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Nicolae Testemitanu
State Medical and Pharmaceutical University



3rd International Medical Congress for Students and Young Doctors

MedEspera



Abstract Book

May 19-21, 2010, Chisinau, Republic of Moldova

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ABSTRACT BOOK

3rd International Medical Congress for Students
and Young Doctors "MedEspera"

May 19-21, 2010
Chisinau, Republic of Moldova

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Universitatea de Stat de
Medicină și Farmacie
«Nicolae Testemițanu»
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Welcome by the President of Honour



We are honored for having the possibility of hosting again, this year, the International Medical Congress for Students and Young Doctors MedEspera, which already became a major event in the life of all those who have devoted themselves to the research activity and the deep knowledge of different fields of medical science.

According to the WHO requirements, the European standards and time rigors, The State Medical and Pharmaceutical University "Nicolae Testemitanu" from Republic of Moldova is looking forward to the increase of the relevance, assurance of quality, virtue and efficiency in the scientific research and innovation process, to the cognitive and technological transfer both in the educational process, and the practical

applications, human resources development through and for research, connection of the research to the European system of values, which on long term will contribute to the recognition of the investigational successes of the University and to its integration in the European Scientific Area.

The International Medical Congress for Students and Young Doctors "MedEspera2010", which is already at its 3rd edition, enters organically in the process of realizing the major objectives. We can firmly affirm that this forum have initiated the forming of medical partnerships with teams of tenacious and inspired young researchers from a series of well known universities, assuring new opportunities for scientific cooperation and professional development to each participant and to the universities represented by them.

We are firm convinced that this edition of the congress will promote ideas of innovation, will prepare the support of new projects of productive collaboration among medical scientific communities for youth.

The participation in this important event of young medical students and doctors from different countries of the world demonstrates the fact that our university is well known and has enrolled in the community of European universities with prospering aspirations through means of some disciples professional prepared to the last word of scientific progress and with civic qualities that serve the spiritual prospering of all the peoples from this space.

Dear young colleagues!

I have the honor and the great pleasure of wishing you in the name of the academic community of SMPPhU "Nicolae Testemitanu" successes of resonance in the realization of the activity program of this forum for youth, and the joy of finding new friends, ideas comrades, to make unforgettable memories about our beautiful country, which like your origin countries, is putting all its hopes of a better future in its youth – always brave, inspired and brighten by the eternal love for close ones.

Looking forward for your new achievements!

**Rector Ion Ababii
M.D., Ph.D., Professor
Academician**

Suntem onorați de posibilitatea de a fi și în acest an gazda Congresului Internațional pentru Studenți și Tineri Medici MedEspera, for care a devenit deja un eveniment major în viața tuturor celor care s-au dedicat activității de cercetare și cunoaștere în profunzime a diferitelor domenii ale științei medicale.

În conformitate cu cerințele OMS, standardele europene și rigorile timpului, Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu” din Republica Moldova tinde spre creșterea relevanței, asigurarea calității, eficacității și eficienței în procesul de cercetare științifică și inovare, spre transferul cognitiv și tehnologic atât în procesul educațional, cât și în aplicațiile practice, dezvoltarea resurselor umane prin și pentru cercetare, racordarea cercetării la sistemul european de

valori, care pe termen lung, vor contribui la recunoașterea performanțelor investigaționale ale Universității și încadrarea ei în Aria Europeană a Cercetării.

Congresul Internațional al Studenților și Tinerilor Medici „MedEspera”, care este deja la a 3-a ediție se înscrie organic în procesul de realizare a obiectivelor prioritare. Putem afirma cu certitudine că aceste foruri au inițiat formarea parteneriatelor medicale cu echipe tenace și inspirate de tineri cercetători dintr-o serie de universități de renume, asigurând astfel noi oportunități de cooperare științifică și formare profesională fiecărui participant în parte, dar și universităților reprezentate de aceștia.

Suntem ferm convinși că și ediția actuală a congresului va promova idei de suflu inovator, va pregăti suportul unor noi proiecte de colaborare prolifică dintre comunitățile științifice medicale de tineret.

Participarea la acest important eveniment a tineretului medicinist din diverse țări ale lumii demonstrează faptul că Universitatea noastră este cunoscută și s-a înscris în comunitatea universităților europene cu aspirații de prosperare prin intermediul unor discipoli pregătiți profesional la ultimul cuvânt al progresului științific și cu calități civice ce servesc prosperării spirituale a popoarelor din acest spațiu.

Dragi tineri colegi!

Am onoarea și deosebită plăcere să vă urez în numele comunității academice a USMF „Nicolae Testemițanu” succese de rezonanță în realizarea programului de activitate al acestui for al tinereții, dar și bucuria de a vă găsi noi prieteni, camarazi de idei, de a vă face amintiri de neuitat despre frumoasa noastră țară, care asemeni țărilor Dvs de origine, își pune toate speranțele de un viitor mai bun în tinerii săi – mereu cutezători, inspirați și luminați de dragostea nestinsă pentru semenii.

Într-un ceas bun și noi realizări!

Rector Ion Ababii
Profesor universitar, dr. hab.,
Academician al AȘM

President of Honor

Ion Ababii – M.D., Ph.D., Professor, Academician

Rector of State Medical and Pharmaceutical University “Nicolae Testemitanu”

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Abstracts

Medical Fundamental Sciences Section

Anatomical and Clinical Variations of the Pancreato-Choledochal Junction of the Papilla Vater

S. Suman, Ala Suman

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Due to the widely used endoscopic procedures, the anatomical and clinical relationship of the pancreato-choledochal junction is of particularly interest. One hundred and thirty four bilio-duodeno-pancreatic specimens, with age range 18-85 years, without upper gastrointestinal pathology were examined. Methods – anatomical micro- and macropreparation, morphometry, common bile duct/duodenal angle measurement, histotopography and frequency appreciation of the pancreatic channel of the common bile duct were performed. Papilla Vater's localization: D1-10 (7.5%); D2 - 112 (83.6%); D3 - 12 (9%). The distance pylorus-Vater's papilla was: maximal-13cm; minimal-6cm; mean distance-9,4cm. Small duodenal papilla localization; D1 - 3 (18.8 %); D2 - 13 (81.2 %) total-11.9% (n=16). Relationship between small duodenal and Vater's papillas were: superior-posterior (n=1); superior (n=1); superior-anterior (n=12); anterior (n=2). The distance pylorus-small duodenal papilla: minimal- 4cm; maximal-9cm; mean distance-6cm. The distance between the papillary orifices: minimal-1,6cm; maximal-5cm; mean distance-2,38cm. Relationship between the common bile duct and the pancreas were: partially covered by a "tongue" of pancreatic tissue-44%; totally covered-30%; uncovered-5%; covered by two pancreatic tissue "tongues" - 9%. Vater's papilla localization on the duodenal wall: in the middle of the medial wall-99 (73.8%); on the junction of the medial and posterior wall-35(26.2%). The common bile/duodenal angle was examined in all cases and the following limits 20 ° -90 ° were appreciated; the vertical limits 20 ° -45 ° (75%), while the horizontal limits 45 ° -90 ° (25%). The distance papillary opening common bile duct penetration through the duodenal wall was: maximal-2.2 cm; minimal-1 cm; mean distance-1.5 cm. The multiple study possibilities provided by modern examination procedures allow establishing new conceptions regarding the anatomical variations of the pancreato-choledochal junction.

Anatomical and Surgical Relations of the Splenic Vessels and Pancreas

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Anatomical and surgical relationship of the splenic vessels and the pancreas is important under the circumstances of modern organ and blood-flow preserving surgical principles.

Topographical relationship of the splenic vessels and pancreas were studied on 36 corrosive and semicorrosive casts. The specimens were injected with autopolymerisant acrylic mass "РЕДОHT-03®" and "ПРОТАКРИЛ-М®". Solid:liquid ratio was 4:5 or 2:3, in order to obtain flexibility dibutylphtalat was added. In 93% cases a. lienalis was orientated inferior wit a length of 3-5 cm, being adherent to the pancreatic tissue. In 76% cases a. lienalis was located posterior to the mesopancreas, in 14% - on the superior pancreatic edge, while in 10% - intrapacreatic location was observed. In the distal portion of the pancreas, a. lienalis is isolated from the pancreatic tissue and located on superior pancreatic edge (80%) while in 20% - on the antero-superior pancreatic surface. The brunches of the splenic artery come across the splenic vein in oblique or vertical direction. The splenic vein was located in the middle and behind of the pancreatic body and tale in 17%, in 80% - closer to the superior pancreatic edge and in 3% closer to the inferior pancreatic edge. Splenic vein presents direct trajectory. Perivascular fibrous carcass is adherent to the pancreatic capsule by means of fibrous fibers, orientated along the pancreatic vessels. Conjunctive tissue is located between the perivascular fibrous carcass of the splenic vessels and the pancreas, fact that allows their separation during surgery. The established anatomical relation of the splenic vessels and the pancreas allows safe manipulations in caudal pancreatic resections, preserving the blood flow through the splenic vessels.

Antibacterial Properties of Naftochinone Derivatives

Andrei Bacinschi

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From ancient time was known that vegetable alkaloids of green peals and walnut's leaves have antimicrobial and antifungal effects. It was found that these structures of thewalnuts contain diferent compounds, derivatives of naftochinone, which were degradeted untill natural alkaloids or actulamentes obtained through the synthesis (nucina, benzil-alcoholic solution of juglone). Studies in vitro demonstrate that benzil-alcoholic solution of juglone in concentration 0,02%; 0,01%; 0,006%; 0,0003%; 0,0001%; 0,00038% and 0,00019% poses a pronounce antibacterial activity against gram-positive microorganisms (Staphilococcus aureus (Wood-209), Streptococcus faecalis) and gram-negative (Escherichia coli, Pseudomonas aeruginosa, Proteus vulgaris). Therefore, growing of majority of the microorganismal strains was inhibited by the juglone solution 0,00019% at the same time benzil-alcoholic solution manifests the same effect in double concentration gram-positive cocci (Streptococcus faecalis and Staphilococcus aureus, which was killed by benzil-alcoholic solution of juglone 0,00009%) with more sensibility to this preparate. Experimental researches in vitro elucidated that benzil-alcoholic solution of juglone in concentration 0,05%; 0,025%; 0,0125%; 0,0062%; 0,0031%; 0,00155%; 0,00077%; 0,00038%; 0,00019%; 0,00009%; 0,000045%manifestes antifungal properties against Candida albicans, Aspergillus niger, Aspergillus fumigatus, Penicillium. In these conditions activity against candidas is 4 times higher, against aspergilles and penicillium 2 times, more intensive than standart benzyl-alcoholic solution. These data demonstrates that antibacterial and antifungal action of the following preparate is determined as a synthetic derivative of naftochinone – juglone.

Acute Toxicity of Profetur and Metiferon

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Was studied the acute toxicity of substances metiferon and profetur by intraperitoneal administration in rats and mice. Preparations were introduced in different doses to determine the maximum tolerated dose and lethal absolute dose. At high doses of profetur animals became inhibited, apathetic, didn't react to stimuli audible and tactile intensity initially moderate and then high, caused tonic seizures. At high doses of metiferon, animals showed signs of peritoneal irritation, aggression, high excitability, tonic seizures, and stereotyped movements. Median lethal dose (LD₅₀) determination was made according to the method of Kerber. LD₅₀ of profetur is 630 mg/kg for mice. LD₅₀ of metiferon is 520 mg/kg for mice and 480 mg/kg for rats.

Association Study between Idiopathic Male Infertility and THE MTHFD1 G1958A SNP

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Couple infertility is a global health problem and according to the World Health Organization approximately one couple in seven is affected by fertility or subfertility problems. Male infertility in humans has been acknowledged as the cause of couple's inability to have children in 20-50% of total cases and although there have been much progress in understanding its etiology many of the case are still considered to be idiopathic, arising from an unknown cause. The MTHFD1 G1958A SNP (single nucleotide polymorphism) by altering the structure of the encoded enzyme, a trifunctional enzyme which catalyzes the interconversion of 1-carbon derivatives of tetrahydrofolate could lead to an abnormal folate status, hyperhomocysteinemia and altered DNA synthesis. The folate metabolic pathway is essential for DNA methylation, DNA synthesis, as well as methylation of various other substrates, thus a disruption to this cellular pathway may lead to major pathologic consequences. By means of molecular genetic techniques, respectively PCR-RFLP (Polymerase Chain Reaction – Restriction Fragment Length Polymorphism) we investigated the possible role of MTHFD1 G1958A SNP in the etiology of male infertility by comparing the distribution of this SNP in two groups: a group of 66 men with idiopathic azoospermia or severe oligozoospermia and a control group of 67 healthy men which have at least one child. Statistical analysis was performed by means of chi-square and Fisher's exact tests. The genotype distribution in the two groups was in agreement with the Hardy-Weinberg Law. We obtained the following genotype stratification: 18 (27.3%) G/G, 27 (40.9%) G/A, 21(31.8%) A/A in the cases group compared to 19(28.4%) G/G, 36(53.7%) G/A, 12(17.9%) A/A in the control group; with a p value of 0.23 (odds ratio: 1.85, CI 95%: 0.71-4.82) when comparing the mutant homozygous status (A/A) to the normal homozygous status (G/G). Because of the profound social, familial, medical and emotional outcomes that male infertility generates a greater emphasis should be made in understanding its etiology. After performing the first study on a Romanian population, due to the similar distribution of the studied polymorphism in the two groups we can state the MTHFD1 G1958A SNP is not a risk factor for idiopathic male infertility in our study group.

Body Piercing - The Threat of Surgical Complications

Valeria Homchenskaya, Yury Zhernov

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There were studies describing a variety of surgical complications after a cosmetic procedure, body piercing in different anatomical region. Many surgical diseases such as meningitis, brain abscess, acute purulent appendicitis, infective endocarditis, developed against the background of bacteremia pathogens for which it became a gateway piercing infection. Unfortunately, often such etiopathogenic relationship difficult to establish and trace, so is relevant to prove the experimental surgical complications of body piercing procedure. The aim of this work was to study the effect of piercing on the effects of morpho-functional state of immunocompetent target organs (lymph nodes, spleen, thymus, liver, heart, etc.). The experiment was conducted on laboratory white rats weighing 150-200 g, which was carried out procedure piercing metal structures - implants (brand name "bar" or a "Bärbel") in different anatomical region. In composition, implants made of various metals and alloys: surgical steel, silver, titanium. The duration of the experiment ranged from 35 to 45 days. Conducted histological examination of spleen tissue and lymph nodes of inguinal and axillary areas, para-aortic lymph nodes, thymus, heart, and liver tissue in the area of implantation (anterior abdominal wall, pubic area, neck and scapular spinal, language) showed that in all organs target-present in varying degrees of severity of alteration, edema and diapedesis of leukocytes, and in the tissues of the implantation zone - wound canal - pronounced inflammation and proliferation. Executed study revealed an inflammatory reaction in different areas of the body of the animal, which proves the possibility of surgical complications during the procedure piercings in different anatomical areas.

Carnal Art

Emre Cem Esen, Orçun Ortaköylü, Sancar Alp Ovali

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We researched a modern art created by Orlan Precol which is called Carnal art. Our research is mostly Internet based. Orlan brought classical means of art to a whole new level. She expressed herself by having surgical procedures on her face, as if she was the canvas. She took some parts from strong female figures from history and mythology, and she put those parts in her face. For example she took Mona Lisa's forehead, Venus's chin and many others. By using Carnal Art, Orlan aimed rebelling against the view of idealized beauty as she is a feminist, being free in the way that she approaches her art, observing her body opened and seeing her real innermost body and finally rebelling against the norms of public and the rules of art. Orlan not only had operations, she also painted her new images after each operation, and made a movie of her operations that she decorated and performed in them. There are two approaches to this subject. She brought art and medical science together. Secondly, it must be discussed whether it is ethical to have the operations without any medical needs. Carnal art was not Orlan's first creation. Before she had surgical operations she had come a long way. We also researched the steps lead her to Carnal art.

Electrical Stimuli Shape Parametres Optimization in Electroanalgesia

Ștepa Valentin

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State Medical and Pharmaceutical University "Nicolae Testemitanu", Chisinau, Republic of Moldova

The transcranial electrostimulation (TES) is a procedure based on the effect induced by electrical current when passing through the brain, through electrodes placed in the scalp. Several attempts were made to produce and maintain a state of general anesthesia, over more than 70 years, by administering different parameters of electrical currents, applied to the skin of the subject's head (i.e., transcranially and transcutaneously). However, due to the high intensity of current required to induce general anesthesia, these efforts were abandoned and superseded by attempts to produce analgesia, rather than general anesthesia, by application of electrical currents. The experiments were conducted on two lots of ten rats each (Wistar, males, 150-200 g each), all under general anesthesia, using Tiopental 50mg/kg. The carotid artery was catheterized and the catheter connected to a pressure measuring device, for the observation of the blood pressure deviations. The blood pressure was measured before TES, after pain stimulation, and after TES and painful stimulation. A rise in the blood pressure parameters would indicate an intense pain sensation. That is explained by the fact that at pain stimulation a "fight or run" reflex occurs, that is mainly accomplished by the sympathetic nervous system. The data obtained revealed a tendency of normalization in the blood pressure registered after pain stimulation when using rectangle shaped current. The parameters registered while using the triangle shaped current showed no notable changes before and after TES. The results indicate to the analgesic effect that can be obtained by TES with rectangle shaped currents. The triangle shaped currents showed no notable analgesic effect upon usage.

Features of Changes in Oxidant/Antioxidant System of Alveolar Macrophages Exposed to Cigarette Smoke

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Oxidants and reactive oxygen species (ROS), contained in cigarette smoke (CD), can initiate oxidative stress, which results from oxidant/antioxidant imbalance. The aim of this study was to investigate the influence of cigarette smoke extract (CSE) on ROS production, lipid peroxidation (LPO) level and antioxidant enzymes activity in alveolar macrophages (AM) depending on the tar concentration in CSE and the duration of its affection. AM were isolated from bronchoalveolar lavage fluid of rats and incubated for 1 h and 24 h in a medium with the addition of varying concentrations of CSE – 0,7 g/L, 1,4 g/L and 2,1 g/L. The activity of free radical processes was evaluated on the basis of the determination of hydrogen peroxide (H₂O₂) concentration and also the concentration of LPO products reacting with thiobarbituric acid (TBA). The status of the enzymatic antioxidant system of AM was assessed by the level of superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPx) activities. H₂O₂ concentration, TBA-active LPO products level and also SOD, CAT and GPx enzyme activities were determined spectrophotometrically. It is found out that with the joint incubation of AM and CSE for 1 h the increase in H₂O₂ concentration in cells and in incubation medium occurs due to the increase in its production in AM 2 times, while during incubation for 24 h - 3,4 times. Another reason for the increasing in H₂O₂ concentration in AM is the reduction of the activity of the enzymes (CAT and GPx), which carry out the process of H₂O₂ decomposition. SOD activity in AM decreases already after the incubation for 1 h in a medium enriched by tar of a tobacco

smoke under the concentration of 0,7 g/L by 16%, 1,4 g/L - 24%, 2,1 g/L - 30%. Even more pronounced suppression of SOD activity occurred during incubation for 24 h, which with the increasing tar concentration in CSE-medium was 70%, 80% and 86%, respectively. CSE has also provided the marked inhibitory effect on CAT activity. After the incubation for 1 h CAT activity was significantly reduced compared with control values (by 22%, 51% and 71%, respectively). After the incubation for 24 h CAT activity under the influence of CSE was reduced to zero. The level of GPx activity was reduced after the incubation for 1 h under the tar concentration of 0,7 g/L by 22%, 1,4 g/L - 39% and 2,1 g/L - 64% ($p < 0.05$). After the incubation for 24 h the average inhibition of GPx activity regardless of the tar concentration in CSE medium was 65%. TBA-active LPO products contents in AM increased 2 times during incubation of cells with CSE for 1 h (3,10 nmol/10(6) cells vs 1,54 nmol/10(6) cells, respectively, $p < 0.05$) and 2,7 times during incubation for 24 h (4,25 nmol/10(6) cells vs 1,92 nmol/10(6) cells, respectively, $p < 0,05$). The present findings indicate that cigarette smoke causes the increase in ROS production accompanied by the decrease in the activity of key enzymes of antioxidant protection.

Female Attractiveness in Terms of Certain Facial Features and Shape

Fadur Alina-Daniela, Chiper Maria-Alexandra

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Female beauty in terms of facial attractiveness has been a subject of many studies in the past decades. However, which facial features affect the rating of attractiveness is still a matter of debate. Human face reflects physiological status, sexual dimorphism, genetic patterns and certain individual features that make it unique. The authors investigated facial features in a sample of 127 female subjects and 36 male viewers (medical students aged between 19-20 years) that rated attractiveness by using a questionnaire. Classical and geometric morphometrics allowed us to measure and localize the differences in terms of shape between women considered attractive or average by their male colleagues. A number of 24 surface landmarks were digitized on frontal view digital photographs of the subjects. The obtained sets of landmarks were analyzed by means of geometric morphometrics and the average female face was compared to the average attractive face. Attractiveness was proved to be associated with fluctuating asymmetry and differences in shape of the regions that are subject to sexual dimorphism (middle and lower face). Big eyes, small nose, gracile chin and larger lips are features that characterize attractive women while shape changes that are associated with a masculine face (pronounced lower face, elongated forehead) make a woman unattractive. Symmetry is strongly associated with attractiveness as symmetrical faces tend to be preferred by male reviewers. Asymmetry implies moving away from the average and that is why it is related to unattractiveness. Our findings could offer a hint on physically explaining the "first sight" reaction when meeting a person. Keywords: facial attractiveness, geometric morphometrics, sexual dimorphism.

Fracture of Nasal Bones

Oxana Sireteanu

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Fractures of nasal bones require careful assessment for any aesthetic as well as functional impairment. Early diagnosis and correct treatment is advisable in these cases. For determination of

the frequency of fractured nasal bones, the incidence according to sex, the causal factor, the association with cranio-cerebral trauma, the trauma of the trunk and extremities, drunkenness etc. has been made a statistical paper-work within IMSP CNSPMU per 2009, ascertaining that fractured nasal bones represent a diverse clinical picture, which is very frequent associated with other types of trauma, and which in most cases (almost a half of all the cases – 44,58%) is caused by aggression. The implemented treatment in fractured nasal bones without displacement is a conservative one, while in fractured nasal bones with displacement needs a surgical intervention in good time with the repositioning of the displaced bones. This is why the familiarization fractured nasal bones particularities offer the possibility to put the diagnosis in time, to implement the right treatment and to elaborate the measures of prophylaxis.

General Issues on Premedication

Prodan Irina

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Premedication refers to a drug treatment given to a patient before a medical procedure (surgical or invasive). Some groups of pharmacological substances are used as premedication: 1. hypnotics (barbiturates, benzodiazepines) 2. psychotropic remedies (tranquilizers – benzodiazepine group, neuroleptics – phenothiazine and butirofenone derivates) 3. antihistamines remedies 4. opioid analgesics 5. colinoblocantes remedies. 1. a) Barbiturates are used as premedication before the night of surgery in combination with tranquilizers, to accelerate and improve their sedative and hypnotic effect. Phenobarbital and etaminal – sodium are long – acting barbiturates, which assures a quiet sleep throughout the night. b) Benzodiazepines: nozepam, diazepam. On the on the evening before the operation the patient is given hypnotic barbiturates in combination with or without association (10 – 15 mg) 30 minutes before sleep. This provides calmness uptown sleep, but without combination with barbiturates hypnotics do not guarantee sleep till morning. 2. Tranquillizers – benzodiazepine: diazepam, fenazepam. An important condition for an anti – stress effect is the administration of tranquillizers in the evening before the operation, and then 2 times in the morning: immediately after wakening up (6 – 7 o'clock) and 40 – 45 minutes before general anesthesia. Neuroleptics provide antipsychotic effects compared with tranquilizers, which give only psihosedativ effect. Phenothiazines. One of the strongest representatives of the derivatives of phenothiazine is chlorpromazine, which is used less in premedication due to the danger of adrenolytic effect of arterial hypotension. Taps butyrophenone in premedication is used less than diazepam, because, it causes emotional distress, anxiety, irritability. 3. Antihistamine remedies. As histamine H1 – receptor blockers are used: diphenhidamine (dimedrole), cloropiramine (suprastine). This medicine is given with other remedies premedicated about 30 – 40 minutes before general anesthesia, especially to patients predisposed to allergies. Histamine H2 – receptor bloklers such as ranitidine or cimetidine may be used in order to reduce secretion of glands before general anesthesia to avoid Mendelson syndrome. 4. Opioid analgesics Morphine and its analogues are used only in cases of pain. Administration of these medicines is allowed only with tranquilizers. 5. Cholinoblocant remedies Atropine is the classic representative m – colinolitics. It is used in: any type and intraoperative bradycardia; before anesthesia with diethyl ether, halothane; with the neostigmine in decurarisation. Conclusion: Tranquilizers are the most important element in premedication. The other elements of premedication do not assure by themselves an effective psycho – emotional inhibition. They can be used as adjuvants of premedication to obtain special effects.

Glenoid Labrum Study. Anatomic and Histologic Implications in Bankart Repair

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Glenohumeral joint particular anatomy and biomechanics raise many questions about its implication in the aetiology and pathophysiology of shoulder instability. We proposed ourselves to perform an anatomic and histologic study of the nervous endings and receptor structures inside the glenoid labrum emphasizing the anatomic and neurophysiologic importance of treating Bankart lesions. We performed minute anatomic dissections and harvested glenoid labrum from 47 fresh cadavers with no lesions of the shoulder, at the Anatomy Department of the University of Medicine and Pharmacy from Craiova; we studied micro anatomic the stereo topography of the nervous endings and receptor structures using the Cajal-Nonidez argentic impregnation staining method and we examined the serried section at a Nikon research microscope. We also made in vivo observations of the labrum morphology during shoulder arthroscopy. Our observations revealed: spiral neurofibers and Pacini lamellar corpuscle at the posterior and inferior aspect of the glenoid labrum; grouped neurofibers first described by Rollette at the anterior and superior aspect; encapsulated nervous endings type II (A, B) from Freeman and Wyke classification at the junction area between the labrum and the long biceps tendon. The presence of mechanic receptors inside the glenoid labrum and especially at the insertion of long biceps tendon brings up the idea for the existence of some neuron modulating processes associated to movements with the nervous center at C5-C7 cervical neuromeres. The presence of mechanic receptors inside glenoid labrum opens new perspectives in the knowledge of neurocybernetics mechanisms involved in shoulder joint complex motions; it also emphasize the importance of Bankart repair followed by functional therapy in order to restore and to retrain the damaged proprioceptive reflexes.

Indication and Genotyping of Rotaviruses Group in Children on the Territory Of Ukraine

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According to the literature, diarrhoeal diseases can be caused by viruses that belong to different species (rotaviruses, caliciviruses, intestinal adenoviruses, astroviruses), but rotaviruses are most often the cases of severe diarrhoea with fatal consequences. The aim of the present study was the investigation of rotavirus circulation among children under 5 years old, hospitalized with severe diarrhoea in different regions of Ukraine and rotavirus genotype identification. Stool specimens were selected from 600 young children under 5 year old, hospitalized in 6 Ukrainian regions: South, North, West, East, Center and Kyiv from 2006 to 2009. The detection of rotaviruses (group A) was performed by chromatographic immunoassay (CITO TEST ROTA, Test Biotec. S.L., Spain). All specimens positive for rotaviruses were confirmed and identified by RT-PCR (AmpliSens® Rotavirus-290, InterLabService, Russia). It was shown that proportion of severe diarrhoea, caused by rotaviruses in 5 regions of Ukraine in the period of study was: in the East - 10% in the South - 44,5% in the North - 24,8% in the West - 45,4%, in the Centre - 21,1%. The winter-spring seasonality was confirmed, and it was found that in the age group of children under 3 years the average frequency of rotavirus identification was the highest and amounted to $70,1 \pm 4,0\%$. As a result among 210 positive

samples it was detected G-genotype in 182 cases (86,7%) and P-genotype in 176 cases (83,8%). P-genotype and G-genotype were not identified in 3,3% and 4,3% of samples, respectively. In 5,7% of samples both genotypes were not identified. It was shown that during each epidemic season from 2006 to 2009 in Ukraine G1P[8] was the dominant genotype, which varied from 30% to 80% of all positive samples. The second most distributed genotype was G4P[8] (40%), third - genotype G3P[8] (25%), and the fourth - G2P[8] (11%). During the epidemic period 2006-2009 in Kiev, for the first time genotype G9P[8] was identified in 5% of cases. Thereafter it was found seldom during 2007, then appeared in rare cases. In some clinical samples multiple genotypes were identified: G1P[8] + G3; G1P[8] + G2; G3P[8] + G4. Genetic variant G2P[4] was the cause of rare cases of diarrhoea during the studied period. For the first time the features of rotavirus group A circulation in Ukraine among children under 5 years old were shown. The obtained data of the major rotavirus genotypes has a great importance in deciding the implementation of specific prevention of rotavirus diarrhoea in Ukraine.

Investigation of Antibiotic Resistance in Enterobacteriaceae, Acinetobacter and Candida Species

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An increased level of hospital infections resistance and emergence of new resistance mechanisms in the conditions of widespread antibiotics use makes serious demands to the quality of laboratory diagnostics and organization of microbiological monitoring. The objective of the research: to determine the frequency of the resistant to antibiotics strains of Enterobacteriaceae, Acinetobacter and Candida species; with the help of phenotypic methods to identify the production of extended-spectrum b-lactamases (ESBL) of different classes and other enzymes and mechanisms providing resistance. Material for the investigation was presented with 102 strains of *K. pneumoniae*, *E. coli*, *A.baumannii* and *Candida* spp., selected from the patients with different pathology treated in therapeutic departments. The determination of selected isolates was performed with the help of disk-diffusion method according to the recommendations of Clinical and Laboratory Standards Institute (CLSI). For identification and results control of the sensitivity identification an automatic system Vitek 2 (Bio Merieux) was used. 27% of the Enterobacteriaceae and Acinetobacter strains showed resistance to penicillins, 3d and 4th generations of cephalosporins and sensitivity to cephamycins what confirms the production of ESBL belonging to molecular class A. 16,7% of the same bacteria were resistant to 3d and 4th generations of cephalosporins, cephamycins, so to reveal ESBL of C AmpC type. 8,3% of the strains that appeared to be *Acinetobacter baumannii*, produced carbapenemases and in this regard were characterized by a high resistance level to 3d and 4th generations of cephalosporins and carbapenems. 16,7% of the strains produced penicillinases and 2,1%- cephalosporinases. Aminoglycoside-modifying enzymes were found in 33,3% cases. Resistance to fluorquinolones was equal to ciprofloxacin, norfloxacin and ofloxacin and was noticed in 38, 5% of the tested strains. *Candida* species were more resistant to azole antifungal drugs (50% of fluconazole-resistant strains) then to polyens (20, 3% nystatin-resistant) according to disk-diffusion method. The results of *Candida* resistance obtained from disk-diffusion method were not confirmed by the following Vitek study that can be explained by the absence of CLSI disk-diffusion method recommendations for non-albicans strains.

Influence of Low-Rate Respiration on Human R-R Interval Power Spectra

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Influence of respiration on human R-R interval power spectra was studied using controlled respiration of 6-15 breaths per minute. Our study was designed to test how the influence of lower-rate respiration than 6 breaths per minute could increase Power Spectra of Human R-R interval. Fourteen men and one woman, ages 17-26 years, participated in this study. Before the recording each subject was trained how to breath so as to obtain the necessary results. Measurements. We recorded digital data (ECG and pneumotachogram) using Biopac Student Lab system at respiration rate of 4 and 15 (normal rate of respiration) breaths per minute. Experimental protocol. Subjects remained supine throughout the recording and breathed in the following 6 fixed sequence each of 3 minutes including: 1) Normal respiration; 2) Normal thoracic respiration; 3) Normal abdominal respiration; 4) Low-rate respiration 4 breathes/minute; 5) Low-rate thoracic respiration 4 breathes/minute; 6) Low rate abdominal respiration 4 breathes/minute. Tidal volume was maintained at 1 liter for normal respiration and between 2,2-3 liters for low-rate respiration. Data analysis. Power spectra of human R-R interval was derived using custom program based on Matlab 7.0. There were not recorded major differences on how age or/and weigh influenced power spectra on R-R interval. For men it was much harder to maintain Low-rate thoracic respiration, none of them had better results than woman. Influence of mouthpiece. The Tidal Volume increased by reason of mouthpiece dead space (about 100 ml). This resulted mainly at the start of the registration. Influence of self-awareness. Even if all subjects had a 5 minute training on respiration pattern, breathing errors were recorded, mostly at low-rate thoracic respiration of 4 breathes/minute. No statistically significant differences were present among mean R-R interval in all respiratory tests. Power spectra of R-R interval was significantly greater ($p < 0.05$) at respiratory rate of 4 breaths per minute than at normal rate of 15. Low frequency power spectra of R-R interval (0.06- 0.14Hz) also were significantly greater at low respiratory rate. Types of respiration (usual, mostly thoracic or mostly abdominal) hadnâ€™t influenced the R-R interval power spectra. Complains. All of the subjects complained about the breathing through mouthpiece (not being able to breathe in fully and shortness of breath). Respiratory recording methods that require a mouthpiece are known to alter the ventilation. Therefore tidal volume rose. It was noticed more breathing irregularities (sighs and pauses) when self-awareness increased (by reason of noise, move, etc). This also altered respiratory pattern.

Isothioureic-Benzyturon Derivative with Hypotensive Action

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Benzyturon substance was used in the experimental study in dose of 2 mg/kg dissolved in 1,5 ml fiziological solution, which was administrated intravenously to 11 normotensive cats, with weight 2-4 kg, anesthesiated with urethane solution of 30% (1g/kg), administrated intraperitoneal, and subsequent with monitorization of blood pressure, the frequency of heart contraction and breath, at different intervals of time during 7hours. Initially, the blood pressure was 135 mmHg, the frequency of heart contractions (FHC) -157,2 beats/minute, breathe -96,9 breaths/minute. After administration of benzyturon substance the level of blood pressure was reduced and frequency of heart contractions compensatory increased. The results after administration of medication at various time intervals were the following: on 2 minutes with -7,1% and +9,6%; on 15 minutes with -10,3 and +20,2%; on 30

minutes with -17,1% and +19,1%; on 60 minutes with -21,8% and +18,7%; on 120-240 minutes, reduced blood pressure was stable with -29,4 and the frequency of heart contraction remain in initial limits; at 300-360 minutes was found a maximum hypotensive effect of -38,9%, return to the initial level to the 6th hours the same FHC. Breath initially shows a tendency to tachypnea to over 30 minutes, which reaches over 2 hours the initial fissures following that and then to shrink over 5 hours till the minut values (54,7 +/- 7,6 compared with 96,6 +/- 7,8; $1 < 0,05$). Isothioureic-benzyturon derivative shows marked hypotensive action, slow and long with maximum effect and stable between 2-7 hours after administration, with a moderate reflectory tachycardia.

Prospects for the Development of Chemotherapeutic Drugs on the Basis of Humic Substances Silt Muds

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Purpose: Study of the influence of drugs peloid humic series and their derivatives on various types of microorganisms, as a promising basis for the development of chemotherapeutic drugs. **Materials and methods:** We investigated the various fractions of humic substances low mineralized silt sulphide muds (peloids) lake Molochka sanatorium "Sergievsk mineral water": hymatomelan [HMA], fulvic [FA], humic [HA] and humus [HsA] acid (concentrations 0,25%, 0,1%, 0,01%). We investigated the chelate complexes of humic substances peloids with ions of mercury (II), silver ions, iron ions (II), zinc ions in the same concentrations. To determine the antimicrobial activity of substances was used the test-cultures of microorganisms: 1) Gram-negative bacteria - *Escherichia coli* (ATCC 25922), *Pseudomonas aeruginosa* (ATCC 27853). 2) Gram-positive bacteria - *Staphylococcus aureus* (ATCC 25293), *Bacillus subtilis* (ATCC 6633). 3) Yeast-like fungi - *Candida utilis* (LIA-01). Antimicrobial activity of peloids preparations was determined by their diffusion in Mueller-Hinton agar, which was carried out payment of the investigated test-culture. Active component of the derivatives of humic substances is a metal cation. Options humic components: 1. Masking bactericidal component; 2. Tropism drug to microorganisms; 3. Increased permeability through biological membranes; 4. Reducing the toxic effect of metals on macro-organisms. The results showed that hymatomelan, fulvic, humic, humus acid peloids not have lytic activity against the studied microorganisms. But often a static activity to an increase in *E. coli*, *Ps. aeruginosa*, that is, all that we have studied Gram-positive microorganisms. Stimulate the growth of the investigated Gram-positive microorganisms - *St. aureus*, *B. Subtilis* with respect to the control. Also show catalytic activity to the growth of *C. albicans* at concentrations of less than 0.1%, and no effect at concentrations more than 0.1%. All investigated chelate complexes of humic substances with ions of mercury (II), silver ions, iron ions (II), zinc ions in all investigated concentrations exhibit lytic activity against the test-cultures of microorganisms. The lowest antimicrobial activity among the studied peloids preparations showed fulvic acid chelate complexes with ions of zinc and iron (II) - a zone of suppression of microbial growth less than 9 mm. The greatest antimicrobial effect of chelate complexes have 0,25% of humic substances: *E. coli* (zone growth suppression $20 \pm 0,1$ mm) - $HsA * Hg^{2+}$; *Ps. aeruginosa* ($20 \pm 0,1$ mm) - $HA * Ag^{+}$; *St. aureus* ($24 \pm 0,1$ mm) - $HA * Hg^{2+}$; *B. subtilis* ($16 \pm 0,1$ mm) - chelate complexes of humic substances * Ag^{+} ; *C. utilis* ($25 \pm 0,1$ mm) - $HA * Ag^{+}$. The results characterize several humic preparations and their chelate complexes, as the optimum components for further elaboration on their basis of chemotherapeutic drugs of natural origin.

