minutes for bipolar resection. **Conclusions.** Bipolar and monopolar transurethral prostate resection have a similar safety/efficacy ratio in patients with voluminous BPH associated with severe lower urinary tract symptoms.

SURGICAL TREATMENT ANALYSIS OF URETHRAL STRICTURES OVER A PERIOD OF 5 YEARS

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ABSTRACT

Introduction. A urethral stricture is a narrowing of the urethra, the tube that carries urine from the bladder out of the body. This narrowing can occur anywhere along the length of the urethra and can cause a range of urinary symptoms, such as difficulty urinating, a weak urine stream, and incomplete bladder emptying. **Purpose of the study.** The aim is to examine the diagnosis and treatment methods used for urethral strictures in the past 5 years, with consideration given to the underlying causes of the strictures. **Material and methods.** In a study conducted from 2018 to 2022 at "Nicolae Testemitanu" State University of Medicine and Pharmacy, 696 individuals with urethral strictures participated. The study aimed to examine the age-related and underlying

characteristics of the condition, along with the specifics of the surgical treatment methods employed. **Results.** In the treatment of patients with acquired urethral strictures, several surgical methods were used, including Holțov-Marion procedures (11 surgeries), Solovov-Badenoc procedures (7 surgeries), urethral recanalization (41 surgeries), urethrotomy with internal optical urethrotomy (UIO) (592 surgeries) using laser energy (39 surgeries), and urethroplasty with oral mucosa (6 surgeries). **Conclusions.** Endoscopic method advantages include minimal additional trauma to affected urethra, making it optimal for multiple strictures. UIO is indicated for recurrent or old strictures, with urethrotomy as preferred treatment. Internal optical urethrotomy is the preferred choice for urethral strictures.

THE APPLICATION OF LASER ENERGY FOR MINIMALLY INVASIVE TREATMENT FOR PROSTATE LITHIASIS AS A CONSEQUENCE OF NONBACTERIAL PROSTATITIS

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ABSTRACT

The objectives. To determine the effectiveness of the endourological treatment of IVO caused by the consequence of CNBP (Cronic nonbacterial prostatitis) lithiasis via the Thu:YAG laser energy.

Material and methods. The study was included 54 patients with prostate lithiasis, after-CNBP, and voiding disorders within 3 months, who required endourological surgery. Transurethral incision of the prostate via the Thu:YAG laser was performed at 5 and 7 o'clock position acordly quadrant, followed by the resection of the sclerosis tissues and endoscopic lithotripsy of prostate lithiasis.

Results. Over the 12-month follow-up, IPSS improved significantly from 20.2 ± 2.57 to 8.84 ± 0.58 after the intervention. QoL decreased from 4.53 ± 0.31 to 1.4 ± 0.17 score points, and Q_{max}

increased from 9.14 ± 1.5 ml/s to 19.53 ± 0.16 ml/s. The mean value of post-void residual decreased (84.8 ± 17.4 ml vs. 16.27 ± 7.6 ml). The following intrasurgery complications were registered: prostate capsule perforation in 3 (5.56%) cases, bladder neck damage in 2 (3.7%) cases, hemorrhage - 1 (1.85%), urethral meatus injury - 1 (1.85%), bladder perforation in the triangle - 2 (3.7%) patients. The after-surgery complications included orchiepididymitis - 1.85%, urethral stricture - 1.85%, and bladder neck sclerosis - 5.56% patients.

Conclusions. Thu:YAG laser incision/resection of the prostate is an effective and safe treatment of IVO caused by CNBP lithiasis, characterized by fast urinary continence recovery, being available to all categories of patients. The advantages are the short-term urethral catheterization and the significant recovery of voiding dysfunction.

THE VALUE OF ENTOMOLOGICAL TREATMENT IN ENDOSCOPIC INTERVENTIONS FOR FIBROSIS IN PROSTATE DUE TO CHRONIC NONBACTERIAL PROSTATITIS

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ABSTRACT

Objective. To determine the efficacy of entomological drugs in chronic nonbacterial prostatitis (CNP) and their contribution in preventing and reducing complications after transurethral endoscopic treatment. **Material and Methods.** In the study were included 40 patients with after bladder obstruction as a consequence of CNP. Prior to transurethral prostate resection with laser Ho:YAG, all patients were administered multimodal treatment. The preparation Supp. Adenoprosin 150 mg were administered to 30 patients, while the remaining 10 constituted the control group. To evaluate treatment effectiveness changes in symptoms (IPSS, QoL) and objective parameters (Q_{max}, residual urine volume,

prostate volume) were analyzed before surgery, and at 3, 6, and 12 months after surgery. **Results.** Over 12 months of follow-up, patients who received additional Adenoprosin showed improvement in IPSS scores from 19.2±4.7 to 6.1±3.7 points, a reduction in QoL from 4.2±1.7 to 2.4±0.8, and an increase in Q_{max} from 8.5±2.8 ml/s to 19.9±3.0 ml/s. In after surgery the average residual urine volume decreased significantly 86.0±12.5 ml vs 12.16±1.8 ml in the first group of patients, compared to the control group. **Conclusions.** Patients with CNP and fibrosis who underwent transurethral resection of prostate with laser Ho:YAG after receiving Adenoprosin medication reported a faster improvement of urinary symptoms compared to those who only received standard therapy.

SCLEROSING SUBSTANCES IN TREATMENT OF SYMPTOMATIC SIMPLE RENAL CYSTS

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ABSTRACT

Introduction. Percutaneous aspiration sclerotherapy is indicated for the treatment of symptomatic renal cysts. The efficacy of various sclerosing agents have been sources of ongoing debate and disagreement. **Purpose of the study.** The aim of this study was to evaluate the efficacy and safety of the use of aethoxysklerol 3% in the minimally invasive treatment of simple renal cysts. **Material and methods.** Between 2018 and 2021, the results of 43 symptomatic patients with an average age of 55 years, of which 22 men and 21 women, with renal cysts larger than 5 cm, detected on ultrasonography or CT Bosniak I. Under local

anaesthesia, through a percutaneous ultrasound - guided approach with an 18G needle, puncture the collection with aspiration of the liquid, then inject 1.0 ml of aethoxysklerol 3% solution for every 100 ml of aspirated liquid. **Results.** The complete disappearance of the renal cyst varied between 80% - 96% after a follow-up period of 3-36 months, for cysts up to 7.0 cm. The partial reduction of the renal cyst >50% varied between 35% - 55%. Minor complications 2 cases 4.6%: low fever and microhematuria. The success rate of sclerotherapy was inversely proportional to cyst size ($p=0.01$). **Conclusions.** Sclerotherapy with aethoxysklerol 3% is a more reliable, cost-effective minimally invasive method for the treatment of simple renal cysts.

RÉSULTATS PÉRIOPÉRATOIRES DE LA CHIRURGIE LAPAROSCOPIQUE DANS LE TRAITEMENT DES PATHOLOGIES RÉNALES

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ABSTRAITE

Introduction. La chirurgie laparoscopique apparaît comme une approche attrayante pour les pathologies rénales et est réalisée avec une variabilité technique. La sécurité et l'efficacité de la chirurgie urologique laparoscopique et son impact sur la qualité de l'acte médical sont justifiés. **Matériel et méthodes.** Cette étude a recruté 72 patients atteints de pathologies rénales oncologiques et non oncologiques qui ont été détectés par Uro CT et ont subi des interventions laparoscopiques de néphrectomie radicale, résection partielle et résection du kyste renal. **Résultats.** Sur le nombre total de 72 patients, 15 patients ont reçu un diagnostic de tumeurs rénales antérieures et dans 5 cas de tumeurs rénales postérieures. 52 autres patients ont été diagnostiqués avec des kystes rénaux. Ont été réalisées 15 interventions

de néphrectomie radicale, 5 néphrectomies partielles et 52 résections de kystes rénaux avec une durée chirurgicale moyenne de 120 minutes et une hospitalisation de 72 heures. Dans le cas de deux néphrectomies partielles a été appliquée l'ischémie, trois néphrectomies partielles sans ischémie. Les taux généraux de complications attribuées à la laparoscopie dans les 20 et 40 premiers cas étaient identiques. Sur le nombre total de résections de kystes rénaux, une a nécessité une conversion chirurgicale en raison d'une hémorragie parenchymateuse. Deux cas de néphrectomie radicale et un cas de néphrectomie partielle ont nécessité la transfusion sanguine. **Conclusion.** Les interventions laparoscopiques sont sûres, efficaces, diminuent la durée de l'hospitalisation et les complications septiques postopératoires.

THE EFFECTIVENESS OF TRANEXAMIC ACID IN THE MANAGEMENT OF MACROHEMATURIA AFTER TUR-P

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ABSTRACT

Introduction. Monopolar-TUR-P is the standard surgical procedure for men with prostate sizes of 30-80 ml. Perioperative macrohematuria is associated with an increase in fibrinolytic activity of urine. Tranexamic acid is a potent inhibitor of plasminogen. **Objective.** The purpose of this study is to determine the efficacy of tranexamic acid in the management of perioperative macrohematuria and the need for hemotransfusion. **Material and methods.** A retrospective pilot study performed at Urology department, during October - December 2022 included 65 patients aged 60-84 years. Patients were divided into two groups: 1) 33 patients in whom tranexamic acid was administered

intravenously 1000mg during surgery and 500 mg intravenously every 8 hours postoperatively and 2) 32 - the control group. **Results.** The operating time in 1 group was with 12.7 min less than in 2 group (49.5 min vs 62.2 min). The decrease in serum hemoglobin level 24 hours after surgery was not significant (8.5 g/l vs 15.2 g/l). Hemotransfusion was required in 2 patients from the second group (6.25%). We identified a significant decrease in the time of postoperative macrohematuria (6.5 hours vs 22.1 hours). **Conclusion.** Intravenous administration of tranexamic acid in recommended doses decreases the risk of postoperative hemorrhagic complications, the need for hemotransfusions and significantly the duration of postoperative macrohematuria.

THE PERIOPERATIVE MANAGEMENT OF PATIENTS WITH CARDIAC PATHOLOGIES IN THE TREATMENT OF PROSTATE ADENOMA

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ABSTRACT

Introduction. Patients undergoing chronic anticoagulant therapy who are subjected to transurethral resection of the prostate pose a major perioperative management problem due to the increased risk of significant bleeding associated with the surgical procedure and the risk of thromboembolism associated with temporary discontinuation of anticoagulants. **Objective.** To evaluate the effectiveness of low molecular weight heparin as a substitute for oral anticoagulants. **Material and methods.** 10 patients with chronic oral anticoagulant therapy underwent TUR-P, according to a prospective protocol based on the exchange of oral anticoagulants with perioperative injections of low molecular weight heparin and resumption of oral anticoagulants postoperatively.

The safety and effectiveness of this regimen were evaluated compared to a control group of 10 randomly selected non-warfarin-treated patients who underwent TURP during the same period. **Results.** The need for blood transfusions did not show a significant difference between the two groups. Due to persistent hematuria, catheter removal was possible in only 3 out of 10 patients in the heparin group, compared to 7 out of 10 in the control group. The average hospitalization period in the heparin group was 4 ± 0.5 days compared to 3 ± 0.1 days in the control group ($p < 0.01$). No hemorrhagic or thromboembolic complications were detected during the 2-month postoperative period. **Conclusions.** Heparin replacement therapy resulted in a longer hospitalization period and a satisfactory outcome in preventing postoperative pulmonary thromboembolism.

THE INTERRELATIONS OF TRUS-P BIOPSIES, PSA LEVELS AND HISTOLOGICAL RESULTS IN THE CONTEXT OF PROSTATE CANCER

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ABSTRACT

Introduction. Prostate cancer (PC) is one of the most often diagnosed cancers worldwide. The PC in men influences life quality therefore an early diagnosis provides a better evolution. The gold standard method is the transrectal ultrasound-guided prostate (TRUS-P) biopsy. **Material and methods.** From May 2016 to December 2021, 328 patients were evaluated using TRUS-P biopsy. The study includes biopsies by core numbers: 43 patients -6core; 44 -10core; 267 -12core and 28 -polysaturated core biopsies (15,18,20). The level of PSA, age, and histological results were assessed. **Results.** The study includes patients aged 50–90 years. PSA levels ranged from 0.32 to 177,00 ng/ml, with a mean of 88,66ng/ml. The diagnoses of Adenocarcinoma (AC) were in 214(56,02%) patients; Benign Prostatic Hyperplasia (BPH) in 122(31,93%) patients and Atypical Small Acinar Proliferation (ASAP) in 46 patients (12,04%). The

6-core biopsy revealed that 37,2% (24 patients) had AC, 37,2% (16 patients) had BPH, and 6,97% (3) had ASAP. The 12-core biopsy had shown that 53,18% (142) were diagnosed with AC; 35,2% (94) with BPH; 11,61% (31) with ASAP. The prostate-specific antigen (PSA) average in the patients with AC is 89,4ng/ml (3,18 ng/ml-177,00 ng/ml). The average PSA level in patients with BPH is 37,16 ng/ml (0,32–74,00 ng/ml). An average of 22,99ng/ml (3,29–44,70 ng/ml) was found in the patients diagnosed with ASAP. There were 27 cases of AC in patients under the age of 60, with 4,1% (8 patients) diagnosed between 2016 and 2018, and 9,94% (19) diagnosed between 2019 and 2021. **Conclusions.** The 10 and 12 core TRUS-P biopsies are efficient in the identification of ASAP forms, which can be suggestive of PC, making an early diagnosis possible. The study also shows that the identification rate of PC in patients under 60 years old is increasing.

BIOMARKERS FOR EVALUATION OF PROSTATE CANCER PROGNOSIS - AN UPDATE OF SCIENTIFIC LITERATURE

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ABSTRACT

Prognosis of prostate cancer is determined by three clinical factors: PSA, Gleason score, and tumor stage. The likelihood of prostate cancer death in each patient after radical therapy can be predicted using nomograms. KLK2 is a good prognostic indicator for prostate cancer, and KLK2 analysis alone or in conjunction with P-binding protein 3SA analysis may be helpful. New prognostic biomarkers are needed to improve clinical care and differentiate between indolent and aggressive illness. IGFBP-3 is an insulin-like growth factor that is involved in the suppression of cell proliferation and the increased cytotoxicity of prostate cancer cells to VD3 when combined with the anti-cancer medication. It is also used in the risk of bone metastases. EPCA-2 is a putative serum tumor marker in prostate cancer and can be used to

distinguish between local and metastatic prostate cancer. PSCA expression is associated with tumor stage, grade, and androgen independence. PSCA is a helpful molecular target in advanced prostate cancer due to its ability to increase extracellular matrix and basement membrane breakdown, which is necessary for metastasis and spread locally. Urokinase plasminogen activator receptor (uPAR) on the cell surface is where (uPAR) binds and is broken down into plasmin. uPAR participates in a number of immune regulatory systems and also indicates the degree of immune system activation. uPAR levels during infectious infections and among patients receiving treatment in critical care units have been the subject of several studies, and may have predictive significance in determining the likelihood of developing diabetes, hypertension, and cardiovascular disease.

OPEN RETROPUBIC PROSTATECTOMY IN PATIENTS WITH LOCALIZED PROSTATE CANCER

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ABSTRACT

Introduction. Patients with localized prostate cancer are candidates for surgery, radiation therapy, or active surveillance. Open retropubic prostatectomy (ORP) is the most common surgical treatment in the Republic of Moldova. **Aim of study.** Were to evaluate the effectiveness of ORP and to study early and long-term postoperative outcomes in patients with localized prostate cancer. **Methods.** In the period from June 2021 to February 2023, ORP was performed in 20 patients with localized prostate cancer at the Urology Department of the IMSP SCR «Timofei Mosneaga». The mean age of the patients was 67.3 years. The mean preoperative PSA was 12 ng/ml. In 8 patients (40%) was determined a low risk of biochemical recurrence, in 8 patients (40%) was established intermediate risk and in 4

patients (20%) high risk of biochemical recurrence. According to the TNM classification for prostate cancer (2017), the distribution was as follows: T1a – 2 patients (10%), T1c – 14 patients (70%), T2a-T2c – 4 patients (20%). Extended pelvic lymphadenectomy preceded prostatectomy in 9 patients (45%). **Results.** Among the intraoperative complications, there was bleeding from the veins of the Santorini plexus in 3 cases. In the postoperative period, one patient had prolonged lymphorrhea. The median number of days a patient spent in hospital after surgery was 8 days (3-25). Removal of the urethral catheter was performed on the 3-4th week. Urinary continence was restored in patients within six months after surgery. **Conclusion.** ORP is an effective surgical method for treatment of clinically localized prostate cancer with low level of postoperative complications.

10-YEAR OUTCOMES AFTER OPEN PARTIAL NEPHRECTOMY

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ABSTRACT

Introduction. Kidney cancer is the 14th most common cancer in the world. The incidence of malignant renal tumors in the Republic of Moldova, between 2014-2022 was 9.3 patients per 100,000/year. Partial nephrectomy (PN) is considered gold standard of care in patients with cT1 renal tumor masses. **Aim.** Analyze the surgical and oncological outcomes in patients with renal tumors and obtaining the optimal strategies for patients with localized renal cancer. **Material and methods.** A retrospective pilot study carried out on 86 patients with kidney tumor who underwent open PN during 2014-2023. **Results.** During the study were performed 920 interventions on patients with renal tumor, of which 9.34% of cases were performed PN. Increased incidence was at age group 40-60

years, with female's prevalence. PN without warm ischemia (WIT) was performed in 60 patients, while with WIT in 26 patients, without impact on renal function after surgery. RCC >7cm was present in 66.2% of cases with localization at the upper renal poles (29%), lower (37%) and at mid-kidney (34%). WIT was performed in 26 patients (14.8±4.2minute). Intraoperative bleeding was present in 100% in PN without WIT (29.8±13ml). The ratio of histological types of renal malignant tumors was 57% of cases, the highest incidence was RCC (66%) in men (83%). **Conclusion.** PN with WIT is valuable when we assume that intraoperative complications and a difficult reconstruction of the kidneys that can occur due to the complexity of the tumor ensuring a low risk of intraoperative bleeding.

RADICAL PROSTATECTOMY FOR LOCALLY ADVANCED PROSTATE CANCER

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ABSTRACT

Introduction. Optimal treatment approaches for locally advanced prostate cancer remain controversial and there are currently no standard treatments. According to recent papers, radical prostatectomy in men with locally advanced prostate cancers seems to effect improvement in both cancer specific and overall survival rates in comparison to radiation with androgen deprivation therapy. **The aim.** This study was to report oncological outcomes of patients who underwent radical prostatectomy in our department and to assess the role of radical prostatectomy in patients with locally advanced prostate cancer. **Methods.** This study included 150 consecutive patients who underwent radical prostatectomy in

our department. Oncologic outcomes comprised positive surgical margins, nodal involvement, ISUP grade, presence of perineural and lymphovascular invasion. **Results.** Median age of the patients was 65±4 (51-79) years. Based on postoperative pathology, from 150 patients, 51 (34%) were pT3, from whom 37% (19) pT3a and 63% (32) pT3b. The rates of positive surgical margins in the entire cohort with stage pT3 disease was 20% (10), N1 were 13,7% (7). In pT3a R1 were 5,2% (1), in pT3b R1were 28% (9), N1were18,7% (6). ISUP 1: 5,88% (3), ISUP 2: 27,45% (14), ISUP 3: 39,21% (20), ISUP 4: 13,7% (7), ISUP 5: 17,64% (9). Perineural invasion was present in 96% (49) of cases, limfovascular in 43,13% (22). **Conclusions.** Radical prostatectomy could be an option for patients with locally advanced prostate cancer.