Rare Variants of Obturatory Artery

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Even more often at performance of morphological researches it is possible to meet a variant of structure of certain organ, having differences from the classical description in textbooks and grants. In such cases it is expedient to inform on it applied medicine, in order to avoid difficulties and complications during diagnostics and treatment. The vascular channel, likely, concerns to most variable system in human body. Presence of "a death crown" is one of "nonclassical" variants of the given vessels. The obturatory artery was a subject of special attention of anatomists and surgeons after publication in the middle of XIX century of cases of its wound at operations concerning the restrained femoral hernias. On literary data the frequency of occurrence "abnormal" a. obturatoria, departing from branches of external iliac artery, can fluctuate from 1,3% to 25% of cases. The origin of the obturatory artery from inferior epigastric meets in 2,6-14,8%. On our data, the obturatory artery is considered one of the most variable pelvic vessels (variability coefficient - 11,6%). In most cases (66%) the given vessel concerns to the system of internal iliac artery, however, its most frequent source (33%) is inferior epigastric artery originating from a. iliaca externa. We find out a number of origins of the a. obturatoria, earlier not described in the literature: 1) a corner between internal iliac and umbilical arteries (in newborns); 2) one trunk with the inferior gluteal artery; 3) one trunk with a iliolumbal artery. Thus, results of our research have shown, that in spite of the fact that more often the obturatory artery originates from branches of the internal iliac artery; nevertheless the inferior epigastric artery is the most frequent source, of all possible. The given fact is necessary for considering, at carrying out of surgical manipulations in the region of a groin.

The origin of lymphatic vessels involved in metastasizing of neoplastic cells in squamous cell carcinoma of the uterine cervix

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In many human malignant tumors the lympho-vascular metastasizing represents the main way of tumor-modified cells spreading. Lymphatic vessels invasion by the neoplastic cells leads to the involvement of regional lymph nodes (RLN) in tumor process. It is well known that metastatic damage of RLN correlates with poor outcome. Tumor cells secrete biological active substances that lead to the appearance of newly formed blood network which keeps up the metabolic activity inside the tumor. Tumors also produce growth factors for lymphatic endothelial cells. Until now it is not clearly established, tumor cells invade the preexistent peripheral lymphatic vessels or invade the new-formed vessels which are formed during tumoral lymphangiogenesis. To establish the origin of lymphatic vessels (LM) involved in metastatic spreading of neoplastic cells in squamous cell carcinoma (SCC) of the uterine cervix. There were investigated the postoperative material taken from patients with SCC of the uterine cervix (n=39). All material was stained with hematoxylin Harris and eosin. For immunohistochemical (IHC) procedure were selected only the cases with intravascular tumor emboli (n=30). Two monoclonal antibodies were used: anti D2-40 (RTU clone, DakoCytomation, Denmark) to highlight the LV and anti Ki-67 (DakoCytomation Carpinteria, CA, USA) for identification of proliferated endothelial cells. The IHC reaction was performed in accordance with Avidin-Biotin technique (LSAB+/Double Stain). Nuclei were stained with Lillie's modified Hematoxylin. The entire IHC procedure was performed with DakoCytomation Autostainer.

There were counted only the LV with the tumor emboli inside. The LV which were positive only for anti D2-40 were considered to be the preexisting vessels, and that LV which were positive for both of the antibodies were considered to be the newly-formed, tumor-derived vessels. LV were found in intratumoral and peritumoral areas. All intratumoral LV were small and flattened, without lumen. Lymphatics placed at the periphery of tumor nests were relatively large and perfusable (with well distinguished lumen). There were found 24 lymphatics with emboli inside. All of them were placed in the peritumoral area. Were detected 11 (45,83%)LV with proliferated endothelial cells. Size of proliferated LV were smaller than size of preexisting lymphatics. There were not found any correlation between the distance of proliferated and preexisting LV from the invasive front of the tumor. Relatively few studies addressed to lymphangiogenesis in neoplastic lesions of the uterine cervix. From them, some addressed to the prognostic value of the lymphovascular invasion in relation with lymph node status and systemic metastasis. It was found that metastases is significantly higher in patients with lymphovascular invasion than in cases without, as otherwise expected. D2-40 is a specific and the most sensible marker for lymphatic endothelial cells. Ki-67 is a nuclear marker which is positive in dividing cells. LV with metastatic emboli were found only at the periphery of the tumor mass. These data show that peritumoral LV are involved in metastatic spreading of tumor cells. Formation of new LV begins with proliferation of their endothelial cells. We use Anti Ki-67 to highlight these mitotically active cells. The size of LV with Ki-67 positive cells were smaller than the size of preexisting LV, which shows that these lymphatics are younger. The high amount of newly-formed LV with emboli inside proves that tumor derived lymphatics participate in metastatic dissemination. Conclusions. 1) Lymphovascular metastasizing in squamous cell carcinoma of the uterine cervix occurs through peritumoral LV 2) neoplastic cells disseminate either through preexisting LV and newly-formed.

Morphological features of lymphatic microvessel density depending on stage of cervical neoplasia

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Incomplete characterization of the uterine cervix cancer from molecular point of view represents the main problem for the use of a proper therapy in this disease. Few data are available about D2-40 expression in lymphatic endothelial cells and also in tumor cells from uterine cervix cancer. The aim of the present work was to study the involvement of lymphatics in tumor progression of the uterine cervix lesions. There were investigated targeted biopsies of the uterine cervix and specimens taken from conization in patients with macroscopically detectable lesions. We used D2-40 immunostaining to highlight lymphatic vessels from squamous cell metaplasia (n=17), cervical intraepithelial neoplasia (n=11), carcinoma in situ (n=3), microinvasive carcinoma (n=4) and invasive carcinoma (n=19) using Avidin-Biotin technique (LSAB+). Type and distribution of lymphatics in different lesions of the cervix were analyzed. Type and distribution of LVs (lymphatic vessels) in the normal uterine cervix. In the superficial lamina propria of the normal cervix, LVs were very rare and small or even absent. In all normal cases, LVs, if found, were located at some distance from the epithelium. In the deep lamina propria we noticed the presence of D2-40 positive vessels with density that ranged between 5 and 6.6 vessels/ $\times 200$, with an average of 5.8. In the muscle layer, LMVD (lymphatic microvessel density) ranged between 5.3 and 7, with an average of 6.15. Type and distribution of LVs in precursor lesions. In squamous cell metaplasia the distribution and number of LVs was not significantly different from results found in the normal cervix. A significant increase in the number of LVs was found in cases with cervical intraepithelial neoplasia high-grade. In these cases, we noticed the presence of many LVs located close to the epithelium and was associated with a

significantly increased expression of D2-40 in basal cells. LMVD in CIN ranged between 10.3 and 19.3 with an average of 14.8 vessels/ $\times 2005$. Lymphatics in microinvasive and invasive carcinoma. Intratumoral LVs were found in both microinvasive and invasive carcinoma. Intratumoral LVs were very rare, small, with narrow lumen, irregular wall and without content of tumor cells. Peritumoral LVs were significantly more numerous, large, sinuous, and occasionally contained tumor cells. LMVD in cases with invasive carcinoma ranged from 0 to 12.3, with an average of 6.15. In microinvasive carcinoma, LMVD has values ranged between 3 and 11, with an average of 8.15. We found significant correlation between lymphatic microvessel density and tumor grade and particular distribution of the lymphatics linked to histopathologic type of the lesions. Our results showed differences in the distribution and D2-40 expression in lymphatic vessels and tumor cells from the cervix lesions linked to histopathology and tumor grade.

Several Anatomical Features of the Orbits According to the Skull Sizes

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The orbit is not only as a receptacle for the eye, but also as one of the main communicative structures, that has numerous communications with the facial and brain skull areas and formations. The aim of the study: to examine the volume of orbits, the area of the natural openings of the skull. The material of the study: 26 human adult skulls of both sex, without features of mechanical damage and diseases of the skeleton from the craniological collection of the human anatomy department of the EI "Grodno State Medical University". Craniometrical examination was performed according to standard methods accurate within 0,1 mm. We studied: the orbital height, the width, the depth and the volume, the area of the openings. The results of the study: the right average orbital volume – 22,89 cm³, the left – 24,72 cm³; the area of the right canalis opticus – 19,5 mm², the left – 18,14 mm², the right foramen rotundum – 8,5 mm², the left – 7,55 mm²; the right foramen ovale – 24,79 mm², the left – 24,4 mm²; the right foramen caroticum externum – 34,46 mm², the left – 34,54 mm².

Study of Ultrastructure in Mitochondria of Acinar Cells in Demarcation Line in Experimental Pancreatic Necrosis

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The objective of the study was to analyze the ultrastructure in mitochondria of acinar cells in demarcation line in experimental pancreatic necrosis. Investigations were done on 3 dogs. Pancreatic necrosis was formed by injection of 1% potassium permanganate solution in pancreatic parenchyma. Materials for electronic microscopy were taken from animals 3 hours after potassium permanganate injection. In comparison to the mitochondria of pancreacyte in peripheric area, in demarcation line these organelles had a round, global form, whereas extended mitochondria weren't found. Instead of a correct mutually parallel arrangement, most of the crists were reduced, in disorder, or even absent. Mitochondrial matrix was light as used for globe extension. The volume of mitochondria increased in demarcation line, but the common length of internal membranes was double reduced. The length of internal mitochondrial membranes mostly adequate reflects the respiratory status and synthesis of ATP in pancreacytes. Mitochondria of acinar cells in demarcation line are characteristic for

organelles with mismatched oxidation and phosphorylation which conductes to reduced energy generation and consequently to pancreatic necrosis. By damaging the mitochondrial membrane cytochrome C get lost, that is one of the components of respiratory circle and important element in energy production. To involve in treatment program actions for energetic stabilization in perspective are planed investigations of cytochrome C influence on ultrastructure in mitochondria of acinar cells in demarcation line in experimental pancreatic necrosis.

The Analysis of Anticcp Antibodies in the Serum: a Comparison between the Patients with Rheumatoid Arthritis

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Rheumatoid Arthritis (RA) is a chronic systemic autoimmune disease that causes inflammation, pain, stiffness and destructive changes in the joints. Although, Rheumatoid Factor (RF), has been the primary blood test used to detect RA, the anti-ccp antibodies detection test is a relatively new assay to detect the citrulline antibodies in blood. These autoantibodies are produced by immune system in response to a perceived threat of citrulline, an amino acid produced from arginine in the citrullination process. The objective of this study was to investigate the presence and prediction value of anti-ccp in RA patients and evaluate its sensitivity and specificity comparing to that of classic laboratory tests, CRP and RF. The serum of 84 patients with RA and 80 healthy control subjects were enrolled into the study. The anti-ccp, RF and CRP levels in the serums were assayed by ELISA and agglutination procedure, respectively. Our results provided evidence that anti-ccp level was significantly higher in patients with RA comparing to that of corresponding controls ($p < 0.0001$). Anti-ccp was found to have the highest sensitivity and specificity (91%-91%) comparing to the other two tests (RF, CRP). The latter tests were found to have (97%- 92%) and (27%- 75%) sensitivity and specificity, respectively. The diagnostic value of anti-ccp is better than RF and CRP, individually. It can be detected early in the disease in unselected early arthritis patients. It is recommended to use RF test together with anti-ccp antibodies detection, in RA patients to ensure a higher diagnostic effectiveness.

The Electrical Resistance of Acupuncture Source Points as a Relevant Factor for Inner Organ Status

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The acupuncture source points have been known in the traditional Chinese medicine for about 5000 years and various therapies and diagnostic methods have been applied using them. Studies indicate that these points also express electrical modifications, depending on the health status of the individual. Aim. The aim of the paper is to study the relevance of electrical resistance measurements in these points in distinguishing inner organ changes. The study was conducted on patients from the gastroenterological department. The electrical resistance of the source points was measured using a Wheatstone bridge, of our own manufacturing, based on certain acupuncture maps. The data was collected using disposable Ag/AgCl electrodes and the results of the measurements were compared

with the standard diagnosis test results. The statistical interpretation was performed using Microsoft Excel and GraphPad. The measured electrical resistance was between 23 and 600 kilo ohms, with considerable variations from a patient to another. Patients with organ resections (gall bladder, kidney, stomach) expressed a decreased electrical resistance in the source points corresponding to these organs (the gall bladder point etc.). Also, patients with cardiac failure expressed a modified electrical resistance in the heart source point, but also in the pulmonary point, probably anticipating the pulmonary stasis consecutive to the heart disease. Gall bladder lithiasis, hepatic cirrhosis and rheumatism also expressed altered electrical resistance in the correspondent points. Patients with inner organ diseases expressed modified electrical resistance in corresponding source points. Further studies will be conducted to test the accuracy of this method to distinguish specific inner organ pathologies and to test the applicability of this measurement as a screening instrument.

The Imupurin Influence on the Development of Experimental Toxic Hepatic Lesions Induced by Paracetamol

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The prophylactic usage of hepatoprotectors in prevention of the hepatic lesions, which develops in persons, who activate in these circumstances hepatotoxic products are considered an important clinical aspect. In a paracetamol case these principles are important for a certain kind of patients (alcoholic hepatitis, associations with other hepatotoxic drugs) with the probability of development or exacerbation of existent hepatic diseases. With this purpose the influence of entomologic drug imupurin on the development of hepatic lesions at toxic doses of respective analgesic were studied in rats. A paracetamol administration in toxic doses shows after 24 hours a semnificative increasing of AlAT from $58,02 \pm 6,18$ u/L to $179,01 \pm 29,76$ u/L ($p < 0,001$) and AsAT $159,12 \pm 11,38$ u/L to $284,42 \pm 34,81$ u/L; $p < 0,05$ activity. The injection of toxic doses of paracetamol didn't cause an essential increasing of transaminases during a preventive usage of imupurin in a period of one week. Thus, in pretreated with imupurin animals the activity of AlAT consists $63,8 \pm 7,27$ compared with $179,01 \pm 29,76$ u/L ($p < 0,05$) in acute toxic hepatitis. Concomitant, the decreased AsAT activity is less semnificative. The obtained results demonstrate that imupurin prevents hepatocytes of being destroyed. Hepatic lesion, induced by paracetamol was not an essential modification in LDH activity in serum. Through protein and amminoacids components, entomologic drugs have determined a protective activity against toxic affections of hepatocytes (transaminases reduction).

The Neurovascular Correlation of Myocardial Bridges with the Anterior Interventricular Branch

Tasnic Mihail

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The aim of this article consists in a concise presentation of the ramus interventricularis anterior (RIA) perivascular nerves distribution and their interrelations with myocardial bridges (MB). Our study was realized on 95 isolated formalized human hearts. The macroscopical study was carried out by thin anatomic preparation of the coronary vessels, under a binocular magnifier; at the macro-microscopic level we colored with Schiff's reagent the coronary vessels and the surrounding perivascular adipose tissue; microscopically were studied transverse cross-sections through the musculovascular complex colored with hematoxylin-eosin and with picrofuxin by van Gieson. Macroscopically MB were revealed in 62% of cases. They settled down on the course of RIA in 39%, along the first marginal branch of the left ventricle in 18%, and in a few cases on the distal thirds of the right coronary artery, on the course of the anterior right terminal ventricular branches and on the posterior interventricular branch. Considering the frequency of MB situated on the RIA and the possibility of the vessel systolic compression in the underbridged segment, we studied the variants of the perivascular arrangement of the nerves to determine their involvement under the MB, and the possibility of the eventual systolic compression. By coloring the total anatomic specimens with Schiff's reagent, we established non-uniform distribution and density of the perivascular nerves of the RIA. In the proximal third of the vessel were revealed a few, large, parallel nervous trunks with a minimum quantity of anastomoses between them; their arrangement mainly was superficial, that reduces to the minimum the opportunity of their involvement under the muscular bridge. In the middle third of the AIB the nervous network was well developed, formed by descendent nerve trunks and final branches coming from the posterior surface of the heart. The nervous structures in this region were situated at all levels of the fatty tissue that increases the opportunity of their involvement under the MB. In the distal third of the RIA was revealed a dense network of nerves that enters the myocardium together with blood vessels. These nerves form wide connections with the final branches from the diaphragmatic surface of the heart. In this case the opportunity of the arrangement of the nervous trunks under MB is quite great. On cross-section through MB and the vessel which it covers, a large number of perivascular nervous trunks were revealed, located between MB and vessel adventitial membrane. One of the methods of surgical treatment of symptomatic MB is their transversal myotomy at which realization it is necessary to consider an opportunity of hearts innervations impairments. The received information shows the possibility to be involved under the MB not only the vessels, but also nerves of different caliber that can lead to their systolic compression.

The Obturatory Artery Correlation

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One of the basic lacks of applied methods of radiological research of vessels is their small informativity that can be caused by: 1) frequently poor-quality contrast of vessels therefore it is necessary to carry out repeated research; 2) some anatomic features of arteries (their tortuosity, deformation as a result of the atherosclerosis, etc.) in which result the contrast substance cannot fill

all departments of a vessel, as a result are necessary additional pictures in other projections. Proceeding from the aforesaid, we have made attempt to establish correlation of some morphometric parameters (length, diameter, and variant of origin) arteries of pelvis, including obturatory artery, with each other, and on their basis to deduce the formula for mathematical research of anatomic features of iliac arteries branches. Results of research have shown, that diameter of obturatory artery correlates with diameter of an anterior trunk of internal iliac artery ($R=0,84$, $p<0,05$). According to this the formula for modelling of a studied vessel is received: $d = 0,07375 + 0,12500 * X1$, where d - diameter of the obturatory artery; $X1$ - diameter of the anterior trunk. Thus, results of research have shown authentic correlation of the morphometric parameters of obturatory artery with parameters of other artery of the pelvic region. The received mathematical formula can benefit in diagnostics of vascular system of the cavity of the pelvis.

The Study of the Action of Physical and Chemical Factors on Microorganisms

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To research the influence of: the irradiation with ultraviolet (UV), the above- and over limit moderate temperatures, the environment's pH, as well as the combination of the above-mentioned factors on microorganisms, aiming the detection of the factor with the highest capacity of disinfection. We have collected air samples and isolated microorganisms from them. Then we've grown the microorganisms on Petri boxes. These Petri boxes were distributed in groups and subjected to different growing conditions (ultraviolet irradiation, action of different types of environment's pH, above- and over limit temperatures). After the incubation period, we have calculated the number and the percent of survived colonies as well as the disinfection capacity of each factor. This study showed that all the above mentioned factors, in some measure, affect the growth and development of microorganisms. UV radiation has a high capacity of disinfection. Even a short time influence (5 minutes) causes a significant decrease (28%) of the microorganisms number. Increasing the duration to 10 minutes, we didn't obtain meaningful results (efficiency increased by only 8%). In case we use UV irradiation for 15 minutes, we get an efficiency of about 64%. Above- and over limit moderate temperatures don't visibly affect the number of microorganisms (7% for low temperatures and 29% for high temperatures). Environmental acidity is a factor with a noticeable influence on the number of microorganisms. Both strong acidic pH ($pH = 2$), as well as the strong basic pH ($pH = 12$) cause an obvious decrease of the microorganisms number (equal to 54% and 66% respectively). Combining the high temperatures, the acid environment and ultraviolet irradiation for 15 minutes, we get an 85% result. Combining ultraviolet irradiation for 15 minutes, basic pH and low temperatures, the disinfection capacity decreases up to 64%. The method with the lowest efficiency is the action of over limit moderate temperatures. The best results on the disinfection capacity were obtained by combining physical and chemical factors. Each factor separately taken is unable to achieve such results.

Variant Anatomy of the Aortic Arch Branches

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The aortic arch, arcus aortae, is a continuation of the ascending aorta, aorta ascendens. The arch starts at the level of the second rib cartilage near the left margin of the sternum. The highest point of the aortic arch is projected on the centre of the manubrium sterni. Main branches of the aortic arch are: truncus brachiocephalicus, left common carotid, left subclavian artery. We analyzed the variants of the main aortic arch branches origin using the corpse material at the Human Anatomy Department. The object of the study – 8 human corpses of the both sex. Methods of the study – macropreparation, micropreparation, morphometry. In the majority of cases the classic variant was presented. The most interesting case was the example of the anomalous arteries origin as 5 branches of the aortic arch: the right common carotid artery, the left common carotid artery, the left vertebral artery, the left subclavian artery, the right subclavian artery. The arch of the aorta passed to the left of the trachea and curved posteriorly. The first branch was the right common carotid artery, next arose the left common carotid artery, than arose the left subclavian artery and at last from the posterior wall of the aortic arch in 4 mm laterally from the left subclavian artery appeared the right subclavian artery. It passed from the posterior wall and turned to the right, passed behind the trachea and oesophagus. No other anomalies of arterial structure were revealed in the cadaver. The study of the vascular variant anatomy is of the great interest nowadays. Especially it is due to the high rate of the vascular surgery development. Today the medicine obtains specific technologies to help people with different vascular pathology (aneurysm, congenital cardiac malformations etc.). In this situation the accumulating and broadening knowledge about the topographic-anatomical characteristics of the aortic arch branches is actual.

Applying of Physico-Chemical Methods in Chemic-Toxicological Analysis of Diclophenac

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The chimico-toxicological investigations on medicamental preparations represent an essential problem. Their efficiency depends on isolation, dosage and identification of compounds by various physico-chemical methods. Diclophenac is part of nonsteroidal antiinflammatory (NSAI) group used as an antiinflammatory, analgesic and antifebrile remedy. The exact mechanism of action is not absolutely known, but it is believed that the primary mechanism responsible for the antiinflammatory, antifebrile and analgesic action is the inhibition synthesis of prostaglandin by inhibiting of cyclooxygenase (COX) and it is likely to inhibit the synthesis of ADN. The inhibition of (COX) also decreases the prostaglandines from the gastric epithelium, making it more sensible to gastric acid corrosion. In this context there is a specific interest of studying of diclophenac in biological fluids. As a consequence, we suggested to clear up those factors which influence the isolation of the compound from the blood plasma. We used chloroform as an extractant, which has a specific character for the nonionized forms from biological fluids. The pH value is important which gives the possibility to isolate the compound from biological fluid, its passing from ionized form in a molecular one, which encourages the efficacy of extraction with lipophilic solvents. Diclophenac was extracted from blood plasma after acidulation with sulphuric acid (pH 2,5-3,0) and precipitation of proteins with

trechloracetic acid, acid extracts under went spectrofotometric investigations at a wave lenght of 275 nm. We applied sillicotic plaques on thin layers within chromatography of the follwing solvent system: Ethylacetate: methanol: amoniacal sol.25% (8:10:10), ethylacetate:chloroform:acetone4:1), methano:amonia 25%(100:1,5). We used the Dragendorff reagent and iodine fumes. These methods serve as a certain and efficient potential in chemico-toxicological analysis practice.

Internal Medicine Section

A Study of Compliance with UK Guidelines on 30-Day Mortality after Systemic Anti-Cancer Therapy

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In November 2008, the United Kingdom National Confidential Enquiry into Patient Outcome and Death (NCEPOD) published an inquiry into deaths within 30 days of systemic anti-cancer therapy (SACT). This study aims to replicate the national enquiry on a hospital level and perform root cause analysis of any identifiable causes of death. The main objective of this study is to conduct a systematic case-by-case enquiry into deaths fulfilling study criteria to ascertain any remediable factors present in each death, reflecting the rigorous methodology of the national study. Also, another objective is to ensure there were no compromises in the quality of clinical care or organisational policy and to suggest relevant changes in practice. The inclusion criteria were all patients who had identifiably died within 30 days of SACT in James Cook University Hospital in 2009. Information was gathered from patient case notes and the minutes of the 2009 hospital mortality meetings. 5 areas of clinical care, namely decision to treat, prescriptions and administrations, safety, hospital admissions during last 30 days of life and palliative care were investigated. Results 12 deaths were deemed eligible for inclusion. Of these only 6 died of causes directly related to malignancy. Half the deaths were in patients with performance status above 3 (bedridden >50% daily) at time of decision of final SACT, reflecting national concerns about overly infirm patients receiving inappropriate SACT. Also flagged up were alarmingly infrequent SACT discussions at multidisciplinary meetings (2/12) and non-consideration of dose reductions in patients with serious comorbidities, mirroring poor practise at national level. Among other minor treatment issues, crucially, prophylactic granulocyte-colony stimulating factor (G-CSF) in patients who had previously suffered SACT toxicity was rarely considered. Evidently findings of poor practice at national level are echoed at hospital level, confirming the reproducibility of the NCEPOD inquiry. Existing hospital-level policies that would avert many abovementioned failures in clinical practice were not rigidly adhered to. This implies unnecessary deaths are possibly occurring. In conclusion, despite relatively small patient numbers dying within 30 days of SACT, there are still avoidable sources of clinical error that may compromise haematological standards of care.

About Results of Clinical Use of Preparation Actilyse® (Rt-PA) at Patients with an Ischemic Stroke

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Measures to expedite clot lysis and restore circulation may limit the extent of brain injury and improve outcome after stroke. Unfortunately, intracranial bleeding was frequent among persons enrolled in studies performed in the late 1960s and 1970s, and the therapy was abandoned. More recently, interest in thrombolytic therapy revived because of development of new drugs and their successful use in the care of persons with myocardial ischemia. In addition, a meta-analysis

combining data from several pilot studies in stroke suggested that thrombolytic therapy might be useful. Available thrombolytic drugs are recombinant tissue plasminogen activator (r-TPA), streptokinase, p-anisoylated lys-plasminogen-streptokinase activator complex, urokinase, and prourokinase. A number of pilot studies evaluated the potential safety and efficacy of early administration of thrombolytic drugs using both intravenous and intra-arterial approaches. Investigators reported generally positive results and an acceptable degree of safety. To study efficiency of preparation Actilyse® (rt-PA) at patients in different terms of treatment and rehabilitation. In the research program with acute ischemic stroke 12 patients have been included (according to criteria of inclusion in groups of treatment NINDS – Trial). To all patients during 3 h have been made CT, transcranial doppler investigation for localisation specification of occlusion and time of recanalisation. Middle age of patients is 61,3 +/-9,6 years. Neurologic deficiency estimated on scale NYHS, in research also used Bartel Index and Rankin Index. Dose Actilyse® (rt-PA) - 0,9 mg/kg. Results. Average term of hospitalisation 10,5 +/-3,4 day. NYHS Bartel Index Rankin Index 1 day 16+/-3,5 13,3+/-8,7 4,3+/-0,6 7 day 9,5+/-5,4 57,2+/-28,4 2,8+/-1,6 30 day 7,2+/-5,3 70,5+/-25,6 2,4+/-1,2 6 months 6,5+/-4,1 80,4+/-19,2 1,5+/-0,9. Thrombolytic therapy with Actilyse® (rt-PA) is very effective and is one of the newest methods for treatment of patients with acute ischemic stroke in Moldova. We recommend this method to use also in other centres on treatment of strokes at us in the country.

Actual treatment of Atrial Fibrillation in the Elderly

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Atrial fibrillation (AFb) is a common arrhythmia in the elderly (17% of the cases) which can be precipitated by cardiac and non-cardiac factors. It can have characteristic symptoms (palpitations with rapid frequency) or it can borrow elements of low cardiac output syndrome (anginous pain, dyspnoea, fatigue, dizziness, syncope). The physical examination and ECG-cut the diagnosis. The goal of the treatment is the conversion to sinusal rhythm but the therapeutic decision should be made carefully in the elderly. The analysis of the therapeutic methods in patients aged > 65 years diagnosed with atrial fibrillation (AFb) regardless of its ethiology. We conducted a retrospective study on 704 patients (age > 65 years) hospitalized in the Geriatric Department of 4th Clinic of Internal Medicine-Nephrology Iasi between January 1- December 31 2009. The incidence of atrial fibrillation was followed in the study group, also the associated risk factors; trigger factors, indication of conversion to sinusal rhythm and response to the administration of anti-arrhythmic therapy. Out of 704 patients, 668 had cardiovascular damage (94%) and of these 224 patients had AFb (33.5%). From the group of patients with AFb, 156 were from rural areas, the majority being women (149 cases). The main risk factors incriminated were: hypertension (45%), dyslipidemia (38%), obesity (38%), and smoking (44%). Among the trigger factors are included: excessive physical effort and unexpected, intercurrent respiratory infections and ethanol consumption. From the types of AFb we note the predominance of fast AFb, followed by the recently installed AFb, paroxistical AFb and AFb with slow spontaneous frequency. In 54 cases was decided the chemical conversion in sinusal rhythm, with amiodarone in 44 cases (83%) and in 10 cases with Propafenone (17%). Sinusal rhythm was achieved in 48 of the 54 patients (88%). The attempt of conversion to sinusal rhythm was charged to all our patients regardless of age, but qualifying the standard criteria: normal sized cardiac cavity, EjF > 40%, no intracavitary thrombus, the AFb onset under 1 year. The conversion was carried out under protective anticoagulant therapy. The results were very good and the prevention of relapses was achieved with amiodarone, very well tolerated by patients.

Affective Reactions in Oncologic Patient

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The patients with cancer should be considered as patients, who are located under the ascendancy of strong stress. The diagnosis of malignant process is combined with the especially strong emotional experiences, which destroy the most important stereotypes of behaviour, manufactured in the course of the life. The study of the reaction of patients on the conducted therapy, the determination of a change in mental status was the purpose of our work. In the department of conservative rehabilitation with the day hospital of oncology policlinics they passed the treatment of 55 patients (13 of the department of mammology, 27 - urology even 15- gastrology). The average level of anxiety, determined according to the scale HAM- A, composed 23,7+/-2,1 (from that moderated to that expressed). The average level of depression, determined according to the scale HAM- D, composed 31,6+/-3, 2. Treatment with the use of different psychotropic preparations and psychotherapeutic sessions was implicated. The shown complex treatment makes it possible to improve psychological state in 47 (85,4%) of patients, who pass treatment (8 patients (61,5%) with breast cancer, 26 (96,3%) urological cancer patients, and 13 people (86,7%) with stomach cancer). In these patients the decrease of complaints establishes, patients become calmer, psychological reactions more adequate, mental tension is reduced, appears confidence in the conducted treatment. The average level of anxiety HAM- A, composed 12,4+/-1,8 . The average level of depression HAM- D, composed 11,3+/-2, 2. Naturally, any treatment with the use of different preparations and any psychotherapeutic session cannot completely free patient from the thoughts and reactions; however, they can and must limit the intensity of emotion, contribute to the development of the psychotherapeutic program of protection, which would lead to the social adaptation of cancer patient.

An Audit of Compliance with National/Local Guidelines Staff Involved in Intrathecal Chemotherapy

Nicholas Pang

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Vinca alkaloids, ordinarily administered intravenously (IV), if administered via intrathecal chemotherapy (ITC) almost certainly causes fatal myoencephalopathy. This audit measured adherence to national and Trust guidelines regarding safe prescription, dispensing, issuing, transporting and administration of ITC. The objective was to assess whether only appropriately trained staff on the medical, pharmacy and nursing registers were involved at every stage of ITC delivery. It also sought to recommend changes for better practise. Data on staff involved was obtained from prescription sheets in patient notes and pharmacy copies. Additionally departmental registers and training certification forms were scrutinized. In total 11 patients received between them 59 ITC prescriptions. Only 83.1% of prescriptions were filed and completed. 10.2% were not filed whereas 6.7% were incompletely filled. Nevertheless whenever a staff name was filled in prescriptions, 100% were on the register. The registers show that, apart from 1 new doctor who had been in post less than a year but who had received appropriate training in this Trust, all registered staff had had annual competence reviews. Commendably, all 17 ITC prescriptions which were administered on the same day as an IV prescription, 2 of which were vinca alkaloids, were only issued from pharmacy after receiving proof that the IV prescription had been infused, demonstrating best practise. The audit

demonstrates better filing and documentation is imperative so a complete paper trail is available if mishaps happen. The audit recommends patient involvement in pre-ITC safety checks, auditing prescription filing, and increased awareness during ITC training of complete documentation.

Anticoagulant Therapy in Elderly Patients

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The pathology of recent years is dominated by lung thromboembolism, the more worrying factor as the algorithms for prophylaxis and treatment of diseases with high embolic risk are properly applied in medical practice and perform only of 75% antithrombotic protection. The aim is to present the benefits and risks of anticoagulant treatment in elderly patients with cardiovascular disease. Anticoagulant treatment is at least as important as for the other age groups because elderly patients have combinations of cardiovascular diseases and comorbidity which have anticoagulant treatment indications. We performed a retrospective study on 781 patients over 65 years, admitted between January 1, 2009 and March 31, 2010 in Medical Clinic IV, Department of Geriatrics. Statistical study followed their distribution by age, average residence, gender, cardiovascular diseases, anti-coagulant treatment indication and methods of implementation. From 781 patients, 758 cases (97%) were hospitalized for cardiovascular disease of these, 545 (72%) received anticoagulant therapy, 152 (20%) received also antiplatelet and 61 (8%) did not receive any of these forms. Adverse effects of anticoagulation therapy were recorded at 1.5% of patients. All these patients were under chronic anticoagulation therapy with antivitamin K and required permanent or temporary interruption. Anticoagulant therapy in the elderly is under-utilized due to fear of unwanted side effects taking into consideration the problems of monitoring chronic treatment with K antivitamin at home.

Anxiety and Depression Symptoms in Patients with Diabetes Type 2

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The aim of the study is to find out the frequency of emotional dissociations, and determine the rate of evidence of changes at psychological state in dependence of sex, age, duration of diabetes, frequency of glycaemic control, body mass index. Materials and methods: 60 patients with diabetes type 2 have been investigated, which included 29 women and 31 men at the age from 41 to 70 (the average age is 55 years; SD 5.88) with the duration of illness from 2 up to 18 years (the average is 7.8 years; SD 4.05) in conditions of Department of Endocrinology, Municipal Clinic Hospital "Sf.Treime", Republic of Moldova. It was used the Hospital Anxiety and Depression Scale (HADS). Based on data of HADS, the high levels of anxiety (mean 8.73 ± 0.39 ; SD 3.08) and depressing symptoms (mean 6.45 ± 0.39 ; SD 3.06) were revealed in patients with diabetes type 2; and the true correlation $r=0.97$ depression= $2.8711+0.4098 \cdot$ anxiety; $p<0.05$) was found out. Clinically evident features (HADS score ≥ 11) of anxiety and depression were 28% and 11% correspondingly. Subclinical forms of anxiety and depression (HADS score 8-10) were 42% and 25% correspondingly. Such as anxiety, depression was met more often in women. It was shown that the frequency of depression is picking up with the age in men but in women these regularities were not found out. With the raising of duration of disease significantly goes up frequency of anxiety ($p<0.05$) and depression ($p<0.05$) in men. It has been found out much higher level of anxiety ($p<0.01$), but not

depression, in patients who had made a daily glucose blood control. More evident it can be seen in women ($p<0.001$). In patients who made such control very seldom and not regular was found out higher level of anxiety (mean 9.65 ± 0.21 , $p<0.01$) and depression (mean 7.59 ± 0.15 , $p<0.01$) regardless the sex. A high body mass index corresponds ($r=0.95$, $p<0.01$) to the level of depression in women. These diagnoses have been showed that the anxiety and depression in patients with type 2 diabetes were significantly higher than the real published data. The discovered regularities of psychological changes in patients with diabetes are necessary to reveal and to treat.

Aspects of Chemosensitivity of Etiological Agents Involved in Severe Sistic Infections

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Excessive use of antimicrobial agents led to the development of important resistance mechanisms. The aim of the study was to observe the etiology and sensitivity of pathogen agents isolated from patients with sepsis. We have conducted a retrospective study on 60 patients with sepsis, hospitalized in the Infectious Diseases Clinic I from Targu Mures, over a period of 1 year (01.03.2009 – 01.03.2010). The incidence of sepsis and septic shock, the generating infection, the chemosensitivity of the etiological agent isolated from blood cultures, the therapy and patients evolution, have been closely examined. An increased incidence of sepsis has been noticed at patients aged over 50 (70%) predominantly male (66,66%). The pathogen agent has been identified at 38 patients (63,33%) as follows: gram-positive bacteria (33,33%), gram-negative bacteria (30%). Resistance of methicillin-resistant *Staphylococcus aureus* (MRSA) to the known antistaphylococcal drugs was shown, except for glycopeptides (15% of patients); resistance of pneumococci to the beta lactam drugs (6,66% of patients), resistance of gram-negative bacteria to the aminopenicillins, sulfonamides, aminoglycosides, third-generation cephalosporins (16,66% of patients), carbapenems (8,33% of patients), fluoroquinolones (5% of patients). In the etiology of sepsis an increased incidence of gram-positive bacteria has been noticed, as well as an increase in the resistance rate to the known antimicrobial agents of methicillin-resistant *Staphylococcus aureus* (MRSA), pneumococci, *H influenzae*, *K pneumoniae*, *E coli*, beta lactamase producing. Keywords: sepsis, etiological agent, sensibility, antimicrobial therapy.