TRANSURETHRAL RESECTION VS EN-BLOC RESECTION OF NON-MUSCULAR INVASIVE BLADDER TUMORS

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ABSTRACT

Introduction. The relevant standard technique for treatment of non-muscle invasive bladder cancer is transurethral resection (TURBT) of the bladder tumor. The quality of TURBT has a direct influence on the accuracy of histopathologic examination, subsequently has an impact on risk evaluation regarding recurrence and patient's outcome. New methods of En-bloc resection with different types of energy were proposed: monopolar, bipolar, laser. **Purpose of the study.** To compare the results after transurethral resection and En-bloc resection of non-muscular invasive urinary bladder tumors. **Material and methods.** In the study 128 consecutive patients with bladder tumor were included. They were treated surgically at the Urology Clinic of *Nicolae Testemitanu* State

University of Medicine and Pharmacy from 2017 till 2022. The patients were divided in four groups: En-bloc monopolar (En-blocM), En-bloc bipolar (En-blocB), En-bloc laser (En-blocL) and transurethral resection group. The postoperative patients' data were comparatively analyzed. **Results.** Tumor and demographic analysis showed absence of any differences between the study groups. Detrusor muscles were detected in 31 (97%) cases of En-blocM, in 30 (97%) cases of En-blocB, in 32 (100%) cases of En-blocL and in 25 (76%) cases of TURBT groups. The frequency of complications is almost the same, without a significant difference. **Conclusions.** The En-bloc resection technique provides more favorable results for obtaining better quality tumor samples, manifested in the presence of detrusor muscle, consequently it allows to establish a correct diagnosis and tumor staging.

EARLY DIAGNOSIS OF URINARY BLADDER TUMORS USING NARROW BAND IMAGING

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ABSTRACT

Introduction. One of the recent directions in modern urology is an early diagnosis of bladder tumors which allow the disease recognition on its early stages of development. Cystoscopy remains the method of choice for diagnosis of bladder tumors. In the last decade new methods for detection and visualization of bladder tumors have been proposed. **Purpose of the study.** To assess the difference between narrow band imaging (NBI) cystoscopy for the detection of non-muscular invasive bladder tumors and white light (WL) cystoscopy. **Material and methods.** 187 patients with diagnosed bladder tumor were included. The study was done at the Urology Clinic of *Nicolae Testemitanu* State

University of Medicine and Pharmacy from 2017 till 2022. White light cystoscopy was performed in all patients, followed by narrow band imaging cystoscopy, and the obtained data were compared. **Results.** From 187 patients with bladder tumors the diagnosis was established by WL cystoscopy in 166 (89%) patients, as where as in 21 (11%) patients the tumor was detected by NBI cystoscopy performed after WL. Quantitatively, a total of 279 tumor lesions were detected. 212 (76%) were determined through WL and 67 (24%) tumor lesions were identified using the NBI method. **Conclusions.** Compared to white light cystoscopy, narrow band imaging cystoscopy shows favorable results regarding the early diagnosis of non-muscular invasive bladder tumors.

RISK FACTORS OF URINARY BLADDER CANCER

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ABSTRACT

Introduction. Carcinogens affecting bladder urothelium are eliminated with urine. Risk factors like inflammation, smoking, infections, radiation exposure, occupational factors etc. lead frequently to tumor and the progression of bladder cancer. Nowadays the interrelation between bladder cancer and genetic predisposition is well studied. Whereas important is the influence of environmental factors in the disease evolution. **The purpose of the study.** To assess the risk factors in patients diagnosed with bladder cancer. **Material and methods.** In the study 337 patients with bladder cancer were included. The treatment was realized in the Clinic of Urology of State University of Medicine and Pharmacy «*Nicolae Testemitanu*» from 2019 to 2022. The patients' age, living conditions, risk

factors and vital parameters were assessed. **Results.** From 337 patients, 82 (24.3%) were females and 255 (75.7%) were males. The most common age among the patients was over 60 years, whereas the mean age was lower in men - 63.8 years and 66.4 years for women. According to the patient's residence place, the study results were as follows: urban - 182 cases (54%) and rural 155 cases (46%). From 337 patients, 145 (43%) patients used tobacco. Occupational risk factors were the etiologic reason in 31 (9.2%) patients. No one of the cases had *Schistosoma haematobium* parasite as etiologic factor. **Conclusions.** Bladder cancer occurs more often in men with a mean age over 65, particularly in urban areas. The most commonly risk factors detected, based on this study are smoking, inflammation, infections, occupational factors and radiation exposure.

TRAITEMENT CHIRURGICAL DES TUMEURS DE LA VESSIE URINAIRE ET IMMUNOTHÉRAPEUTE DU BCG. PROPRES RÉSULTATS

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ABSTRAITE

Introduction. Le TURV et le bacille de Calmette-Guérin représentent le traitement et la norme actuels pour le cancer de la vessie non-musclé invasive intermédiaire/ à risque élevé. La chirurgie TURV sans instillation de BCG échoue dans une mesure considérable chez les patients atteints d'un cancer primaire de la vessie, malgré l'application de la technique «En Bloc». **Matériel et méthodes.** Une étude rétrospective a été menée au cours de la période 2018-2022. La résection transurétrale de la vessie a été réalisée chez 60 patients atteints de tumeur primaire de la vessie et 20 patients atteints d'une tumeur récurrente. Tous

les patients ont été évalués postopératoirement de 3 mois à 1 an. **Résultats.** Chez 12 patients, un traitement instillationnel par Doxycycline « single shot » a été appliqué au stade postopératoire immédiat avec une rechute à 6 mois d'environ 25%. À 3 mois, les patients ayant subi une seule résection sans traitement par le BCG présentaient un taux de récurrence de 34,3%. La thérapie instillationnelle par le BCG a été appliquée après la première résection chez 50 patients selon le schéma 6 + 3 + 3, avec le taux de rechute, examiné par le tissu post-BCG, de 10% à 1 an postopératoires. **Conclusions.** Pour le cancer de la vessie urinaire le TURV et le traitement par instillation du BCG réduisent considérablement le taux de rechute.

MICROBIAL SPECTRUM AND ANTIBIOTIC RESISTANCE IN THE UROLOGY DEPARTMENT "TIMOFEI MOSNEAGA" PMI REPUBLICAN CLINICAL HOSPITAL

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ABSTRACT

Introduction. Urinary tract infection (UTI) is one of the most common infections encountered in clinical practice, and microbial resistance is currently one of the most serious threats to global health. **Objective of the study.** To identify the bacterial spectrum causing UTIs in the urology department of the «Timofei Moșneaga» Clinical Hospital in 2022 and its antibiotic resistance. **Material and methods.** Retrospective study of urine culture results, collected in the urology department of the «Timofei Moșneaga» Clinical Hospital during 2022, samples were examined using VITEK 2 Compact (bioMérieux). **Results.** Total: 900 samples, sterile - 597 (66.33%), 303 (33.67%) showed bacterial growth ($>10^5$), of which *E. coli* - 76 (28%) cultures, sensitive to amikacin in 88.16% cases, to nitrofurantoin in 86.84%

cases, to amoxicillin/clavulanate in 69.74% cases, and pan-resistant in 1.31% of cases; *Klebsiella* spp. - 66 (25%) cultures, sensitive to amikacin in 62.12% cases, to meropenem in 40.9% cases, to amoxicillin/clavulanate in 39.39% cases, and pan-resistant in 12.12% of cases; *Enterococcus faecalis* - 53 (20%) cultures, sensitive to ampicillin in 71.7% cases, to amoxicillin/clavulanate in 67.92% cases, to piperacillin/tazobactam in 62.26% cultures; *Pseudomonas aeruginosa* - 21 (8%), sensitive to amikacin in 47.62% cases, to meropenem in 47.62% cases, to piperacillin/tazobactam in 19.05% cases, and pan-resistant in 14.29% of cases; the remaining 87 (19%) cultures were other species. **Conclusions.** Urine cultures that were examined from the patients hospitalized in Urology Department in 2022, was determined: a higher incidence of *Klebsiella* spp. and *Enterococcus faecalis*, high sensitivity to aminoglycosides and aminopenicillins.

MICROBIAL SPECTRUM EVOLUTION AND ANTIBIOTIC RESISTANCE IN URINARY TRACT INFECTIONS

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ABSTRACT

Introduction. Antimicrobial resistance is a global public health problem that can lead to treatment failure, increased mortality and morbidity associated with urinary tract infections. **Objective.** To evaluate the results of urine cultures collected at T. Mosneaga Clinical Hospital, with a focus on identifying the evolution of microbial spectrum and antibiotic resistance. **Material and methods.** A retrospective study was conducted involving analysis of urine culture results collected from hospitalized patients between 2018-2021. A total of 22,076 urine cultures were included. Urine cultures were collected within the first 48 hours of hospitalization. **Results.** Out of the total of 22,076 urine samples, 5,500 were positive for pathogens (24.9%). Gram-negative microorganisms (Enterobacteriaceae - 60%) were

the most commonly identified, with a decreasing incidence over the years, followed by Klebsiella pneumonia (20%) and Pseudomonas aeruginosa (10%), the latter showing an increasing incidence. Sensitivity was higher (85%) for antibiotics from the aminoglycoside group (amikacin), while preparations from the fluoroquinolone group (ciprofloxacin) showed lower sensitivity (37%). **Conclusion.** It has been demonstrated that over the reference years, the evolution of the microbial spectrum was characterized by an increasing incidence of Klebsiella P. and Pseudomonas A., with a corresponding decrease in the incidence of Enterobacteriaceae. The identified agents showed increased sensitivity to aminoglycosides and significant antibacterial resistance to fluoroquinolones. The most spectacular evolution was recorded during the Covid-19 pandemic (2019-2020).

THE PHENOMENON OF ANTIBIOTIC RESISTANCE IN URINARY TRACT INFECTIONS IN THE UROLOGICAL CLINIC

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ABSTRACT

Introduction. Efficacy of antibiotics are confirmed by clinical results, however irrational use: exaggerated doses, the use of last resort antibiotics, the patient's non-compliance with the treatment plan, the interruption of antibiotic therapy, the lack of need for the use of antibiotic therapy etc. results in the development of antibiotic resistance. Problem whose severity progresses with time, a fact also encountered in the urological clinic.

Objective. Retrospective data analysis of microbial antibiotic resistance and the usefulness of the measures undertaken to combat its progression in Municipal Clinic Hospital (MCH) "Sfânta Treime", Urology Department, 2018-2022 period.

Material and methods. The statistical data for the period 2018-2022 from bacteriological laboratory of MCH "Sfânta Treime" were analyzed. Data were

processed using Microsoft Excel and Statistica 7.

Results. The most common bacteria met in the urology department were *Klebsiella pneumoniae*-24 %, *Enterococcus faecalis*-32%, *E.Coli* 28%, *Pseudomonas aeruginosa* 6%, other 10%. During 2018-2019 a progressive development of antibiotic resistance was observed in the isolated bacteria mentioned above. The data for 2020 are only available for the first semester, the cause being the SARS-CoV2 pandemic, which made it impossible to properly monitor the hospital microbial spectrum. After Adjusting the antibiotic therapy according to international protocols, the years 2021-2022 don't show any change in the microbial spectrum nor the level of antibiotic resistance. **Conclusion.** Compliance with internationally approved treatment schemes has stalled the progression of antibiotic resistance within the Urology section of the MCH "Sfânta Treime".

ACUTE PYELONEPHRITIS IN UROLOGICAL PRACTICE – ETIOLOGY, DIAGNOSIS AND TREATMENT

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ABSTRACT

Introduction. Urinary tract infection is one of the most frequent bacterial infection in the development countries. Currently, the diagnosis and treatment of Acute Pyelonephritis (AP) was significantly improved. **Material and methods.** In the prospective study were included 196 patients with AP and a group of 22 patients with AP in pregnancy urgently admitted in the Urology Department Republican Clinical Hospital between January 1, 2017 and December 31, 2023. **Results.** The duration of hospitalization of urgently hospitalized patients with AP was between 3 and 28 days. Acute pyelonephritis occurs with a higher frequency in young adults, and in the case of acute pyelonephritis in pregnancy (APP), it occurs with a higher incidence in the 2nd and 3rd semester. The

symptomatology of AP and APP in the groups of patients included in the study was: renal colic - lumbar pain was observed in 189 (92.6%) cases; fever in 198 (90.8%) cases; dysuria in 71(32.5%) cases; nausea 55 (25.2%) cases; vomiting in 35(16%) cases. The complications of PNA were; renal abscess 23 (10.5%) cases, acute renal carbuncle 42 (19.2%) cases, pyonephrosis 2 (0.4%) cases, paranephric abscess - 5 (2.2%) cases, toxic-septic shock - 4 (1.8%) cases. **Conclusions.** Acute pyelonephritis is the most serious form of urinary infection and requires hospitalization in urology or intensive care units for emergency treatment. In acute obstructive pyelonephritis, drainage of the urinary tract and prescription of large spectrum of antibiotics is crucial to prevent the development of life-threatening complications.

THE USE OF ANTIBODY-COATED BACTERIA IMMUNOLOGICAL TEST IN THE DIAGNOSIS OF INFLAMMATORY PROCESSES IN THE KIDNEYS AND URINARY TRACT

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ABSTRACT

Introduction. Bacteriological investigation of urine presents a summary indication of inflammatory processes components. Some authors describe the presence of immuno-inflammatory phenomena in the urinary system that allow their staged detection.

Objective. Presents an interest the interaction of immunological tandem formed by the immunity of the renal parenchyma (imposed by germs) and bacteria detected in the urinary tract. **Methods.** The urine of 32 patients (19 women, 13 men) who were treated in the urology clinic with various inflammatory processes was investigated. Pyuria was present in most cases. The bacteriological examination allowed the detection of more than 1000 bacterial germs in 1 ml of examined urine. The immunological urine investigation was performed by Shestakova V.P. (2015) method.

In order to determine the antibody-coated bacteria (ACB), the freshly harvested urine was centrifugated. Inactive suspension of staphylococci from the Cowan-1 strain, which contain Protein A antiglobulin in their coat, was added to 1 ml of centrifuged. **Results.** If agglutination occurs, the test is considered positive. Bacteria contain fixed antibodies (pyelonephritis). The lack of agglutination and therefore of ACB indicates the presence/absence of an inflammatory process in the lower urinary tract (LUT). **Conclusions.** The lack of ACB even when pyuria is present indicates a location of the infection in LUT. Only the presence of the positive agglutination process expressed by the bacteria covered with antibodies shows the inflammatory process in the kidneys. Renal parenchyma is a stronger immune substrate than LUT immunity.

NOCTURIA – A CRITICAL ASSESSMENT OF CURRENT DIAGNOSTIC AND TREATMENT ERRORS

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ABSTRACT

Introduction. Nocturia being a part of LUTS and BPH symptomatology has been historically associated with prostate or bladder pathology. Currently, the diagnostic tools used to assess the severity of LUTS/BPH symptoms do not allow the differential diagnosis between nocturia of obstructive or irritating etiology and nocturnal polyuria. The International Society of Continence (ISC) classifies nocturnal polyuria as the volume of nocturnal urine divided by the 24-hour urine volume, this ratio being defined as the nocturnal polyuria index (NPI). Thus, according to ISC, nocturnal polyuria is when $NPI > 20\%$ in young people and $NPI > 33\%$ in people over 65 years old. **Material and methods.** A group of 44 patients (18 patients <65 years and 26 patients > 65 years) with nocturnal symptoms as the main complaint was analyzed. Main inclusion criteria - $NPI > 33\%$. 33 patients - with an anamnesis of evaluation and treatment, 11 patients addressed primarily. The patients age ranged from 41 to 72 years, with an average of 54.2 years. The results of the following assessments were analyzed: IPSS standardized

questionnaire, TRUS-P with residual urine and Stamey-Meares probe. **Results.** According to the results of IPSS, 34(77,27%) were assessed with mild severity and 6(27,73%) with moderate symptomatology. The analysis of the answers identified 0 points for questions 1-6 in 35(79,54%) of the cases, most of the points being accumulated on the account of questions 7 and 8 for all those included. At question 7, 40(90,9%) patients get 3 to 5 points and 27(79,41%) of those with mild symptoms get 5 or 6 points for question 8. The volume of the prostate was estimated from 23,4ml to 88,56ml, with an average of 45,34ml. Absent residual urine was identified in 37(84,1) and in 7(15,9%) it was below 50 ml. The positive Stamey-Meares test was identified at 7(15,9%). Of those with a history of evaluation and treatment, 26(78,8%) were treated for prostatitis and 13(39,4%) had prostate surgical treatment. **Conclusions.** The diagnostic tools for LUTS / BPH are insufficient to assess all the etiological causes of nocturia. Nocturia significantly affects patients' quality of life, and the total IPSS score wrongly assess the degree of impairment.

RIGHT TESTICULAR VOLUME CAN HAVE A GREATER IMPACT ON OVERALL FERTILITY THAN LOWER LEFT TESTICULAR VOLUME

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ABSTRACT

Introduction. The volumetric predominance of one testis over the other, also known as testicular asymmetry, has been proposed as a prognostic factor for varicocele repair, with a cutoff for the significance of 20%, and for the evaluation of the functional capacity of small testes, particularly in patients with a history of cryptorchidism. At the same time, we commonly see patients whose right testicle is to varying degrees smaller as the left testicle. **Methods.** The study included 64 patients with idiopathic severe OAT syndrome which were evaluated for: testicular volume, using testicular volume were calculated Testicular Asymmetry Ratio (TAR= Right Testicular Volume/Left Testicular Volume) and were correlated with the semen parameters. **Results.** Following data analysis, 32 (50%) of the 64 patients with severe

OAT syndrome of unknown cause were found to have TAR 1, 19 (29.7%) to have TAR=1-1,2, and 13 (20.3%) to have TAR>1.2. For TAR=1,0, the median values were 0.86 [0.75-0.92], for TAR=1-1,2, the median values were 1.07 [1.05-1.12], and for TAR>1,2, values were 1.33 [1.25-1.49]. This points out that individuals with significant RT pathologic asymmetry have higher TV than individuals with large LT pathologic asymmetry. In the instance of lower RTV linked with TAR 1,0 the mean volume was higher than mean LTV with TAR > 1,2. **Conclusions.** According to observations, males whose right testicle is smaller in volume than their left testicle frequently have substantial changes in the quality of their semen. We might conclude that lower RTV can have a greater impact on overall fertility than lower LTV given that all individuals included in the study had nearly identical semen outcomes.

ERECTILE FUNCTION EVALUATION IN CORRELATION WITH SLEEP DISTURBANCES

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ABSTRACT

Introduction. Obstructive sleep apnea (OSA), defined by frequent bouts of upper airway collapse while sleeping, affects 10% of middle-aged males. When an OSA event occurs, the oropharynx collapses, resulting in alertness, decreased oxygen saturation, and sleep fragmentation. Patients with OSA were reported to have erectile dysfunction (ED). Patients with OSA had an ED incidence that varied from 40.9 to 80%. OSA severity measured by the Apnea-Hypopnea Index (AHI) and oxygen saturation levels below 90% during sleep were linked to a changed bulbocavernosus reflex. **Methods.** The study included 32 men with snoring symptoms. Mean age was 45,56±9,09 years. Polysomnography records were done, measuring the oxygen level, heart rate and breathing during sleep. IIEF-5 and IPSS were done for clinical

symptoms. Additional, hormonal profile was performed. **Results.** Mean body mass index values was 34,04±6,60. Accordingly with IIEF-5 scoring, no one was found with severe ED, 6.3% with moderate ED, 56.3% with middle ED and 37,5% with absence of ED. Following IPSS results, mild lower urinary tract symptoms were found in 43,8% and 56,2% with moderate symptoms, severe symptoms were not reported. AHI mean value was 46,23±15,48 and mean oxygen desaturation index 39.73±22,63. Mean SpO₂ level was 90,72%±2,65 and lower SpO₂ mean level was 73,81±9,59. Heart rate mean values were reported being 69,47±7,63. Total testosterone was found to be low, mean values were 201±43,77. **Conclusions.** The data analyses showed an overage ED symptom associated with OSA in 62,6%. Obesity and low testosterone level could have a major impact on erectile function in patients.