Complicated Acute Myocardial Infarction: Free Wall Rupture

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The rupture of the ventricular wall complicates 1- 3% of the patients suffering from acute myocardial infarction. On necroptic studies the percentage raises up to 7-24%. The risk factors are age>60 years, feminine gender and hypertension. The acute ruptures are characterized by shock through cardiac tamponade. The subacute ruptures are a challenge for surgeons; immediate postoperative death varies between 0 to 60%. Death without surgery occurs in 100% of the cases. A 73 years old male patient is admitted to the hospital for intermittent claudication at 15-20m, with insignificant heredocolaterale history, smoker for approximately 60 years 1 package per day. The patient has no cardiological history. After his admission he presented syncope. The clinical exam

showed turgescient jugular veins, diffuse abdominal pain, and the lower liver margin was palpable 2 cm under the right costal margin. Differential diagnosis was: mesenteric ischemia, cardiac tamponade and aortic dissection. The transtoracic echocardiography showed the presence of pericardial liquid of 25 mm in the right ventricle, an intrapericardial thrombus in the left ventricle. The final diagnosis is acute anteroapical myocardial infarction with cardiac rupture, intrapericardial thrombus, pericardial tamponade and obliterant arteriopathy of the inferior limbs, stage III. The patient was transferred to the Cardiology Center in Iasi and after the necessary investigations went directly to the operating room due to the mechanical complication of the infarction. The postoperative evolution was good. The particularities of the case consist of: the sudden debut through the rupture of the myocardium without the typical retrosternal pain; the lack of EKG or the necrosis enzymes modifications and the good postoperative evolution.

Coping Strategies in Chronic Migraine and Chronic Low Back Pain patients

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Chronic pain is frequently resistant to medication. Some studies confirm what coping strategies (CS) (constantly changing cognitive and behavioural efforts to manage stressful events) have impact on pain chronification and treatment efficiency. Some types of CS could have more influence on pain, demanding more attention during its management. The aim of this study was to detect the more influent CS in patients with chronic migraine (CM) and chronic low back pain (CLBP). The first group included forty patients with CM, 37 females, 3 males, mean age $42,83 \pm 10,88$ years. The comparison group included 50 patients with CLBP, 31 females, 19 males, mean age $49,24 \pm 10,87$ years. We performed Chronic Pain Coping Inventory, Chronic Pain Acceptance Questionnaire and Back Persistence Scale in both groups and compared the use of SC with chronic pain characteristics. Both groups used more frequently passive CS. In patients with CLBP (with similar pain intensity) CS as Task persistence were strongly negative correlated (discordant) with pain intensity ($z = 2,34$; $p < 0,01$) and pain duration ($z = -1,71$; $p < 0,05$). CS as Guarding were concordant with frequency of pain accesses ($z = 2,34$; $p < 0,01$) and disability ($z = 1,89$; $p < 0,05$). In patients with CM (with similar pain intensity) CS as Resting were strongly positive correlated (concordant) with pain duration ($z = 1,67$, $p < 0,05$) and with reduced pain treatment response ($z = 1,73$; $p < 0,05$). The study results confirm the impact of CS on pain evolution, the passive ones being more dysadaptive. The most influent CS in CLBP patients were Guarding and Task persistence, and in CM patients – Resting.

Depressive Disorders in Patients with Parkinson Disease: The Influence of the Therapy of Massage

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The parkinsonian patients frequently experience different movement disorders symptoms. The association of depression in these patients causes severe disability. The goal of this study was to evaluate the efficacy of massage-therapy in depressive patients with Parkinson's disease (PD). A number of 13 patients affected by severe depression were included in the study. A clinical

examinations and neuroimaging studies have been performed. All patients underwent a neuropsychological assessment. Methods of screening for Parkinson's disease have been performed also. The depression syndrome was estimated by Hamilton Depression Rating Scale (HAM.D.). We observed the insignificant amelioration of motor function only after second or third course of massage-therapy. But decreasing of depression (HAM.D. 38,15 +/- 2,12) had an important alleviation already after one 10-days course of massage (HAM.D. 22,34 +/- 3,62) and in dynamics its improves more significantly (HAM.D. 10,84 +/- 1,37). The clinical data suggest the complexity of depressive symptoms in PD patients which can be successfully managed using massage-therapy. The depression syndrome worsens the general status of the patients and also requires treatment. In this connection the further studying of possibility of appointment to these patients of antidepressant treatment for complex rehabilitation is expedient.

Epilepsy Caused by Hippocampal Sclerosis

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Mesial temporal lobe epilepsy with hippocampal sclerosis (MTLE-HS) is one of the most distinct epileptic diseases/ syndromes with defined underlying hippocampal pathology shown on MRI (Magnetic Resonance Imaging), clinical seizure types and postresection seizure relief. The purpose of this paper is to describe MTLE-HS diagnostic procedures, therapeutic approach and compare the results from the County Hospital in Targu Mures and the medical literature. A total number of 1467 epileptic cases (spanning from 2005 to 2010) were extracted from the archive from which 3 patients (2 females and 1 male) were diagnosed with MTLE-HS. No suggestive pathological history was found for these patients, diagnostic procedures were consistent with those in the medical literature. Seizure types were partial complex seizures and secondarily generalized seizures. The therapeutic approach consisted of antiepileptic drugs, opposed to cases from medical literature, where first line therapy was surgery. Diagnosing MTLE-HS is important, because in more than half of cases this type of epilepsy is refractory to antiepileptic drugs.

Evaluation of Efficiency of Thrombolytic Therapy in Patients with the Acute Coronary Syndrome

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Evaluation of efficiency of thrombolytic therapy in patients with the acute coronary syndrome with ST segment elevation depending on the time of drug injection. Introduction: For patients with the clinical presentation of myocardial infarction with elevation of ST segment reperfusion should be performed. In the absence of contraindications and if primary percutaneous coronary intervention (PCI) cannot be used thrombolytic therapy is the method of choice. Thrombolytic therapy prevents 30 deaths per 1000 patients. The aim of the study was to analyze dynamics of ST segment reduction in patients with acute coronary syndrome with ST segment elevation, depending on the time of injection of: streptokinase, alteplase, tenecteplase. There were processed 174 medical cards of patients with acute coronary syndrome with elevation of ST segment, who underwent thrombolytic therapy with streptokinase, alteplase, tenecteplase, in the coronary care

unit of Kyiv Regional Hospital over a period from 1 January 2009 to 1 January 2010. The average age of patients is $58,6 \pm 3,1$. We assessed dynamics of ST segment reduction, depending on the time of thrombolytic medicine injection with the intervals of 2 hours, 2-4 hours and 4-6 hours from the beginning of clinical manifestation of acute coronary syndrome. 34 patients (20 %) underwent thrombolysis with 2 hour interval, 89 patients (51 %) – with 2-4 hour interval, 51 patients (29 %) – with 4-6 hour interval. Thrombolysis was considered to be more efficient in patients with more than 50% reduced ST segment with damaged front parts of aortic ventricle, more than 70% with damaged back parts of aortic ventricle, 90 minutes after medical injection according to ECG data in leads with maximum ST segment elevation. The results showed that thrombolysis, with 2 hour interval was effective in 30 patients (88 %), with 2-4 hour interval – in 74 patients (83 %), with 4-6 hour interval – in 28 patients (55%). Proved ST segment reduction was more frequently observed in those groups of patients who underwent thrombolysis with interval up to 4 hours comparing to the group of patients where thrombolytic therapy was carried out with 4-6 hour interval.

Insulin resistance and adiponectin

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The aim of the paper was to demonstrate the relationship between plasma adiponectin levels and insulin resistance of peripheral tissues as well as the mechanism of action of adiponectin. There is positive correlation between plasma adiponectin levels and insulin sensitivity of peripheral tissues independently of age, gender and BMI. However, there is negative correlation between adiponectin and insulin plasma levels and HOMA index (Homeostasis Model Assessment). Adiponectin levels predict potential alterations of insulin sensitivity of tissues. High levels are associated with decreased risk of developing diabetes. Adiponectin can also constitute an index for predicting an underlying disorder of carbohydrates metabolism in people with normal glucose tolerance test. Finally, variations in its gene expression can predispose to hyperglycemia. Mechanism of adiponectin influencing insulin resistance of tissues is not well known. Potential mechanism is decrease of fatty acid levels in plasma as well as triglycerides in liver and skeletal muscles resulting in increased insulin activity and muscle glucose up taking. In addition, it limits fatty acids hepatic flow. Other mechanisms appear to be: inhibition of gluconeogenesis, TNF- α action in adipose tissue and increase of AMP-activated kinase. Adiponectin is an adipose tissue hormone that increases the sensitivity of tissues to insulin action. Further studies are needed to determine precisely action mechanisms.

Hodgkin's Disease - Case Presentation

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Hodgkin's lymphoma is a type of cancer of the lymph tissue found in the lymph nodes, spleen, liver, and bone marrow. The diagnosis can be set strictly morphological and it is based on the presence of Sternberg-Reed cells in the structure of an enlarged lymph node. The disease occurrence shows two peaks: the first in young adulthood (age 15–35) and the second in those over 55 years old. The cause is not known but risk factors include male gender, history of Epstein-Barr virus infection and a genetic predisposition. At onset the disease affects one lymph node and it slowly disseminates

either through the lymph, or through the blood, affecting all the lymphatic system and other organs. Female patient, aged 22, without significant pathological history, is admitted in 2005 to the Hematological Clinic from Iasi for special diagnosis and therapy after the appearance of a left developing latero-cervical adenopathy. The clinical and paraclinical exams (lymph node biopsy, sternal puncture, thoracic and abdominal CT) have set the Hodgkin's lymphoma diagnosis with mixed cellularity, stage IV B and the cytostatic treatment was begun. Despite all treatment, the disease progressed rapidly – generalized adenopathies, osteolytic lesions in the lower ½ of the sternum and finally hepatorenal failure with exitus. Although the global cure rate of Hodgkin's lymphoma is about 85%, in this case diagnosing the disease in an advanced stage (because of the absence of symptoms) has determined the unfavorable evolution of the disease, with lack of response to treatment administered according to international standards and exitus in 4 years.

Late Complications Following Permanent Pacemaker Implantation

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The objective of the work was to determine prospectively the rate of late complications (6, 12 months) following first implantation of a permanent pacemaker or generator replacement. To illustrate our pathology using 3 case reports with particular problems concerning the diagnosis and treatment options. We studied 126 consecutive patients with definite indications for permanent pacemaker implantation, included between 2006 and 2009. Generator replacement was required in 12 patients because of pulse generator electrical failure. In all cases a VVI pacemaker was used. Implantation of the lead-catheter used right/left subclavian vein (108 cases vs. 18 cases) access. We realized a clinical follow-up (local pocket integrity, signs/symptoms for ipsilateral superior limb deep venous thrombosis or pulmonary thromboembolism-TEP) combined with biologic (D-dimers, fibrinogen, platelets), microbiologic (wound secretion, hemocultures) and imaging methods. Imaging follow-up protocol used venous ultrasound, ipsilateral superior limb phlebography, perfusion lung scintigram, transthoracic and transesophageal echocardiography. The overall rate of late complications was 23.8% in our study. There were infectious, thromboembolic complications and pacemaker syndrome signs/symptoms. Local pocket-related infection (pocket erosion/necrosis) with *Staphylococcus aureus/epidermidis* was found in 7.14% of cases; in two cases *Enterobacter/ Staphylococcus aureus* septicemia complicated local infection. Infective endocarditis complicated evolution in one case (vegetation on the stimulation catheter). Late infectious complications rate was significantly lower after first implantation of the permanent pacemaker comparing generator replacement (1.4% vs. 6.5%) and also in the subgroup with prophylactic antibiotherapy (0.6% vs. 3.1%). Pacing electrode thrombosis was defined by ultrasound in 10 patients (12.6%) and by phlebography in 19.04%; echocardiography detected one case of thrombosis in right atrium and manifest TEP complicated evolution. In 2 cases there were clinical signs for superior limb deep venous thrombosis. Perfusion lung scintigram revealed high /intermediate probability for TEP in 5 patients, respectively 2 patients. In 3.17% of cases both types of complications were present. Pacemaker syndrome was manifest through mild symptoms/signs in 2 cases. Our data are comparable with literature concerning the rate of late infectious and thromboembolic complications. Pacing electrode thrombosis is frequently asymptomatic and underestimated in clinical terms. For this reason, the decision for anticoagulation is better individualized. Even conducted in rigorous asepsis conditions invasive technique is better followed by antibiotherapy. The low incidence of pacemaker syndrome is in relation with follow-up period.

Literature Review of Modern Hypotheses of Seronegative Spondyloarthropathies

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Seronegative spondyloarthropathies (SpA) are a set of disorders marked by chronic inflammation of axial joints. These are portrayed by similar clinical syndromes, genetic susceptibility, and constitutional symptoms, with prominent tissue inflammation and joint destruction. Specific clinical types comprise of Ankylosing Spondylitis (AS), Reactive arthritis (RA) with Spondylitis, Psoriatic Arthritis (PA), Enteropathic Arthritis (EA) and Undifferentiated SpA. This review summarizes the proposed classification of major pathogenic mechanisms of seronegative SpA. It also considers the hypotheses of its etiology and pathogenesis in recent times. The current understanding of SpA pathogenesis is obscure. Subsequently, knowledge of early tissue, cellular, and molecular changes is incomplete. However, many researchers recognize the influence of the environment, immunologic processes, and genetics as factors of disease source and development. Majority of the focus is on HLA- B27 in predisposed individuals, immunologic processes like molecular mimicry and arthritogenic peptide hypothesis. Recent studies also highlight the pivotal roles of cytokines, tumor necrosis factor alpha (TNF- α), and angiogenesis in immune deregulation which results in disease morbidity. The most promising new direction has been the involvement of cytokines. By elucidating the central role of cytokines in etiology and pathogenesis of SpA, diagnostic and therapeutic significance is apparent.

Myocardial Bridging, From a Simple Benign Condition to Sudden Cardiac Death

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Myocardial Bridging represents an anomaly of the coronary circulation, characterized by a myocardic course of a major epicardial artery. The segment is referred to as the "tunnelled artery" as it runs beneath a layer of muscle fibers, which varies in length and thickness. The most common site of this anomaly is the left anterior descending artery, but it can also be confined to any other coronary branches. The condition is clinically silent most of the times, being accidentally discovered during an angiographic study or at autopsies. Even though usually benign, clinical manifestations vary from ischemia to sudden cardiac death. Superficial bridges are usually of no clinical importance, while deep ones lead to different cardiac complications. The estimated frequency varies from 1.5% to 16% at coronary angiography studies, to 80% in some autopsy studies. While still debated whether just an anatomic variant or a malignant condition, different pathology studies showed morphologic alteration of the myocardium tributary to the bridged artery. Furthermore, there is evidence that the tunnelled artery is protected from atherosclerosis, while the proximal and distal segments have an increase susceptibility to atheroma plaque formation. The main physiologic effect of the myocardial bridge occurs with each systole, when the coronary artery is compressed between the overlying muscle bundle and the rest of the ventricular mass. Yet, additional research is needed to define which bridges are life-threatening and furthermore, which are the most suitable therapy options for these patients. Our goal was to review the literature regarding Myocardial Bridging and present two opposite clinical cases, one discovered by chance after the autopsy and the other of sudden cardiac.

Optimization of Vegetative Dystonia Treatment

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Vegetative dystonia (VD) is one of the most frequent diseases that are nowadays diagnosed in patients. According to the global medical literature approximately 80% of all patients, which are consulted by doctors in different specializations, suffer from VD. To mention is the circumstance that from vegetative-vascular dystonia suffer the most efficient population. Objective: The aim of this study was to select an optimal differential treatment for vegetative-vascular dystonia depending on the form: sympathetic-adrenal, vago-insular or mixed. Materials and Methods: The investigated group consisted of 51 patients, in the age from 18-57. The prevalent etiologic factor of VD in this group was stress (82,3%). Patients were divided into four age groups: 1. 18-25 years – 18 persons, 2. 26-35 years – 21 persons, 3. 36-45 years – 7 persons, 4. 45-57 – 5 persons. Female were 33 and male – 18 of the patients. The control group consisted of additional 12 patients. To confirm the diagnosis all patients were investigated with methods: questionnaire Zerssen, neurological status was investigated, cardiovascular tests (Val Sava test, orthostatic test, test with deep breathing) that were registered and interpreted by vegeto-test Poly-Spectr (Neurosoft 1995-2003) and ECG, arterial blood pressure, glucose quantity were controlled. In dependence on complaint, clinical manifestations and results of investigation patients were divided into three treatment-groups: with sympathetic-adrenal, vago-insular or mixed paroxysm. Each group got an individual complex treatment that consisted of methods: Traditional Chinese Medicine (TCM) - acupuncture, acupressure, auricular-acupuncture, point-massage, moxa-therapy, aroma-music-color-therapy and homeopathic remedy Heel. Control group got standard medication. Results: After treatment all patients were objectively investigated for control. All patients noticed subjective state improvement, which was confirmed by objective investigation findings. The efficiency of treatment was about 75, 3% ($p < 0,01$) higher in the groups that were individually treated with different methods of TCM and homeopathic remedy Heel, than, in comparison, in the control group that got standard medication. Conclusion: Treatment option with high efficiency for vegetative dystonia of patients without organic injury of nervous system can be the complex treatment, which consists of methods of the Traditional Chinese Medicine and homeopathic remedy Heel.

Particularities of Infective Endocarditis Prophylaxis in Republic of Moldova

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The aim of the paper was to determine whether adults from increased risk groups have adequate knowledge of infective endocarditis (IE) and to evaluate the particularities of infective endocarditis prophylaxis in comparison to the recent tendencies recommended by the international guidelines. We evaluated 133 patients (33 with IE, 80 with rheumatic heart disease and 20 with congenital heart disease) divided in two groups: i) High risk group included 33 pt. with IE, 31 pt. with valve prosthesis and 17 with congenital heart diseases (tetralogy of Fallot, ventricular septal defect, aortic coarctation, bicuspid aortic valve) ii) Moderate risk group was formed by patients with rheumatic heart disease without prosthesis and congenital heart diseases such as aortic stenosis and prolapse of the mitral valve. We asked selected patients and 50 doctors responsible for infective endocarditis treatment and prevention (cardiologists, family doctors and dentists) to complete a 10-

question survey to assess their knowledge of heart disease, infective endocarditis, and endocarditis prophylaxis. Out of 133 patients (100%), 102 patients knew the name of their heart disease. Fifty patients correctly defined endocarditis, but only 38 knew hygiene measures that could prevent endocarditis. Thirty patients knew that they needed to take "a medicine" before dental procedures and just 18 of those patients knew that an antibiotic was necessary. Among doctors, all knew what infective endocarditis is, but 30% of family doctors and 67% of dentists hesitated to name the antibiotic of choice and its dosage. The most recent guidelines recommend prophylaxis only in patients with underlying cardiac conditions with the higher risk of adverse outcomes, including patients with a previous history of infective endocarditis, patients with prosthetic heart valve or prosthetic material used for valve repair, patients with a valvulopathy after cardiac transplantation, and patients with a specific congenital heart disease. But it is a particularity of Moldova that the number of patients with rheumatic valve disease is high, that is why we consider forming a group of moderate risk for infective endocarditis and to include them in prophylaxis regimens. Many adults with heart diseases have inadequate knowledge of their cardiac lesion, of endocarditis and of endocarditis prophylaxis. Educational efforts for them need to be updated and reinforced regularly. The use of definite criteria for identifying groups of risk and prescribing antibiotics regimens for IE prophylaxis can decrease its incidence and rate of complications.

Renal Damage and Hypercholesterolemia

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Objectives of this study are to investigate/indicate the potential mechanisms of hypercholesterolemia-induced renal injury. We found out that podocyte activation, such as after renal mass reduction, with hyperlipidemia may contribute to podocyte injury those results in development of segmental sclerosis associated with secondary damage to the tubulointerstitium. Other studies stress the pathogenetic roles of macrophage influx and mesangial cell activation/injury (as evidenced by glomerular hypertrophy and matrix accumulation) in lipid-induced glomerular damage. Another hypothesis for renal effect of hypercholesterolemia suggests that hypercholesterolemia impairs systemic vascular reactivity in response to endothelium-dependent vasodilators, which may be mediated partly through increased formation of lipid peroxides. One of the underlying mechanisms for impaired vascular reactivity is an increased release of oxygen radicals that react with nitric oxide (NO) resulting in decrease of NO's bioavailability and form of peroxynitrite. The impairment also likely is related to increased oxidizability of LDL. Furthermore, oxidized LDL may affect NO bioavailability by modulating the expression of the enzyme endothelial NO synthase. Finally, hypercholesterolemia is associated with pro-inflammatory changes and impaired regulation of tissue perfusion, which may lead to neovascularisation in the renal cortex, which precedes signs of overt renal morphological damage resulting in renal disease progression. Recent experimental studies on hypercholesterolemia-induced renal damage exhibit that hyperlipidemia contributes to the progression of renal disease. Further studies are needed to investigate the pathogenetic mechanisms.

Renovascular Hypertension: Mechanisms of Development, Clinical Manifestation, Management of Treatment. Review of Literature

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This presentation is a review of international literature that elucidates the clinical manifestation, management of treatment, and mechanisms of renovascular hypertension. Another object of our work is to report some real clinical cases relating to this study and make a difference between international and Moldavian practice in the management of patients with renovascular hypertension. Hypertension in the presence of renal artery stenosis may not necessarily be renovascular hypertension. The two conditions may simply co-exist. Renovascular hypertension is usually symptomless, while hypertension that is difficult to control with antihypertensive therapy is probably the best indication as to whether further diagnostic evaluation is indicated. Some features of renovascular hypertension include: a worse prognosis than essential hypertension, less amenable to drug treatment, a greater risk of dose-dependent side effects, a higher risk of progression to accelerated hypertension and it may result in irreversible ischaemic failure of the affected kidney. Renal artery stenosis may be present in up to 30% of drug resistant hypertensive patients. Arteriosclerotic renovascular disease is an increasingly important cause of renal failure. Functional diagnostic tests for renovascular hypertension such as rapid sequence intravenous urography have now been superseded by the captopril challenge test and in particular scintigraphy following captopril provocation. Tests of prediction as to whether correction of a demonstrated renal artery stenosis will lead to an improvement in the blood pressure include renal vein renin estimations and scintigraphy. The key diagnostic procedure is renal angiography. The approaches to management primarily include appropriate antihypertensive therapy, while there is an increasing place for percutaneous transluminal angioplasty, with or without stenting of an occluding lesion. There is still a small place for corrective surgery. Renal ischaemia due to atherosclerotic renovascular disease is becoming an increasing problem in nephrology. Treatment should be directed at preserving or even restoring renal function.

Right-Sided Infective Endocarditis-Review, Clinical Study

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The aim of this paper is to review the clinical and laboratory features, treatment and prophylaxis of right-sided infective endocarditis, and in particular to compare the clinical manifestations and the outcome of right-sided endocarditis to left-sided endocarditis. Between November, 2008, and March, 2010, 50 patients were examined and investigated with the diagnosis of definite infective endocarditis. All the patients included in the study follow the diagnostic criteria for infective endocarditis developed by Duke Endocarditis Service (Durham, North Carolina). The patients were divided in two study groups, the first group- 8 (16%) patients with right-sided infective endocarditis and the second group- 42 (84%) patients with left-sided infective endocarditis. In the study, predominately male (68%), the ratio male / female was 2:1; median age was 43.1 years. While the tricuspid valve is the usual site of infection (5 patients, 62.5%), pulmonary (2 patients, 25, %) and Eustachian valve (1 patient, 12,5%) infection was also observed. Right-sided infective endocarditis occurs in intravenous drug users (3 patients), the patients with a permanent pacemaker (1 patient), implantable cardioverter defibrillator (1 patient), prosthetic valve (1 patient), central venous catheter

(1 patient), hemodialysis (1 patient), congenital heart disease, Fallot's tetrad (1 patient), furunculosis (2 patients). *Staphylococcus aureus* was the most common aetiological organism of right-sided infective endocarditis (60%), *Staphylococcus epidermidis* and *Streptococcus viridans* were the causes in 20%. For the left-sided infective endocarditis the most common was *Streptococcus viridians* (40%), while the *Staphylococcus aureus* was detected in only 10% cases, other organisms, *Staphylococcus epidermidis* (10%), *Streptococcus haemolyticus* (10%), *Candida albicans* (10%), *Enterococcus faecalis* (10%) also occur less frequently. The usual manifestations of right-sided IE are persistent fever (100%), bacteraemia (62,5%), and multiple septic pulmonary emboli (87,5%), which manifest with chest pain (37,5%), cough (87,5%), haemoptysis (25%). Pulmonary septic emboli was complicated by pulmonary infarction (12,5%), abscess (12,5%) and purulent pulmonary effusion (25%). However, emboli to the lung with subsequent abscess formation occur frequently in patients with tricuspid endocarditis. Systemic emboli most commonly complicate left-sided IE (8 cases, 19%), including three cerebral embolism, two renal arterial embolism, two emboli of the extremities, one embolism of retinal artery. There was a highly significant difference of the risk factors, etiology, clinic, diagnosis and treatment, survival rates between the patients on due to right-sided infective endocarditis compared to left-sided infective endocarditis.

The Impact of Mass Market Literature on Public Perceptions of Forensic Psychiatry

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This study seeks to identify influences on public perception of child and adolescent forensic psychiatry, focusing on the complete works of Stieg Larsson. Effects on lay beliefs and patient expectations were also explored. A brief history of the female protagonist and a briefing on the author's left-wing origins are included. Comparisons are made between fictional services and the reality in British forensic services, focusing on differences in clinical and organisational aspects of care. The heightened influence of music and art therapy above and beyond national curriculum requirements, as postulated by Tervo (2001) and Keen (2004) are explored. Corresponding film studies and historically seminal studies of psychiatry in literature (Dudley 1994) corroborate the finding that psychiatrists are universally ambivalently or negatively portrayed. Also, Larsson benefits from author reliability bias. Finally, there is an exploration of how literature enhances psychiatric practise. Dudley (1994) proposed key roles for author as social critics who "call psychiatrists to account" and "heighten consciousness of psychological development". Also fiction's role as a "storehouse of intrapsychic images" is discussed.

The Immune Profile of Patients with Rheumatoid Arthritis during Immunosuppressive Therapy

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The aim of the work is to make a complex investigation of the efficiency of biological agents or/and conventional DMARD therapy presenting the evolution of the biomarkers from the pre-treatment stage up to 24 weeks of therapy and establishing whether there is a correlation between these biomarkers. A number of 26 patients from 3 clinics in Bucharest (Romania), diagnosed with RA

according to ACR criteria, were evaluated prospectively during 24 weeks of therapy with DMARD or/and biological agents. We evaluated IL-1, IL-6, IL-8, IL-17, TNF-alfa, TGF-beta, tDPD, MMP-3, COMP, ICAM1, CD40L, RF IgG, IgA, IgM, CCP, AKA at 0, 6 and 24 weeks of treatment. In this study were included patients who are over 18, are for the first time on this therapy or after 6 months of break and are not on corticosteroids. The entire group of patients was divided in subgroups A (patients under DMARD therapy), and subgroup B (patients under DMARD and biological agents). The RF IgG in the group unde biological agents and DMARD had a much significant decrease ($p=0,0028$), and after 24 weeks the mean value was in normal limits. DAS28 was more decreased in group B (group B DAS28=0,008, group A DAS28=0,015); CRP was statistically significant decreased in the entire group of patients ($X^2=5,991$), sig=0,013. TNF-alfa was significantly decreased in the entire group of patients ($x^2=5,991$), sig=0,013. ICAM 1 in the group B presented variations which were statistically significant ($p=0,021$). In the group A CD40L presented variations which were statistically significant ($p=0,017$). In the group A were significantly decreased MMP3 ($p=0,049$) and COMP ($p=0,015$), tDPD was modified in the entire group of patients ($x^2=5,991$), sig=0,013. The parameters which are statistically significant modified during 24 weeks of therapy in the entire group of patients are: CRP, DAS28, TNF-alfa, tDPD. IL-1, IL-17, TGF-beta, ICAM1 had a biphasic evolution, with an increase in values at 6 weeks and a decrease at 24 weeks. The TNF-alfa blockers produce a decrease of this cytokine and also a secondary decrease of IL-1 and IL-6 with an increase of TGF-beta. The decrease of MMP3 and tDPD in the group of patients treated with DMARD and biological agents shows that together these agents are more efficient in stopping the bone resorption and cartilage destruction. There is a correlation between rheumatoid factor and markers of inflammation included in DAS28. Low values of IL-17 where correlated with low values of AKA and CCP, and IL-8 in high values was correlated with tDPD. Biological agents along with conventional DMARD therapy are more efficient in control of inflammation and extraarticular complications evidenced through the important disease in DAS28 and RF.

The Metabolic X-Syndrome in Patients with Ischemic Stroke

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The metabolic X syndrome (MXS) represents a complex of metabolic, hormonal infringements and clinical displays, is a cardiovascular factor of risk. Criteria of diagnostics of MXS include: intolerance of glucose or a diabetes and/or resistance to insulin with 2 or more signs from listed more low: - the raised arterial pressure ($> 160/90$ mm Hg); - raised triglycerides plasmas ($> 1,7$ mmol/l and/or HDL-cholesterol lowered ($< 0,9$ mmol/l at men; < 1 mmol/l at women); - visceral adiposity; - microalbuminuria (> 20 microgr/min). Aims. Definition of prevalence MXS at patients with an ischemic stroke, level finding-out glicemia and its evolution in dynamics, correlations MXS with disease, death rate and duration of stay of patients in chamber of intensive therapy, duration of hospitalisation. For revealing of presence MXS diagnostic criteria NCEP (National Cholesterol Education Program) have been used. Risk factors NCEP III 1. Adiposity Circle of a waist > 102 cm at men and > 88 cm at women 2. Blood pressure $> 130/85$ mmHg 3. Glicemia a jeun > 110 mg/dl 4. Triglycerides > 150 mg/dl 5. HDL-cholesterol < 40 mg/dl at men, < 50 mg/dl at women. The positive diagnosis is exposed at any 3 factors. 322 patients have been included in research with acute ischemic stroke. Middle age of patients of 66,85 years (40-89 years). The parity of the man/woman makes 1/1,19. MXS has been revealed at 45 % of patients. The diabetes is defined at 19,6 % of patients with a stroke. Hyperglycemia prevails at women (47,6 %), at men - 42,9 %. 32,6 % of patients with MXS had a massive ischemic stroke, at patients without MXS - 19,8 %. In the executed research the volume of a zone of a cerebral ischemia correlates with presence or absence of risk factors which are

defined MXS. Average mortality studied patients – 15,8 %, strictly correlating with level of glicemia at hospitalisation. Term of hospitalisation at patients with MXS – 10,9 days, at patients without this syndrome – 9,2 days. Term of stay of patients with MXS in chamber of intensive therapy much more longer (5,3 days in comparison with 3,1 days). Thus, patients with MXS are needed longer intensive therapy, and also additional expenses is necessary for treatment of complications for these patients. MXS widespread in a society. MXS contributes to development of strokes by means of such risk factors as adiposity, an arterial hypertension, a diabetes, endothelial dysfunction, hypercoagulation, and dyslipidemia. Frequency of a massive ischemic stroke in 1,65 times more at patients with MXS. Death rate of patients with MXS in 3 times above and duration of hospitalisation in 1,7 times more. At such patients complications is more often come to light and later there comes rehabilitation. Therefore timely diagnostics MXS allows to warn expansion of a zone of a cerebral infarct.

The Peculiar Diagnostic Approach of Migraine in Patients with Histrionic Personality Disorders

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Migraine (M) in patients with hysteria was reported by different authors, but their pathogenetic interaction remains unclear. M diagnosis, due to exclusively subjective criteria, is sometimes difficult to establish in histrionic personality disorders (HPD) associated with conversion disorders (CD) and somatoform disorders (SD). Analysis of clinical features of M in HPD patients and the settlement of specific additional diagnostic support to increase the diagnostic certainty of M. Methods: The study included 31 female patients, average age – 41.8 years, referred to the Headache Center (HC) with a diagnosis of M. The M clinical diagnosis in the HC was based on the International Classification of Headache Disorders criteria (ICHD-2004). The HPD, CD, SD diagnoses were confirmed according to DSM-IV criteria. Additionally, we have practiced discussions with relatives concerning the patients' verbal and non-verbal behaviour, repeated discussions with patients about M history in different psychological context, and a detailed analysis of medical documentation. All the patients met the criteria of HPD: 12 associated with CD, 19 - with SD. M was present in 25 patients (80.6%), 6 (19.4%) had tension-type headache. Four patients had episodic probable M, 7 – episodic M (3 with aura) and 14 - chronic M (4 with medication overuse). In 6 patients M attacks coincided with CD and SD exacerbation, usually within a psychogenic context. Headache, including migraine, in patients with HPD and other hysterical phenomena, raise diagnostic problems. The use of a larger diagnostic approach, parallel to ICHD-2004, considerably enhances the M diagnostic certainty.

The Value of BNP and NT-ProBNP Testing in the Diagnosis of Heart Failure

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Heart failure (HF) is the situation in which the heart isn't able to meet the hemodynamic and metabolic needs of the body. HF is a medical emergency, which depends on quick diagnosis, in the context of the presence of nonspecific symptoms common to many pathologies, including shortness of breath, fatigue, tachycardia and rhythm disorders Initial misdiagnosis occurs in approximately 15-20% of patients presenting to the emergency department with dyspnea secondary to an exacerbation

of heart failure. The objective of this work is to present a method for optimizing the diagnosis of HF with irrelevant clinical features or associated with other diseases, clinical masking HF. According to international statistics, the determination of BNP and NT-proBNP proved to be useful in diagnosis of left HF in patients with suspected HF and in the differential diagnosis of severe dyspnea of cardiac or respiratory etiology. The natriuretic peptides (ANP, BNP, CNP, DNP) constitute a family of cardiac polypeptides which presents three main proprieties: natriuretic, diuretic and vasodilating. BNP is a natriuretic hormone released primarily by the myocardial cells from the left ventricle (LV) in response to increased volume expansion and wall stress. An elevated BNP or NT-proBNP level is a marker of increased LV filling pressure and LV dysfunction. BNP or NT-proBNP determination, has both diagnostic (BNP - normal: 100-500pg/ml; NT-proBNP – normal: <75 years - <125 pg / ml, > 75 years - 450 pg / ml) and predicting value in the evolution of HF. Serum level of BNP and NT-proBNP is age-dependent, it increases in cases of renal failure, atrial fibrillation and it decreases in obesity. Diagnostic thresholds of BNP and NT-proBNP are different in case of presence of these factors.

Venous Thromboembolism - A Never Ending Story

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The marking richness of venous thromboembolism in the current medicine, within all the medical and surgical specialities, represents a first characteristic of this pathology, demonstrable through statistics, but unfortunately, discouraging regarding the survival of pulmonary embolism. The dimension of the theme incites to its research, through the amplitude of the issue, of the different pathology generically reunited under the recently adopted name of venous thromboembolism, both on the national and on the international plan, on the other part it discourages, because from many points of view there are no final solutions in the field of medical research regarding this disorder. At the world level, in each year this disease affects a number of over 5 million people. In Europe, the deaths caused by thromboembolic events are 10 times more than those through traffic accidents, and 100 time more than those through AIDS. According to the data, 30 % of the patients who had a thromboembolic accident will die in the first month after. In september 2008, European Heart Journal published Guidelines on the diagnosis and management of acute pulmonary embolism - The task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology, paper that demonstrates the researchers' interest regarding the theme. Venous thromboembolism has been described as the most preventable disease in the hospital, in internal medicine clinics, oncology clinics, also in general surgery, obstetrics and gynecology clinics and orthopaedic and traumatology clinics and also the most preventable disease. Thus, mortality could be reduced by prompt diagnosis, early prognostic and more intensive treatment in patients with adverse prognostic despite the currently available evidence. It is need a multidisciplinary diagnostic and treatment approach. We will present to you results of a multidisciplinary study focused on venous thromboembolism in patients admitted during 12 month, to the Emergency Room, to the Ist Medical Cardiology Clinic, to Oncology Clinic in “St Spiridon” Hospital Iasi, to the Ist Obstetrics and Gynecology Clinic “Cuza Voda” Hospital, Orthopaedic and Traumatology Clinicin “St Ioan” Hospital Iasi. The most important application of our study is to save the patient life, with our hope to improve the knowledges in this scientific field.