HISTOLOGICAL AND IMMUNOHISTOCHEMICAL EVALUATION OF TESTICULAR BIOPSIES AFTER MICROSURGICAL TESTICULAR SPERM EXTRACTION IN PATIENTS WITH AZOOSPERMIA

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ABSTRACT

Introduction. Azoospermia can be obstructive (OA) and non-obstructive (NOA). Given the increased incidence of maturation arrest histological phenotype, it is now becoming increasingly difficult to estimate azoospermia type before histological assessment. The micro-TESE techniques allow the identification of foci of spermatogenesis in non-obstructive forms and only the histological examination will provide an objective and definitive testicular phenotype. For greater accuracy, immunohistochemical techniques are needed in order to assess additional risks. **Material and methods.** 23 testicular biopsies were studied, obtained from 12 patients with azoospermia. Presumably 8 patients with ANO and 4 patients with AO (according to testicular volume, FSH, LH, genetic evaluation). All 23 preparations with tissue fixation in Bouin solution for at least 24 hours. Conventional histopathological evaluation was done for all stainings with immunohistochemistry for PLAP, MAGE4, INSL3 antigen in selected

patients. **Results.** The histological results confirmed in 10 cases the diagnosis of NOA, 2 cases with the prediction of OA before intervention was not confirmed. The histological phenotype Sertoli cell-only syndrome, complete form, was found in 7 cases, the maturation arrest, also complete form, was found in 1 case and mixed atrophy in 2 cases. All preparations (18) were evaluated negatively for PLAP antigen. MAGE4 antigen was positively confirmed in 5 cases - 2 cases with OA, 2 cases with mixed atrophy and 1 with maturation arrest. MAGE4 was absolutely negative in biopsies of patients with Sertoli cell-only syndrome. INSL3 antigen was strongly fixed in tissues with OA and maturation arrest, significantly less fixation was observed in tissues with Sertoli cell-only syndrome and mixed atrophy. **Conclusions.** Hormones, ultrasound evaluation of the testicles, testis volume and available genetic tests have a predictive value in differentiating OA from NOA. The histological and immunohistochemical evaluation is accessible, establishes the testicular phenotype accurately and guides us in the patient's management.

THE IMPACT OF SPORTS SUPPLEMENTS ON SEXUAL AND REPRODUCTIVE HEALTH IN MEN

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ABSTRACT

Introduction. Approximately 60% of the population of reproductive age has a high intake of supplements. Among the most popular sports supplements used are protein (51.2%), creatine (22.9%) and pre-workout/energy (20.7%), and the reasons for taking the supplements were to improve exercise recovery (52.6%), general health (51.4%) and increased muscle mass/strength (41.7%). However, little is known about how consumption of these products affects male reproductive health. **Material and methods.** A detailed review of the specialized literature was carried out to detect all available documents that investigated adverse effects of dietary supplements and their mechanism on male fertility. A literature search was performed using the Google Scholar, PubMed, SCOPUS and Science Direct databases without time limitations using the keywords: «sport supplements,» „caffeine,» «creatine,» «protein powders,» «sperm quality,» and «male fertility». **Results.** Research shows that caffeine can damage sperm cells by breaking up their DNA and causing them to have an abnormal number of chromosomes, caffeine intake above 200mg per does appear to affect reproductive hormones particularly associated with a decrease in

oestradiol (oestrogen) concentration, at the same time no association was found between caffeine consumption and any fertility related outcomes. Creatine can increase the level of adenosine triphosphate (ATP) in sperm cells, thereby increasing motility. The right amounts of BCAAs in whey protein powders have a synergistic effect on sperm function and testosterone production, resulting in increased fertility. Protein supplements do not have a direct negative effect on male fertility, considering that 23 of 24 protein supplements contained undeclared anabolic androgenic steroids, it may affect reproductive system. Abstinence from protein supplements resulted in a significant increase in median sperm concentration, which was 2.6 times higher than the baseline median sperm concentration, another study found protein does not significantly impair sperm quality and may even improve sperm motility. **Conclusions.** Most supplements used in sports are rarely discussed when it comes to male fertility and there is not enough research on this topic. However, not all supplements are harmful to fertility, some of them appear to have a relatively neutral or have been shown to improve not only sperm concentration, but also motility and morphology.

HOW DO WE TREAT THE INFERTILE MAN AFTER 40?

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ABSTRACT

Introduction. Unlike the sudden decline in reproductive capacity in women, men can maintain a certain level of reproductive function throughout their lives. However, studies show that with advancing age, the production of reproductive hormones, sexual function, the number and quality of sperm and fertility decreases. Advanced parental age is a risk factor for the occurrence of genetic mutations at the sperm level, congenital malformations or other diseases. At the same time, due to certain social, economic or medical situations, many couples address fertility problems at a relatively advanced age. **The purpose** of the research was to assess the causes and outcomes of treatment of infertile men over 40 years of age. **Material and method.** The study included 67 male infertility patients aged from 40 to 65 years (mean age 46 ± 4.7 years). 21 with primary infertility and 46 with secondary infertility. The complex andrological evaluation established 9 (13%) men with azoospermia, 29 (41%) men with oligoasthenoteratospermia, 1 (1.5%) with aspermia, 1 (1.5%) with retrograde ejaculation, 27 (40%)

men had had other changes in the spermogram or normospermia (7/10%). The instituted treatment was pathogenic in 19 (28%) cases in which we detected concrete causes of infertility (urogenital inflammation, hydrocele, hyperprolactinemia). In 40 (63%) men we prescribed empiric treatment for infertility (antioxidants, aromatase inhibitors, follicle-stimulating hormone) and treatment for concomitant diseases (diabetes, prostate adenoma, erectile dysfunction). In 8 men (9%) we have recommended fertilisation techniques or adoption as a first option. **Results.** We obtained the improvement of the spermogram parameters at an interval of 6 months in 36 (59%) patients, including in 14 (21%) men, up to normospermia or with a significant reduction in the degree of sperm DNA fragmentation. In 15 (25%) patients we recommended in vitro fertilization. **Conclusions.** The diagnosis and treatment of infertility in the elderly man has several peculiarities due to the increase in the incidence of idiopathic or unexplained infertility. Lifestyle modification and antioxidant therapy seem promising, but studies and strategies are needed to maintain and optimize the fertility potential of the elderly man.

PECULIARITIES OF TREATMENT IN IDIOPATHIC MALE INFERTILITY

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ABSTRACT

Introduction. Idiopathic male infertility has an incidence of about 40%. It is a form of infertility that is easy to diagnose and difficult to treat. There are currently no evidence-based treatment guidelines for idiopathic infertility. Treatment protocols that are not based on evidence present a potential risk of complications or additional expenses and are not recommended by professional scientific societies. At the same time, the large number of patients, the high costs of in vitro fertilization techniques and the questionable success rate require the search for new therapeutic solutions that can be applied on a large scale. **Material and methods.** The study was conducted on 180 patients aged 23 to 48 years with male infertility considered idiopathic. All patients were advised to follow a healthy lifestyle, excluding harmful factors (smoking, alcohol abuse, pesticides, etc.). Antioxidant treatment was prescribed that included vitamin and mineral complexes, with an emphasis on those containing zinc, L-glutathione, selenium, folic acid, vitamin E, carnitine, L-arginine. 146 (81%) patients with hypovitaminosis D were prescribed vitamin D in

doses from 2000U to 8000U. 165 patients with dyslipidemia were prescribed natural supplements with an anti-inflammatory effect, and nutritional recommendations. Selective estrogen receptor modulators (clomiphene citrate) or aromatase inhibitors (anastrozole) were prescribed to 18 patients. The patients were evaluated at intervals of 3, 6 and 9 months. **Results.** The improvement of spermogram parameters at the 9-months interval occurred in 124 (68%) patients, including 49 (27%) at the 3-months interval. Complete restoration of spermogram parameters was in 37 (20%) patients. In patients with obesity and dyslipidemia, positive correlations were observed between the improvement of spermogram with the decrease of body mass and lipidogram. At the same time, 24 (13%) patients refused to continue the treatment after 3 months. **Conclusions.** The patient with idiopathic male infertility requires individual approach. We believe that before resorting to in vitro fertilization techniques, especially in obese patients or patients with dyslipidemia, it is necessary to recommend empirical antioxidant treatment along with a recommendation to modify the lifestyle.

COULD SEXUAL DYSFUNCTIONS BE A CAUSE OF UNEXPLAINED MALE INFERTILITY?

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ABSTRACT

Introduction. Sexual disorders such as erectile dysfunction, premature ejaculation or delayed ejaculation are underestimated in the assessment of infertile couples. Sexual dysfunctions are considered to occur more frequently in infertile couples because of psychogenic, relational and/or organic problems related to the inability to conceive. There are studies that state that changing spermogram thresholds are associated with the severity of erectile dysfunction, and men in infertile couples more frequently have premature ejaculation. At the same time there are few studies that would claim that male infertility is a consequence of sexual dysfunction. The cause of infertility is unexplained in about 20-30% of cases. Although the likelihood of a spontaneous pregnancy in couples with this form of infertility is higher than in other forms of infertility, clinicians are still searching for possible causes of the problem. The aim of the study was to assess sexual function in couples with

unexplained infertility. **Material and methods.** The study included 38 men aged 23 to 46 years with unexplained infertility, who completed the Erectile Function Evaluation Questionnaire (EFIQ) and the Premature Ejaculation Diagnostic Tool (PEDT). **Results conclusions.** Absence of erectile or ejaculatory dysfunction was present in 23 (60%) men. 12 (31%) patients had erectile dysfunction of various degrees, excluding 2 (5%) severe erectile dysfunctions. 17 patients had ejaculatory dysfunctions, 1 (2.6%) traditional ejaculation, 16 (42%) premature ejaculation, including 5 (13%) with premature ejaculation and erectile dysfunction. **Conclusions.** It is difficult to state that the sexual dysfunctions detected were the cause of infertility in the couple, but it is certain that pregnancy occurred after treatment in 2 cases. We recommend the inclusion of erectile or ejaculatory function determination questionnaires in the evaluation of all men in couples with unexplained infertility.

DIAGNOSTIC FEATURES OF IDIOPATHIC MALE INFERTILITY

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ABSTRACT

Introduction. Male infertility has an incidence of about 6-10%. Despite the diagnostic progress, in about 30-40% the causes of infertility remain unknown or unrecognized and it is considered idiopathic. At the same time, the complex evaluation of the infertile man allows to diagnose some diseases or clinical situations with a potential negative effect on fertility. **The objectives** of the paper are to present some diagnostic peculiarities of male infertility in order to reduce the number of unknown causes of infertility. **Material and methods.** The study included 187 consecutive patients with idiopathic male infertility aged from 23 to 49 years, in whom the causes of the problem were not detected after the standard andrological evaluation. In all patients, the lipid profile (cholesterol, LDL, HDL, Triglyceride), 25-OH-VitD, blood sugar, thyroid hormones and oxidative stress in the sperm were additionally performed, and optionally sperm DNA fragmentation. **Results.** Increased level of cholesterol, triglycerides

or dyslipidemia was determined in 126 (67%) patients, respectively in 6 (17%) of 35 patients with a BMI <25, in 51 (70%) of 72 overweight patients (BMI 25-29.9) and in 69 (86%) of 80 obese patients (BMI >30). Blood sugar was increased in 22 (11.7%) patients, and hypovitaminosis D was diagnosed in 149 (79%) patients with infertility. At the same time, 4 (2%) patients were diagnosed with thyroid dysfunctions. Increased level of oxidative stress in sperm was detected in 119 (63%) patients. Out of 51 patients in whom spermal DNA fragmentation was performed, only 9 (17%) patients had a low degree of fragmentation (up to 15%). **Conclusions.** Idiopathic male infertility requires not only the use of standard diagnostic techniques but also additional examinations. Lipid profile, blood sugar, oxidative stress in sperm and sperm DNA fragmentation are important parameters in the evaluation of idiopathic infertility. At this moment, we cannot say for sure that the detected metabolic disorders are the cause of infertility, but they can serve as a guiding indicator in further assessment and treatment.

THE ROLE OF BARIATRIC SURGERY IN THE TREATMENT OF MALE INFERTILITY AND MORBID OBESITY

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ABSTRACT

Introduction. Obesity is a major public health problem causing temporary or permanent disability and reduced life expectancy. Recent studies incriminate obesity in the development of male infertility. Infertility is identified in about 70% of morbidly obese men over the age of 35. There are pertinent statements recommending treatment of male infertility through weight loss and normalization of BMI. One of the most effective methods of treating morbid obesity is bariatric surgery. **The aim** of the paper is to evaluate the role of bariatric surgery in the treatment of male infertility through the presentation of a clinical case and review of the literature. **Material and methods.** A case of a 43-year-old patient with BMI 42 with

secondary infertility, functional hypogonadism and erectile dysfunction is studied. Sperm volume 1.4 ml, 1.2mln spermatozoa per/ml, progressive motility 15% and normal morphological forms 1%. Total testosterone 170ng/dl and SHIM index 14. The patient underwent bariatric surgery, followed for 3 months antioxidants and was evaluated 9 months after surgery. **Results.** BMI - 26, SHIM index -22, sperm volume 3.2 ml, 18 mln sperm per/ml, progressive motility 31%, normal morphology 5%, total testosterone 456 ng/ml. **Discussion and conclusions.** As a result of bariatric surgery weight loss, significant improvement of erectile function, spermogram parameters and considerable increase of testosterone level were obtained. Bariatric surgery can be considered a viable treatment option for male infertility in morbidly obese men.

ROLE OF TESTOSTERONE CONCENTRATION IN MALE PATIENTS WITH NAFLD

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ABSTRACT

Introduction. Sex steroids have a direct impact on hepatic and systemic metabolism, thus implicating the pathobiology of NAFLD. The association between serum testosterone concentrations and NAFLD in men is one of the dysfunctions that interests specialists, also having an impact on the patient's quality of life. We investigated the relationship between total testosterone and inflammatory and fibrotic progression NAFLD. **Material and methods.** In this cross-sectional study, 35 men with NAFLD were recruited. Serum testosterone concentrations were measured by immuno-chemiluminescence. In order to further identify grade of steatosis and liver fibrosis in patients with NAFLD we used ultrasound and

FibroScan with CAP score. **Results.** Average age of patients - 51.2 years. We found negative correlations between testosterone levels and inflammation status. Thus, we obtained the negative correlations between T and ALT ($p < 0.1$) and hypertriglyceridemia ($p < 0.05$). Testosterone level was negatively associated with F4 fibrosis grade ($p = 0.01$) but did not correlate with F1-F3. At the same time, an insignificant positive correlation was observed between the level of testosterone with the degree of steatosis and with waist circumference ($p > 0.5$). **Conclusion.** Our results indicate that in male patients with NAFLD, testosterone may play a role in inflammatory and fibrotic progression of NAFLD. And, understanding this change may help clinicians personalize treatment strategy for male NAFLD patients.

GENETIC POLYMORPHISMS ASSOCIATED WITH FOLATE CYCLE DISORDERS (MTHFR, MTR, MTRR) AS A FACTOR OF INFERTILITY OR REPRODUCTIVE LOSSES

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ABSTRACT

Introduction. Currently, folate cycle and one-carbon metabolic pathway are being studied at the molecular level, as a potential genetic risk factor that can be associated with reproductive losses (spontaneous abortion, pregnancy stagnated in evolution), through intracellular homocysteine accumulation. **Objectives.** Evaluation the genotypes of the folate cycle genes (MTHFR677; MTHFR1298; MTR2756; MTRR66) with evaluation of the intensity expression of biochemical factors (folic acid, homocysteine, vitamin B12) in etiology of reproductive losses in women and infertility in men. **Material and methods.** 382 patients were included in the study, with mean age 31.9 ± 6.1 years, they were divided 4 study groups (women with a history of reproductive

loss pregnant women with complicated progress, and men with infertility) and 2 control groups of women and men. **Results.** The TT genotype of the MTHFR677 gene will increase the level of homocysteine, the transition from the category CT to TT will increase the value of the homocysteine by 1.93 units. There are no differences in the level of vitamin B12 and folic acid depending on the genotype variant. **Conclusions.** The distribution of gene polymorphisms in the control and study groups didn't show statistically significant differences. The presence of reproductive losses in the anamnesis is reflected in higher levels of homocysteine, regardless of biological sex, but with statistical significance only in men and the level of folic acid in men with infertility is lower than the group of control women.

ACUTE SCROTAL SYNDROME IN CHILDREN

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ABSTRACT

Introduction. Acute scrotal syndrome in children is one of the urological emergencies, the medical management of which depends on early diagnosis, also resulting from the fact that only a few hours of delay can permanently compromise the affected testicle. The functional results demonstrate that in supravaginal torsions that belong to the age of the newborn, the testicles are lost in almost 100% of the cases, whereas in intravaginal torsions the losses constitute 20-80%. **Aim of study.** Presentation of curative surgical limits in the treatment of acute scrotal syndrome, to reduce complications and improve the chances of survival of the affected

testicle. **Material and methods.** The statistical analysis was carried out patients aged between 0 and 18 years. During 2022, 49 children were hospitalized with the diagnosis of acute scrotum, 7 children with testicular torsion, 43 children for the excision of the Morgagni hydatid. Compared to the year 2021, 23 people came with acute scrotum, 2 testicular torsion, 21 Morgagni hydatid torsion. **Results.** The results of the study demonstrate that late torsion leads to the impairment of the spermogram in 50% and the increase in the rate of complications in patients. **Conclusions.** In the given study, we elucidated the etiopathogenesis, the anatomical-physiological, clinical-paraclinical features of acute scrotal syndrome.

DISTANT SURGICAL TREATMENT RESULTS IN PRIMARY OBSTRUCTIVE MEGAURETER IN CHILDREN

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ABSTRACT

Introduction. The medical-surgical treatment of primary obstructive megaureter remains a relevant and debatable topic. **Aim of study.** To analyze the long-term results of children with primary obstructive megaureter at the State University Hospital «*Nicolae Testemitanu*» urology department between 2013 and 2019. 20 children with primary obstructive megaureter grade III-IV-V were operated, with 14 males and 6 females between 3 months to 11 years of age. The diagnosis was established based on clinical and paraclinical examination (ultrasound, intravenous urography, dynamic renal scintigraphy). **Results.** The cause of primary obstructive megaureter was found to be neurogenic dysplasia of the ureterovesical segment, with unilateral involvement in 11 cases and bilateral

involvement in 9 cases. Surgical interventions were performed using the Lich-Gregoir method. Long-term results were assessed at 1-6 months and 1, 3, and 5 years post-operation. Satisfactory results were found in 14 cases (70%), relatively satisfactory in 4 cases (20%), and unsatisfactory in 2 cases (10%). Late postoperative complications were observed in 2 cases, and both were surgically resolved. **Conclusions.** Primary obstructive megaureter is considered one of the most severe forms of obstructive uropathies that can lead to Chronic Kidney Disease. The surgical correction of megaureter is aimed at eliminating obstruction and restoring urodynamics. Therefore, prenatal diagnosis and determining the appropriate time for surgical correction are crucial for improving the quality of life of children with primary obstructive megaureter.

BLADDER DIVERTICULA IN CHILDREN

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ABSTRACT

Introduction. The bladder diverticula are cavities of different sizes that communicate with the bladder through a usually narrow hole, often located on the side walls and in the vicinity of the ureters. Clinically they can be asymptomatic, or cause of urinary tract infections with rebellious piuri. **Aim of study.** Analysis of specialized literature and personal studies on the clinical cases of children with bladder diverticula. **Material and methods.** The work presents 3 patients with bladder diverticula, who were on treatment for a period of 2 years. **Results.** The age of children with congenital diverticuli was 9 months, 3 years

and 5 years, of which 2 boys and a girl. Clinically all patients had urinary infection, two - stroke urination, suprapubic pain - in 1 child. The clinical examination was completed by the ultrasound of the urinary system, laboratory examinations, cystoscopy, micational cystography, intravenous urography. In two children the bladder diverticuli located on the left was implanted in the ureter. In them, the excision of the diverticulum was done with the neomyplantation of the ureter procedure Leadbeter-Polytano, and in another child - the excision of the diverticulum with the suturation of the bladder. **Conclusion.** In some patients, bladder diverticulum evolves latently, asymptotically and are discovered on the occasion of a cystoscopy.