Aspects of Pneumonia in Patients with Pandemic 2009 Ah1n1 Influenza

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During the spring of 2009 the WHO declared 2009 A (H1N1) influenza pandemic. The first case of pandemic influenza A(H1N1), in Republic of Moldova, was registered on July 27, 2009. As of this moment were reported around 29 850 cases of influenza. A part of them were confirmed by RT-PCR (2708 cases of 6500 examined samples). The most severe complication of influenza is pneumonia. From the beginning of the pandemic in Republic of Moldova, has been reported 21 382 cases of pneumonia. Retrospective analysis of medical records of 650 patients hospitalized for at least 24 hours for flu-like symptoms during the period November 2009 - January 2010 in 5 hospitals in Chisinau. Influenza A (H1N1) infection was confirmed by RT-PCR in 114/650 (17.5%) cases, and in 69/328 (21%) patients with pneumonia, in all other examined cases diagnosis of influenza was established on clinical and epidemiological grounds. Of the 650 patients who underwent chest radiography on admission, 316 had findings consistent with pneumonia. Radiological changes of alveolar infiltration, interstitial infiltration, or mixed images met the majority of patients. In 12 (3.6%) patients the diagnosis was established only clinically, chest X-Ray being normal. The average age of patients with pneumonia was 40.8 years, 28 (8.5%) patients were older than 65 years. 32 (10%) patients with pneumonia required hospitalization in an intensive care unit for a period varying from one day to 28 days, 6 patients died (1.8% of all patients with pneumonia). Comorbidities were present in 113/328 (34.4%) patients (COPD, diabetes, cardiovascular diseases, obesity, lymphogranulomatosis, drug addiction). In all patients with flu symptoms, antiviral treatment with oseltamivir was administered from the first day of hospitalization for a period of 5-10 days, radiological infirmation of pneumonia wasn't criterion for annulment of antiviral therapy. Pneumonia can develop both in apparently healthy young people and those with comorbidities and was diagnosed in around 50% of cases of patients who required hospitalization. Antiviral therapy in the first days of disease seems to be associated with a favorable evolution of the disease, with cure.

Pulmonary Rehabilitation in Chronic Obstructive Pulmonary Disease

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The aim of the present review is to cover various aspects of pulmonary rehabilitation (PR) in patients with stable chronic obstructive pulmonary disease (COPD): definition and rationale, outcome measures and patient selection, practical organization and program content. For the articles and reviews about pulmonary rehabilitation were searched in HINARI and MedLine. The keywords were: pulmonary rehabilitation, COPD management, COPD outcomes, chronic bronchitis, exercise training, muscle, health care resources, dyspnoea, health-related quality of life and multidisciplinary approach. Chronic obstructive pulmonary disease is a major cause of morbidity and mortality worldwide and an important worldwide cause of disability and handicap. Centred at exercise training, PR is global, multidisciplinary, individualized and comprehensive approach acting on the patient as a whole and not only on the pulmonary component of the disease. PR is now well recognized as an effective key intervention in the management of several respiratory diseases particularly in COPD. For patients with chronic obstructive pulmonary disease, PR is now considered to be the standard of care for those with at least moderate COPD as well as for those patients with COPD of mild severity (as determined

by spirometry) who, follow maximal medical care and remain symptom-limited in exercise capacity or functional status. The goal of PR is for the patient to become more physically active and maintain independence a longer period of time. The benefits of PR extend far beyond physical endurance and reduced dyspnoea, and include improved adherence, reduced health care utilization and costs, more patient involvement in disease management, and improved patient outlook. In the recent years, the beneficial effects of a comprehensive and multidisciplinary pulmonary rehabilitation program have been so well documented in COPD that this therapy has gained a prominent position in most guidelines on diagnosis and treatment of this disorder. The magnitude of the effects resulting from pulmonary rehabilitation compare favourably with the available drug therapies in COPD, and the evidence for reducing use of health care resources is increasing. The successful effects of pulmonary rehabilitation in COPD can be largely attributed to the systemic component of the disease, with peripheral muscle dysfunction the best documented.

Pulmonary Arterial Hypertension in Scleroderma

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Systemic sclerosis (SSc) is a rare chronic disease of unknown cause characterized by diffuse fibrosis and degenerative changes in the skin and internal organs. It can cause serious complications in the lungs in two major ways: the pulmonary fibrosis and pulmonary hypertension (PAH). Owing to the fact that lung damage in SSc has a high incidence (70 % in the necropsy studies) and represents the leading cause of death in scleroderma patients, it is required an early systemic evaluation of lung complications in these patients. The objective was to study the particularities of lung complications in patients with SSc. Material and methods This study is based on the surveying of 12 patients with the SSc, aged between 28 and 68 years old, the majority of the patients being females. The diagnosis was established on the bases of the clinical presentation, the laboratory data and the instrumental examination: hemoleucogram, immunological tests (Anti-Scl 70 antibody, Anticentromere antibody), ECG, echocardiography, spirometry, chest X-ray, CT of the chest, pulse-oximetry. Results and discussions The lung complications were determined in a big number of patients 83.3 %. PAH was diagnosed in 4 patients: 1 case of severe isolated PAH in a patient with limited form of SSc, and 3 cases of light PAH associated with pulmonary fibrosis. Pulmonary fibrosis without PAH was determined in a half of examined patients. Cor pulmonale was revealed in 2 patients, both of them with PAH. The symptoms of lung damage were non-specific and consisted of shortness of breath from an activity (at 8 patients from 10) and dry cough (at 5 patients from 10). In order to treat the severe PAH was administrated a phosphodiesterase 5 inhibitor (Sildenafil) and a calcium channel blocker (Verapamil) with a good clinical and hemodynamic response. Conclusions: 1. Both the diffuse and the limited subsets of scleroderma patient may develop PAH, but it is more common in patients with limited scleroderma. 2. Symptoms that might indicate PAH are non-specific. 3. Echocardiography is recommended in the annual evaluation of all sclerodermic patients. 4. New effective treatments may improve quality of life and improve long-term outcome.

Cryptogenic Organizing Pneumonia: Report of 3 Cases

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Cryptogenic organising pneumonia (COP), is a rare disease also called idiopathic bronchiolitis obliterans with organising pneumonia (BOOP), characterised by histological findings of polypoid masses of granulation tissue in the lumens of small airways, alveolar ducts, and alveoli. Although the pulmonary lesions in COP are mainly intraalveolar, COP was included in the American Thoracic Society/European Respiratory Society International Consensus Classification of the Idiopathic Interstitial Pneumonias. The aim of this study was to investigate the clinical features including history, radiology, pulmonary function (PF) and histological pathology of COP and report its features in our experience for improving the ability of diagnosing and reduce recurring. Methods: Three patients were diagnosed with COP, the mean age was 65 years. Two were men and one woman. All the patients presented with cough and dyspnoea. Fever, anorexia and weight loss were reported in 2 patients, chest pain and haemoptysis in 1 case. There is no finger clubbing. Physical examination disclosed velcro rale on auscultation in all the patients. Lung function tests revealed hypoxemia and restrictive ventilatory defect in 2 patients. Chest radiography showed: bilateral subpleural distributed air-space consolidation and ground glass opacity (2 cases); unifocal region of consolidation in 1 case. In all cases the diagnosis was made by open lung/thoracoscopic biopsy. Two patients were treated with corticosteroids (CS), had a good response and were stable after stop medication. One had spontaneous remission, but after 6 months had recurrence and CS was started. The diagnosis was delayed in all the case (2-8 months), and they took several courses of antibiotics for pneumonia. Conclusion: We should try to get a pathological diagnosis when clinical and image characteristic suspected to COP. Early enough dose of CS after a definite diagnosis could reduce recurring, although the response to CS is generally good, a proportion of patients can experience early or late relapses.

Assessment of Risk of COPD Exacerbations by the Multidimensional Staging Systems

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Chronic obstructive pulmonary disease (COPD) can become the third most common cause of death and the fourth cause of disability in the world by the year 2020. The severity of COPD is currently assessed using a single physiological measurement, the forced expiratory volume in 1 s (FEV1). COPD, however, has complex effects on other aspects of respiratory function and in many patients is associated with important systemic changes. The aim of this study is to compare multidimensional disease ratings in COPD. Methods: 158 consecutive COPD patients were enrolled into the study. The spirometric data (FEV1, FVC, FEV1/FVC), BODE index (BMI, FEV1, MRC, 6 MWD), BOD (BODE without 6 MWD), SAFE (SGRQ, Air-Flow limitation and Exercise tolerance) and HADO (Health-Activity-Dyspnoea-Obstruction) were analyzed. Health-related quality of life was assessed by the Clinical COPD Questionnaire (CCQ) and the St. George Respiratory Questionnaire (SGRQ). Results: The cohort consisted of 78 younger patients, mean age 56.8 ± 3.94 years and 80 older patients mean age 72.2 ± 4.82 . Patients in both groups had the similar severity of COPD by GOLD/ATS/ERS: FEV1, % was $42.7 \pm 14.44\%$ versus $42.3 \pm 12.82\%$ ($p > 0.05$). Pearson correlation coefficient analysis demonstrates in COPD patients a significant positive correlation between the BODE and the rate of COPD exacerbations (in elderly $r = 0.45$, $p < 0.01$ and in younger $r = 0.52$, $p <$

0.01), also correlations between BOD index and exacerbations are considerable. Moreover the correlational analysis revealed the presence of positive correlation between the BODE and HRQL: the total scores of the CCQ ($r=0.62$, $p<0.01$) and SGRQ ($r=0.42$, $p<0.01$) in elderly COPD patients. SAFE ($r=0.34$, $p<0.01$) and HADO scores ($r = -0.33$, $p<0.01$) correlated weaker with the rate of COPD exacerbations in elderly. Conclusion: The BODE and BOD scores correlate stronger with rate of COPD exacerbations in elderly and young COPD patients than HADO and SAFE scores.

Predictors of Health Status in Patients with COPD Determined by Gender

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The influence of gender on the expression of COPD is studied rather superficially. Quality of life (QoL) has become an important outcome in COPD patients. Aim: The aim of the study was to analyse the factors which contribute to gender differences in quality of life of COPD patients. Methods: The following indices were taken into consideration: age, FEV1%, FVC, FEV1%/FVC, BODE index, 6 minute walk distance (6MWD), body mass index (BMI), dyspnoea (modified MRC), Saint George's Respiratory Questionnaire (SGRQ), Clinical COPD Questionnaire (CCQ), EuroQol Questionnaire in 80 men and women with COPD from pulmonary clinic. Results: 80 patients were divided into 2 groups of 40 women, mean age 65 ± 8.3 years and 40 men, mean age 64 ± 8 years. The mean FEV1% for the groups were $46.27 \pm 15\%$ and $44.9 \pm 9.5\%$, $p= 0.62$. Patients in both groups had similar scores in all domains of the SGRQ: total 62.23 vs 65.01, $p= 0.29$; symptoms 76.46 vs 80.63, $p=0.29$; activity 57.49 vs 59.35, $p=0.58$; impact 60.49 vs 63.35, $p=0.29$. In CCQ there were also observed no significant differences in total score 2.96 vs 2.8, $p=0.38$. Minor differences were observed in BODE index 6.07 vs 5.9, $p= 0.68$. The forward stepwise regression analysis shows that the BODE index, severity of obstruction and comorbidities are the important predictors of health related quality of life in men COPD patients, which explain 55% of the total score of SGRQ ($p<0.01$). In women COPD patients, 6MWD, age and oxygenation explain 54.6% of SGRQ total score. Conclusion: In moderate and severe COPD patients attending a pulmonary clinic, there are no significant gender differences in health status scores. The main predictors of SGRQ total score in men are BODE index, degree of obstruction and comorbidities, whereas for women, the main predictors are age, exercise capacity and level of arterial oxygenation.

2009 AH1N1 – Associated Pneumonia, Clinical, Microbiological and Pathological Analysis of 15 Fatal Cases

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The objective of the study was to describe clinicopathological, microbiological and radiological characteristics of 15 patients who died following 2009 AH1N1 – associated pneumonia. As materials and methods were reviewed clinical, radiological, microbiological, and pathological datas (with emphasis on the pulmonary pathology findings) of 15 fatal cases of 2009 A H1N1 associated pneumonia hospitalised between November 2009 and January 2010 in Republican Clinical Hospital (RCH), Chisinau, Republic of Moldova. Most of the 15 decedents - 13 (86,6%) - were women (2 of whom were pregnant and 2 postpregnant). The mean age in the reviewed cases was 37,4

years. Comorbidities were presents in 10 cases, most frequent being hypertension (6 cases) and obesity (4 cases). The mean time from onset of symptoms to admission RCH was 6,5 days (range 3-13). The mean time from onset of symptoms to death, and from hospitalization to death was 16,91(range 3-27 days) and 10,39 days (range 3 hours-23 days) days respectively. All patients had clinical criteria for SDRA and required mechanical ventilation during the first 24 hours of hospitalization. Chest radiographs demonstrated, in all cases, bilateral, confluent, patchy opacities with subtotal or total extent. In 3 cases was detected spontaneous pneumotorax. Bacteriological exam in 7 of 8 sputum specimen revealed *Pseudomonas aeruginosa*. Histopathologic changes consist of focal to extensive diffuse alveolar damage (DAD) in 12 patients often associated with marked hyaline membrane formation. Four of these 12 DAD cases showed only acute DAD. Three of 12 cases showed acute and organizing DAD. Five of 12 cases had fibrosing and organizing DAD. Autopsy evidence of mixed bronchopneumonia (viral + bacterial), predominantly with total extent, were observed in all decedents. In 11 cases was present predominantly a purulent exudate and in 4 cases - predominantly hemorrhagic. Acute desquamative tracheobronchitis was observed in all patients. In 10 of these cases was found a serohemorrhagic component, in 3 cases a fibrinopurulent component and necrotizing one in 2 cases. Desquamative bronchiolitis with metaplasia of bronchial epithelium were observed in 3 cases. Serofibrinous pleurisy was found in 6 decedents. In conclusion we say that pulmonary pathological changes in fatal cases, caused by 2009 A H1N1 influenza virus, were similar to those described in the past pandemics. Superimposed bacterial infection of the respiratory tract was common. Comorbidities and pregnancy can be risk factors for death.

Current Concepts in the Treatment of Hepatopulmonary Syndrome

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The aim of the present review is to cover various aspects of treatment of pulmonary dysfunctions in patients with hepatopulmonary syndrome (HPS), which represents important complication to cirrhosis and portal hypertension. For the articles and reviews about pulmonary dysfunction and it treatment in HPS was searched HINARI and MedLINE. The keywords were: pulmonary dysfunction in HPS, treatment of HPS. Multiple medical therapies have been investigated for the treatment of HPS in small studies but with low answer to medical therapy. An investigation into the efficacy of pentoxifylline, a nonspecific phosphodiesterase inhibitor that is recognized to block effects mediated by TNF- α in inflammatory and endothelial cells, has been shown improvement of intrapulmonary vasodilatation and gas exchange abnormalities. Other studies have looked at the contribution of somatostatin analogs, amiltrine, indomethacin and blockers of AT-II like losartan show benefits in arterial oxygenation. Liver transplantation is considered to be the definitive treatment of HPS with often successful reversal of hypoxemia; however other treatments have been trialed about mediators (nitric oxide) disorder in lung vessels and block synthesis of vasodilatationvasoconstrictive substances at liver level. Currently, no effective medical therapies for the hepatopulmonary syndrome exist, and liver transplantation is the only successful treatment. It is necessary to study efficiency of the new drugs in lung vascular disorders in liver cirrhosis.

Pulmonary Sclerosing Hemangioma. Case Report

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Pulmonary sclerosing hemangioma (PSH) is a rare benign neoplasm of an epithelial origin and was reported by Liebow and Hubbell in 1956. The incidence accounted for approximately 1% of all pulmonary tumors, following hamartoma among the benign tumors. The finding of multiple bilateral lesions is rare and less reported in the literature. We report one such case seen recently at our hospital. A 55-year-old non-smoker woman without a unremarkable family and medical histories was admitted to our hospital in August 2008. She presented with mild dyspnea and asthenia. In February 2007 she was diagnosed with bilateral basal pneumonia (detected on chest radiography) and treated with third-generation cephalosporin. In July 2008 she notified increasing dyspnea, cough, subfebrile temperature and weight loss (5 kg in 2 month). Radiological differential diagnosis was performed with all of the disseminated pulmonary lesions (inclusively with septical pneumonia and pulmonary metastasis). There were a very few findings in the physical examination of the patient: she was hipoponderal and there was a diminuation of vesicular murmur on bilateral pulmonary basis and wheezing above the left site. Laboratory examinations (except an unimportant anemia and high level of ESR 65) including respiratory function tests were within normal ranges. The bilateral purulent endobronchitis was detected on fibrobronchoscopy. In sputum cultures were positive for *Citrobacter* spp, *E.faecium* and *Candida* spp. On her 2nd day of admission the temperature level backs to normal (under the antibiotic treatment). Chest computed tomography (CT) images revealed a chronic inflammatory process with pulmonary bules. Left pulmonary biopsy was then performed. On general examination of the left lung there were presented sclerosis and multiple lesions in S8. Histological view was suspected for tumor lesion of an origin from endothelium of the lung vessels. The differential diagnosis was performed between an pulmonary hemangioepithelioma and pulmonary sclerosing hemangioma. By immunohistochemical analysis with CD34 the pulmonary hemangioepithelioma was excluded (this tumor has a very bad prognosis for patient). In December 2009 there were no dynamic changes on chest radiography or on chest CT: no new lesions or any growth of the old ones. Discussion Pulmonary sclerosing hemangioma in more than 80% of all cases occurs in female patients who are mostly in their 40s (range from 11 to 80 years). 80% of the patients are asymptomatic and the lesions are generally discovered incidentally by chest radiography. In symptomatic patients the cough, the dyspnea, the chest pain and hemoptysia are mainly observed. The diagnosis remains based on histological findings. A limited resection of the lesion or a lobectomy is the treatment of choice. The prognosis of patient is excellent (survival range from 5 to 30 years).

Surgery Section

Juxtapapillary Diverticulas

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Duodenal diverticulas incidence is 10% of the total number of gastrointestinal tract diverticulas, 70% being localized in D2 peri- or papillary. These can affect all layers of the duodenal wall or just the mucosa, which herniates through the weak points – vessel and common bile duct penetration points in D2. One hundred and thirty four bilio-duodeno-pancreatic specimens collected within 12 hours, from fresh human cadavers, with age range 18-85 years, without upper gastrointestinal pathology, fixed in 10% formaline for 15 days were examined. Methods – anatomical micro- and macropreparation, morphometry, common bile duct/duodenal angle measurement, histotopography and frequency appreciation of the pancreatic channel of the common bile duct were performed. In 11.16% juxtapapillary diverticulas were observed Peripapillary diverticulas incidence – 67%, while parapapillary diverticulas incidence was 33%. Pancreatic channel was observed in 30% and its length varied from 4 to 7 mm. In 75% the common bile duct/duodenal angle was 20°-45° and in 25% - 20°-90°. The diameter of the common bile duct in the supraduodenal, pancreatic and intramural portions was in the range 1-3 mm. The determining factors for distal common bile duct stricture were: 1-diverticular length; 2-diverticular axe; 3-diverticular diameter; 4-diverticular opening diameter. The anatomical particularities of the juxtapapillary diverticulas impair the biliary tree drainage by compression of the distal part of the common bile duct. Under these circumstances strictures, bile and wirsung stasis occurs with subhepatic jaundice, colangitis and chronic pancreatitis.

Aneurysmal Dilatations of the Vascular Access for Hemodialysis: Surgical Treatment

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The aim of the research is to choose the optimal methods of diagnosis and rational surgical treatment in patients with aneurysmal type dilatations (ATD) who are on dialysis. Dilatation type aneurysms (DTA) are part of the late complications of arterio-venous fistula (AVF) and can be seen in all types of fistulas, as a result of both repeated puncture and decreased vein elasticity. Surgical management is controversial for DTA. In the study were included 15 patients with CRF, stage V (KDOQI) who are on dialysis in the department of Hemodialysis (HD) in the CNSPMU with AVF dysfunction caused by DTA between 2006-2009. The mean age was 51,07±3,05 years (34 – 75 years). The male/female ratio was 6/8. The mean treatment period of iterative HD was 6,54±0,76 years (2-12 years). The mean period of time of aneurysm occurrence from the formation of AVF was 45,38±9,47 months (6-84 months). Using Duplex ultrasound preoperative is compulsory both for the assessment of peripheral vascular system condition, and for setting the diagnosis. In 9 patients indications for surgical treatment were: a) decrease of blood flow in AVF (n=2); b) spontaneous

rupture of the aneurysm of the AVF with external bleeding (n=2); c) pseudoaneurysm with PTFE graft infection (n=1); d) presence of calcinates in the aneurysm wall and of pain syndrome (n=1); e) aneurysm of the AVF in association with stenosis and partial thrombosis (n=3). According to location, the DTA are situated: on anastomosis line (n=2), at the puncture site (n=4), partial venous aneurysm (n=2), pseudoaneurysm of the polytetrafluoroethylene (PTFE) graft (n=1). Surgical treatment was performed in 9 (60%) from 15 patients. Following types of surgical correction were used: aneurysmectomy + AVF formation using PTFE graft (n=2), resection of the aneurysm with the reestablishment of native AVF with a segment of PTFE (n=1), resection of the aneurysm + reconstruction of the native AVF (n=4), aneurysmectomy + central venous catheter (n=1), reconstruction of synthetic AVF (PTFE) (n=1). The surgical option is made according to the size of the aneurysm, blood flow in the AVF and the patient's vascular supply. The goal of the surgical treatment is to preserve the native AVF, but in case of absence of necessary peripheral vascular reserves – synthetic PTFE graft is recommended to form a new vascular access.

Optimal Type and Timing for Cholecystectomy in Patients with Acute Biliary Pancreatitis

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Pharmacological management in patients with acute biliary pancreatitis could result in elevated number of its complications. The type of surgery, endoscopical management and timing for these procedures is controversial. For the present study 62 patients with acute biliary pancreatitis were selected. The diagnosis was confirmed by laboratory (blood and urine amylase level) and paraclinic (USG, ERCP with papillosphincterotomy) tests. In all cases elevated level of urine amylase was detected and in 32.3% - elevated blood bilirubin level. In all patients with signs of elevated pressure in the biliary tree - ERCP with papillosphincterotomy was performed. In 26(42%) choledocholithiasis was diagnosed while in 36(58%) – other reasons of biliary tract obstruction. In case of choledocholithiasis and patients' positive evolution, confirmed by instrumental and laboratory tests, ERCP and papillosphincterotomy was performed within 24-48 h. form admission. These patients underwent surgery within 6-7 days, after general condition improvement – confirmed by laboratory tests. Laparoscopic cholecystectomy was performed in 60, while traditional surgery – in 2 cases. Laparoscopic cholecystectomy in patients with acute biliary pancreatitis can be performed after biliary tree decompression by means of ERCP with papillosphincterotomy and improvement in patients' general condition. Laparoscopic cholecystectomy is considered “golden standard” for the treatment of acute biliary pancreatitis.

Surgical Management of Mesenteric Ischemia

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The aim of the research was to assess the initial results of the application of “Damage Control Surgery” (DCS) principle in the treatment of acute mesenteric ischemia (AMI). Despite the successes achieved in the surgical treatment of the AMI the lethality rate in this group of patients is still 70-

90%. Several surgical options have been reflected until now in literature, but there are few articles on the application of DCS principle in the surgical management of AMI. We present the results of the surgical management of 13 consecutive cases of AMI treated according to the DCS management option (immediate resection of nonviable bowel without the reconstruction of the digestive tract, laparostoma, including VAC-system, stabilizing the patient in the Intensive Care department and eventual elective reconstructive surgery later) between January 2009 and march 2010. Mean age was 67.92 ± 2.48 (48-79) years, with the mean period of time before check-in of 45.62 ± 14.47 hours. Diagnosis was set using the results of D-dimers test, 3D-CT with angiography and laparoscopy. 11 cases of arterial AMI and 2 cases of venous AMI were identified. The primary surgery included resection of the nonviable portion of the intestine: ileum (n=2), jejunum+ileum (n=3), jejunum+ileum+right hemicolonectomy (n=8). The final reconstructive surgery was performed after 50.82 ± 5.31 hours. The postoperative mortality was 61.53% (died 8 patients). The initial experience demonstrates that the Damage Control Surgery principle can be considered the only surgical option for the treatment of patients with AMI. The final conclusions will be defined after the analysis of a bigger group of patients.

Anatomical Embryological Possibilities for Ventral and Dorsal Pancreatic Resections

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Recently, ventral and dorsal pancreatic resections are considered the procedures of choice for low-grade malignant neoplasms. The anatomical structure of the head of the pancreas is currently controversial. The anatomy of the head of the pancreas was studied on 10 fresh and 10 fixed in formaline specimens, collected from cadavers with age between 18-85 years, without pancreatic injuries. Anatomical macropreparation, morphometry, histotoporaphy were performed as methods of the study. The apex of the uncinat process was considered as orientation for separation and penetration into the interpancreatic fissure. The presence of a loose fissure between this two pancreatic structures facilitates their separation. The ventral portion is adhered to the dorsal portion by means of perforating vessels only. The ventral portion is connected to the dorsal portion by loose tissue. After separation, the dorsal and ventral pancreatic surfaces are smooth and shiny. The ventral portion can be removed without affection for the duodenal blood circulation. A complete fusion between the ventral and dorsal pancreas is determined only in the 1/3 superior part of the head of the pancreas. The main blood source for the ventral portion of the pancreas is presented by anterior pancreatoduodenal arcade. The ventral and dorsal pancreatic resections are argumentated anatomically and embryologically.

Intra-Abdominal Hypertension in the Intensive Care Unit

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Intra-abdominal hypertension (IAH) and abdominal compartment syndrome (ACS) have been increasingly recognized in the critically ill over the past decade. The wide variety of definitions leads to confusion and difficulty in daily activity. Goal of study: Elucidate the leading causes of IAH in intensive care unit and the systemic effects of elevated intraabdominal pressure. Materials and methods: The study included 22 patients who had monitored intraabdominal pressure, the total

number of measuring being 33. The average age of patients was 53,9. The patient's severity state was quantified by APACHE II score, the average being 15,9. The measurement of intra-abdominal pressure (IAP) was performed by indirect method – urinary bladder pressure measurement. Results: The leading causes of IAH were: intraperitoneal surgical pathology in 68% (n=15), retroperitoneal pathology in 27%(n=6) and one case of ventral hernia cure complicated by IAH. The average of IAP was 15,58 mmHg, the highest value was recorded at the patients with retroperitoneal pathology. Carrying on analysis of systemic effects of IAH was marked tachypnea at the patients whose IAP exceeded the value of 15mmHg. Signs of pulmonary shunt was found in 84,85% cases, the ratio of PaO₂/PAO₂ being 0,47. Comparing IAP values at the patients who had signs of pulmonary shunt and competitor group was noted a negligible difference. At the patients with IAH was noted a slight tendency to tachycardia, the average heart rate being 93.64±15.91 per min. False high values of central venous pressure (CVP) have been recorded at the patients whose IAP exceeded the value of 20mmHg. The average level of serum creatinine in the single group was 111,44 µmol/dl. Higher serum creatinine values were recorded at the patients with increased values of IAP as impairment of kidney function. Discussion and conclusions: Abdominal hypertension is a more common phenomenon in intensive care unit than seems to be at first sight. Causes leading to elevated intraabdominal pressure are diverse, but unified according to certain principles can be separated into 3 anatomical large groups: intraperitoneal, retroperitoneal pathology and those related to abdominal wall. Elevated intraabdominal pressure has systemic reflexion. Prevalence of pulmonary shunt at the patients with IAP<15 mm Hg versus those with IAP>15mmHg can be explained by other origins than intraabdominal hypertension when IAP value doesn't exceed 20mmHg. Hemodynamic effects are manifested by high false CVP value, which is a surrogate of preload and reflects indirect volemic state. Intra-abdominal pressure less than 20mmHg had minimal systemic effects while IAP exceeding 20mmHg is responsible for the compromising of at least one organ system.

Safety and Effectiveness of Ultrasound-Guided Foam Sclerotherapy for Varicose Veins

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The aim of this study is to compare NICE guidance recommendations to the outcome of a series of patients with varicose veins managed by ultrasound-guided foam sclerotherapy (UGFS), thereby assessing UGFS's safety and effectiveness. Methods: Between April 2008 and December 2009, 16 outpatients (9 males and 7 females), mean age 48.1 years, with varicose veins were treated with UGFS at the Queen Elizabeth Hospital. An audit support tool provided by NICE was used to collect data relating to three criteria: consent, safety and effectiveness. Results: Consent was sought in 100% of cases. Colour-flow Doppler ultrasound testing showed that 92% of limbs were completely occluded with no reflux at the saphenofemoral junction, whereas only 1 patient showed occlusion with reflux at the saphenopopliteal junction. None of the patients reported recurrence of varicose veins. No serious side-effects were reported. 31% had pigmentation post-procedure, 25% suffered from bruising, but only 6% reported a skin ulcer post-treatment. 75% of patients were happy and satisfied with the results, while the rest (25%) were unhappy due to persistent skin pigmentation (12.5%), pain (6%), or lack of symptom improvement (6%). The AVVQ scores show that 86% of patients have an improved quality of life post-treatment. Our results are in accordance with the NICE guidance. The outcome of the 16 patients suggests that UGFS is an efficacious and safe procedure short term. Nonetheless, a study with a larger sample size and a longer follow-up is needed to confirm our findings, yield more statistically significant results and establish long term efficacy.

White phosphorus burn. Case report

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White phosphorus burn is a special subtype of chemical burns, rarely encountered and is very limited in literature. Case Presentation On January 11, 2009, an 18-year-old male was transferred to the Emergency room (ER), due to exposure to military attack with White Phosphorus shell, with multiple scattered patches of full thickness burn, surrounded by sloughed tissue, involving 30% of his body surface area, distributed in both upper and lower limbs and right shoulder, a clinical diagnosis of white phosphorus burn was made. Airway was secured, without signs of inhalation burns; resuscitation fluid was initiated, irrigation with diluted sodium bicarbonate solution and wet dressing were done. In the Burn Unit, White smoke was noticed coming up from the wounds which became deeper, with extensive necrotic tissue, apparent localized injuries weren't correlated with underlying severe deep destruction. In the operation room, debridement and excision for dead tissues and removing phosphorus particles was accomplished, transferred to ICU for monitoring of vital signs, electrolyte disturbance and ECG changes where he was managed accordingly. After 8 days of hospitalization, the patient was relatively well, and discharged without manifestations of systemic complication of white phosphorus burn. White phosphorus is transparent combustible substance, associated with extensive full thickness burn injury with delayed wound healing. In our case, the management include irrigation by diluted sodium bicarbonate solution at ER, whereas, only water have been proved to prevent deaths , early excision and massive debridement of particles was accomplished, electrolyte disturbance was noticed as a complication.

Microsurgical Treatment of the Sacular Supratentorial Aneurysmes

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The purpose of the study is to compare the results of minimally invasive keyhole craniotomy and standard larger craniotomies in the surgical treatment of patients with intracranial aneurysms.

In the past 5 years 105 patients were operated by two experienced neurosurgical teams. The first group of 30 patients with 32 aneurysms were operated through a small keyhole craniotomy, using the eyebrow keyhole approach in particular. The remaining 75 patients with 82 aneurysms were operated using a standard craniotomy that included pterional/frontotemporal, frontoparietal parasagittal and retrosigmoid suboccipital craniotomies. All operations were performed in the standard microsurgical technique using intraoperative evoked potential monitoring and endoscopic assistance in selected cases. Results: Most supratentorial aneurysms and basilar tip aneurysms were successfully operated through an eyebrow keyhole craniotomy. Distal MCA aneurysms as well as aneurysms on the MCA with a long M1 segment were operated through a temporal keyhole, and aneurysms of the distal PCA (P2-P3) segment subtemporally. The frontoparietal parasagittal keyhole approach was used only for pericallosal artery aneurysms. Infratentorial aneurysms of the VA/PICA complex were operated via a retrosigmoid approach. On comparing the surgery results in patients with a keyhole craniotomy and those with standard standard craniotomy, similar outcomes were found for both groups, with excellent or very good outcomes (GOS 5 and 4) in 23 (76.66%) patients from the keyhole craniotomy group, and in 51 (68%) patients from the standard craniotomy group.

The mortality rate in the keyhole group was 5 (16,67%) and 15 (20%) in the standard craniotomy group. Parallel treatment results of using two options - keyhole craniotomy and standard larger craniotomy - were analysed in the past 5 years. Two experienced neurosurgical teams in performing both surgical approaches have reached almost similar morbidity and mortality rates, and overall surgical results. The type of craniotomy is selected according to the experience of the surgical team, and familiarity with certain approach. The authors have good experience with the minimally invasive approach for different intracranial pathology and recommend it especially in neurovascular surgery.

Present Trends in Abdominal Actinomycosis

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Actinomycosis is a chronic infectious disease caused by bacteria in the *Actinomyces* genus. The pathologic, clinic and imagistic polymorphism and the rare incidence of this disease make it so frequent misdiagnosed. Single unit retrospective nonrandomized clinical study on over 40 years of experience in diagnosing and treating abdominal actinomycosis. First case of abdominal actinomycosis was diagnosed in our clinic in 1968. During the next 36 years, between 1968 and 2004, there were registered only 3 cases, all ileo-cecal actinomycosis. In the next 3 years interval, 5 more cases were diagnosed: 4 associated with intrauterine devices (IUDs) and 1 associated with intraperitoneal remnant calculi after laparoscopic cholecystectomy. We present these last 5 cases, the first 3 having been reported elsewhere. Abdominal actinomycosis is a rare disease, with variable and deceiving clinical and imagistic characters. In Romania we witness a shift in the epidemiology of this disease as a result of the introducing of the IUDs for the first time after 1990. Confronted with a female patient carrying an IUD that has an inflammatory and a pelvic tumoral syndrome of variable intensity, one should consider also the diagnosis of abdominal actinomycosis. Preoperative establishing of this diagnosis may allow, by a long antibiotic therapy, the elimination of the need for surgery or at least the decrease of its limits. A very rare cause of intraperitoneal actinomycosis is intraperitoneal gallstones remnant after laparoscopic cholecystectomy. To our knowledge, our case is the first reported in the medical literature.

Role of Tumoural Markers in the Treatment and the Prognosis of Head and Neck Cancer

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Head and neck cancer has important mortality, incidence and prevalence in Romania, therefore prompting for studies meant to detect reliable markers capable of predicting the disease's progression and its response to treatment. The study was conducted in the Oncology Clinic of Craiova, Romania during ianuarie 2000-decembrie 2009. Patients were randomized 1:1 (using a simple randomization software) in 2 groups: A receiving standard radiotherapy, B comprising patients who received radiochemotherapy (protocol 5-fluorouracil 1000 mg/5d iv CI + Cisplatin 20 mg/5d IV CI x 4 days/4 week or Cisplatin 20 mg/5d IV CI weekly or 20 mg/5d IV CI x 5 days/3 week). The endpoints of the study were: response rate, median overall survival, disease progression

free survival and quality of life in each group. Kaplan Meier curves were used for statistical analysis – for overall survival and the logrank test. The response rate was high for patients with radiochemotherapy which was possible radical surgery. Is significant difference between median overall survival appeared between the 2 groups: 18,8 months in group A and 17,2 months in group B with a hazard ratio for survival of 0,88 (95%CI, 0,75-1,12, $p < 0.004$). Progression free survival was not significant different between these 2 groups: 6.9 months for group A and 7.2 months for group B. Multivariate analysis revealed TNM stage and site of the tumor significant factors for overall survival, and TNM stage, site of the tumor and EGFR expression as significant factors for time to progression. The molecular biomarkers EGFR and VEGF have a prognostic significance in head and neck cancer in addition to the established clinical prognostic factors such as the stage and site of the tumor. Also hypermethylated TSG promoters were detected in saliva using microarray based (DCC, MINT31, p16, cyclin A1, MINT1, TIMP3, DAPK) and this test can be a surveillance prediction and model of recurrence that might be applied to screening the population. First line chemoradiotherapy regimen associated with molecular target therapy in advanced head and neck carcinoma remains a decision of the physician. New approaches include the combination of anti VEGFR agents and antiEGFR monoclonal antibodies, and combined antiEGFR therapy with small molecule tyrosine kinase inhibitors.

Medical-clinical Aspects of Chronic Atrophic Fetid Rhinitis. Clinical Case

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Chronic atrophic fetid rhinitis (ozaena) takes important place among other forms of chronic atrophic rhinitis. It has, mostly, progressive flow, that leads to complete atrophy of mucous membrane and skeleton of nose, also the appearance of unpleasant smell and establishment of irreversible lowering of sense of smell. Denotation and presentation of some medical-clinical aspects of chronic fetid rhinitis and elaboration the diagnostic's algorithm of patients with such pathology. This advanced work is integral, descriptive research based on an analysis and synthesis of official autochthonous medical information and international periodicals. The significance and research importance corroborates with demonstration of clinical case. A man, European, 48 years, complaints on: breach of nasal breathing from crusts which hard separate, anosmia, presence of unpleasant smell on distance according to other people. A patient was exposed casually. From anamnesis - patient is ill more than 25 years, accepted treatment irregularly, his son suffers from similar disease. Laboratory indexes have shown: Hb - 126 g/l, Er - $4,3 \times 10^{12}/l$, i/c - 0, 87, Fe serum - 2, 4 $\mu\text{mol}/l$. On the basis of clinical and paraclinical facts the final clinical diagnosis was proposed: Chronic fetid rhinitis. Ozaena is widespread pathology and family cases are characteristic for such disease. Patients with this pathology do not apply for medical help long time and remain unnoticed. There are some difficulties of diagnostic of disease, as cultivation of *Klebsiella ozaenae* requires special conditions and instruction of medical personnel.

Small Cell Mammary Neuroendocrine Carcinoma – Case Presentation

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Neuroendocrine carcinomas are very rare and develop from the neuroendocrine cells which are present in the whole body. The carcinomas usually appear in the bronchopulmonary or the gastrointestinal tract, but these can also occur in the mammary glands. There have been reported only about 50 cases of this type of cancer in the medical literature. The diagnosis is set on the presence of neuroendocrine markers present in the tumor cells (ex. Neuron Specific Enolase – NSE). Female patient aged 40, presents to the hospital for further investigation after the appearance of a mass at the level of the left breast. The clinical exam showed the presence of a painless tumoral mass with a diameter of 2cm. The anatomopathological and the immunohistochemical exams revealed the presence of a small cell neuroendocrine carcinoma. The CT exam (thorax, abdomen, pelvis with contrast substance) exposed nodular hyperactive nodules at the level of the left mammary gland, left axillary adenopathy without other pathological changes. The final diagnosis was primary mammary neuroendocrine carcinoma with resection recommendation. The patient's tumor and the lymph nodes from the first axillary station were excised and metastases were revealed in 3 of the 6 examined lymph nodes. The patient had cytostatic treatment to avoid recidive. The patient continues the cytostatic and radiotherapy but the prognosis is reserved due to metastases present in the axillary lymph nodes. The precocious discovery and the quick onset of treatment are vital for the increase in survival chances of patients.

Nonoperative Management of Blunt Splenic Injury in Associated Abdominal Trauma

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The aim of the study was to assess the results and evaluate the efficiency of nonoperative management (NOM) in polytrauma patients with blunt splenic injury (BSI). Material and methods: A prospective study on 30 patients, 2008-2009 with BSI; the m:f/ 19:11; mean age=39.97±20,35, RTS=7,66±0,5, ISS=6±8,95. The hemoperitoneum was first established by USG(100%). Its volume and extent of parenchymatous organ injury was subsequently quantified at CT(90%), the laparoscopy was performed in 6(20%) cases for assessing USG sensitivity and determined ascites in 2 cases of politrauma patients with splenic lesions established at CT, and exaggerate volume of free liquid. Results: Isolated BSI in 5(16,7%) patients, in 21(71%)—associated with thoracic trauma, in 9(30%)—with head trauma and in other 9(30%)—with musculoskeletal trauma. 7(23,3%) patients presented hemodynamic instability: 6 politrauma patients with BSI: IIInd degree—4 and IIIrd degree—2 cases with unstable pelvic fractures, and one patient with isolated BSI; they were all hemodynamically stabilized, but the last resulted in failure of NOM in the first 4h. In 3 politrauma patients with cerebral contusion and GCS- 12p NOM succeeded, splenic lesions being of IIInd (n=2) and IIIrd (n=1) degree, despite of determining intraabdominal free liquid and hemodynamic instability in 2 cases. The severity of BSI was determined from IIInd degree to IVth degree according to AAST, IIInd degree—16(53,3%), IIIrd degree—13(43,3%), IVth degree—1(3,4%), simultaneously being diagnosed 3 cases of minor liver contusions (Ist degree—2 patients, IIInd degree—1 patient). The mean value of hemoperitoneum determined by CT for IIIrd degree lesions was 766,67±208,17ml, while for IIInd

degree was $271,43 \pm 146,79$ ml ($p < 0,001$). The volume of blood transfusions for patients with BSI associated with lesions of the musculoskeletal system was $933 \pm 208,79$ ml, but for IIIrd degree BSI without pelvic fractures – $282,3 \pm 82,5$ ml; IInd degree BSI did not require blood transfusions ($p < 0,01$). Failure of NOM was reported in 3 (19%) cases: in 2 – isolated BSI of IIIrd degree, 1 case associated with head trauma with hemoperitoneum mean value of 1400 ± 200 ml. Conclusions: NOM can be successful both in isolated and associated BSI of I–III degree. USG is the screening method for determining hemoperitoneum, but CT defines the degree and volume of hemoperitoneum, and it can serve as a relative prognostic criterion of failure. Lack of awareness is not a criterion to avoid NOM, laparoscopy in these conditions reflects the success of this option. Decreased haematocrit and the need for blood transfusions in patients with BSI and musculoskeletal trauma is not a failure index in case of stable and responsive to infusion therapy hemodynamics.

Do We Need a Specialization of Recovery Room According to Patient's Surgical Profile?

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For economic, fast recovery and processes optimization reasons, patient's postoperative route is divided, according to illness severity, in 3 levels of care: recovery room (RR), intermediate care service (ICS) and intensive care unit (ICU). Although the existence of RR in Moldova is referred only formally, no hospital in the country has, in fact, such a unit. Consequently, patients are awaked in operating room or in the ICU – both locations are not suitable for this purpose. For these reasons, we decided to analyze postoperative evolution of general surgery and orthopedic surgery patient's profiles, with the intention to: 1) identify specific patterns of recovery from anesthesia, 2) argue the necessity of opening more specialized recovery rooms, 3) stratify the patients flow to correspondent care levels, according to they postoperative state severity. The general surgery ($n=103$) and orthopedic ($n=103$) patient's postoperative profiles were analyzed for 3 consecutive months of 2009. There were compared: time profiles of patient's admission and discharge; recovery duration and stabilization of homeostasis in post-operative period; the proportion of patients of mild severity, moderate to severe state in general surgery vs orthopedic surgery groups. Were used statistical tests: t-Student, Chi2 with Yates correction, Kaplan-Meyer curve. A $p < 0.05$ was considered statistically significant. Groups were comparable according to age, body mass, ASA score. The interventions spectrum of general surgery profile included: endoscopic cholecystectomy (32%), colectomy (23%), inguinal hernia repair (17%), hysterectomy (12%), and other interventions (16%); for the orthopedic profile: hip joint replacement (59%), lower limb osteosynthesis (32%), upper limb osteosynthesis (6%), and other interventions (3%), respectively. The timing of discharge from surgical block depending on daily working hours and week-days' hours were identical for both groups. Surgical vs orthopedic patients were eligible for the route "RR" in 63% vs 20% ($\text{Chi}^2=36$, $p < 0.0001$) of cases, for the route "ICS" – 31% vs 71% ($\text{Chi}^2=5.7$, $p < 0.001$), and for the route "ICU" – 4% vs 9% ($\text{Chi}^2=1.8$, $p=0.17$). Surgical patients were progressive discharged on the evening of the same operation day, these of the orthopedic group – massive, in the next morning. Conclusions: 1) For both studied patient's profiles (surgical and orthopedic), it is reasoned the stratification of post operative's route in RR, ICS and ICU flows; 2) It is argued the need of supplementary specialization of RR for general surgical and orthopedic patient' profile; 3) Concomitant diseases determined recovery duration for surgical profile patients, and size of intervention – for the orthopedic profile, respectively.

Retrospective Analysis Regarding Moderate Head Injury and Mild Head Injury

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Head injuries (HI) represent a major cause of morbidity and mortality worldwide. In Romania, trauma is the 4th cause of death and has a growing incidence explained by infrastructure and transport development, by increasing the number of vehicles, as well as that of physical aggressions. HI consequences are often disabling, with deficiencies in socio-professional reintegration of patients and high economic costs. The objectives were to demonstrate the necessity of guidelines in Mild and Moderate Head Injury management. The study group included 91 patients with age between 8 and 92 years old (mean age is 52 years old), hospitalized in the Neurosurgery Clinic Hospital Prof.Dr.N Oblu, Iassy, between January 2005 -December 2009. Patients were clinically evaluated both at admission and discharge (Glasgow Coma Score and Glasgow Outcome Score), also by CT scan and we analyzed HI etiology, current symptoms (headache, intracranial hypertension, consciousness deterioration, neurological focal signs) and hospitalization length. Patients who had other organs and systems involvement were excluded, as well as those who had pre-existing comorbidities. All the 91 patients were evaluated Glasgow Coma Score at admission, 32 were Mild HI (35.16% of HI) and 59 were Moderate HI (64.84% of HI). At discharge it was found that a number of Minor HI presented GOS = 1 (12 patients, 37.5% of Minor HI), GOS = 2 (13 patients, 40.63%), GOS = 3 (5 patients) GOS = 4 (2 patients) and a number of Moderate HI had GOS = 1 (9 patients), GOS = 2 (27 patients, 45.76% of Moderate HI), GOS = 3 (21 patients, 35.59 %), GOS = 5 (2 patients). The average duration of hospitalization was 14,15 days for Mild HI and 15,42 days for Moderate HI. We found out that a number of 20 Moderate HI got worsen. Were recorded 2 deaths (Moderate HI). Based on the final results we found that Mild HI evolution is influenced by the precocity of diagnosis, elimination of needless time for diagnosis and establishment of adequate treatment. This management can be established by appropriate guidelines that can be adapted to the real possibilities of each region apart.

Study Review: Tako Tsubo Syndrome

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Tako-Tsubo cardiomyopathy is characterised by an atypical distribution of left ventricular (LV) dysynergy with apical ballooning and compensatory basal hyperkinesis. Coronary angiography is normal. Several substrates have been put forward to explain the underlying pathophysiology such as raised catecholamine levels (due to physical or emotional stress), multivessel epicardial coronary spasm or diffuse microvascular spasm. However, the pathophysiology has not yet been fully clarified. We present a series of cases whose findings could explain the mechanism underlying this syndrome. Four consecutives patients, all female, were admitted with the clinical features typical of Tako-Tsubo syndrome. In all, severe widespread transient LV mid-apical a/dyskinesia was associated with a mid-cavity dynamic obstruction which resolved prior to the resolution of the LV wall motion abnormalities. In all cases the dynamic LV obstruction was related to localise mid-ventricular septal thickening. After improvement in wall motion, a low-dose strain/strain rate dobutamine stress-echocardiography (DSE) was performed to determine the underlying ischaemic substrate. This

provoked an LV mid-cavity gradient at peak dose in all. Regional deformation changes during DSE showed the affected myocardium to have the typical response diagnostic of regional stunning. We postulate that an important unrecognised factor in the development of Tako-Tsubo cardiomyopathy is the presence of abnormal myocardial functional architecture (such as localised mid-ventricular septal thickening), which in the presence of dehydration and/or raised catecholamine levels due to physical or emotional stress, leads the development of a severe transient LV mid-cavity obstruction. This effectively sub-divides the LV into two functionally different chambers with a marked increase in wall stress in the high pressure distal apical chamber. This, in combination with the abnormal high circulating catecholamine levels, induces widespread sub-endocardial ischaemia which is unrelated to a specific coronary artery territory. With rehydration/fall in catecholamine levels the interventricular gradient resolves and distal function recovers. Low dose SR/S DSE confirms that the distal ischaemic substrate is myocardial stunning.

Actualities in Acromioclavicular Injuries

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Acromioclavicular (AC) joint injuries most commonly occur in young adults involved in sports and overhead activities. They account for 3% of all shoulder injuries and 40% of shoulder sports injuries. The person who sustains an AC injury commonly reports direct or indirect mechanisms of injury. Direct force is when the person falls on to the point of the shoulder, with the arm usually at the side and adducted. The force drives the acromion downwards and medially. Indirect force is when the person falls onto an outstretched arm. The force is transmitted through the humeral head to the acromion, therefore the acromioclavicular ligament is disrupted and the coracoclavicular ligament is stretched. Is very importante to identify the injury type, because the treatment and prognosis hinge on an accurate diagnosis? The AC injuries are classified as grades I, II and III, representing respectively, no involvement, partial tearing, and complete disruption of the coracoclavicular ligaments. More recently, Rockwood has further classified the more severe injuries as grades I-VI. The treatment of AC joint injuries varies according to the severity or grade of the injury. Ice packs, anti-inflammatories and a sling are used to immobilise the shoulder and take the weight of the arm. As pain starts to subside, it is important to begin moving the fingers, wrist and elbow, than shoulder to prevent stiffness. Undisplaced injuries only require rest, ice, and then gradual return to activity over a 2-6 week period. Surgical repair can be divided into: acromioclavicular repairs; coracoclavicular repairs; distal clavicular excision and dynamic muscle transfers. Disadvantages of surgery are that there are risks of infection, a longer time to return to full function and continued pain in some cases. For the patient with a chronic AC joint dislocation or subluxation that remains painful after 3 to 6 months of closed treatment and rehabilitation, surgery is indicated to improve function and comfort. For sequelae of untreated type IV-VI, or painful type II and III injuries, the Weaver Dunn technique is advocated. Postoperatively, the arm is supported in a sling for up to 6 weeks. After the first 2 weeks, the patient is allowed to use the arm for daily activities at waist level. After 6 weeks, the sling or orthosis is discontinued, overhead activities are allowed. AC joint injuries are an important source of pain in the shoulder region and must be evaluated carefully. Type I and II injuries are treated symptomatically. The current trend in uncomplicated type III injuries is a non-operative approach. If it develops subsequent problems, a delayed reconstruction may be undertaken. Type IV-VI injuries are generally treated operatively.

Imaging Diagnosis of Mammary Glands with Implant

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The abstract study evaluates the algorithm of diagnosis of breast implant complication imaging medical methods. The idea of implantation exists for more centuries being practiced since in 1962. Knowledge concerning technical and medical modern possibilities, advantages, risks, complications of breast implant and apparition of cancer in the future are initial conditions of objective judgment in monitoring patients with breast prosthesis. In this section, we analyzed two aspects, which show the correlation between breasts implant: - assessing the integrity of implant (detect early and late complications), - the diagnosis of breast cancer or some other diseases of mammal gland in bearers of mammary implants; finally estimating, sensibility, specificity and effectiveness of each separate imaging methods and complexity. To assess the technical performance of diagnostic methods and conduct of diagnostic imaging were investigated following moments: 1. Number of implants examined. 2. Number of implants, whose complications which were confirmed at surgery. 3. To calculate sensitivity, specificity and accuracy study. Breast implants are of different types and shapes, with different coatings and content. Implant shape may be rounding, oval or anatomical. There are several types of implants: saline-containing implants, silicone gel-filled implants, smooth or cohesive, joint implants. Knowledge of breast implant issue is a current problem namely surveillance of these patients in terms of early detection of specific complications of breast implants As a diagnostic method of first choice are as follows: clinical evaluation, ultrasound, mammography, MRI. To highlight the relationship between imaging mammary gland and breast implants we consider the following two aspects: 1. to evaluate breast implant integrity (rupture and leak detection) 2. Diagnosis of breast cancer and other diseases associated with carrying breast implant patients.

Ischemic Colitis. Case report

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Ischemic colitis is very rare in Romania; there are difficulties in diagnosis and surgical treatment, and the late diagnosis in advanced cases causes a high rate of mortality. Reduced blood flow in the large bowel may lead to different pathologies from complete reversible injuries to total ischemic necrosis of the large bowel. Elder patients, atherosclerosis, inferior mesenteric artery thrombosis, cardiac arrhythmias, aneurisms of the abdominal aorta etc predispose to ischemic colitis. Case: A 73-year old woman presented with melena, diffuse abdominal pain, nausea and vomiting. Laboratory evaluation revealed a WBC of 20,900/ mm³, glicaeamia of 194mg/dl, without other abnormalities. Plain abdominal radiography and abdominal ultrasound were normal. Emergency exploratory laparotomy revealed a rubbery hard colon, without the normal aspect of haustrations, feeling like a parenchimatous organ, from the left colic angle to the recto-sigmoid junction. The dissection of the origin of the inferior mezenteric artery proved its complete thrombosis. There was performed a left hemicolectomy with terminal colostomy on the transverse colon. Postoperative course was uneventful. Nine months after the first operation, the continuity of the digestive tract was restored by a colo-rectal anastomosis, without any problems. Conclusions: We present a rare case of abdominal surgery in our country that needs to be identified early in order to be treated succesfully. It

is very important to include ischemic colitis in the differential diagnosis of the abdominal pain syndrome in elder patients and also in surgeries as we suspect the necrosis of some parts of the large bowel. Not knowing the gravity of the clinical signs and late diagnosis may lead to massive bacterial invasion, toxic ischemic products into the blood stream that eventually lead to a severe septic shock.

Prophylaxis of Pulmonary Artery Trombembolism

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Informative analysis of the efficiency of prophylaxis of pulmonary artery thrombembolism. Clinical data, laboratory and preventive methods applied to a group of 627 patients treated at the clinic ATI in 2009. Results: From 627 patients monitored, 473 had the benefit of a perioperative thromboprophylaxis, and other 154 patients got only a postoperative thromboprophylaxis. The incidence of pulmonary artery thrombembolism is 0.48%, this result refers only to patients operated urgently. The incidence of lethal cases is 0.16%. Pulmonary artery thrombembolism incidence varies depending on the combination of predisposing factors. There were studied several combined methods of prophylaxis. Priority was the combination of mechanical methods (application of elastic bandages on the legs) with low molecular mass heparins (LMWH). Effectiveness of preventive methods applied: Elastic bandage 68.2, Heparin 4.8, Nadroparine (Fraxiparine) 22.4, Dalteparine (Fragmin) 13.7, Enoxaparine (Clexane) 51. Combined methods 68.2. From observation of the study it is determined an increased efficiency of use the combination of mechanical methods with Enoxaparine (Klexan) in thromboprophylaxis of patients with moderate and high risk of pulmonary artery thrombembolism. The priorities of Enoxaparine, to other low molecular weight heparins are not requiring the determination of bleeding and clotting time during administration. Also there was no change in platelet count in patients receiving Enoxaparine.

Time of Admission as a Prognostical Factor for Trauma Patients

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Trauma is the leading cause of death in the population under 40 years. 60% from the total of Trauma happen in the evenings or at night, and are in the care of night staff of ICU and trauma team. The availability and quality of personnel and technology are often different during the daytime hours as compared with off hours and weekends. Our aim was to evaluate whether there was an association between the time of admission of trauma patients to the ICU of the National Scientific and Practical Centre of Emergency Medicine of Chisinau, Republic of Moldova, (RM) and their prognosis. Evaluation of prognosis of trauma patients admitted to hospital at: 8.00 – 14.30 daytime hours (group 1); 14.31 – 07.59 off hours (group 2); over the weekend: from Saturday, 8.00 to Monday 7.59 (group 3). A retrospective study was performed. The data came from the registry of the National Scientific and Practical Centre of Emergency Medicine of Chisinau, RM and were available from January 1, 2008 to January 1, 2009. We assessed 153 trauma patients (103 men/50 women). Estimating criteria were: evaluation of severity of trauma and prediction of outcome with (ASCOT); the survival of trauma patients; the period of treatment in ICU. The statistical analysis was performed

with Statistical Package for the Social Sciences (SPSS) program. The differences of results were tested using unvaried analysis (ANOVA one - way), followed by post- hoc tests. For all the tests we applied the conventional criterion for statistical significance ($p < 0.05$). Comparative evaluation of groups: group index sex, age, ascot, survival, admission, stay hospital, stay ICU. We have determined a statistical significantly difference for the level of survival of trauma patients between groups 1 and 2 ($p < 0.001$), the ratio of survival for group 1 being 85% and for group 2 -54%. Between group 1 and 2 and 1 and 3 the ratio of survival doesn't significantly differ statistically ($p > 0.05$). The evolution (the survival) of trauma patients admitted to ICU of the National Scientific and Practical Centre of Emergency Medicine of Chisinau, RM from January 1, 2008 to January 1, 2009 depended on their time of admission.

Percutaneous Vertebroplasty - The First Clinical Experience in Moldova

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Background: Vertebroplasty is a minimally invasive, image-guided therapy used to relieve pain from a vertebral body fracture. Percutaneous vertebroplasty usually involves percutaneous injection of cement, polymethylmethacrylate into the vertebral bodies. It has been used for osteoporotic or malignant fractures. Initially, the major indication was treatment of spinal hemangiomas, as described in 1987 by Galibert et al. With experience, other indications have emerged. Vertebroplasty can increase patient mobility, decrease narcotic needs, and prevent further vertebral collapse. **Objectives:** There were 9 women and 6 men with a mean age of 64 years included. All patients had vertebral pain. Safe and accurate procedures of transpedicle vertebroplasty were examined, and the short-term results were evaluated. Methods for prevention of complications were also evaluated. **Methods and results:** Nineteen vertebral bodies were treated in 15 patients. Bipediculate injections were used in 18 (94,7%) of 19 treatment levels, and unipediculate injections were used in 1 case (5,3%) of treatments. The indications for vertebroplasty were hemangiomas in 7 patients, osteoporosis (osteoporotic fractures or severe osteoporosis of the vertebral body) in 6 patients, and malignant metastases in 2 patients. In 13 cases percutaneous vertebroplasty was performed. Open decompressive laminectomy with further vertebroplasty were performed in 1 patient with vertebral compression fracture. A transoral vertebroplasty for a fractured C2 vertebra, caused by an angiosarcoma metastasis, was also performed in 1 patient. Neurologic or systemic complications, such as pulmonary embolism, were not observed. After surgery, no aggravation of pain was observed, and pain was alleviated in all 15 patients. The mean visual analog scale (VAS) score was 7.2 points before surgery and 1.3 points after surgery. All these 15 patients could walk by themselves on the day of or next day after surgery. **Conclusions:** Percutaneous vertebroplasty proved to be safe and effective in reducing pain and improving functional status of patients with specific vertebral body lesions (osteoporotic vertebral fracture, vertebral hemangioma, spinal tumors). It provides significant pain relief with the potential for improving functional outcome.

Correction of Cardiac Congenital Malformation with Ventricular Septal Defect Associated with Pulmonary Secondary Hypertension

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The aim of study was the evaluation of the methods of diagnosis and treatment of the patients with ventricular septal defect associated with pulmonary secondary hypertension. During the 2008-2009 years, in Heart Surgery Centre there had been treated 495 persons with cardiac congenital malformations from which 269 patients have had ventricular septal defects (VSD) accompanied with left-right shunt with breed of the pressure in the pulmonary artery more than 38 mmHg (Doppler-EchoCG). The age of the patients was from 2 months to 29 years. From the total of patients with VSD, 95(35%) patients have had isolated VSD. In the 164 cases VSD was associated with: atrial septal defect (ASD) 79 (29%) patients, patent ductus arteriosus (PDA) 27 (10%) patients, aortic coarctation (CoA) 13 (5%) patients, multiple partnerships in 55 (21%) cases. For the settlement of the diagnosis there was applied to compulsory investigation: ECG in 12 derivations, X-ray thoracic and EchoCG-Doppler. To the 24 (9%) of patients there was accomplished cardiac catheterism. As a result of the investigation there was established pulmonary hypertension of the I(WHO) degrees to 158 (32%) patients, the second (WHO) degrees to 203(41%) patients, third (WHO)degrees have had registered in 94 (19%) cases, the IV (WHO) degrees tracked down in the 40 (8%) cases, from which 17 patients with isosystemic tension in lung artery. There were established two cases of Eisenmenger Syndrome that had not been included in the study. The radical surgery was submissive 164 (61%) patients, the palliatives stages were done to 105 (39%) patients, from which ligation of PDA in 44 (42%) cases, the banding of pulmonary artery (Muller surgery) in 61 (58%) cases. The surgical treatment was effective in 248 (92%) cases of pathology with radical and staged surgery. The tension in pulmonary artery registered through Doppler-EchoCG in first days has diminished significantly. In five (2%) cases interfered after surgery complications with the decease of the patients. Rebinding was made (accomplished) in the 16 (6%) cases. The pulmonary hypertension secondary developed to the congenital heart disease with left-right shunt extinguish remains to be one of the most difficult problems of the heart surgery. The delay of the surgery leads to complications that can pay with the development of the Eisenmenger syndrome and decease of the patient.

Atrial Fibrillation in Patients with Mitral Valvulopathy

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The aim of study was the evaluation of the methods of diagnosis and treatment to the patients with mitral valvulopathy associated with atrial fibrillation (AF). In the course of 2009, 139 patients were treated with mitral valvulopathy, with the age between 9 and 78 years (with a media of 46,3y.). The rheumatismal etiology was found out in 118 cases (85%), myxomatosis in 14 cases (10%), congenital in 7 cases (5%). Atrial fibrillation was found at 64 patients (46%) with the age between 15 and 78 years (media 51,5 years) with a duration from 1 month to several years. For confirmation has been used ECG in 12 derivations. All the patients were examined with EchoCG, that has evaluated besides the valvular pathology and the sizes of the cardiac cavities, the presence of intracavitary thrombosis (tracked down to 3 patients in left atrium auricle, to 1 patient in right atrium auricle. The thromboembolic anamnesis were present to 6 patients preoperator (9% from the cases of AF),

demonstrated though vascular cerebral accidents. All the patients were submitted to the surgical treatment. After surgery the sinus rhythm recovered spontaneously to 41 patients (64%). To other 21 patients (33%) with AF there was administered Verapamil (for conversion tahisistolic in normosistolic forme), Amiodaron. Acenocumarol or Warfarin was indicated for the prophylaxis of the thromboembolic complications. After surgery, sinus rhythm recovered to 12 patients (18%), 8 patients (12%) were submissive to cardioversion, from wich the rhythm recovered just in 3 cases, 5 patients went home with persistent AF normosistolic. Frederick post surgey syndrom developed to one patient, caused by the transitor completely atrioventricular flats block. In the first days, two patients (3%) died because of the progressive heart failure. The AF represents the most dangerous rhythm disorders, chiefly to the patients with organic heart disease. The thromboembolic and hemodynamic unsteadiness are the major AF complications. To the patients with mitral valvulopathy, the AF can appear at different terms of evolution of the disease and one of the absolute indications for surgical treatments that have a high efficaciousness in the reestablishment of the sinus rhythm. The patients, whereat the AF persists after surgery and is refractory to the drugs and electric conversion treatment, will require to continue anticoagulant drugs administration.

Usage of Tissue Expansion in the Treatment of Postburn and Posttraumatic Sequelae

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Introduction: Replacement of postburn or posttraumatic scars with good quality skin represents, nowadays, the standard of treatment for this pathology. Tissue expansion is a straightforward technique, providing large skin flaps whose color and texture matches the area to be reconstructed, achieving optimal final aesthetic result. Objectives: The purpose of this paper is to present results achieved in our clinic in the treatment of postburn or posttraumatic sequelae in the head and neck area, using tissue expansion. Material and methods: A retrospective analysis of medical records during a period of three years (2006-2009) was performed. In this period of time, we treated 27 (34 expander insertions) patients with postburn or posttraumatic scars located on the scalp, face and neck. Results: Total scar replacement was achieved in 22 patients (84.61%), using staged surgery. Due to wide scar involvement, 4 patients (14.82%), are still under treatment. Complications were minor in 3 cases (11.11%) (minor skin necrosis before the transposition – 1; minor skin necrosis after the transposition – 1, expander exposure that did not lead to expander removal - 1), or required expander removal in 2 cases (7.41%) Complications requiring expander removal were: infection in 1 case and expander leakage in 1 case. Conclusions: The use of tissue expanders in order to reconstruct postburn sequelae is a valuable and easy technique, leading to superior aesthetic results. Disadvantages are the price of the expanders, long duration of the treatment multiple procedures required and the inconvenience caused by the temporary deformity during balloon inflation.

Optimizing Anesthetic Support in Plastic and Reconstructive Surgery

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Selecting the optimal method of anesthesia, depending on the operable area, concomitant pathologies, age, gender and last but not least, patient preferences. An important role plays the

maintenance and / or improvement of vascular indices in the operated soft tissues, local temperature monitoring, as a parameter in the perioperative period of plastic reconstruction. Studies have been conducted, based on a sample of 74 patients aged 15-55 years in plastic - reconstructive surgery of the upper limb after trauma or burns. Operations have been performed: combined plastics (14), skin graft plastics (52), flaps plastics (4) and expander implantation (6). Depending on the methods of anesthesia, patients were classified into 4 groups: 1st group - 16 patients Loco-regional anesthesia (brachial plexus blockade-BPB); 2nd group - 22 patients Intravenous general anesthesia MR; 3rd group - 21 patients Intravenous general anesthesia RM with hypnotic of ultra short duration; 4th group - 15 patients Infiltrative anesthesia combined with intravenous anesthesia. No anesthetic complications were observed in any of patients. All patients were undergoing hemodynamic monitoring of: BP, pulse, pulsoximetria, thermometry (central and peripheric), polarography. All indications listed were fixed in 4 - steps: I - preoperative II - stage of surgical anesthesia III - while performing surgery itself IV - end of the surgery In all 4 anesthetic groups were not observed manifest deviations of observed index levels: -BP -HBM -SpO₂ (peripheral blood oxygen saturation) But in some cases small deviations were observed: eg. in Group 3 by the anesthetic type - average BP in perioperative period decreased by 5.3%, resulting in increased heart rate - 15% HBM in the first stage, preoperative. Conclusions Monitoring of transcutaneous partial pressure of oxygen in operated areas as well as the central and the peripheral temperature gradient, and in the operated area, allow the correcting of the vascularisation of operated area in perioperative period. In case of locally anesthesia type, in plastic and reconstructive surgery, the oxygenation increase twice and the temperature increases with more than 14% in operated areas compared with other types of anesthesia. Increase indications and opportunities to loco-regional anesthesia in plastic and reconstructive surgery allow avoiding adverse effects and post anesthetic complications related general anesthesia and avoid the transfer of patients in intensive care recovery ward after the surgery.

Laparoscopic Approach a New Stage in the Surgical Treatment of Gastroesophageal Reflux Disease

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The life's quality is a primary factor in the productive activity of any person in socio-economic and cultural sphere. This particular factor is impaired in patients suffering from gastroesophageal reflux disease (GERD). The global incidence with GERD for the period 2006-2009 (by WHO) is 10-30% and about 1 to 10 (adults) show specific signs for this pathology. In this context, the authors made the study, which shows the benefits of establishing laparoscopic surgery in restoring the life's quality of patients with GERD. The research was carried out on a group of 40 patients (diagnosed Hiatal Hernia, both axial as well as para-esophageal) that had GERD symptoms, operated by laparotomy (15 patients: 11 women, 4 men) as well as the laparoscopic approach (25 patients: 10 women, 15 men) from 2006-2009 in the Municipal Clinical Hospital No 1 from Chisinau. From this group was selected a clinical case: a patient, of 48 years old diagnosed with GERD that was operated by the laparoscopic fundoplication method. Following the evolution pre, intra and postoperative the patient have confirmed the data obtained in the research group of patients. All of these elucidate the superiority of laparoscopic techniques by: shorter duration of intervention and restore, reduce intraoperative complications (no cases of injury of the spleen), low postoperative analgesia, aesthetically trivial injury, reduced hospitalization time and return to work in the shortest time possible. The purpose of this study reveals the advantages of using the laparoscopic method in surgical treatment of GERD, which causes minimal complications and may allow an early restoration of work ability. Despite the fact that there are multiple methods of treatment, however, laparoscopic treatment remains "Gold Standard" in the surgical cure of hiatal hernias.

Assessment of Critical Patients from Intensive Care Unit in Correlation with Probability of Death

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Aim of the study. We tried to demonstrate the link between mortality in Anesthesia and Intensive Care Unit I, Targu Mures and evaluation of critical patients using APACHE III score at admission in the Intensive Care Unit, number of days of hospitalization in Intensive Care unit, the number of days of ventilator support needed, infections due invasive manoeuvres and number of days of antibiotic administrative management of patients. **Material and methods** I made a retrospectiv study based on clinical observation of 102 sheets of patient complaints, random note, hospitalized in Anaesthesia and Intensive Care Unit I Targu Mures between September 2009 and February 2010. Patients from medical and surgical clinics were aged between 4 months and 84 years old, in proportion of 71.56% male and 28.43% female. We compared the mortality of patients with APACHE III score received by the patient at admission in clinic, the number of days of hospitalization in Intensive Care Unit necessary, number of days of ventilator support needed, depending on the location of infection and invasive manoeuvres needed to support functions vital patient and the number of days of antibiotics used in prophylaxis or curative. We demonstrated that there is a quarrel between the patients mortality in the intensive care unit and morbidity associated with their condition at admission, expressed through APACHE III score, and the number of days they needed vital support, the number of days they needed mechanical ventilation, and the localization of infection caused by invasive manoeuvres on the patient Number of days of antibiotic needed is not conclusive because some patients where transferred to other clinics and continued antibiotics, and some patients died during the first days of hospitalization.

Efficacy of Laser Treatment in Diabetic Retinopathy

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The aim: 1. Analysis of the efficacy and of the modalities of laser treatment of diabetic retinopathy (DR); 2. Comparative evaluation of the efficacy of different treatment types: laser, chirurgical, drug, combined of DR for diabetes mielitus patients who are with associated pathologies, insulinodependent or insulinoindpendent. **Materials and methods:** 100 selected patients that formed 2 lots (37 men, 63 women) of whom 61 are capable and 39 incapable to work. The material was analyzed by the criteria number of patients, and by the criteria "eyes patient" (affected or not affected). The analysis method: statistical process of the quantitative values was preceded by the calculation of the arithmetic media (M), of the arithmetical medium error (m). The likening of the variables in different independent groups was performed by Student criteria (t), range correlation criteria (Spearmen). The witness case research results, permitted to us to evaluate the visual acuteness state of "eyes patient" after 4 treatment type were effectuated. The treatment was performed like monothetapy or like a combined treatment. Laser, chirurgical and drug treatments were from the first group. After laser treatment were obtained a 26.5% cases visual acuteness amelioration] n men lot and 33.1% cases in women lot. Were obtained a visual acuteness stabilization in 57.1% cases in men lot, in 52.1% cases in women lot, in 51.3% cases in capable to work lot and 59.6% cases in incapable to work lot. Were obtained a visual acuteness worsening post-treatment in 16.2% cases in men lot, in

15.0% cases in women lot, in 16.6% cases in capable to work lot and in 11.9% cases in incapable to work group. Conclusions: the laser is the most efficient monotherapy treatment method in DR, having a minimum of complications and side effects (100% efficacy in men lot, 94.2% efficacy in women lot, 95.3% efficacy in capable to work lot, 100% efficacy in incapable to work group).

Algorithm for the Diagnosis and Treatment of Pancreatic Pseudocysts

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Algorithm for the Diagnosis and Treatment of Pancreatic Pseudocysts – Review, Clinical Study The Pancreatic Pseudocysts (PP) are single or multiple fluid collections, composed of pancreatic juice, blood, necrotic tissue, localized inside or outside the pancreas, without their own walls, instead having a "pseudo-wall" without epithelium, following a process of encysting fibrosclerosis, persistent over 4 weeks, without clinical signs of infection. PP is a well-known complication of acute or chronic pancreatitis, with a higher incidence in the latter. The aim of this clinical study was to optimize the diagnosis methods and to establish a rational surgical management of the PP treatment, through the correlation of surgical techniques with the optimal surgical moment, given by the maturation degree of pseudocystic wall. This study included the results of the complex treatment of 191 patients with PP, communicating or not with pancreatic duct, operated in the Hepatobiliary-Pancreatic Surgery Section at the Republican Clinical Hospital from Chisinau, in period of 1994-2009. The mean age of the patients was 45 years old. The study proposes a modern diagnosis algorithm, which includes clinical, laboratory dates and imagistic explorations (echography, simple abdominal radiography, gastro and duodenography, endoscopic retrograde cholangiography (ERCP), computer tomography, magnetic resonance imaging (MRI), wirsungography and intraoperative echography). The surgical indication was done by mature pancreatic pseudocyst, by pancreatic pseudocyst during maturation (less than 6 months from debut) and by pancreatic pseudocyst with postoperative complications, facts which bring to the elaboration of a self surgical management. Different strategies were used for the treatment of PP: endoscopic transpapillary or transmural drainage, percutaneous catheter drainage, or open surgery. The PP represents a disease that affects persons who are in the period of the highest socio-professional productivity and efficiency; their mean age is 45 years old. The diagnosis was accomplished most often by computer tomographic scanning, by ERCP, by ultrasound or by MRI. The successful resolution of pancreatic pseudocysts can be achieved by surgical treatment. The good monitoring of the application of an adequate conservative treatment, possibly occurring under the protection of Octreotide, could allow the development of pseudocystic wall that matures in less than 6 months from debut.