CONGENITAL ANOMALY OF URETERS IN CHILDREN

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ABSTRACT

Introduction. Congenital anomalies of the ureters in children are a significant concern in pediatric urology. One such anomaly is the double kidney, where there are two non-delimited or partially delimited parenchymal masses, each with their own collecting system and ureter. This condition results from the division of the metanephrogenic blastema of the ureter during development. The incidence rate of this anomaly is 2:1 in females, and it can be asymptomatic or present with various symptoms, such as fever, hydronephrosis, colic, and renal lithiasis. Diagnosis is established through prenatal or postnatal ultrasound, urography, and cystoscopy. **Aim of study.** To present the clinical case of a patient with a double bilateral kidney, bilateral megaureter, ectopic ureterocele, and nonfunctional

upper renal pelvis on the right. **Material and methods.** Analysis of the specialized literature in terms of the clinical case of a patient with reno-urinary congenital anomaly, through the SIAMS intra-hospital search engine. **Results.** The patient, a 2-year-old, presented with abdominal pain, leukocyturia, urinary hesitancy, fever, pallor, and loss of appetite. Ultrasound of the urinary system revealed bilateral double kidneys, hydronephrosis on the right, and ectopic ureterocele. The patient underwent surgical intervention, including heminefroureterectomy and ureteroclectomy of the upper renal pelvis on the right. **Conclusions.** The correction of congenital reno-urinary malformations in children remains an important issue in pediatric urology. However, advances in technology and treatment have improved outcomes for children with these conditions.

PROSTHESIS IN MALE STRESS URINARY INCONTINENCE: AN UPDATE

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ABSTRACT

Introduction. Stress Urinary Incontinence (SUI) is mostly present in men having undergone prostate surgery (radical prostatectomy for prostate cancer or TURP for Benign Prostate Hyperplasia). It is a bothersome condition, with a significantly negative impression on patients' quality of life, including low self-esteem as well as professional, social and relational restrictions. Nowadays, the gold standard treatment for SUI in men is the implantation of an Artificial Urinary Sphincter (AUS). Apart from this, the development of newer materials leads to the use of suburethral slings in the management of SUI as an alternative to the AUS. **Aim.** We aimed to perform a systematic review concerning the outcomes of SUI surgery, more precisely between the AUS and the suburethral slings, using the most recently published trials. **Results.** A recent non-inferiority study performed in the UK by Constable et al revealed that the slings were non-inferior to the AUS in terms of postoperative continence rates although the sling patients were more likely to have a lower success rate. At 12 months' interval, the incontinence symptoms were

less likely to appear in the AUS patients (mean difference in ICIQUI-SF score for the time point at 12 months: 1.30, 95% confidence interval 0.11 to 2.49; $p=0.032$). The number of serious adverse events was small (male sling group, $n=8$; AUS group, $n=15$ with one man in the AUS group having experienced three serious adverse events). The authors reported an improvement in Quality-of-life scores as well as an increased satisfaction in both groups. However, the analysis of cost over benefit favored the AUS despite the less expensive sling. Another study concerning the ATOMS male sling performed by the study of Giammo et al on a cohort of 99 male SUI patients revealed that the device had a 74.7% continence rate at follow-up, with 87.9% of devices being in place at 60 months and a necessity for revision in 20.2% of patients. Still, the authors suggested that the results could have been further improved by using the device as the first choice for male SUI surgery. **Conclusion.** AUS remains the gold standard for SUI surgery in men. However, similar results could be obtained in selected patients using the most recent generation of male suburethral slings, especially when using a model that allows adjustments after implantation.

ROLE OF URODYNAMIC AND CLINICAL FINDINGS IN WOMEN WITH REFRACTORY OVERACTIVE BLADDER

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ABSTRACT

Introduction. Overactive bladder (OAB) is defined as urinary urgency, usually accompanied by frequency and nocturia, with/without urge urinary incontinence, in the absence of urinary tract infections, or other urinary bladder pathology. OAB is more prevalent in women, with overall prevalence increasing with age. The international guidelines recommend after a full basic assessment to be done urodynamic studies (UDS) at refractory OAB patients. **Aim.** Evaluation the importance of urodynamic and clinical values at refractory OAB patients which would reveal the cause of failure of lifestyle interventions, behavioral therapy, and/or antimuscarinic treatment. **Methods.** A retrospective pilot study performed at Urology department, during 2019-2022, included 30 refractory OAB patients, clinical based on voiding diary, OAB Symptom Score questionnaire (OABSS) and on UDS examination. **Results.**

Voiding diary data and OABSS revealed that in 83% of cases patients showed moderate/severe level of OAB symptoms (8,43±2,06). Based on UDS, low values of 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 bladder capacity (MCC=176±136,2ml) correlated positively with OABSS. Detrusor overactivity (DO) was confirmed by the presence of detrusor phasic contractions, increased values of detrusor voiding pressure (PdetQ_{max}=54±8cmH₂O) and maximum flow rate (Q_{max}=12,2±6,2ml/s). High level of detrusor contractility was obtained by using the projected isovolumetric pressure. **Conclusion.** Based on UDS were obtained statistically significant variables associated with clinical data values that could influence the further treatment decisions and could be used as predictors of effectiveness of third-line therapy in women with OAB and DO.

SEROLOGIC STATUS PREVALENCE OF VIRAL HEPATITIS A, B, C, AND E MARKERS AT UROLOGY HEALTHCARE WORKERS

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ABSTRACT

Objectives. To determine the seroprevalence level of viral hepatitis markers A, B, C, and E among urological healthcare from department of Republican Clinical Hospital. **Methods.** A cross-sectional descriptive epidemiological study was conducted. Blood samples were collected from medical workers and examined using the enzyme-linked immunosorbent assay (ELISA) method for markers of viral hepatitis A (anti-HAV and anti-HAV IgM), viral hepatitis B (AgHBs, anti-HBcor, anti-HBs), viral hepatitis C (anti-HCV), and viral hepatitis E (anti-HEV IgG and anti-HEV IgM). A total of 49 medical workers were

examined, and 392 laboratory investigations were performed. **Results.** The following seroprevalence levels of viral markers were identified among urology healthcare: AgHBs–2.0±2.0%; anti-HBcor–38.8±7.0%; anti-HBs–51.0±7.1%; anti-HCV– 4.1±2.8%; anti-HAV–100%; anti-HAV IgM–0%; anti-HEV IgG–12.2±4.7%; anti-HEV IgM– 12.2±4.7%. The most affected groups were female individuals, medical assistants or auxiliary personnel, and with a work experience of ≥30 years. **Conclusions.** The results indicate that medical workers in the field of urology can be considered a high-risk group for infection with hepatitis B, C, and E viruses.

PREVALENCE OF VIRAL HEPATITIS A, B, C, AND E SEROLOGIC STATUS IN UROLOGICAL PATIENTS

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ABSTRACT

Objectives. To determine the seroprevalence level of viral hepatitis markers A, B, C, and E in patients from the urology department of the Republican Clinical Hospital. **Material and methods.** A cross-sectional descriptive epidemiological study was conducted. Blood samples were collected from patients in the urology department of the Clinical Emergency Hospital (SCR) and examined using enzyme-linked immunosorbent assay (ELISA) for the following viral hepatitis markers: anti-HAV, anti-HAV IgM, AgHBs, anti-HBcor, anti-HBs, anti-HCV, anti-HEV IgG and anti-HEV IgM. A total of 234 patients were examined, and 1638

laboratory tests were performed. **Results.** The following seroprevalence levels of viral hepatitis markers were identified among patients in the urology department of SCR: AgHBs – 9.0±1.9%; anti-HBcor – 47.9±3.3%; anti-HBs – 41.0±3.2%; anti-HCV – 7.7±1.7%; anti-HAV – 95.3±1.4%; anti-HAV IgM – 0%; anti-HEV IgG – 17.5±2.5%; anti-HEV IgM – 27.4±2.9%. The most affected groups for hepatitis B and C were females from the central region of the country, while for hepatitis E, males from the northern region were the most affected. **Conclusions.** The results indicate that urological patients can be considered a group at increased risk of infection with hepatitis B, C, and E viruses.

ACUTE KIDNEY INJURY IN HOSPITALIZED PATIENTS WITH COVID-19

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ABSTRACT

Introduction. Acute kidney injury (AKI) has been reported as a frequent complication among critically ill patients admitted with COVID-19, associated with high mortality and recognized as an indicator of multiple organ dysfunction and disease severity. **Material and methods.** A retrospective study was conducted, including patients with confirmed COVID-19 infection admitted to Republican Clinical Hospital «Timofei Mosneaga» between June 01, 2020 and August 31, 2020. Obtained data were compared between patients with AKI and without AKI. **Results.** Of the 81 patients included in the study, 49 (60,49%) were male and 32 (39,50%) were female. The median age was 61 years (interquartile range - 55-60). Twenty patients

(24,69%) had acute kidney injury, of whom 4 patients (20%) required renal replacement therapy. Of the 20 patients, 5(25%) developed stage I AKI, 7 (35%) developed stage II and 8 (40%) stage III. Risk factors for the development of AKI during hospitalization were: assisted breathing and vasopressor support. Of the twenty patients with AKI and urinalysis, 65% had proteinuria, 45% had hematuria. Mortality rates were significantly higher in patients with AKI (90% versus 36,06%). **Conclusions.** Patients with COVID-19 have a high incidence of acute kidney injury. At the same time, AKI significantly increases the mortality of patients admitted to intensive care units. Of all patients with AKI, only 10% survived with recovery of renal function until discharge.

THE IMPACT OF COVID-19 PANDEMIC ON GENITOURINARY CANCERS DETECTION IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Introduction. The new severe acute respiratory syndrome SARS-CoV-2 (COVID-19) has emerged as an alarming disease since December 2019, creating a global health crisis. All over the World, oncological services were suspended, and millions of patients were unable to carry out in time vital investigations or treatments. **The aim.** Were to provide an evidence-informed review of genitourinary cancer detection during COVID-19 pandemic in the Republic of Moldova. **Material and methods.** We analyzed the data from the National Cancer Registry of all newly diagnosed genitourinary cancers from 2019 to 2022. The total number of registered patients and stage were

compared in the targeted periods. **Results.** The overall number of patients decreased from 2019 to 2020 by 15.2% (n = 1184 vs. 1004), then raised by 8% in 2021 and exploded by 30% in 2022 (n = 1092 and 1435). The main increase was observed for renal (26.16%, n = 223 in 2020 vs. 302 in 2022), prostate (34.2%, n = 485 in 2020 vs. 737 in 2022), and penis (38.9%, n = 11 in 2020 vs. 18 in 2022). No significant differences were observed in the incidence of bladder (5.43%, n = 244 in 2020 vs. 258 in 2022) and testicular cancer (7.7%, n = 24 in 2020 vs. 26 in 2022). **Conclusions.** The Covid-19 pandemic had a major impact on the detection of genitourinary tumors, initially leading to a decrease in detection and later to an explosion in the number of cases.