New Method of Tracheal Allotransplantation

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Most tracheal lesions can be resected and primary reconstruction safely effected. But reconstruction of long-segment tracheal defects requires a vascularized allograft. We report result our experimental and anatomical studies and successful tracheal allotransplantation in a clinic. Our method of tracheal transplantation uses the composite thyrotracheal allograft revascularized by both inferior thyroid arteries and veins. The first step includes harvesting the trachea from a donor. For this purpose the aortic arch cannulation was performed, and then it was ligated on the level of ascending and descending branches, the superior vena cava was ligated and dissected above the ligated site. Through the aortal catheter stream introduction of the preservative solution was performed. Simultaneously a perfusion of shoulder-girdle, head, and neck and mediastinum organs (including the trachea) was performed. This enabled quick removal of the donor complex together with muscles, vessels and mediastinum cellular tissue. Further preparation of the graft was performed *ex vivo*. The next step includes tracheal resection and thyrotracheal complex transplantation. The graft revascularization was performed through the brachiocephalic trunk or carotid arteries of the recipient. Venous drainage was restored by means of suturing the inferior thyroid vein of the grafted complex with the left brachiocephalic vein of the recipient. Results: The findings of the experimental anatomical study made it possible to conduct this operation in a clinical setting in a patient with subtotal tracheal pathology. The thyrotracheal complex removal was completed using our protocol. Organ perfusion was performed using the Custodiol solution (Dr Franz Kohler Chemia GMBH, Germany). The trachea of the recipient was dissected at the level of the first intercartilagenous gap. In the caudal segment, the trachea was resected from the right edge of the last cartilagenous tracheal ring, and resection of the tracheobronchial triangle was performed on the left wall. After revascularization of the graft, pulsation of the lower thyroid arteries was satisfactory, quick filling of the lower thyroid vein was noted. Fibrotracheoscopy was confirmed restoration of the blood flow by the changed coloring of the tracheal mucosa. To prevent postoperative complications the patient received antibacterial, antimycotic, antiviral and immunosuppressing therapy. Since the discharge, the patient has had no further episodes of dyspnoea. Three years after tracheal reconstruction, the patient was satisfied with the outcome. Conclusion: Our experimental studies have paved the way for transplantation of the trachea with adequate supportive blood flow in a clinical setting. The practical experience supported the feasibility of the concept that tracheal transplantation is a viable option. This method of treatment might help patients who are currently considered incurable.

Optimisation of Surgical Repair of Tetralogy of Fallot

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The aim of study was the evaluation of the surgical treatment of the Tetralogy of Fallot (TF), to emphasize the technical and age particularities, in order to develop a clear tactic in the future treatment and to study the opportunity of this patients in activity. To achieve our objective we have analyzed the experience of the last 10 years, during which 182 patients were operated with TF (to the 61 patients have been made the palliative procedures and to the 121 - the radical correction). The patient's age was between 3 and 42 years. The data were studied from the observation and outpatient

files of patients evaluated in the dynamic after ECHOC and clinical data. The standard preoperative patients have had performed: ECG, ECHOC, before being indicated the cardiac cateterism and angiography. The ECHOC investigations have been made repeatedly over 10 days postoperative, 1 month, 3 months, 6 months and then once a year to analyze the dynamics of the remaining gradient caused by the obstruction of right ventricular output tract (ORVOT) and material used in plastic right ventricular output tract (RVOT) and pulmonary artery (PA). Between the patients with radical correction 43 were re-operated after the inter-systemic anastomosis in the history, to 2 of which were performed 2-stage palliative, to one - 3 steps out in order with unfavourable pulmonary artery anatomy. In 2 cases for the anastomosis ligature and plastic of AP branch circulatory arrest was performed. For the ventricular outlet tract plasty have been used these methods: patch of outlet tract ventricular in 38.8%, 47.9% transanular patch, implantation of homograft 4.1%, 4.96% suture of the tract, corrected by atrial and pulmonary artery approach in 4.24% cases. The transanular patch has been applied in patients with intersystemic anastomosis previously in 45% cases and in 52% cases of primary radical correction. The relationship between ventricular and aortic pressure after the correction was 0.53 in the group with transanular patch compared with 0.45 in the group with resection of the ring. Postoperative lethality represented 20.6%, with its subsequent reduction in the last 2 years up to 4.1%. The favorable functional result was obtained in patients with implanted homograft and suturing the right ventricular outflow tract. The regurgitation at the pulmonary artery was observed in patients with transanular patch plasty which presents a risk factor for repeated surgery. The surgical treatment depends of two important things: proper removal ORVOT without compromising pump function and closure of VSD. The application of the intersystemic anastomosis as first stage, creating favorable conditions for radical correction, reduces the need to transanular patch application. The radical correction applied for children under 3 years cause growth of postoperative lethality in the absence of the necessary endowment profile sections.

Induced Pain in Intensive Care Unit: Are there Sex Differences?

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The induced pain (procedural pain) is a short-term pain caused by a doctor or other medical staff during therapeutic or diagnostic action in foreseeable circumstances and likely to be prevented by adopted measures. Induced pain prevalence is between 43-56% for adults, 59% – for children and up to 93% – for newborns. Over 660 painful gestures were identified, with an average of 1.8 gestures per patient per day. From all studied painful gestures, intense pain and extremely intense pain was attested at 57% of patients. Scheduled treatment of postoperative pain has no influence on induced pain. So, it is imperative to ensure additional analgesic treatment. At our knowledge, the induced pain was no subject to any study in Republic of Moldova till now. Therefore, we aimed to describe incidence and pain intensity for some sources of induced pain in the intensive care unit (ICU) and to identify any gender differences. The study included 99 adult patients (M – 39 F – 60), hospitalized postoperatively in ICU. Patients completed a specifically designed questionnaire, where they noted supported painfully diagnostic or therapeutic interventions and also, the intensity of pain (assessed by visual-rating score VRS 0-10). Statistical tests used: t-Student, Chi2 with Yates correction. One $p < 0.05$ was considered statistically significant. Both groups (M vs. F) were comparable according to level of education, ASA score, and range of interventions. Instead, F group were significantly older (61.7 ± 14.7 [95CI: 57,9-65,4] vs 47.1 ± 15.0 [95CI: 42,2-52,0] years, $p < 0.0001$). Spectrum and incidence of induced pain sources were recorded (M vs F): intravenous injection (97-98%), intramuscular injection (87-95%), bladder catheterization (79-88%), dressings (79-83%), wound drains (59-60%), neuraxial puncture (49-48 %), peripheral venous line (51-48%), tracheal tube (36-47%), naso-gastric tube (33-30%), arterial puncture (18-23%) with no significant differences between

groups. The only exception: subclavian vein catheterization was more common in women because of more advanced age of patients in group (20% vs 10%, $p < 0.0001$). As very painful (SVA > 5) were reported: arterial puncture (in 50% cases), subclavian vein catheterization (22%), neuraxial puncture (13%), nasogastric tube (12%), bladder catheterization (12%), peripheral venous line (7%), and other interventions (<5%). The conclusions are: 1) induced pain in intensive care unit has an extremely high incidence, intensity and variety of sources. 2) Generally were not identified gender differences in the spectrum, frequency and intensity of induced pain.

Laparoscopic Treatment of Simple Renal Cyst

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Laparoscopic resection of simple renal cyst is a method of choice (N.A. Lopatkin, 1999; I. Coman, 2000; R. Boja, 2000; E. Angelescu, 2003), including by excision of symptomatic and recurrent cysts, as an alternative to open and percutaneous surgery (Z.A. Kadyrov, 2000.). Laparoscopic treatment of simple renal cysts is a well-standardized urological operation, with minimal complications and practically no risk of recurrence (Rassweiler, 1998). New technologies of endoscopic surgery are becoming gradually the gold standard in the treatment of many urological diseases. Analysis of the treatment results and presentation of own experience in laparoscopic resection of simple renal cysts. The study was made on the basis of 17 operated patients with simple renal cyst (5 men and 12 women) during 2009 - 2010 years in the Department of Urology from Clinical Republican Hospital, Moldova. Patient age ranged from 21 to 65 years (average 48.3 years). Mandatory screening of the patients included ultrasound and intravenous urography, and in some cases, CT in the urographic mode and selective angiography. In 8 (47%) patients the cyst was found on the left (17,6% - middle segment, 29,5% - upper segment of the kidney), 9 (53%) patients on the right (17,6% - middle and 35,2% - inferior segment of the kidney). All cysts located at the middle segment were of lateral location. As a result of instrumental examination were revealed unvascular liquid formations with a diameter from 5,6 up to 10,5 cm (mean 7.8 cm) with extra renal location. Laparoscopic resection of renal cysts was implemented in 15 (88,2%) cases. From the total number of operated patients laparoscopic resection was converted to open surgery in 2 (11,8%) cases due to technical difficulties of laparoscopic resection of renal cysts. From the total number of operations, simultaneously with laparoscopic resection of renal cysts were performed: in one case (5,9%) laparoscopic cholecystectomy, in the second case (5,9%) laparoscopic cholecystectomy and laparoscopic resection of a hydatid cyst of the liver. Hospitalization period of the patients averaged 6.2 days, postoperative period was 2.8 days. The duration of operation ranged from 28 to 62 minutes, average length - 34.6 minutes. A check up of patients after 3 and 6 months after surgery showed no recurrence of cysts. Results of treatment of simple renal cysts by laparoscopic surgery are comparable with open operations, and have such great advantages as: reducing of the length of patients' hospitalization, the lack of postoperative scars, rapid postoperative recovery and earlier return to the social and working life. Transperitoneal access in laparoscopy allows solving several surgical problems simultaneously (laparoscopic cholecystectomy, resection of the liver cyst, plastia of the esophageal hernia, etc.).

Doppler Ultrasonography in the Management of Urinary Stone Disease

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Doppler ultrasound (DU) examination of the ureterovesical jet (UVJ) is a noninvasive, accessible and informative examination method. In patients with ureteral obstruction, it allows viewing UVJ without fluid intake. Additionally it makes possible to appreciate the localization of the ureteral meatuses and qualitative assessment of UVJ, its view, location, frequency, intensity and angle. The aim of the study was to determine the value of DU in the management of reno-ureteral lithiasis and dynamic evaluation of obstructive uropathy. Between October 2009 and January 2010, 45 patients with renal colic have been evaluated, aged between 33 and 58 years (mean 45.5 years), 33 men and 12 women. Examination of patients was in two stages: simple ultrasonography (Grey Scale) and DU of the bladder for evaluation of presence or lack of UVJ. DU was performed daily. All patients were divided into 2 groups: I. Group - 13 patients with signs of total renal obstruction (unilateral). II. Group - 32 patients with signs of partial renal obstruction. In I group, we assess UVJ missing and dilation of the renal pelvis and calyces on the affected side. In 2 patients on simple renography were detected stones in the pielo-ureteral segment (about 10 mm in diameter) after 3 days without positive response to conservative therapy, was decided to make cystoscopy with installation of ureteral stand. In 11 patients from the same group, the ureteral stones were between 6 and 8 mm in diameter. Appearance of UVJ after 2 or 3 days of conservative therapy in 7 patients was considered as a sign of reduction of obstruction so conservative therapy was prolonged, which resulted with spontaneously elimination of the stones. In 4 patients signs of renal block persisted, so they required ureteroscopy with lit extraction. Depending on stones localization, II group patients were divided into 2 subgroups: 2A - 22 patients with stones in calyx, pieloureteral segment and medium third of ureter; 2B - 10 patients with stones in intramural ureteral segment. Positive dynamic was observed in 18 patients from 2A group (daily variations in increasing and growth of UVJ frequency). Despite treatment, in 4 patients UVJ frequency didn't change, so they required stimulation by infusional therapy, so on 3 or 6 day all patients spontaneously eliminated the stones. 7 patients from group 2B, on 2 or 4 - day spontaneously eliminated the stones and UVJ normalized. 3 patients for 5 days showed no positive dynamic, and meatotomy with lit extraction was required. During the study contradictory results between DU and radioisotope renography were not identified. We determinate that surgical treatment required 46.2% (6) of patients with total obstruction and only 15,6% (5) of patients with partial obstruction. In absence of radioisotope renography and other indications for hospitalization, DU evaluation of UVJ may be a selection criterion for ambulatory treatment. Daily DU examination of UVJ allows dynamic evaluation of urteral obstruction. DU examination of UVJ allows differentiation between partial and total urteral obstruction and helps us to select the treatment. DU examination of UVJ is an informative examination method that allows us to determine the prognosis of treatment, to prevent and decrease the number of complications, offers the possibility to decrease the number of radiological and radioisotope investigations.

Evaluation of Post Operative Pain by Interpretation of Patients' Attitude and Experiences

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Adequate approach to pain assessment and management can reduce pain experiences and risks associated with unrelieved pain, increase patient comfort and satisfaction, and shorten hospital stay and costs. The aim of our study was to evaluate postoperative pain management using patients' information, their attitude and treatment. Our study was performed in National Scientific and Practical Centre of Emergency Medicine, Chisinau in February 2009 and included 94 operated patients. Patients were given to answer a standardized questionnaire in the first 36 hours after intervention. It included three type of questions: the information and knowledges about postoperative pain (POP), the scores of pain and quality of postoperative analgesia. We evaluated scores of pain in three groups of patients, according to type of anesthesia: patients which received intravenous anaesthesia (IVA) 35 (37,6%), epidural anaesthesia (EA) 34 (36,6%), combined spinal epidural anaesthesia (CSEA) 24 (25,8%). Among the total number of patients, 87,7% of them considered that it is normal to have POP. 65,6% of patients asked for analgesic drug when the pain is insupportable, 21,5% when the pain was appearing, 2,15% of patients asked an analgesic when the pain is not present and 10,75% of patients never asked for an analgesic. About 88,2% of patients were asked about presented pain, and 55,9% of patients were asked to characterise pain. 29% of patients were not informed about the medication they received. Information about complications of anaesthesia was given to 41,9% of patient, information about methods of treating POP was given to 45,2% of patients. All patients reported to be totally satisfied with received treatment and personnel attitude (73,1%) or relatively satisfied (26,9%), no one reported to be unsatisfied. More than 90% of patient presented POP. Assessment of pain scores with Visual Analogue Scale shown that 5,7% of patients with IVA had a total relief of pain, 37,2 % mild pain, 45% moderate pain, 11,4 severe pain, patients with RA presented a total pain relief in 5,8%, mild pain 41,2%, moderate pain 28,2% and severe pain 14,7%, patients with CSEA invoked no pain in 8,3%, mild pain in 62,5%, moderate pain 20,8%, severe pain 8,4%. The most common way of receiving analgesics in postoperative patients was intramuscular route (91%), in 9 % the route was oral, intravenous, epidural etc. Patients, generally, had not a correct attitude toward POP, considering normal the situation to have POP. About all investigated patients presented postoperative pain, but in the same time most of them were satisfied about information given by the anaesthesiologist. It seems that fewer patients with CSEA presented moderate and severe pain compared with patients with IVA and RA.

Infected Pancreatic Pseudocyst Drainage and Necrosectomy by Endoscopic Per-Oral Transgastric Approach

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Open surgery with external drainage represents the treatment of choice in case of infected pancreatic pseudo cyst but may result in a pancreatic external fistula difficult to heal. Endoscopic internal drainage with stent avoids the risk of pancreatic fistula but may have a lower success rate and may require multiple stent replacements. The authors present the case of a 52 years old male patient with acute severe necrotizing alcoholic pancreatitis that developed, as local complication, a 7 cm

diameter pancreatic pseudo cyst in the body of the pancreas that persisted 6 for weeks after the onset and later became infected. The diagnosis was set upon the clinical signs of infection, enhanced dynamic intravenous contrast CT scan and endoscopic ultrasonography. The patient was submitted to transgastric endoscopic drainage considering the fact that the pseudocyst was bulging into the stomach. Endoscopic ultrasound was use to choose an avascular window structure in the walls of the pseudocyst. After needle-knife puncture and guide wire introduction, a balloon dilator was inserted and an orifice of 1.5 cm was created through which a turbulent fluid and tissue debris were removed. The endoscope was then inserted in the cavity to check for residual debris and fluid and the cavity was rinsed with abundant saline and povidone-iodine. Healing of the residual cavity was followed by endoscopy and CT scan at 1 month, showing an important reduction in size. No hemorrhagic or septic complication occurred during the endoscopic procedure and during the follow-up interval. In cases of infected pancreatic pseudocyst, transgastric endoscopic cystgastrostomy may be a better solution for the patients that the classical external drainage performed by any other approach.

Methods of Bone de Calcification and Their Efficiency

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The purpose of the paper was to appreciate the optimal decalcification method of the cortical bone for grafting. The objectives of the paper were: determination of the efficiency of decalcification with hydrochloric acid 1M, determination of the efficiency of decalcification with hydrochloric acid 0,5M, determination of the efficiency of decalcification with hydrochloric acid 0,5M being accelerated by electrolysis, determination of the efficiency of decalcification with hydrochloric acid 0,1M being accelerated by electrolysis, determination of the efficiency of decalcification with EDTA 14%. It has been used 73 pieces of bovine compact bone. All bone pieces were devised in five experimental groups (14 pieces for each group) and 3 pieces as control specimens. The experiment duration – was 21 days. Every three days the solutions for demineralization were changed. The presence of Ca²⁺ ions in the demineralization solution was evaluated every three days, also every three days two specimens from each experimental group were investigated by X-rays methods. After by analytical method was determined the remaining calcium in the specimens.

Decompressive-Reconstructive Surgery in Treatment of Vertebro-Medular Traumatism Consequences

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Corresponding authors' dates on vertebro-medular traumatism represent from 10% to 48% of vertebral column disease. Vertebro-medular traumatism consequences, which underline in clinical evolution a traumatic disease period, restore partial in time, spinal functions reappear in dependence of lesion severity or worsening neurological symptoms, progressing in following traumatic spinal deformities, vicious bone callus formation, etc. Currently, to improve patient clinical outcomes with vertebro-medular traumatism consequences is practicing a rational combination of decompressive-reconstructive surgical methods, with or without stabilization, and complex conservative treatment. The aim of the work was to research in dynamic development and results analysis of surgical

treatment at patients with severe posttraumatic spinal vertebra disease. Was analyzed the records of observation and dynamic assessment in clinical development to 24 patients with spinal vertebra disease and severe posttraumatic spinal vertebra disease, surgical intervention in Central Clinical Military Hospital during 2003-2009. Females – 4(16, 66%) and males – 20(83, 33%). Patient's age constituted from 17 to 54 years, with average age of $35 \pm 1, 2$ years old. From anterior side was performed surgical interventions to 4(16, 66%), from posterior side 20(83, 33%). Surgical interventions were made to patients from the traumatism within 8 months until 8 years, in average $2,4 \pm 0,4$ years. Most patients 20(83,33%) from 24, whom were performed surgical reinterventions, were unable to work. Disabled Grade I -17(70,83%), of them 13 (76.47%) - clinical manifestation of inferior paraplegia with pelvic organs functions disorder, but 4(23,53%) patients - deep inferior paraparesis. Disabled Grade II - 2(8,33%) patients with posttraumatic myelopathy with static disorder and movement. Disabled Grade III –just 1 patient (4,1%) – posttraumatic discirculatory caudopathy and sphincter disturbance. Four cases (16,66%) – had no neurological disorders. Surgical intervention's time ranged within the 125 minutes until 180 minutes, with average time $155 \pm 6,8$ minutes, intraoperator hemorrhage average $705 \pm 10,1$ ml. Duration of hospitalization was within 14 until 24 days, in average $19 \pm 1,4$ days. In all cases was obtained partial neurological regress of neurological symptoms. The improvement of the Vertebral algic syndrome, significantly increased patient's life quality (locomotion, autodeservation). Conclusion: 1. Surgical interventions applied in posttraumatic deformities of the spine with severe neurological disturbanses are one of the most difficult method, influenced by high risc of spinal traumatization, wound depth, long period of intervention; 2. Compression of vertebral deformities, fracture-luxation with spinal compression needs to make laminectomy or hemilaminectomy, not just at injury level, but also with partial rezeccation of upper vertebral lamina.

Mother and Child's Care Section

Development and Validity of the "Red Flag Developmental Screening Checklist"

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The aim of this pilot study was to develop an indigenous, simple developmental screening tool based on red flags, for administration to Indian children at routine immunization visits and to determine its validity. A 44 items-checklist was designed by listing milestones based on the red flags for the age- groups 3.5-4.5months, 9-12months, 18-20months and 24-26months, in 6 domains- Gross-Motor, Fine-Motor, Language, Social, Vision, Hearing. This checklist was administered and difficulties experienced by parents in comprehension were recorded. Then the child underwent evaluation by a developmental expert that included administration of Developmental Profile II and neurodevelopmental assessment. The validity of checklist for detecting developmental delay was calculated. The RFDSC was administered to 102 subjects (29 aged 3.5-4.5months, 32 aged 9-12months, 26 aged 18-20months, 15 aged 24-26months). 43% were screening test positive (RFDSC fail). The average time taken for its administration was 2.37 minutes (SD=0.62). 32% mothers faced problems in comprehension of certain questions. The RFDSC was found to be a fairly valid screening tool (sensitivity 63%; specificity 87%). The RFDSC was maximally valid for the age-group 3.5-4.5months with a sensitivity of 88% and a specificity of 90%. However, the sensitivity of the checklist for the age-groups 18-20months and 24-26months was less than 50% with a specificity of 100%. The checklist developed is parent-report based, quick to administer, easily comprehensible, having easy scoring pattern and interpretation. The checklist can be a valid screening tool for the evaluation of development in children coming for immunization in the age-groups 3.5- 4.5months and 9-12months. The ultimate goal is incorporating the administration of this checklist as a part of National Immunization Program so as to facilitate early identification and intervention in developmentally delayed children.

Early-Life Risk Factors for Occurrence of Atopic Dermatitis during the First Year

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Associations of family history, infection during pregnancy, cord blood cytokine concentrations, and skin function parameters with atopic dermatitis were analyzed. Stratum corneum hydration was measured with an impedance meter until 5 days after delivery and again at 1 month. Complete data were obtained for 110 infants, including 27 diagnosed by a physician as having atopic dermatitis during their first year and 26 diagnosed as having infantile eczema during their first month. The risk of atopic dermatitis during the first year of life was related to maternal atopic dermatitis, lower concentrations of macrophage inflammatory protein in cord blood, and greater skin moisture in the surface and stratum corneum of the forehead and cheek at 1 month of age but not to viral or bacterial infection during pregnancy or breastfeeding. Paternal hay fever was associated negatively

with the development of atopic dermatitis. High concentrations of interleukin-5, interleukin-17, and macrophage chemotactic protein-1 and only surface moisture in the cheek were associated with greater risk of infantile eczema in the first month. The association of atopic dermatitis in infancy with reduced neonatal macrophage inflammatory protein levels suggests a link with immature immune responses at birth.

Myometrectomy in Large Uterine Myomas Size

Misina Liudmila, Misina Anna

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Introduction: Surgical interventions for very large uterine myomas (hysterectomy vs organ preserving procedure) are under evaluation. The aim of the study was to analyze one center experience of myometrectomy in surgical treatment of very large uterine myomas. **Material and methods:** From November 1994 to May 2008, 21 consecutive patients with very large uterine myomas (?16 weeks, according criteria published by West S. at all., 2006) were selected for organ-preserving operation (myometrectomy). The mean age of patients was 36.48 ± 0.72 (ranged from 31 to 43 years). Tumors size was 17.81 ± 0.9 (range from 16 to 35 weeks). Operative technique includes: (1) temporary vascular clamp of uterine vessels; (2) two "V" incisions of the anterior and posterior uterine wall ("ellipse type"), with subtotal removing of myometrium with all myomas nodules and maximum preserving of the endometrium volume; (3) formation of new endometrial cavity; (4) final formation of "neo-uterus" with vascularize perimetrium flaps used continuous "baseballs" sutures ("Vicryl" or "PDS" Ethicon®). For final hemostasis were used non-commercial fibrin glue and human thrombin (27 vs 17 cases). **Results:** The mean operation time was in the range of 45 to 147 min (mean 79.52 ± 5.5). Blood loss was 298.43 ± 20.8 ml. Number of nodules excision were from 1 to 11 (mean \pm SD, 4.05 ± 0.7). The mean hospital stay was 6 - 8 days. **Conclusion:** Conventional abdominal myometrectomy is safe, favorable and effective procedure in surgical treatment of voluminous myomas with accessibly morbidity and recurrence rate.

Role of Echocardiography in Primary Diagnosis of Dilative Cardiomyopathy in Children - Clinical and Hemodynamic Relations

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The objective of the work was the assessment of changes in echocardiographic and their primary diagnosis of dilated cardiomyopathy in children. The retrospective study included 11 patients consecutively admitted during 2006-2009 in the service of pediatric cardiology and C in ICSOSM diagnosed with dilated cardiomyopathy (DCM). The study also included children of both sexes (3girls, 8boys), age within 3 months - 16 years (average 6. 4 years). Echocardiographic examination (EcoCG) was performed in M mode, 2D and Doppler (AcusonX300 System). EcoCg examination included determining the following relevant hemodynamic parameters in diagnosis of DCM (P.Elliott, 2000; F.E. Wilklow , 2008): size of left and right heart cavities (LVDD, LVSD, LAD, RVD), left ventricular contraction function (EF, SF). MPI (Tei index, C. Tei, 1997) was calculated simultaneously, reference values are dependent on age. EcoCg measurements obtained were compared with normal values for age in relation to BMI (R. Kampmann, 2000). It has been found

correlations between parameters EF, SF, MPI and the severity of CHF (NYHA / Ross). The clinical and paraclinical examination of patients determined: male predominance (73%). 63.3% of patients had severe HF (3-4 NYHA / Ross). Echocardiographic index values: Ao (16 ± 2.03 , $p < 0.03$), LAD (32 ± 1.9 , $p < 0.0002$), LVDD (46 ± 4 , $p < 0.001$), LVSD (40 ± 3.3 , $p < 0.0001$), RVD (14 ± 2.1 , $p < 0.0001$) are significantly increased compared with normal values reported to BMI. EF (38 ± 3.6 , $p < 0.0001$), SF (19 ± 2.1 , $p < 0.0001$) are reduced. Myocardial performance index values (0.76 ± 0.06 , $p < 0.0001$) are enlarged. 36% of patients on the background of a normal EF ($53 \pm 2.35\%$), show the increased Tei index (0.57 ± 0.0095). Initial clinical presentation in children with DCM is mostly serious HF (63.3% with FC NYHA / Ross III-IV). EcoCg parameters reported to the BMI are more relevant in diagnosis of dilated cardiomyopathy. Mentioning, that Tei index allow more objective appreciation of function of heart muscle contraction, even in cases with EF and SF preserved, which allows early initiation of appropriate treatment.

Heart Abnormalities in Children with Neuromuscular Diseases

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Neuromuscular diseases are a large group of diseases that are characterized by defective functions of peripheral nervous system, neuromuscular junction and/or muscle. Due to the similar structure of skeletal and cardiac muscles it is possible to associate neuromuscular diseases with cardiac disorders. The aim of the work was to identify the incidence rate of cardiovascular abnormalities in children with neuromuscular diseases. During the period from January to December 2008 at the Clinic of Neurology and Psychiatry for children and Youth the Faculty of Medicine in Belgrade, 44 patients with neuromuscular diseases had cardiovascular examination (physical, electrocardiographic and echocardiographic). All of the examined patients fell ill before turning 18 years of age. The patients' ages (M: 25, F: 19) ranged from 3 to 38 years ($X = 16 \pm 8.35$) at the time of cardiovascular examination. High incidence rate of mitral valve dysplasia, without haemodynamic changes, has been diagnosed (38.6%). Patients with dystrophinopathy are often referred to cardiovascular examination. Five (26.3%) of the patients with dystrophinopathy have dilated cardiomyopathy, and two patients with dystrophinopathy have congenital heart disease and diseases of the valve. One of the examined patients had congenital heart disease as well as nondystrophinopathic dystrophy (LGM.D.), and spinal muscular atrophy (SMA) while patients with peripheral neuropathy hadn't been diagnosed with pathological cardiovascular findings. Two out of five examined patients with disease of neuromuscular junction had results of the cardiovascular examination that matches the ones found in heart valve diseases. Dilated cardiomyopathy, isolated or associated with other cardiology abnormalities can only be diagnosed in dystrophinopathy. In other forms of dystrophy, as well as other neuromuscle diseases occurrence of described diseases of valve and congenital heart diseases has been diagnosed.

Pharmacoepidemiologic Investigation in Acute Renal Cholic in Children

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Acute renal colic is one of the most intense pains in pathology and represents a urologic and nephrologic emergency. This exploratory study was performed on 86 patients with a ages between 10

and more than 18 which completed a questionnaire consisting of some questions about intensity of acute renal colic measured with the visual analogue scale (range=0-10), associated symptoms and the drugs used to reduce pain. In summary this study shows that in most of the patients the pain significantly affects the normal daily activities. Drug therapy plays an important role in pain management. Renal colic pain management consists especially in using spasmolytic drugs and their association with analgesics or anti-inflammatory drugs.

Nitric Oxide as a Clinical Guide for Asthma Management in Children

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Asthma is a chronic inflammation of both large and small airways. The treatment of asthma has undergone a number of evolutions over the last several decades, nowadays consisting in bronchodilators and corticosteroids to reduce the inflammation. Exhaled nitric oxide, an easily and rapidly obtained noninvasive study, is a potential surrogate for measuring airways inflammation. The study was conducted at the Clinical Pediatric Hospital “St. John” from Galati where using a FeNO (fractional exhaled nitric oxide) detector, a number of 53 children already diagnosed with asthma were analyzed. The method is noninvasive and cost-reductive compared to other methods used in these cases. A number of 53 were tested using fractional exhaled nitric oxide. From this number, 36 children presented elevated FeNO values (>20 ppb) while 17 of them presented normal values. After the corticosteroid treatment, all the children had lower values. Measuring fractional exhaled nitric oxide (FeNO), a marker of airway inflammation, is useful in the early confirmation or exclusion of asthma in children, especially in cases where the diagnosis is not clear at presentation. FeNO is elevated in untreated or under-treated asthma and decreases in a dose-dependent manner with the use of inhaled corticosteroids.

Surgical Findings in Tympanic Cavity of Children Suffering from Otitis Media

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Surgical intervention should be considered when observation and medical therapy fail to demonstrate timely resolution of the effusion. Myringotomy with insertion of ventilation tubes was found by many authors to be most effective in preventing and treating of different forms of OM. The purpose of our research is to describe and compare the surgical findings in children suffering from different forms of OM who underwent Myringotomy with Tympanostomy tubes insertion. The research was carried out in ORL Clinic, Republican Hospital for children “Em. Cotaga”. The study involved 38 patients at the age from 1 mo to 18 years with different forms of otitis media – otitis media with effusion (OME) and recurrent acute otitis media (RAOM) in remission. The Work up included: anamnesis, pneumatic otoscopy, otomicroscopy, conventional audiometry, impedance audiometry otomicroscopy during surgery, examination of surgical findings and analysis of morphological changes in tympanic cavity, cytological and histological results. In additional rhinoscopy, oropharyngoscopy and posterior rhinoscopy were performed. Tympanic membrane (TM) appearance (color, transparency, dullness, opacity, thickness, visibility of main points, presence of

retraction pockets, thin-film adhesion, its localization and size) were evaluated by otoscopy before surgery and otomicroscopy during the surgery. Tympanic cavity (TC) changes (presence and character of effusion – serous, mucous, purulent, changes of mucosa - color, thickness, presence of granulation tissue, polyps), etc. were evaluated by otomicroscopy during the surgery. Surgical procedure - Myringotomy was made under general anesthesia with endotraheal anesthetic. From 38 children included in Project 24 were diagnosed as having OME (63.2%) and 14 - RAOM (36.8 %). We have shown that various forms of OM are dynamically interrelated regarding their causes and pathogenesis and do not represent separate entities. Rather, they represent the same disease process as it progresses in continuum. We support the opinion of some authors that TT insertion prevents severe retraction pocket formation and cholesteatoma development. We consider that using tympanostomy tubes for the treatment of otitis media with effusions and recurrent otitis media in childhood might prevent the necessity of early, repeated and radical ear surgery in the future.

Myometrectomy in Large Uterine Myomas Size

Misina Liudmila, Misina Anna

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Surgical interventions for very large uterine myomas (hysterectomy vs organ preserving procedure) are under evaluation. The aim of the study was to analyze one center experience of myometrectomy in surgical treatment of very large uterine myomas: From November 1994 to May 2008, 21 consecutive patients with very large uterine myomas (16 weeks, according criteria published by West S. at all. 2006) were selected for organ-preserving operation (myometrectomy). The mean age of patients was 36.48 ± 0.72 (ranged from 31 to 43 years). Tumors size was 17.81 ± 0.9 (range from 16 to 35 weeks). Operative technique includes: (1) temporary vascular clamp of uterine vessels; (2) two "V" incisions of the anterior and posterior uterine wall ("ellipse type"), with subtotal removing of myometrium with all myomas nodules and maximum preserving of the endometrium volume; (3) formation of new endometrial cavity; (4) final formation of "neo-uterus" with vascularize perimetrium flaps used continuous "baseballs" sutures ("Vicryl" or "PDS" Ethicon®). For final hemostasis were used non-commercial fibrin glue and human thrombin (27 vs 17 cases). The mean operation time was in the range of 45 to 147 min. Blood loss was 298.43 ± 20.8 ml. Number of nodules excision were from 1 to 11 (mean \pm SD, 4.05 ± 0.7). The mean hospital stay was 6 - 8 days. Conventional abdominal myometrectomy is safe, favorable and effective procedure in surgical treatment of voluminous myomas with accessibly morbidity and recurrence rate.

Clinical Symptoms and Ultrasound as a Method of Diagnosis of Endometriosis

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Endometriosis is typically seen during the reproductive years; it has been estimated that it occurs in roughly 5% to 10% of women. The objective of the work was to estimate different symptoms of endometriosis and ultrasound in the diagnosis of endometriosis. The retrospective study was conducted on a group of 60 patients, aged 44 ± 0.5 , selected from the Gynaecology Department from the Municipal Clinical Hospital Nr.1, Municipal Clinical Hospital Nr.3 and Oncologic Institute,

Chisinau with the diagnosis of endometriosis confirmed histological, in the period 2006-2008 and check group of 24 patients, aged $42,2 \pm 2,0$, selected from the Gynaecology Department of Women Health Center "Virginia", Cahul, with the diagnosis of uterine myoma, during the period January – November 2008. Patients were analyzed by the following criteria: clinical symptoms of diseases, ultrasound exam. Endometriosis is most common at the group of women at age of 19-39 (45%) and in the higher socio-economic group. The presumptive diagnosis established were: "uterine myoma, metrorrhagia" – 30 cases (50%), "menorrhagia" – 2 cases (3,3%), endometrial cancer - 2 cases (3,3%), hydatiform mole – 1 case (1,7%), adenomyosis – 13 cases (21,7%), cervix endometriosis and fallopian tubes endometriosis each in 2 separate cases (1,7%) and ovarian endometriosis in 10 cases (16,6%). Most frequent symptoms were dysmenorrhea in 43 cases ($71,7 \pm 5,8\%$, $p < 0,001$), pelvic pain associated with headaches in 7 cases ($11,7 \pm 4,1\%$, $p < 0,05$), chronic fatigue in 9 cases ($15 \pm 4,6\%$, $p < 0,01$), depression in 10 cases ($16,7 \pm 4,8\%$, $p < 0,01$), nausea in 3 cases ($5 \pm 2,8\%$, $p > 0,05$). Symptoms often worsen in time with the menstrual cycle. Dyspareunia were present in 18 cases ($30 \pm 5,9\%$, $p < 0,001$), disturbance of menstrual cycles were manifested by hypermenorrhea in 11 cases ($18,4 \pm 5,0\%$, $p < 0,001$), hyper-polymenorrhea in 21 cases ($35 \pm 6,1\%$, $p < 0,001$), menorrhagia in 24 cases ($40 \pm 6,3\%$, $p < 0,001$) and in the fact posthemorrhagic anemia was estimated in 20 cases ($33,4 \pm 6,1\%$, $p < 0,001$). Infertility were present in 19 cases ($31,7 \pm 6,0\%$, $p < 0,001$). Brown pre- and postmenstrual bleeding were detected in 22 cases ($36,7 \pm 6,2\%$, $p < 0,001$). Often an enlarged uterus from adenomyosis is misdiagnosed as being from fibroids; this common error can lead to wrong diagnosis. The check group diagnosed with uterine myoma had the following symptoms: in 21 cases (80,7%) there were no clinical symptoms, in 3 cases (11,5%) painful periods and in 2 cases (7,8%) abnormal haemorrhage. Adenomyosis causes the walls of the uterus to thicken and the uterus to become enlarged. During the bimanual exam uterine enlargement corresponding to 6-7 weeks gestation in 7 cases ($14,5 \pm 4,5\%$), to 8-9 weeks gestation in 15 cases ($31,4 \pm 5,6\%$) and more than 10 weeks gestation in 22 cases ($45,8 \pm 6,4\%$). Uterine retroversion was present in 23 cases ($47,9 \pm 6,4\%$, $p < 0,001$). In 26 cases ($54,2 \pm 7,0\%$, $p < 0,001$) adenomyosis was associated with uterine myoma. Pelvic ultrasonography imaging was used to identify individual lesions, but these modalities are not helpful in assessing the extent of endometriosis. Even with direct visualization, diagnosis of endometriosis can be difficult. All patients had performed ultrasound exam and just 28 ($48,3 \pm 6,5\%$, $p < 0,001$) ultrasound reports had indicated endometriosis as a possible diagnosis based on ultrasound findings, and that because of the fact that ultrasound exam wasn't perform pre- and postmenstrual to detected the pathognomonic signs of endometriosis (the size of uterus before and after menstruation vary in 2 weeks gestation). Dysmenorrhea in $71,7 \pm 5,8\%$, hyper-polymenorrhea in $35 \pm 6,1\%$, brown pre- and postmenstrual bleeding in $36,7 \pm 6,2\%$, uterine enlargement are the common symptoms of endometriosis and ultrasound exam had indicated endometriosis as a possible diagnosis in 28 cases ($48,3 \pm 6,5\%$).

Effectiveness of Intraoperative Ultrasound in Reducing Recurrent Fibroids during Myomectomy

Misina Liudmila, Misina Anna

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Reconstructive operations of uterus (ROU) for multiple myomas (MM) are accompanied by high rate of recurrence 40 – 50%, which are caused by residual tumors. The main of this study was to present initial experience of intraoperative ultrasound (IOUS) guidance during ROU for MM. Material and methods: The prospective study were based on 78 consecutive patients with MM, the age were 20 – 44 years (mean 32.6 ± 0.52), whom were performed ROU with IOUS. Clinical criteria included in study were diagnosed on clinical examination, transabdominal US, CT scan, MRI. IOUS

was done using an 8-MHz curved – array sector transducer attached to a “Toshiba Just Vision 200 (Model SSA-320A, Tokyo, Japan)” for (1) detecting nonpalpable nodules, (2) to defined relation between myomas and uterine cavity, uterine vessels (criteria's were published previously (Mishina A., Gyn. Surg. 2005; 3; 223 – 225). Results: In 37 (47.3%) cases axial and sagital images of the uterus revealed additional non-palpable small myomas less than 2.0 cm, situated intramural and submucosal, in 34 cases (43.5%) were opened uterine cavity, especially for submucosal myomas. Postoperative recurrence, morbidity and mortality was zero. Our case highlights the efficient application of IOUS in open reproductive procedures for MM, which allows determining the completeness of nodule excision less than 2 cm in diameter; examinations of myometrium in preventing residual myomata; defining the locations of nodules to uterine artery and cavity.

Evolutionary Particularities of Gestational Period in Rh Incompatibility

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In spite of a large number of studies, the Rh incompatibility remains one of the most controversial problems in contemporary obstetrics, because of the influence of it on perinatal morbidity and mortality. The study was based on evaluation of 247 cases of Rh incompatibility, in IMSP SCM1. Anamnestic facts, clinical and paraclinical evidences (immunological tests, USG exam, Doppler) and evolution of gestation was determined. In 95,5% cases patients were included in group between 18 and 35 years old. In 159 cases (64,4±3,0%) were atested primiparous and in 35,6±3,0% - multipara. In 65 cases (26,3±3,0%) the anamnesis was complicated by medical and spontaneous abortion, with a high level among primiparous. The evolution of gestational period was catracterised by the associated extragenital diseases in 86 cases (34,8±3,0%), the presence of viral and bacterian infections (43 cases - 17,4±2,4%), etc. The diagnosis of Rh incompatibility was established by clinical and paraclinical examinations. In the majority of cases the patients were unsensibilized, and only in 8 cases (3,2±1,1%) was atested a high level of antibodies (1:8 -1:16). In 231 cases (93,5±1,6%) babies were born per vias naturalis and in 16 (6,5±1,6%) – by ceasarian section. The Rh incompatibility is one of the actual problems in obstetrics; wich needs to be evaluated in the near future. In these cases, the possible isoimmunisation need to be diagnosticated in early gestational period, for making a correct decision in its management.

Optimization of Infusional Therapy in Burn Shock in Children

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Severe thermal injury in children causes significant changes of electrolytic and proteic balances with an early development of multiple organ failure syndromes. Till present days, issues regarding the stabilization of blood circulation indicators in children with burn shock remain unsolved. Restoring the circulatory volume is usually done mostly by the infusional therapy. The calculation of fluid needs vary depending on age, weight and the area of the burned surface. The most used formula for calculation of fluid needs is the Parkland formula - 3-4 ml / kg /% of the burn surface of crystalloid solutions during the first 24 hours. A more grounded approach to fluid therapy in children is the Carvajal formula, based on the fact that the ratio of surface area to body weight in

children is bigger than in adults: 2000 ml Ringer lactate for 1 m² of total body surface area + 5000 ml of Ringer lactate for 1 m² of the burns surface. P. Y. Gueugniaud et al. propose the use of crystalloid solutions Ringer lactate only in the first 6 h after the injury, in a dose of 1 ml / kg / % burn area. In the next 18 hours of crystalloids in doses of 1ml/kg / % burn area and colloids in doses of 1 ml / kg / % burn are prescribed. The total volume of infusion therapy should not exceed 4 ml / kg / % burn area during the first 24 hours. K. Okabayashi et al. consider that it is possible to increase the volume of fluids injected in children with massive burns in the first day after injury from 7 to 9.4 ml / kg / % burn. The next day, 50% of the first day dose is used. After 48 h or more, infusion therapy is calculated by the sum of physiological needs and the pathological (abnormal) losses. The issue regarding inclusion of colloidal solutions in the anti-shock measures is currently under discussion. In some of clinical centers, colloidal solutions are recommended in 12-24 hours after the injury - the time when capillary permeability may partially return to normal. However, the albumin infusions to patients during clinical stabilization after an adequate resuscitation with crystalloid infusion therapy resulted in a significant decrease in glomerular filtration rate, despite the increase of plasma volume. Some authors believe that the application of colloidal, protein solutions and / or hypertonic solutions of sodium chloride can reduce the volume of injected fluid. The use of hypertonic solutions may lead to the development of hypernatraemia, hyperosmolarity and an increase of edema in the burned area. There are evidences of the development of renal failure in patients with severe thermal injury, in which a complex anti-shock therapy included hypertonic sodium chloride solution. Despite this, authors consider the application of this solution in the treatment of critical burn shock justified. In general, an infusion therapy program for patients with burn shock is a complex, multi-faceted and highly actual issue.

Ethiology of Thermal Burns in Children

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Burns represents one of the most difficult surgical pathologies in children and include some serious injuries with skin necrosis, fat tissue, muscles, tendons, nerves, blood vessels, bones, with a very dynamic deployment according to the stages, comprising the major symptoms of dehydration, hypoxia, anemia, metabolic disorders, endotoxemia, immune collapse, septic complications, acute multiorgan failure syndrome. According to the Republican Center's for Thermal Injuries statistics, burns in children represents about 5-10% of all acute injuries in children. More than half (64.5%) of children with thermal injuries are nursery and preschool age (1-5 years). But according to severity, complications and disability degree burns are situated as follow: electric burns (3.5-4%), by flame (14.2%), by contact with incandescent solids (8.7%). In most cases burns were caused by hot liquids (72.8%). The present study was conducted by Burns and Plastic Surgery Clinic of the Clinical Republican Hospital for Children "Em.Cotaga" over the past 10 years. Analyzing the evolution of trauma in 4864 children aged up to 18 years, we have elucidated the incidence, nature of deterioration, and burns complications. After etiology factors: burns with hot liquid, overheated steams - 2682 (55.1%), burns by flame or by electric flame - 1182 (24.3%), burns by incandescent bodies - 835 (17.2%), electrical burns - 262 (5.4%), chemical burns - 36 (0.7%), solar burns - 49 (1.0%). According to the depth of the burn: superficial burns (I-II-IIIa) - 2160 (44.2%), deep burns (IIIB to IV) - 2704 (55.8%). Complications: thermal shock was found in 26% of all traumatized children, septic complications - manifested by septic shock, destructive pneumonia, myocarditis, hepatitis, nephritis and toxic encephalopathy were detected in 6.4% of hospitalized patients. Location: The most frequent location of burn are upper limbs, the head -72.5%, on the 2nd place were placed patients with facial, neck and torso burns, - 48%, the lower limbs have 26% of all trauma patients, but

for this location the most serious burns are characteristic. Burns in children represent some serious injuries with skin necrosis, fat tissue, muscles, tendons, nerves, blood vessels, bones, with a very dynamic deployment according to the stages, comprising the major symptoms of dehydration, hypoxia, anemia, metabolic disorders, endotoxicosis, immune collapse, septic complications, acute multiorgan failure syndrome. Children's body with its anatomical and physiological specific and immature mechanisms of immune protection, respond inadequately to stress induced by the thermal injury that is why the evolution of the burned disease in children has characteristic and specific adaptive-compensatory mechanisms, which can generate a systemic inadequate response.

Tumors of the Abdominal Cavity in Children

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The incidence of tumors in children is steadily increasing worldwide. In persons under 18 years with tumor, malignant tumors occur 10 times less than benign. They are one of the main causes of infant mortality. Child mortality due to cancer is second after deaths from accidents in Europe and the United States. One of the major challenges of cancer in children is always a late diagnosis of the disease, from which depends the final result of treatment. One of the most problematic in terms of early diagnosis of cancer in children, have always been a tumor processes in abdominal cavity and retroperitoneal space. Volumetric mass in the abdominal cavity is a term that denotes dense or soft formation in any region of abdomen. They may appear at any age. In the case when the mass formation is small, unseen for the eye and the palpation of the surface of child's body, it may remain undetected even with normal physical examination. Prognosis for a child with a mass in the stomach depends on the nature and location of the mass. Objective: To demonstrate the data of personal observations of children with this pathology. Material and methods: To the National Center of Pediatric Surgery "Natalia Gheorghiu" from 2004 to 2009 in the Department of Thoracoabdominal surgery was received 87 children with tumors of the abdominal cavity. On hospitalization were given the following diagnoses: 42 (48%) of the children with a mass of the abdominal cavity, 20 (23%) – liver mass, 16 (18%) – pelvis mass, 3 (3.5%) with the formation of retroperitoneum, 1 (1%) with liver cirrhosis, 2 (2%) with adhesive disease and 1 (1%) with mesenteric cyst. The final diagnoses were as follows in 20 (23%) children – mass in retroperitoneal space, in 17 (19,5%) - the mass in the abdominal cavity in 3 (3%) - intestinal, 10 (11,5%) - liver, 20 (23%) - the internal female genital organs, 3 (3%) - the spleen, 2 (2%) - the stomach and one echinococcus of the mesentery. In 11 (13%) children the data for tumors were not identified: in 4 data for the pathology was not identified, 7 were operated: 2 with hepatitis B, 2 - with abscess, 1 - with intussusception, 1 with adhesive conglomerate, 1 with abdominal lymphadenitis. Results: The children were divided by the age: 1-3 years 26 children with a predominance of mass in retroperitoneal space; 4-7 years, 18 children – mass in the abdominal cavity of children 8-10 years -12 and 11-13 years - 13 children in these groups were not identified the predominant localization? 14-17a - 18 children with a predominance of mass of internal female genital organs. When the new mass formation get to large size the shape and size of the stomach changes to what the attention is played by the parents or physician in routine inspection. The skin over the mass of abdomen, as a rule, does not change, thus retains its normal color.

Ovarian Cancer in Children and Adolescents

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Ovarian cancer represents a small proportion of the tumors in children and adolescents, about 3-4% of solid tumors in this age group. Little accurate information is available regarding the true incidence of ovarian tumors in children and adolescents in Romania. The objective of this study was to evaluate the particularities of ovarian cancer in children and adolescents, to analyze the survival and late effects. This historical prospective study is based on the data from the medical records of 32 patients – children and adolescents - with ovarian cancer who were treated between 1990- 2008 in Institute of Oncology Bucharest, Romania. The highest incidence was for the age group of 10-14 years (17 cases), followed by the 15-19 years old group (14 cases). The histological types were: dysgerminoma (12 cases), undifferentiated carcinoma (4 cases), differentiated carcinoma (5 cases), endodermal sinus tumor (5 cases), mixed tumors (6 cases). Stages at the time of diagnosis were as following: stage I-5 cases, stage II- 10 cases, stage III- 16 cases (50% of patients) and stage IV-1 case. The primary tumor was unilateral in the majority of cases: 23 patients (72%) and bilateral for 9 patients. The treatment was multimodal. Initial management was surgical for all patients: unilateral oophorectomy in 15 cases, bilateral oophorectomy in 8 cases and bilateral oophorectomy + hysterectomy in 7 cases. In 1 case the purpose of the surgical intervention was citoreduction, in 3 cases- palliative surgery and in 4 cases second-look surgery (positive in 2 cases). All patients received chemotherapy following specific protocols. Radiotherapy was used in 12 cases (pelvic and abdominal RT in 8 cases and only pelvic RT in 4 cases) and hormonal substitution used in 3 cases. All cases were followed-up at least 1 year after the end of the treatment. Clinical observation: In the cured cases the procreation was conserved (2 patients with normal pregnancy, normal accouchement and healthy child). The most frequent metastases: peritoneum, lungs, liver. Mortality: 10% (1 case-stage I with incomplete treatment, 1 case stage II, 1 case stage IV). Conclusions: 1. ovarian tumors in children and adolescents are rare, the highest incidence being at pubertal age. 2. the most frequent histological type was germ-cell tumors. They are curable if early diagnosed. 3. Survival rate in stage III was very good with modern multimodal treatment.

Acute Gynecological Abdomen in Children

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Acute abdomen is acutely emerging pathological processes in the abdominal cavity of different etiology and clinical course. Among the reasons causing the acute abdomen in children is the torsion ovarian formations in about 15%. Causes of acute abdomen in gynaecology can be divided into 3 groups: acute intra-bleeding (ectopic pregnancy, ovarian apoplexy - poor circulation in the internal reproductive organs (the torsion stem tumors and tumor formations ovarian torsion and / or necrosis of myoma node); acute inflammatory diseases of internal genital organs with involvement in the process of the peritoneum. The aim of the work was to demonstrate the frequency of gynecological diseases in girls occurring in the clinic of an acute abdomen. In the National Center of Pediatric Surgery [N. Georgiou" from 2004 to 2009 were operated on 126 children with pathology of the internal female genital organs, hospitalized with clinical acute abdomen. Among them are marked 59 (47%) children with apoplexy of the ovary, 52 (41%) with ovarian cysts, 21 (16,6%) with a uterin

tube chists and only 2 (1.6%) with parovarian cyst. Also, among the children with ovarian cysts in 14 (27%) is recorded torsion, in 2 (3,8%) - necrosis in 3 (5.8%) - rupture and in one (1.9%) - infecting. It is also important to note that there were encountered combinations of gynecological pathologies, such as ovarian apoplexy with cyst of the uterin tube 6 (4.5%), paraovarian cyst torsion on the right ovary with the right ovary cyst 1 (0.7%), ovarian cyst with a cyst in the uterine tube 2 (1,5%) cases. But it also noted the combination of gynecological pathology with secondary appendicitis in 27 (21,4%) children and in one case (0, 8%) with gangrenous appendicitis. The distribution by age as follows: 6-10 years - 6 (5%) children, 11-13 years old - 15 (12%) children, ages 14 - 17 - 105 (83%) children. The most common gynecological pathology causing acute abdominal clinic in our hospital was ovarian cyst, and the age of most of the patients was from 14 to 17 years, while children 6 to 10 years with gynecological pathology clinic that simulates an acute abdomen is largely an inflammatory and does not require surgical treatment. In view of the anatomic-topographic and anatomic and physiological features of a child's body, high mobility of neoplasms in female internal genital organs in girls clinic usually simulates acute appendicitis. Ovarian Neoplasms and the leasure of the right ovary occur in puberty more often confirming the theory of genetic determination of an earlier and higher functional activity of the right ovary.

Treatment of Donor Wounds with a Free Transplant Grafts in Children

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The biggest advantage of the medium thickness free grafts transplantation is that large areas of skin can be transplanted without any damage (functional or cosmetic) to the donor site wounds. However, for the implementation of this basic advantage in practice, is a smooth donor wound healing, which is most successful ensured by an appropriate treatment and by leaving the wound open. In the Children's Republican Hospital "Em.Cotaga" in Burns Department, during the 2009 have been hospitalized 626 patients. 114 patients of those operated, with diagnosis autodermoplasty with split grafts. The excision of the flap was carried out under general anesthesia. Before the excision, donor site was treated with antiseptic solution. Subcutaneously sa-line solution was injected till the formation of "citric peel". After this, the excision of the graft was performed. At the end of the operation to the surface of donor wound was covered with Kollahit, non-woven wound coverings based on collagen-chitosan complex. Coverage Kollahit is placed on the wound so that it stood for the wound for 5-10 mm, is pressed to the bottom of the wound, and then is imposed a gauze and fixed with gauze bandage. Donor site wound is immobilized. Bandages should be changed in two days after surgery. From the wound surface only the wet areas are removed and are replaced with new pieces of cover of the same size. The crust formed is closely welded to the bottom of the wound, forming a solid and yet flexible protective coating. Cover stucked to the wound are left on the wound until its complete epithelialization. Wound surface of the donor site wound epithelialization begins primarily from the edges. The development of the process of epithelialization is shown by the delamination of crust edges, which is observed in 6-8 days after the surgery. The lifted crust edges should be cut every day, so that they could not accidentally be caught on the patient's clothes, and lift the adhered parts, which may cause bleeding and even lead to the occurrence of the infection. 10-14 days after the operation, the epithelialization ends, the crust is definitively decaled; the place of the donor site is shown only by the bright spot on the skin. The Kollahit coatings stimulate regeneration of damaged tissues in the wound: stimulate marginal and island epithelization and provide conditions to epithelial cells migration, providing the conditions for scar free healing. A very valuable asset of Kollahit is its: soft spongy structure, high capacity to absorb wound fluid content, the ability to provide normal moisture in the wound. This allows an easy and painless bandage change. Due to the high plasticity,

Kollahit makes it easy to make coatings for various parts of the body. They possess wound-healing, antimicrobial and analgesic effect.

Life Quality of Sick People Affected by Endometriosis in the Conditions of Medicamental Ovariectomy by Applying a New Method of Add-back Therapy

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During the last decades a gold standard of the treatment of endometriosis is considered to be the application of agonist gonadotrophin-releasing hormones (a-GnRH), but in connection with a great number of side effects, its application is reduced. To solve the problem it's necessary to search new methods of add-back therapy. The aim of the research was to carry out the analysis of life quality of sick women affected by endometriosis in the conditions of medical ovariectomy by applying a new method of add-back therapy. To treat 25 patients affected by peritoneal endometriosis – the third degree (classification AFS of 1985) - a-GnRH, containing 3,6 mg Acetate Gozerelin was applied. The course of treatment included 6 injections of zoladex. After 2-3 injections, because of evidence of Zoladex side effects, the patients were prescribed the combined oral contraceptive containing 0,02 mg Ethinyl Estradiol and 0,15 mg Dezogestrel - a medicine Novynett in a continuous regimen. Earlier Novynett wasn't applied with the similar purpose, but the drugs of replaceable hormonal therapy were applied for add-back therapy. 52 % of patients were prescribed the treatment during first 10 days after the operative intervention. We estimated the efficiency of a-GnRH therapy in case of peritoneal endometriosis on the ground of questioning, gynaecologic examination, echoscopy researches. In 4 weeks after beginning of treatment such symptoms, as dysmenorrhea, "smearing" discharges before menses, hypermenorrhea, hyperpolymenorrhea were cut off. The total absence of a painful syndrome is noted after 20 weeks from the beginning of a-GnRH treatment. During the treatment of a-GnRH all patients suffered various side effects. Such symptoms, as hot flushes, hyperhidrosis, depression, peripheric edemas, insomnia, giddiness, weight- increase, complaints of headache were increasing. In 4-8 weeks from the beginning of treatment appeared the complaints of heart pains, enlargement or diminution of mammary glands, seborrhea, hirsutism, nausea, myalgia, nervousness, and cases of increasing of a systolic BP on the average to 160 mmHg, diastolic - to 100 mmHg. Most patients had the combination of several symptoms (hot flushes and hyperhidrosis etc.). To correct the side effects we used Novynett which was prescribed to 15 patients to be taken continuously after 2 Zoladex-injections. During Novynett intake more than 50 % of patients noted the reduction of such symptoms, as libido decrease, headaches, emotional lability, hot flushes, hyperhidrosis, and insomnia. By the end of the treatment course the patients did not complain to depression, acneea, mialgia, diminution of mammary glands. 10 patients did not receive side back therapy. 8 patients had contraindications for its application, 2 patients refused to applicate it in connection with satisfactory state of health. The patients who didn't take Novynett, complained to headaches, heart pains, hot flushes, hyperhidrosis, emotional lability, liftings of arterial pressure during the whole period of a-GnRH treatment. The side effects of various characters and the degree of the evidence in response of application of Zoladex affected all patients and led to necessity of side back therapy by 88% of patients. The application of microdosed COOK Novynett stopped effectively side effects that suffered sick people affected by peritoneal endometriosis during a-GnRH treatment.

Frequency of Hirsutism among Female Students from the State Medical and Pharmaceutical University "Nicolae Testemitanu" - Differentiation of Cosmetic and Medical Problems

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Hirsutism is defined as the excessive growth of coarse black hair in areas where hair growth in women is minimal or absent. The hairiness implies the presence of abnormal androgen action, which may represent a serious or, more likely, a nonserious medical problem. Regardless of the etiology, hirsutism can produce mental trauma and emotional anguish. Even mild cases of hirsutism may be viewed by the patient and others as a presumptive loss of femininity. In more severe cases, hirsutism can be a serious cosmetic problem. In a study of 171 female students of State Medical and Pharmaceutical University of the Republic of Moldova "Nicolae Testemitanu", have determined the presence of hirsutism in 17.54% (30 students), of which, only 10 students know that suffering from a disease with high androgen levels, among which, 47.05% (8 cases) had polycystic ovary syndrome, 5.88% (1 case) congenital adrenal hyperplasia, 5.88% (1 case) adrenal tumor and ideopathic hirsutism is 41.17% (7 cases). Also, have been revealed an insufficient level of knowledge among female students in hirsutism.

Uterine Artery Embolisation in the Treatment of Uterine Myoma

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The objective of the study was to demonstrate the efficiency of uterine arteries embolisation in the treatment of uterine myoma (reduced size nodules, symptoms, menstrual regulation). As methods was used a retrospective study was performed in 30 patients, aged 35-45 years, admitted in the Republican Hospital in 2004-2007 with a diagnosis of uterine myoma and clinical (menorrhagia, dysmenorrhea, abdominal pain, pelvic pain, dysuria, constipation). Patients were performed: Ultrasound of the internal organs until and after the uterine arteries embolization (6 months), endometrial biopsy with morfohistological examination, examination of the sexually transmitted infections. Myomas nodules sizes were: 7% \pm 10 cm, 27% \pm 9cm, 17% \pm 7 cm, 30% \pm 5 cm, 20% \pm 3 cm. The results of the study showed that in 96.7% of patients (26) reduced the size of myomas nodules, had improved symptoms, menstrual cycle was set. In the group of patients with nodules of 2-6 cm (67%) as a result of the embolisation nodules completely disappeared over a year. Nodule size larger than 6 cm or shrink by more than $\frac{1}{2}$, need a conservative myomectomy. At 3.3% of patients (1) amenorrhea has been installed at 3 months after surgery. At 6.6% of patients (2) soon after intervention were born. As a conclusion we mention that the study showed that UAE is an effective way, no treated case was not finished with a hysterectomy. Menstrual function was preserved in 96.7% cases, 2 patients recovered and reproductive function. The method is final if nodules smaller than 6 cm or submucosa as transvaginal abolition or necrotizing. If nodules $>$ 6 cm embolisation method only reduces them and is less bloody conservative myomectomy.

Public Health Section

Comprehensive Scientific Research to Assess the Impact of Behavioural Risk Factor for Cardiovascular Diseases

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A multicenter randomized research studied lifestyle factors impact on the development of socially important diseases among population of Kazakhstan. The study involved experts from leading research institutes: cardiology and internal medicine, maternal and child health, oncology and radiology, ophthalmology, psychiatry and healthy lifestyle center. Objective: Development new organizational approaches and efficient forms, economically feasible proposals for preventive work on major socially important diseases (arterial hypertension, ischemic heart disease (IHD), diabetes mellitus (DM), asthma, breast cancer, cervical cancer) in primary health care. Methods: socio-hygienic, statistical, informational, epidemiological, preventive, clinical, paraclinical, laboratory, sociological and mathematical. Results: Population of Almaty and Enbekshi-Kazakh rayon of Almaty oblast was studied (1500 people). Prevalence of risk factors and cardiovascular diseases (CVD) (32,0 +2,8); IHD (18.1 2.3); with DM 0,33%, asthma - 1,64%; with allergic rhinitis - 10.49%; with diabetic retinopathy from 8,5 to 86,5; with depressive condition - 52.7%; all these diseases had higher rates among urban residents than rural ones. Among CVD risk factors an overweight was a leading condition. Analysis showed strong linkage between CVD and overweight among both men and women. The second and third ranks accounted for tobacco smoking and atken-tea (tea with salt and milk) use, the fourth - intake of alcohol. 77,0% of examined healthy people under age of 30 had prenosological conditions, enable to disorder normal adaptation, lead to diseases onset in later life. Work of School of health and observation of experimental group in 60-68% cases showed positive results in correction of functional conditions. Most people were not informed about ways of diseases prevention and had no healthy lifestyle skills. Among the urban percentage of people aware of healthy lifestyle importance was 21.78%, among the rural -18.81%. Low doctors and nurses' supply in Almaty city and Almaty oblast, disparities and uneven, poorly trained staff, high rates of layoffs reduced availability and quality of health care including preventive health care. Based on the research results training programs "Technology of preventive education at schools of health for patients with cardiovascular diseases", "Technology of preventive education of patients with diabetes, obesity, metabolic syndrome" were developed and applied. Screening programs developed to identify risk factors of socially important diseases at primary health care settings as well as algorithm technology for early detection and monitoring of patients with hypertension and coronary heart disease, angina, myocardial infarction.

Prevalence of Obesity, Weight Perceptions and Weight Controlling Practices Among Female College Students in Kerala, India

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Obesity has been described as an epidemic which is spreading globally. Insufficient awareness regarding obesity and undue concern about weight issues have given rise to a spectrum

ranging from increased morbidity, unhealthy diets to low self esteem, depression. Female college students and adolescents have been reported as the most vulnerable population in studies conducted by Mooney et al (Ireland), Davies and Furnham (Britain) and many other authors. Thus, the research question: What is the prevalence of obesity, weight perceptions and weight controlling practices undertaken by female college students in Kerala, India. A Cross-sectional survey was done among 497 girls in the age group 17-20 years studying in college. A pretested questionnaire was used to collect the socio-demographic data, data on weight control practices and weight perceptions. Weight was measured to the nearest 1 kg using a calibrated weighing machine and height was measured to the nearest 1 mm using a stadiometer. BMI categories: Underweight < 20, Normal 20-24.9, Overweight 25-29.9, Obese >30. The prevalence of obesity was found to be 4.6% while 46% were underweight even though 55% of the study population belonged to the affluent society. Concerning weight perception, 38.3% of students overestimated their weight and 31.3% underestimated their weight. 41.6% of normal weight and 46.7% of underweight subjects were dissatisfied and overestimated their weight, while 51.5% of the obese subjects have underestimated their weight. 30.67% of girls desired to lose weight out of which only 16% adopt exercise as their practice to lose weight while the rest adopt unhealthy dieting practices. 28% of the subjects skip breakfast as a means for the same. Conclusion: In this study the prevalence of obesity was found to be 4.6% which is significantly lower than that in developed countries. However, even though majority of the study population belonged to affluent society the prevalence of underweight was found to be 46%. More than 70% of the subjects have false perceptions regarding their weights. Majority of the subjects resort to unhealthy eating practices, as a means to control weight and this in turn may lead to hazardous effects in the future.

Nutrition Peculiarities of an Under School Age Childs Group From Negresti City, Romania

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Assessing the preschool child's nutrition, appreciation of the relationship that exists between child's nutrition and maternal educational level. Study group included 134 preschool children from "Whipster" Kindergarten No.1, in Negresti City, Vaslui County, Romania. Mothers responded to a questionnaire on the different food weekly consumption frequency. We insisted on the use of milk and dairy products, eggs, fish, fat, meat, vegetables, sugar products, cereal products and fruits. Statistical data were processed using Pearson test. We used the different kind of food frequency questionnaire, and then we realized that nutrition correlation with maternal education. Daily consumption of milk appears in 58.9% of cases. Unfortunately, there are also cases with rare consumption of milk (once a week) (12.7%). Daily consumption is dominant regardless of maternal education ($p > 0.05$). Cheese is mostly consumed 2-3 times per week (40.3%). Unfortunately it also appears null variant (8.9%), which is gravely. In majority, egg consumption is 2-3 times per week (57.5%). Again, the null responses (4.5%) and those of daily consumption (3.7%) are alarming us. Especially animal fats are consumed 2-3 times per week (34.3%) or once a week (32.8%). In studies, differences appear only in beef meat consumption where mothers with secondary education level refuse to give it ($p < 0.05$). Mothers with secondary education give daily potatoes, while in other cases, the dominant use is 2-3 times ($p < 0.01$). Dry bean consumption is very varied, with statistically significant differences ($p < 0.05$). Sweets are consumed mostly by 2-3 times (29.1%) and daily (38.1%). Daily consumption is dominant in mothers with secondary education, vocational, high-school and university. Those with post-high-school studies use 2-3 times, so that differences that appear are statistically significant at $p < 0.001$. Cereal products provide more calories, so that

excessive consumption is not favorable. There is consumption of 2-3 times (34.3%) or once (41%), but also daily (6.7%). The studies report that there is a small or apparently absent consumption in mothers with secondary education, while in rest, consumption is 2-3 times a week ($p < 0.05$). Mainly, eating habits are different, but consumption exists, which is a positive thing. Conclusion: There are many problems related to infant's nutrition. In some cases, cheese, eggs, fish, fats are absent in their diet. In other cases, some products are excessively consumed. So, cereals derivatives and sugar products are frequently consumed daily, which is a risk factor. The target of such studies are the specialists, and national priority programs should be discussed (a national program of fruits consumption would be beneficial for these children).

Economic Impact of Iron Deficiency Anemia for the Republic of Moldova

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To estimate the economic impact of iron deficiency anemia associated with cognitive deficits in young children and productivity losses in adults for the Republic of Moldova (RM). Methods. To assess the economic losses caused by iron deficiency anemia we used algorithms proposed by Jay Ross and Susan Horton in the work "Economic consequences of iron deficiency", data from the Demographic and Health Survey, 2005 (DHS) and Statistic Yearbook of the Republic of Moldova. Iron deficiency is the most common nutritional disorders in the world that frequent leads to anemia. A lot of studies document association of iron deficiency anemia (IDA) with poor motor and mental performances in children, low work productivity in adults, and poor pregnancy outcome. The consequences of iron deficiency are extending far beyond the population with iron deficiency anemia due to many physiological functions of iron other than its role in hemoglobin synthesis. Combining the effects of childhood anemia on cognitive achievement with those of adult anemia on physical productivity, total productivity loss due to iron deficiency anemia was estimated from the following: $\text{Cog loss} + \text{BC loss} + \text{HML loss} = [0.04 \times \text{WS} \times \text{GDP/cap} \times \text{Pr}(\text{child})] + [0.01 \times \text{WS} \times \text{BC Share} \times \text{GDP/cap} \times \text{Pr}(\text{adult})] + [0.12 \times \text{WS} \times \text{HML} \times \text{GDP/cap} \times \text{Pr}(\text{adult})]$ Where: Cog loss is productivity losses due to lower cognitive scores related to childhood IDA; BC loss - losses in productivity for blue-color workers; and HML loss - losses in productivity for blue-color workers performing heavy manual labor; WS - wage share (labor) in GDP; GDP/cap - per capita GDP; BC Share - share of blue collar employment in total employment; HML - heavy manual labor share in GDP; Pr (child) - prevalence of anaemia in children; Pr (adult) - prevalence of anemia in children. Applying the most recent data (the last study that evaluates prevalence of anemia was done in 2005 - DHS) we calculated total productivity loss due to iron deficiency anemia for the RM: $\text{Cog loss} + \text{BC loss} + \text{HML loss} = [0.04 \times 0.38 \times 10225 \text{ lei} \times 0.33] + [0.01 \times 0.38 \times 0.36 \times 10225 \text{ lei} \times 0.195] + [0.12 \times 0.38 \times (0.575 \times 0.16) \times 10225 \text{ lei} \times 0.195] = 62.38 \text{ lei}$ This calculation yields an annual loss of 62.38 lei MD per capita in 2005, equivalent to 0.61% of GDP for this year. Effect associated with cognitive deficits in children and low work productivity in adults provides the justification to the urgent need to prevent iron deficiency in all groups of population, beginning with young children.

Some Aspects of Knowledge and Attitudes of Medical Students Regarding Sexual Education and Information

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Within the last decade, the indicators of unsafe sexual behavior (incidence of Sexually Transmitted Infections STIs, unwanted pregnancy) have grown significantly, especially among the young people. Cumulatively there have been 4,131% new cases reported of 2007, including about 33% reported during 2006-2007 alone. A stable increase in the number of newly reported HIV cases can be seen over the last 8 years. Out of 731 newly reported HIV cases in 2007, about 63.2% have been transmitted sexually. Since 2005, the sexual route of transmission has been prevailing and there are steady trends of up-surging rates of sex route among the newly reported cases. Thus, women account for most of the newly reported HIV cases with sexual route of transmission (57.2% - 2006; 66.2% - 2007). The coverage of pregnant women with HIV testing during 2003-2007 is within the 96-99.4% range (prevalence among pregnant women going up 0.1% -2005; 0.21% -2006; 0.23% -2007). This article reflects the analyses research case/test organized in November 2009 in the Orhei Medical School and SMPhU. The scientific sample was presented to 81 students: 41 of Medical School from IV year and 40 of SMPhU from II year. The young in the both groups had the same (18-20 years) age. Results One of the objectives assayed was – from where do young people receive information about Prevention of STIs – who is a trustworthy person for young – as we wished to receive information about this subjects. In the questionnaire were proposed questions with truthful & wrong answers. It is mentioned that medical students from Medical School in 13.2% cases were presented wrong answers, in compared than students from SMPhU in 33.9% cases. They were asked to indicate the necessity of providing reproductive health and sexual education (prevention STIs, contraception, conception). In the 87.9% cases respondents answered that the first discussion on this topic they had with friends/colleges. The second position had a lyceum or gymnasium teacher 64.3%. And only, the third in order was family 45.2%.The young people were asked about consequences of STIs. In the majority cases they presented neurophysiology (76.7%) and socio-morally (98.8) watches. The physical and sterility (32.2%) was mentioned in the last order. Discussions The KAP in RM - survey carried out in 2008 among young people, ages 19-24, indicate worrisome lower condom use rates among young women, only 35.8% of young women reporting condom use at last contact compared to 67.1% of young men. Anecdotal evidence suggests that are differences between men and women in the ability to negotiate safer sexual behaviour. The same quality researches are necessary for improved informative / educative processes in the management of reproductive health medical services, of preventions STIs.

The Demographical and Health State Indicators a Pre-School Population During 2003-2008 Years

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In the forth objects of the National Report Millennium Development Goals Report: "New Challenges – New Objectives" was said to reduce by two thirds, between 1990 and 2015, the under-five mortality rate. In 2003 the official Medical Statistics Reports registered indicators of health of children under 5-years. During 2002-2008 the MH of RM supported UNICEF implementation

National Strategy "Integrated Management Children Illness". In this period were organized a lot of researches regarding this topic. In this item was described "Women perceptions of access to health care"; "Immunization coverage"; "Incidence of Acute infections and Fever and Diarrhea"; "Breastfeeding and Supplementation". The research was realized by the base of descriptive epidemiological, historical methods and meta - analyze previous works. Results During 2001-2007 years was registered a decrease of children population under-5 years with 7, 8 million people. Thus, in this period children were reduced with 1.32 million people every year. Mortality under-5 years were contacted 17.8‰ in 2003; 14.0‰ in 2007 and 14.4‰ in 2008. Also, for District - locations were 9.8 in 2007; 10.8 in 2008. And for Municipality- locations were 15.2‰ in 2007; 15.5‰ in 2008. It was contested that this indicator didn't depend on geographical regions but depended on territorial-administrative regions. In the structure of children's causes of death the first were perinataly diseases (31.7‰); the II were congenitally malformations (30.3‰); III- respiratory illnesses (13.7‰); IV- respiratory illnesses (11.7‰). The other indicator of Morbidity/ Incidence under 5-years was predominated in Municipality- locations in comparison with District-locations. In the previous works was observed that these indicators are in direct relations. The first positions in incidence structure were the respiratory illnesses (435.4‰ in 2008). There isn't in the official statistics reports data about physical behaviour but there is data about result' prophylactic exam of preschool population. This indicator is in direct relationship with the morbidity under 5-years. Also, data about physical retard is in direct relationship with indicators – disability children populations. It is necessary to implement an indicator for disability of children under 5-years and other indicator of children population under-5 years. Conclusions It's very important for the improvement of management medical care for children under-5 years to implement a qualitative indicator of health state of preschool children in the Primary Medical Care.

Profile of Smokers Seeking a Smoking Cessation Program

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To evaluate the characteristics of smokers seeking treatment in public smoking cessation program "STOP FUMAT". We made a retrospective evaluation of data collected during the interview for enrollment in the smoking cessation program. The participants completed questionnaires related to smoking history, history of psychiatric disorders, depression, anxiety and history of comorbidities; demographic variables (age, gender, ethnicity, education), body weight and measures of nicotine dependence were made. Between January of 2009 and January of 2010, 527 smokers were evaluated and received individual counseling. More than half of the subjects had high degree of nicotine level, comorbidities, were female with a mean age of 50 years. Smokers seeking assistance for smoking cessation were socially disadvantaged, presented a high degree of nicotine dependence and had previously made smoking-cessation attempts without the benefit of a structured program. Smoking control interventions should take into consideration the general characteristics of the smokers treated via the public health care system.