POSTOPERATIVE COMPLICATIONS OF HYNES-ANDERSON PYELOPLASTY

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ABSTRACT

Introduction. Ureteropelvic junction obstruction is the most common congenital cause of upper urinary tract obstruction, leads to progressive dilatation of the renal collecting system. Hynes-Anderson technique is considered as gold standard with success rate greater than 90%. **The aim** of this study was to evaluate the complications of open Hynes-Anderson pyeloplasty in adults. **Methods.**

In the period from 2014 to 2017 we prospectively evaluated the results of 118 open Hynes-Anderson pyeloplasty. Postoperative complications were reported according to the Clavien-Dindo classification. **Results.** In 24 (20,33%) patients we recorded 27 complications. Clavien I: 3,39% (4), Clavien II: 11,02% (13), Clavien IIIa: 3,39% (4), Clavien IIIb 0,85% (1). **Conclusions.** Open Hynes-Anderson pyeloplasty in adults is associated mostly with Clavien II complications.

HERNIES LOMBAIRES POSTOPÉRATOIRES

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ABSTRAITE

Introduction. Les hernies lombaires postopératoires représentent environ 20 % du nombre total de complications. Les techniques chirurgicales ont été constamment adaptées afin de prévenir la survenue d'éventrations postopératoires. **Matériel et methods.** Dans la période 2019-2021, une étude comparative a été réalisée sur deux groupes de patients, le groupe A comprenait 12 patients et le groupe B recensait 15 patients. Toutes les patients ont subi des lombotomies pour diverses pathologies rénales à l'exception des processus septiques rétro-péritonéaux et ont été évalués postopératoirement de 6 mois à 2 ans. **Résultats.**

Du groupe A, 10 ont subi une lombotomie sous-costale et 2 intercostales. et seulement sous-costale aux patients du groupe B. La suture de la plaie pour le groupe B a été faite en couche par couche, fil continu avec drainage sous-cutané aux patients obèses. Dans le groupe A la fibrine et l'antibiotique topique Cefazolin ont été appliqués localement ayant la fréquence des phénomènes septiques locaux était de 5%, le taux d'éventrations était de 7%. Le groupe B présentait une suppuration dans 20 %, déhiscence 12 % et l'apparition d'une hernie 1 an après la chirurgie dans 18 % de cas. **Conclusions.** La fibrine et l'antibiotique topique se sont avérés efficaces et ont réduit le taux de hernie postopératoire de 11%.

EPIDEMIOLOGY OF BIOPSY CONFIRMED GLOMERULONEPHRITIS IN THE REPUBLIC OF MOLDOVA

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ABSTRACT

Objectives. Reporting the epidemiology of glomerulonephritis in the Republic of Moldova, based on histological diagnosis, and setting up the premises for the creation of the National Renal Biopsy Registry. **Methods.** The histological results of percutaneous renal ultrasound-guided biopsies, performed during the 30/03/2020-19/02/2023, were evaluated in the RCH "Timofei Moșneaga", Chisinau. Demographic characteristics, paraclinical parameters (serum creatinine, serum urea, glomerular filtration rate, nictemeral protein) and histological results were analyzed. **Results.** The outcomes of kidney biopsies performed on fifty-three patients were examined. The prevalence of renal pathologies in young and mature adults

was observed, with the average age being 46.2 years. Most of the examined patients were men (71.70%). The main indication for performing renal biopsy was nephrotic syndrome, present in 64.15% of patients. The dominant morphological variants of primary glomerulonephritis were membranous glomerulonephritis (50%) and membranoproliferative glomerulonephritis (20%). The most frequent types of secondary glomerulonephritis were lupus nephropathy (40%) and renal amyloidosis (30%). **Conclusions.** This study forms a first image of the current spectrum of glomerular kidney disease in the Republic of Moldova. It also serves as the basis for the creation of the National Renal Biopsy Registry, which can serve as a useful resource for health policy development.

VASCULAR ACCESS STRUCTURE IN PATIENTS TREATED BY SCHEDULED HEMODIALYSIS

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ABSTRACT

Introduction. The formation of a vascular access (VA) for hemodialysis (HD) and its long-term functionality remains a complex problem. Permanent central venous catheter (CVCp) is justified as the only chance for further dialysis treatment in such patients. Only 30-40% of CVCp remain functional after 1 year. **Aim of the study.** Were to evaluate the VA structure and to argument surgical tactics in the formation of permanent VA according to vascular reserves. **Material and methods.** In 2018-2022 in the Clinical Hospital "Timofei Moșneaga" were admitted 1275 patients with CKD st.V KDOQI, of which 547 (42.9%) for initiation of HD. Mean age 57.87 ± 2.43 years. Primary pathology in 41.22% was diabetic nephropathy, hypertensive nephropathy-19.3%, diffuse chronic glomerulonephritis-14.04%, chronic pyelonephritis-9.64%, Alport syndrome-0.87%, polycystic kidney disease-3.5%. With Duplex

ultrasonography was determined vascular reserves necessary for formation VA. **Results.** For all the patients was performed Duplex ultrasonography, in 78%. 722 interventions were for native AVF formation, and 141 for CVC installation. Primary VA in 692(95.8%) cases; secondary VA-brachio-basilar FAV in 8(1.11%) cases, radio-basilar AVF 10(1.38%) cases. In 141 patients were installed in superior/inferior vena cava. In 109 cases (77.3%) CVCp insertion was right jugular vein. In 18(12.7%) in superior vena cava via left jugular vein. In 14 (9.94%) patients in inferior vena cava via common femoral vein. After 2-3 hemodialysis sessions were performed with finding of adequate functionality. **The data obtained in this study are as follows.** Taking a careful approach to VA formation by considering the type and order of intervention can produce maximum outcomes, leading to enhanced treatment and quality of life for dialysis patients.

44 YEARS OF TREATMENT EXPERIENCE OF ACUTE KIDNEY INJURY IN THE PMI «TIMOFEI MOSNEAGA» REPUBLICAN CLINICAL HOSPITAL

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ABSTRACT

Introduction. Acute Kidney Injury (AKI) is a prevalent medical condition that is currently on the rise. This trend can be attributed to various factors such as social, economic, and medical, including the establishment of new intensive care units and hemodialysis, as well as the impact of the COVID-19 pandemic. AKI is a significant concern as it can lead to a decrease in life expectancy and an increased risk of developing or worsening Chronic Kidney Disease (CKD). **Material and Methods.** The study analyzed 44 years of AKI treatment experience at the Hemodialysis section of PMI «Timofei Moșneaga». The study group comprised of 1271 patients treated for AKI caused by various factors and was divided into two groups, with

each group comprising 22 years of data. **Results.** When comparing the two study groups, there was a significant increase in the number of patients in group 2, with a more than 2-fold increase observed (398 vs. 873 patients). Additionally, there was a significant increase in the average age of the patients in group 2 (30.4 ± 2.2 years vs. 59.1 ± 2.1 years). At the same time, the study also showed a nearly double increase in the mortality rate for group 2 (22.9% vs. 43.4%). **Conclusions.** The study showed a significant increase in the number of patients with severe forms of AKI, including those requiring hospitalization in intensive care units, over the last two decades. This has contributed to an increased mortality rate in this patient population.

THE DIAGNOSIS AND CONTEMPORARY TREATMENT OF BILIARY STRICTURES OF BENIGN GENESIS IN THE CONDITION OF A UNIVERSITY SURGICAL CENTER

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ABSTRACT

Introduction. Biliary strictures of benign origin are a common problem in clinical practice. The diagnosis and treatment of these strictures are challenging and require a multidisciplinary approach. There are various causes of benign biliary strictures, such as iatrogenic (post-cholecystectomy), inflammatory (primary sclerosing cholangitis), or traumatic (blunt abdominal trauma). **Aim.** The aim of this study is to evaluate the contemporary diagnostic and treatment modalities of biliary strictures of benign origin at a university surgical center. **Material and methods.** The integral prospective and retrospective cohort study analyzed the long-term results of biliodigestive reconstructions in 203 patients who underwent the procedure between 1989 and 2015. The patients included in the study were monitored for 2-5 years, taking into account the local anatomic particularities at the time of reconstructive surgery, as well as the remote clinical-evolutionary particularities, using the clinical Terblanche score. **Results.** The majority of the patients (73.3%) were female, and the mean

age was 54.9 years. Individualized reconstructive surgical treatment was performed based on the level of biliary strictures, with a preference for biliodigestive derivations on jejunal loop a la Roux. Treatment for benign biliary strictures, classified according to Bismuth's classification, included choledoco-jejuno-stomy in 86 (42.4%) cases of type I and II strictures, hepaticojejunostomy in 102 (50.2%) patients with type III strictures, and bihepatico-jejuno-stomy in 15 (7.4%) cases of type IV strictures. Remote results were classified as very good in 123 (60.6±4.41%) cases, good in 39 (19.2±6.31%) cases, relatively satisfactory in 18 (8.9±6.91%) cases, and unsatisfactory in 23 (11.3±6.75%) cases, based on the clinical-evolutionary classification. **Conclusion.** Biliary strictures of benign origin remain a challenging condition for diagnosis and treatment. Hepaticojejunostomy on Roux loop is the preferred surgical option for biliary strictures. An analysis of remote results showed that reconstructive interventions were clinically effective in 88.67% of cases. The success rate of treatment is high, but complications may occur.



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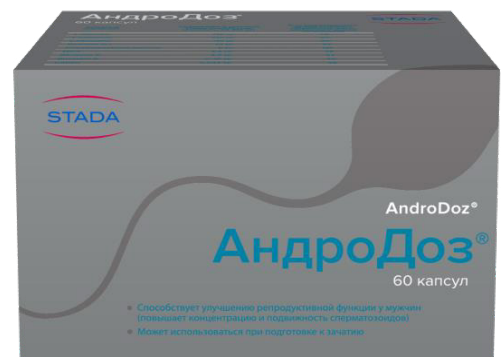


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