Monitoring Diseases Prevention in Health Care System

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In Kazakhstan diseases prevention is a matter of great concern and is one of the long-term priorities of "Kazakhstan - 2030" strategy. Diseases prevention includes monitoring of prevention and healthy lifestyle development. Widespread of risk factors among the country's population identified primary problem of health protection and promotion - high rates of chronic diseases, i.e. deterioration of health. In papers available, we found no studies on the impact of behavioral risk factors for complications in patients of surgical hospitals. Taking into consideration mentioned above and influence of bad habits on the disease course, there was a need for monitoring key healthy lifestyle indicators among population. In Kazakhstan 4 national population-wide surveys were carried out on risk factors for diseases associated with population lifestyle choices. Objective: To improve prevention and healthy lifestyle development by examining prevalence of behavioral risk factors among the population. The object of national survey was population of the country 11 years and older (up to 65 inclusive). Sociological survey of 5 Kazakhstan regions covered 2500 people (2007). In each region, according to the research objectives eight age groups living in urban or rural areas were identified. The questionnaire consisted of 32 questions. We examined behavioral risk factors such as smoking, alcohol consumption, nutrition, physical activity, quality of medical care and others. A comparative analysis of lifestyle indicators from previous 1st, 2nd and 3rd national studies (1998, 2001, 2004, and 2007) and results of surgical patients survey was conducted. According to the results of sociological survey (2007) the prevalence of chronic diseases observed in all age groups, averaging 38.8% for the republic, by regions - Eastern region dominated (51,2%). In-depth statistical analysis established a direct correlation between the prevalence of risk factors and chronic noncommunicable diseases. We determined prevalence of smoking among surgical patients, accounted for 30%, and prevalence of alcohol abuse - 49% among patients of planned surgery, and 38% among patients of urgent surgery. According to national sociological studies smoking rates among population was 22.7% - 27%, and prevalence of alcohol - 35,6%. Consequently, the rates of bad habits among surgical patients were higher than among the general population. Physicians of primary health care and hospitals must take into account smoking and alcohol consumption among patients. Thus, monitoring of behavioral risk factors for diseases, including surgical ones enables to making timely decisions on disease prevention and correction of diagnostic and treatment process through lifestyle changes and avoiding risk factors complicating pathological process.

Prevalence and Correlates of Common Mental Disorders among Incarcerated Men in Kerala, India

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Researches around the world have demonstrated the higher prevalence of mental illness in prisons when compared to the general population. However there is a dearth of data on mental illness, among prisoners from low and lower middle-income countries. We hypothesize that there is an increased prevalence of common mental disorders (CM.D.) in Indian prisons, when compared to the general population. The study aims to find the prevalence and correlates of common mental disorders among incarcerated men in a prison in Kerala, South India. Randomly selected sample of 329 male

prisoners were interviewed between November 2008 and May 2009. Prevalence was measured using the General Health Questionnaire (GHQ-12). Socio demographic information, reports of repeated incarceration, history of mental illness, hazardous alcohol use and substance abuse were also collected and compared. Prevalence of common mental disorder was 18.2% (n=60; 95% Confidence interval (CI) 14.2-22.8); and men from younger age groups were at an increased risk. After adjusting for age, we found higher risk among married men, those with two or more children and those who had experienced extreme poverty. Men affected were more likely to report history of psychiatric illness, suicidal attempt(s) and family history of psychiatric illness; and were also more likely to seek general medical care from the prison hospital. Associations were also found with repeated jail incarceration, prescription drug abuse and use of Marijuana during the past 12 months. The final multivariate model found poverty (OR 3.4; 95% (CI) 1.8-6.6), use of marijuana during the past 12 months (OR 3.8; 95% (CI) 1.8-8.2), seeking general medical care (OR 2.7; 95% (CI) 1.3-5.6), history of suicidal attempt(s) (OR 4.9; 95% (CI) 2-11.7), and repeated incarceration (OR 2.3; 95% (CI) 1.03-5.0) independently associated with common mental disorders. Our study found significantly higher rates of common mental disorder among incarcerated men (18.2%) compared to general Indian population (6.54%). It is closely associated with several high risk behaviors. Public health implication of the results will be discussed at the congress.

Competition in the Pharmaceutical Marketplace of Republic of Moldova: Problems and Perspectives

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The objective was to evaluate autochthonous pharmaceutical marketplace and to establish the strategically characteristics of companies which carry on pharmaceutical activity in RM. The commercial activity of pharmaceutical companies is accomplished on the consumption marketplace, the objectives of buy-sale of which are services and merchandising designated to satisfy the population necessities. Marketing pharmaceutical products, pharmaceutical companies become active participants of consumption marketplace and respective competitors. Now, number of operators of pharmaceutical marketplace is figured at number of 350, the main activities being import/export, distribution and promotion of pharmaceutical and para-pharmaceutical products. Estimated, for the whole 2007 year at 1,2 mlrd MDL (about 72 mil euro). Evaluated at 242 mln \$ in 2008, moldavian pharmaceutical market place is considered of a minim activity for multinational companies in Europe. The annual consumption range of pharmaceutical products per person, can't exceed 10 euro, comparatively with 30-40 euro, the unregistered range in neighbour countries as Romania and Ukraine. This fact tops the Moldavian marketplace on unfavourable 17th place between Central and East European Countries (ECE), corresponding of pharmaceutical & Healthcare Business Environment Classification for the third trimester of the current year, compiled by International Business Monitor (MBI). From another side State has increased the budget for medical insurance by 30% in 2009. This fact could stimulate the marketplace to increase the access to drug, as to medical insurance. An important increase is achieved towards the problem of counterfeit drugs; the main factor of this was introducing the automatized systems of book-keeping evidence in almost 74% of Pharmacies till the end of 2008. The evolution of pharmaceutical marketplace of RM will register little variation. In spite of the fact that BMI forecasts for future 5 years an increase of annual rate of 13,3% in pharmaceutical domain. The low value of Moldavian marketplace is the major factor that makes its attractivity to decrease, is told in a BMI publicised report.

Dental Medicine Section

Medical Rehabilitation of Children with Isolated Cleft Palate

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The purpose of this study is to increase the efficacy on rendering a specialized medical aid to children with isolated cleft palate. With a view to organizing, planning and forecasting of therapeutic and preventive care for children with cleft palate in the Republic of Moldova was conducted epidemiological study with the definition of the frequency of this defect and trends of indicators in the period 2005-2009. Their incidence in Moldova was 1, 32:1000 live-borns. The highest incidence was noted in the southern and central regions of the republic. The increase of incidence up to 0,31:1000 live-born in comparison with the period 1987- 2000. The incidence of separate cleft lip (CL) decreased 0,04 and incidence of cleft lip and palate (CLP) increased 0,08 and the incidence of cleft palate (CP) increased 0,17 per 1000 live-born, that resulted in the change of the ratio between the certain form of lip and palate clefts (CL:CLP:CP) from 1:1,3:1,2 to 1:1,8:2. This means the increase of the abnormality severity. It is noted the predominance of isolated cleft palate. The prerequisite for the full oral rehabilitation and social adaptation of cleft palate patients is a consistent, comprehensive care system, providing a well organised integration of preventive and interceptive measures, as well as close cooperation between the various specialised disciplines. The paper describes in detail the etiology, pathogenesis, and modern methods of prenatal diagnosis, clinical and early rehabilitation of these patients in a specialized centre. In children with isolated cleft palate, palate repair is generally performed before 1 year of age. Early restoration of the anatomical structures of the palate creates the conditions for speech production and integration of the child in society according to age.

Particularities of the Prosthetic Treatment by Using Modified Dowel - Cores in Case of Small Prostheti

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Particularities of the prosthetic treatment by using modified dowel-cores in case of small prosthetic abutments in side areas The essence of the subject is in using modified dowel-core in order to increase the contact surface with the future prosthetic construction which will reduce the risk of decementation and increase retention of the construction. For herewith subject-matter research was used the comparison method of analysis. The comparison was acted upon the dimensions of contact surfaces with future prosthetic construction in case of using standard dowel-core and the modified dowel-core with occlusal depression proposed and described in this paper. After calculation it was found that using modified dowel-core total surface increased by approximative 25%, and occlusal surface in comparison with the standard one by 95%. The particularity of modified dowel-core is also presented in clinical case. In dental practice a frequently met problem is that the prosthetic treatment becomes difficult or even impossible because of bad retention connected with insufficient height of the abutment. Such situations lead to decementation of the prosthesis as well as cause insufficient

space for ceramic layer. Such complications may be observed in the following cases like: small dental crowns, some vertical dental and dento-alveolar migrations which leads to shifting the occlusal area and tooth lapping by decreasing the height of the crown, in cases of total and subtotal defects of the crown which are followed by migration of antagonists. The proposed method of treatment using modified dowel-cores (with the occlusal depression) can compensate the insufficiency of the surface and height of the abutments by increasing both the retention zone and the contact surface with the future prosthetic construction. In conclusion we underline insufficient dimensions of prosthetic abutments in different clinical situations create difficulties in prosthetic treatment and often compromise prosthetic construction; - the usage of dowel-cores with occlusal depression increase contact surface and retention with future prosthesis; - due to particularities of this modified dowel-core it is possible to increase the space for ceramic layer; - advantages of using the modified dowel-cores prevail its disadvantages, therefore, the herewith proposed method permits to solve the space and surface deficiency accrued in the prosthetic treatment of the special clinical situations as described, without loosening the root support.

Changes of Peri-Implant Crestal Bone Dependent on Crest Module Positioning with Flapless Surgery

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Analyzing de changes of cortical bone around endosseous implants depending on crest module insertion with flapless surgery. Methodes: 98 relationships of medial and distal sides of 49 submerged two-piece endosseuse implant were studied in vivo on mandible and maxilla after insertion by a non traumatic flapless surgery method between the years 2008-2009. After first and second operational stage panoramic radiographies were made and scanned for computerized analysis with "Corel Draw" program. Results: Radiographies showed after first stage that crestal module had 4 different relationships with cortical bone on medial and distal sides of each implant. The medial and distal relationships were as follow: Medial 15.3% at cortical level, 12.24% subcortical 1.0 mm, 10.2% subcortical 1.01 mm and 12.24% above cortical bone. Distal: 14.28% at cortical level, 12.24% subcortical 1.0 mm, 5.1% subcortical 1.01 mm and 18.36% above cortical bone. After 3 months at mandible and 6 months at maxillae, changes of peri-implant crestal bone showed a significant statistical priority ($p < 0.05$) on distal side with above cortical bone relationship at first stage, with mean bone apposition of 0.173 mm. Medial relationships didn't show any statistical differences. The mean peri-implant changes on medial side were as follow: (-0.257mm) at cortical level, (-0.332mm) sub cortical -1.0 mm, (-0.562) sub cortical 1.01 mm and (+0.232) above cortical bone. The mean peri-implant changes on distal side were as follow: (-0.687mm) at cortical level, (-0.777mm) subcortical 1.0 mm, (-2.198) subcortical 1.01 mm and (+0.173) above cortical bone. Conclusions: as much as implants were inserted towards sub-cortical, bone loss is increasing. Positioning implants within the thickness of de gingiva or above cortical bone, contributes to bone apposition. Different crestal module positioning with flapless surgery does not influence the outcomes of peri-implant bone changes. The probability of positioning crest module above crestal bone with flapless surgery are higher on distal side, while on medial side probability is greater that a cortical level will be achieved.

Third Molar Endodontic Space

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Third molar morphology was described as impermissible, and extremely complex in a 3 dimension analysis, although endodontic manipulations of this teeth are very important so they can be used as anatomo-morphological entity. Analysis of endodontic space has a major clinical, statistical and anthropological importance. Methods. A total of 56 third molars were analyzed (30 mandibular, 26 maxillary) with a range of years from 15 to 67 years. In the aim of their analysis we used macroscopically sections of the third molars, dental retro alveolar radiography and ortopantomogramic radiography, macroscopically analysis of right away extracted teeth in compilation with radiologic findings, and the most important one, which gave us the most informative data were the clearing of the extracted teeth. We used our own method of clearing: Extracted teeth were kept for 24h in H₂O₂ and another 24h in formaldehyde. Afterwards scaling and further access cavity was prepared. Once the orifices of the canals were evident or a thin canal to the pulp chamber was achieved, the needle of the syringe was introduced in it and glued for 3 h. China Ink was introduced in it under high pressure, until it was pouring out of the major and lateral canals. Further teeth were kept in sulfuric solution of progressive concentration of 50, 60, 70, 80, 90% for five days. After five days their were washed in a continuous water flow for 24h. After wards they were kept in benzoic acid until were completely transparent and no signs of opacity was present. At the end all of them were related to Vertucci's classification. Results. Number of roots related to maxillary teeth: 1,8% - 4 roots, 83,9% - 3 roots, 5,4% - 2 roots, 8,9 - 1 root; mandibular: 44% - 2 roots, 56% - 1 root. Number of canals of maxillary teeth: 10,7% - 4 canals, 75% - 3 canals, 7,1% - 2 canals, 7,1% - 1 canal; mandibular: 90% - 3 canals, 10% - 1 canal. Root canal deviation frequency was 78% in the upper and 84% in the lower teeth. 12% of the upper and 2% of the lower teeth presented significant, large lateral canals. Average canal length of maxillary teeth was 17,98mm, of mandibular 18,9 mm. Discussions. Similar articles analysis of data around the world present close proximity to them. However differences between data from Asia are quite evident but only in the means of number canals in the lower molars. Differences in the anatomy of the third molars related to the rest of the molars are not so different in the number of canals, but the manifest sometimes very bizarre forms, frequently hard do see. However most of them are not that hard to instrumentation and obdurate if right tools and isolation is performed. The most problematic issue is the access and the apical anatomy of the teeth. In cases when there are a major factor problem solving the worth the time effort and consuming.

Stability Evolution of Alfa Gate Bioactive Coating® Implants During Healing

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To investigate the early outcome of a dental implant with bioactive Calcium-phosphate (CaP) coating in the first 6 week of usage in mandibular clinical situations, for determenatin if it is possible early prosthetic loading by measurements with Osstell and resonance frequency analysis (RFA), and bone density. Materials and methods: Study of the 6 weeks function of 16 oral implants in 6 patients, in the mandibular clinical situations we have evaluated the clinical and paraclinical parameters to

predict implant outcomes. We initiated a short-term prospective study on Bioactive Alfa Gate implants. The following para clinical analyses were determined to access the necessary dates for success and survive rate of implants: The implant primary and changed stability of 6 weeks stability (the resonance frequency analysis (Osstell Mentor® (RFA) Osstell AB, Gothenburg, Sweden) which was done weekly and the result was registered to make the statistical comparison. All surgeries were performed under local anaesthesia with 3 patient with open flap and 3 with flapless access to the bone. Osteotomy preparations of neo alveolas were performed with low speed high-torque drill units using intense irrigation with a cold saline solution. During each site preparation of the neo alveolas for the implants, the bone quality II to III was recorded. All implants were placed manually and final torque was measured with a manual torque control wrench with result of 35-45 Ncm. And each implant was covered with healing abutment for easy access for the quantitative evaluation of implant stability, RFA was recorded with the Osstell Mentor device. Orthopantomographic X-ray images were used for calculation of radiological bone loss and the respective success criterion Results: The ISQ testing for signs of initial and changed stability of 6 weeks after implantation could show notable result. The ISQ values of the stability could be estimated for the implants at the time of healing abutment placement. Statistically results demonstrate that implants present a better stability after 6 weeks post insertion. The ISQ mean values for the 16 implants prosthetic rehabilitated after 6 week of healing period were 70.75 comparing with 67.63 mean ISQ value after implant placement, the lowest ISQ mean values was 64.63 wich was registered in week 1 after the implantation. From week 2 till week 6 was in a continue increase in ISQ values. Panoramic radiographs based on the two-dimensional availability, While looking at the peri-implantary loss of bone the wasn't observed Conclusion: The clinical and para-clinical outcomes in this study indicate a high stability value after 6 weeks, and we had the possibility of prosthetic treatment after the studied time

Modern Issues of the Root Canal Treatment

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The chronic inflammatory diseases of the pulp and of the periodont after the treatment may become sources of infection which trigger or support pathological reactions in the human body. That's why a proper endodontic treatment is needed, in order to obtain a complete healing of the inflammatory sources. Although therapeutical dentistry has achieved a great progress in recent years, regarding endodontics, the quality of the root canal treatment still remains a major problem, up till now. The investigations made by Sirbu S. and the authors (1999) establishing that in those 86,5% endodontic treated teeth, the qualitative root canal obturation consists only 3,5%, and the other cases are considered to be different failures. The therapeutical success in the gangrenous pulpitis and granulated chronic periodontitis is supported by different factors: biomechanical preparation, root canal irrigations and medicamentary dressing with antibacterial and osteoinductive proprieties, root canal tridimensional sealing with full crown restoration. The objective was to evaluate the modern methods of the root canal treatment in pulpitis and periodontitis with the use of the ProTaper System and Thermafil System as a way of mechanical preparation and obturation of the root canal. There were selected, examined and endodontic treated 21 patients aged between 21 and 45 years, diagnosed with gangrenous pulpitis and granulated chronic periodontitis. Besides the clinical and instrumental exam there were used paraclinical methods such as: electric pulp tester, apex location, and the radiography. The X-Ray exam was applied: at the beginning, during the treatment and after 3, 5 and 12 months pursuing the treatment. There were used methods of modern treatment in all patients, such as, root canal preparation by the ProTaper System, antibacterial irrigations with natrium hypochlorite -2,5% and root filling with Thermafil. In periodontitis, the root canals were temporary filled with a

calcium hydroxide paste, Ultracal XS. Results and discussions: Clinical observations during 3, 5 and 12 months after the treatment show the absence of the clinical accuse and the entire participation of the endodontic treated teeth in the masticatory act. The study of the X-rays revealed the following data: complete healing in 12 examined cases; 4 cases presented bone regeneration more than half of its initial inflammatory process, 5 cases of pulpitis didn't indicate any periodontal changes. The root canal preparation with the ProTaper System and the three-dimensional obturation with Thermafil represent modern methods of treatment which assure treatment effectiveness in endodontic therapy.

Profilaxy of Odontogenic Inflammatory Diseases of the Oro-Maxillo-Facial Region

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One of the basic problems facing the dental surgery is the prevention and treatment of inflammatory diseases of oro-maxillo facial region. Cephalic extremity suppurations with odontogenic starting point is a category of diseases that can take various clinical aspects of a greater or lesser severity. Prevention is a system of government, social, hygienic and medical measures aimed at ensuring a high level of health and disease prevention. Depending on the extent to segments of the population and existing preventive measures, we identify three levels of prevention of dental diseases: • an individual; • collective; • mass. To achieve efficiency in preventing of inflammatory diseases of oro-maxillo-facial region, we need a thorough study of clinical cases among the ranks of the population. Studing of 637 medical records of patients in the department of oral-maxillo-facial surgery in Emergency Hospital, concluded that we need to pay attention to prevention of these diseases. If the pacient don't treat in time the inflammatory process in can appeared dangerous complication like sepsis, mediastenite witch in most cases the pacient die. Making an effective prevention will lead to a considerable decrease in the incidence of complications. To study this compartment is very important for future specialist: making a correct preventive diagnosis, laboratory explorations, that section entitled patients, treatment and record the dynamics of patients after discharge. In conclusion we mention that the incidence of odontogenic inflammatory processes in Moldova is relatively larger, which requires us to make the most efficient prevention program.

Zygomatic arch fractures

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Isolated zygomatic arch fractures, acordig to the statistics dates of the section of maxillo-facial surgery from CNSPMU during 2009 year, constituted about 23,8% from all the fractures of zygomatico-maxilar complex (ZMC). In 90% there were delayed cases which need reposition. The main etiological factor remains to be assault, which was met in 50% of cases. There is no a unique clisfication of isolated zygomatic arch fractures, but recently was proposed one by Ozyazgan et al(2004). There are a lot of methods of reduction but the selection of the treatment method depends on the nature of the fracture, on the knowledge and abilities of the doctor and also on the possibilities of the institution. The technological progress, overcrowding , the speed increase that determine the car accidents and the presence of many habitual traumatic factors determine many traumas.

Periodontal Disease related to Hypothyroidism

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It is mandatory to mention that more than 95% of the global population is presenting signs of periodontal disease (PD). The most common etiopathogenetic factor for PD is dental calculus and plaque. This main factor however is not the only feature which affect and aggravate the disease process, hormonal impairment are a frequent etiological factor for PD. This paper will present a clinical case of a 32 year old woman with a severe form of periodontal disease. The patient received a complex treatment paraclinical examination. With standard examination of PD patients (OPG, full mouth periodontal probing), the patient was examined by a general practioner and a endocrinologist, which revealed hypothyroidism in a low form that was treated 3 years ago. General blood analysis was performed and chemical analysis of blood for alkaline phosphatase. Local treatment with BioR 0.5% sol. for 5 days and general treatment with metronidazole 0.5 for 8 days in combination with doxaciclina 0.25 for 8 days were administered prior to endodontic and prosthetic treatment. As stated by the endocrinologist the patient was examined 3 years ago for hypothyroidism in a medium form for 3 months, and no present signs of it are present. The patient related that prior to that treatment she was examined by a stomatologist which related to her that she had PD in a mild form so scaling was performed in a usual manner. Alkaline phosphatase shows no significant variations and general blood analysis too. Tooth mobility of II nd degree was related in a 56% of all present teeth, III rd degree in 20%. 4 teeth were extracted as they were out of the treatment plan. Following scaling, general and local treatment, endodontic treatment presented a significant tooth stability also stated by the patient. Prosthetic treatment showed a high level of esthetic rehabilitation and a future stability for the rest of the teeth. Hypothyroidism and other hormonal disease are considered lately as a major factor for periodontal disease it is fact stated by many articles, and comparative studies presented it's reability. The present work is another one that supports this idea. Patients with PD especially the ones that present severe form of it need to be examined in a complex form because most of them present general disease and especially hormonal impairments. The metabolism of Calcium in the tissue is a major factor that may induce the periodontal disease; its mechanism is "washing" it away from blood and eliminates it thru natural fluid including saliva eventually it will be deposited on dental plaque and form the calculus.

Pharmacy Section

Application of the NMR Spectroscopy in the Structural Analysis of Clonidine

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NMR spectroscopy is one of the most powerful techniques available for studying the structure of molecules. It involves the absorption of radio waves by the nuclei of some combined atoms (^1H , ^{13}C , ^{15}N , ^{19}F , ^{31}P) in a molecule that is located in a magnetic field. Nuclear magnetic resonance spectroscopy is the use of the NMR phenomenon to study physical, chemical, and biological properties of matter. The most important applications are proton NMR and carbon-13 NMR spectroscopy. In principle, NMR is applicable to any nucleus possessing spin. This property of nuclei to have a spin, was used to establish the structure of clonidine using ^1H and ^{13}C spectrum. Clonidine-N-(2,6-dichlorophenyl)-4,5-dihydro-1H-imidazol-2-amine- treats high blood pressure by stimulating α_2 receptors in the brain, which decreases cardiac output and peripheral vascular resistance, lowering blood pressure. It has specificity towards the presynaptic α_2 receptors in the vasomotor center in the brainstem. This binding decreases presynaptic calcium levels, and inhibits the release of norepinephrine (NE). The net effect is a decrease in sympathetic tone. Was determined : • the number of carbon atoms using ^{13}C spectrum(DMSO), and their shift's, ppm : 158.5(C7), 134.5(C8), 129.7(C9), 131.5(C10), 129.7(C11), 130.5(C12). • the number of hydrogen atoms using ^1H spectrum(DMSO), and their shift's, ppm : 7.58(H9), 7.46(H10), 7.58(H11), 10.72(H6), 8.51(H1), 43.2(2H4d, 2H5d). The obtained spectrum gave us the possibility to establish the spatial structure of the analyzed sample. The impact of NMR spectroscopy on the natural sciences has been substantial. It can, among other things, be used to study mixtures of analytes, to understand dynamic effects such as change in temperature and reaction mechanisms, and is an invaluable tool in understanding protein and nucleic acid structure and function. It can be applied to a wide variety of samples, both in the solution and the solid state.

Application of Physical-Chemical Methods in Chemical-Toxicological Analysis of Pyroxicam

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Pyroxicam (4 hydroxy-2 methyl-N-2 pyridinil-2H-1,2 benzotiazin-3 carboxamide-1,1 dioxide) is used in medicine to treat the rheumatoid polyarthritis, ankylopoetic spondilitis, gout attack, periartthritis, traumatic pains. It concerns to the group of drugs with antiinflammatory features, analgesic. The action mechanism can be explained by the synthesis inhibition of prostaglandines and the inhibition of the synthesis of cyclooxygenase and the migration of leucocytes to the inflammatory focus inhibiting the phagocytosis and releasing of lysosomal hydrolysis. In certain conditions (overdosage, hepatic diseases) pyroxicam possesses toxic features. In this context the study of pyroxicam is a specific interest in biological fluids. As a result we intended to study the factors (the pH

values of the medium the extragents polarizing acting during the process of isolation of the compound from the blood serum). Pyroxicam has alkaline properties; it can be extracted from an alkali medium. We used chloroform as an extraagent, which carries a specific character for the compounds in unionized form from biological fluids. The pH value is important, which gives us the opportunity to isolate pyroxicam from biological fluids, its passage from ionized form in a molecular one, which encourages the efficiency of extraction with lipophilic solvents. The pyroxicam was isolated from blood serum after acidulation with oxalic acid (pH2.0-2.5) and the proteins sedimentation with threochloroacetic acid, then extracted from alkali medium with chloroform. Alkalic extracts underwent spectrophotometric studies at a wave length 247 nm. We applied silicosis plaques on a thin layer within chromatography in the following system of solvents: Chloroform: Acetone (4:1) Rf=0.51; Ethylacetate: Methanol: Ammoniacal solution 25% (85:10:5) Rf=0.17; Ethylacetate Rf=0.38. These methods can be applied in chemical toxicological analysis practice. Acetone (4:1) Rf=0.51; Ethylacetate: Methanol: Ammoniacal solution 25% (85:10:5) Rf=0.17; Ethylacetate Rf=0.38. These methods can be applied in chemical toxicological analysis practice.

Nanopharmacology and the 21st Century Revolution

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The 21st century is dominated from a revolutionary new technology - nanotechnology. The term Nanotechnology was first introduced in 1959, by Richard Feynman that winning Nobel Prize for Physics in 1965. Nanoparticles are the main product of nanotechnologies, and they may have organic and inorganic structures, the size being less than one hundred nanometers (10-9m). These technologies open the new perspectives and new opportunities for all sciences also in medicine. The new direction based on nanotechnology methods - nanopharmacology will obtain significant advances in areas such as diagnostic, regenerative medicine and pharmacological therapeutics. Nanopharmacology can be defined as the application of nanotechnology to develop and discovery of new methods to delivery drugs. In April 2006, the journal Nature Materials estimated that 130 nanotech-based drugs and delivery systems were being developed worldwide. More and more new drugs, which are highly effective against certain diseases, especially cancer are face-off lot problems as bad absorption or severe side effects. With nanotechnology-based drug delivery systems, important improvement on pharmacokinetics and pharmacodynamic parameters of drugs will take place. Clinical used demonstrate a broad variety of useful properties, such as longevity in the body, increased solubility, specific targeting to certain disease sites and increased drug concentration in it, enhanced intracellular penetration, contrast properties allowing for direct carrier visualization in vivo, stimuli-sensitivity, and others. Also the use of nanotechnology will serve for a more accurate control of doses, which will decrease significantly drug toxicity and increase safety. Some of those pharmaceutical carriers have already made their way into clinic, while others are still under preclinical development. The next generation of pharmaceutical nanoparticles combining different properties and allowing for multiple functions. In recent years, nanotechnology has found innumerable applications in the field of medicine - from drug delivery systems, nanorobots and cell repair machines to imaging, nanoparticles and nanonephrology. But the most important future applications of nanotechnology will be with construction of medical nanorobots, for example, there were technical analyzed some types of medical nanorobots: Respirocytes (artificial mechanical red cells), Pharmacytes (ideal drug delivery nanorobot). To conclude we can say that nanotechnology open new possibilities for pharmacology and medicine with preservation and improvement of human health and extension of natural biological structure and function using molecular tools and molecular knowledge of the human body.

Development of a UV-VIS Spectrophotometric Azithromycin Assay

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The goal of project was the elaboration of an alternative Azithromycin assay given the fact that the Pharmacopoeial method is the biological one. This method is hardly realizable, and requires special determination conditions, which also creates some difficulties in the substance and pharmaceutical forms analysis. Materials and methods: For spectral analysis Agilent - 8453 UV-VIS spectrophotometers in wavelengths range from 350 up to 550 nm were used. Phosphate buffer solutions with different pH values were used as solvent. The colored product, resulting from reaction with concentrated sulphuric acid, was investigated. Results: Azithromycin, which is a compound with complex structure and is part of macrolide antibiotics group, forms a colored compound in reaction with concentrated sulphuric acid. In order to determine the possibility of using this compound in the UV-VIS spectrophotometric assay, we have studied the properties of mixture complex being composed from Azithromycin and Sulphuric acid; such as parameters also were assayed: the stability over the derivatization time, its dependency on reagents co-ratio and solvent's influence, and the value of pH environment. There were been developed the optimal technique of life time colouring reaction: the amount of reagents - 10 ml; reaction time - 30 min; pH - 7.0. The spectrum of absorption was recorded in the range from 350 up to 550 nm; the maximum of absorption was established at 483 nm. The basic parameters of the method were determined: solution concentration, specific absorption, absorbance law enforcement. The linearity and accuracy of the method were evaluated that range within the limits of about 3%. Conclusions: 1. There were been established the optimum conditions of Azithromycin assay, using the UV-VIS spectrophotometry on the base of coloring reaction of Azithromycin with concentrated Sulphuric acid. 2. There were been developed valuable technique and have evaluated the main criteria of validation: linearity, accuracy and the repeatability of the method. 3. UV-VIS spectrophotometry of quantitative Azithromycin determination may be also employed in the determination of this active principle in the pharmaceutical forms.

Elaboration of Principle Extractive Method From Skin Ointment Containing Izohidrafural and Methyluracil

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The objective was to create a new pharmaceutical form for external use - the combined ointment with Izohidrafural and Methyluracil, which combines the antibacterial action of Izohidrafural and the regenerating action of Methyluracil and also to elaborate the method of extraction of active principles from the ointment. Materials and methods: Izohidrafuralum, Methyluracilum, the excipients: Vaselinum album, Alcoholum cetylstearylicum, Propylenglycolum, Glycerinum, Tween 80, PEG 400, Natrii laurylsulfas; the extragents: Dimethylformamidum, Natrii hydroxidum 0.1mol/l and the mixture of these two substances; spectrophotometer Agilent 8453 UV-VIS. Results: The combined ointment with Izohidrafural and Methyluracil can be used in treating skin diseases, in surgery, obstetrics and gynecology, ophthalmology, proctology due to high efficiency and good way of application. It was studied the concentrations of 0.1% for Izohidrafural and 5% for Methyluracil which ensure a good availability and the maximum pharmacological effect. To create

the optimal formulation of ointment, the active substances have been incorporated into various excipients, of different nature. So it was investigated four compositions containing emulsion-type ointment bases O/W and W/O. It was established the manufacturing technology flow of the ointment. To select the optimal composition that would allow an effective therapeutic action and minimal side effects, first of all it was elaborated the optimal extraction method and after that it was used the dosage of active substances from the extract by UV-VIS spectrometry methods. So, it was analyzed the extraction with solution of 0.1% sodium hydroxide, dimethylformamide and the mixture: solution of 0.1% sodium hydroxide and dimethylformamide (1:3). It was recorded the absorption spectra in the region 250nm-450nm in the case of extraction with solution of 0.1% sodium hydroxide, 250-400nm in the case of extraction with dimethylformamide and 250-450nm in case of extraction with the mixture. Conclusions: 1. IZOHIDRAFURAL and METHYLURACIL have been incorporated into different excipients. As a result, it was investigated four compositions containing emulsion-type ointment bases O/W and W/O; 2. It was selected the optimal manufacturing technology for the compositions; 3. It was elaborated the extraction with solution of 0.1% sodium hydroxide, dimethylformamide and the mixture of these two substances; 4. It was concluded that the optimal extraction method is with dimethylformamide.

Robustness Testing of a Modified-Release Tablet Formulation Comprising Metformin and Glibenclamide

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It was recently ascertained that sulphonylureas and biguanides synergistically act for the control of blood glucose levels in patients with type II diabetes, by different pharmacological mechanisms. The aim of this study is to design a modified release formulation comprising metformin hydrochloride and glibenclamide, where one drug does not affect the release of the other drug. Due to a relatively high unit dose of metformin, the tablets should be size fitted for oral administration and should ensure the controlled release of the two active ingredients. Taking into consideration the poor flowability of metformin hydrochloride, in order to attain dose uniformity, a wet granulation manufacturing process was used. Glibenclamide was geometrically dispersed into the granules of metformin. The mixture was blended with soluble filler, a hydrophilic polymer, a disintegrant and a lubricant. The hydrophilic polymer used was: hydroxypropylcellulose (Klucel® HF, HXF) and hydroxymethylpropylcellulose (Methocel® K100 LV CR, K4M and E4M). The matrix tablets were evaluated for their robustness: hardness, friability, thickness, and weight variation and disintegration time. It was concluded that satisfactory robustness profiles can be achieved using all types of hydrophilic polymers, by wet granulation of the major active ingredient, followed by a direct compression into a modified release matrix. Keywords: metformin hydrochloride, glibenclamide, diabetes, formulation, matrix tablets.

NMR Spectroscopy Applied in the Identification of Organic Substances and Medicinal Drugs

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NMR spectroscopy is one of the most powerful available for studying the structure of molecules and identification of drugs. NMR involves the absorption of radiowaves by the nuclei of some combined atoms in a molecule that is located in the magnetic field. An NMR spectrum is acquired by varying or sweeping the magnetic field over a small range while observing the resonance signal from the sample. Due to NMR spectra we can confirm the structure of compounds. Aims: The purpose of our investigation was to elaborate the method of interpreting ^1H proton and ^{13}C carbonic spectra. Materials and methods: In the analysis were used the drugs like aspirin, Benzituron, Isohydrofural, Metiferon. The NMR spectra was registered at Fourier Transformation NMR spectrometer. The substances were dried for 2 hours at 1050 C, after that the samples is necessary to be dissolved in the deuterised water and be filtered through Millipore filter 0.2 μm under vacuum. The obtained solutions were transferred in glass tubes about 15 cm in long and 5 mm in diameter. As a reference standard is used TMS with the absorbance set at 0,0 ppm, which is introduced in the tube with solution. Results: The NMR spectra of these substances give important and detailed information about molecules. Every spectrum is characterized by the chemical shift of peaks and spin-spin splitting of peaks. For example the chemical shift indicates the functional groups that are present, such as aromatics, ketones, amines, alcohols, aldehyde and so on. The multiplicity of the resonances identifies the type of protons. The ^1H protonic spectrum of Benzituron contain resonance signals of a high intensity which demonstrate the presence of hydrogen proton in the molecule. The signal at 3.4 ppm belong to metylen group (-CH₂-) it is a diplet. The zone of resonance at 4.56 ppm correspond to amines group (NH₂) and imines (NH), its represented as a common signal, due to superposition of peaks. The signal at 7.21, 7.22; 7.24; ppm included in multiplet are assigned to aromatic ring. Conclusions: There were examined the ^1H -protonic and ^{13}C - carbonic spectra of different substances in order to elaborate the rules for interpreting spectra. These spectra permits to confirm the structure of compounds, to identify the drugs.

Strategy and Competence in the Pharmaceutical Industry

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How will the drug industry look like in 20 years? Can we get there? How? Of course, it's hard times in every industry these days, but none has anywhere near the inherent contradictions and high risks, regulations, technologies, and costs pressing down on every aspect of its business. True innovation in this maze is a near miracle. Valued at US\$199mln in 2008, Moldova's pharmaceutical market is forecast to increase at a steady CAGR of 9.70% in local currency terms. By 2014, the market is expected to top US\$387 mln at consumer prices. In 10-year forecast period through to 2019, market development is likely to accelerate, growing at a CAGR of 10.49% in local currency terms, stimulated by economic recovery, healthcare modernization and the expansion of healthcare insurance coverage. Generics' CAGR will be similar to that of the overall market, with patented medicines expected to benefit from regulatory improvements and Moldova's progress towards European Union (EU) membership, which will translate into a 2009-2014 CAGR of 18.86% in local

currency terms. The pharmaceutical industry is a very unique and spectacular industry, with an impressive evolution along the 20th and the beginning of the 21st centuries, as well as facing a challenging future. The situation in the industry has spectacularly changed in the past two decades, leading to new strategies and new portfolios, especially for the major pharmaceutical companies worldwide. We are now confronted with a mature, stable industry, constantly affected by mergers and acquisitions, as well as by new scientific discoveries. Therefore, trying to foresee the future of such an industry becomes very interesting and challenging at the same time.



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