NINTH INTERNATIONAL MEDICAL CONGRESS

New Findings in the Field of Professional Scientific Medicine Ethics & Moral of the Medical Profession

6 – 9 September 2018
Teslić, Banja Vrućica
Republic of Srpska, Bosnia and Herzegovina

Sofia, Bulgaria
2019

SEEMF

ДРУШТВО ДОКТОРА МЕДИЦИНЕ РЕПУБЛИКЕ СРПСКЕ
REPUBLIC OF SRPSKA ASSOCIATION OF MEDICAL DOCTORS

SOUTHEAST EUROPEAN MEDICAL FORUM (SEEMF)

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Dear Colleagues, members of SEEMF society and Friends,

I am honored and delighted to welcome all of you to the Ninth International Medical Congress of SEEMF in Banja Vrućica, Teslić, Republic of Srpska, Bosnia and Herzegovina, organized in cooperation with the Association of Medical Doctors of Republic of Srpska.

SEEMF Congresses' goals are to bring together a multidisciplinary group of scientists and physisians from South East Europe to present and exchange ideas. As members of the SEEMF's society we are fortunate to have strong opportunities for professional development.

We are together again, now in Banja Vrućica, and it is a great time to continue SEEMF's traditions to promote medical science, practice and ethics together for institutional cooperation and personal friendship in order to envisage the future of promising development of medicine and healthcare in Europe.

I am convinced that the Congress will deliberate and discuss all different medical aspects of its agenda and come up with recommendations that will lead to better, healthier world.

I want to thank all of you, dear colleagues, for your participation at the Ninth Intenational Medical Congress of SEEMF in this beautiful part of the Balkan Peninsula – Banja Vrucica.

We are the peacemakers of the future, not only because we are doctors, but because we are friends and part of a long term SEEMF unity.

Once again, I sincerely wish a successful and meaningful work, friendly atmosphere, pleasant and enjoyable stay in Republic of Srpska, Bosnia and Herzegovina for professional and personal benefit to all of us.

Assoc. Prof. Andrey Kehayov, MD, PhD

President of SEEMF

***Dear colleagues, ladies and gentlemen**,*

It is my pleasure to welcome you on behalf of Prime Minister of the Government of Republic of Srpska and myself! I would like to thank Professor Andrey Kehayov, President of Southeast European Medical Forum and Co-Chair of Organizing Committee of Ninth International Medical Congress of Southeast European Medical Forum and Professor Siniša Miljković, President of Association of Medical Doctors of Republic of Srpska and as well as to all of those who diligently worked on preparation of this significant event.

The delegation of Association of Medical Doctors of Republic of Srpska, led by Professor Miljković and myself, took part in the International Conference on Medical and Health Tourism, which was held from June 29 to July 1, 2018 in Varna, Bulgaria. At that time, we began to talk about organizing the Ninth International Congress of Southeast European Medical Forum which is to be held over the following four days in Banja Vrućica spa, one of the most beautiful spas in Republic of Srpska.

Ninth International Medical Congress of Southeast European Medical Forum has been accredited by the European Accreditation Council for Continuing Medical Education with 16 European Credits. The purpose of this conference is to maintain, develop or increase the knowledge, skills and professional achievements of healthcare professionals with aim of monitoring and implementing latest scientific and professional achievements. Members of Association of Medical Doctors of Republic of Srpska and all health professionals have an excellent opportunity to get acquainted with the latest achievements in various professional fields.

This event is also great opportunity to celebrate the 25th anniversary of the Association of Medical Doctors of Republic of Srpska. This Association, as a voluntary and professional organization of medical doctors and dentists, brings together colleagues from all over Republic of Srpska, whose activities, abilities and dedicated work contribute towards improving the health system through professional training, searching for new information on modern scientific achievements in medical practice and respect for ethical principles and other similar aspects.

The Government of Republic of Srpska is working continuously on improving health system of Republic of Srpska, and the patient is in the focus of interest. This is supported by the fact that over the past decade, through two phases of project "Strengthening the health sector", more than 24 million euros have been invested in primary health care, through construction, restoration, reconstruction and equipping of family medicine ambulatory care clinics. More than 300 ambulatory care clinics for purpose of family medicine teams were built or reconstructed within 120 facilities in 51 municipalities of

Republic of Srpska. Thanks to implementation of this project, the accessibility of health care throughout Republic of Srpska has been significantly improved, which is particularly reflected in strengthening the capacity of regional ambulatory care clinics that are of great importance to the local population.

Significant projects were also carried out at secondary and tertiary level such as construction and equipping of hospital in Bijeljina, hospital in Nevesinje, reconstruction and construction of University Clinical Center of Republic of Srpska, construction of hospital in East Sarajevo (ongoing), as well as construction of a new hospital in Doboj

Over the past few years, Republic of Srpska has done a lot to improve the accessibility of all health services, including reducing outpatient magnetic resonance imaging and computed tomography wait-times that are much shorter compared to ten years ago. These wait-times have been reduced thanks to introduction of centralized patient appointment scheduling, introduction of private sector into healthcare system, investment in equipment and personnel and the like. In 2004 there were no magnetic resonance imaging machines in Republic of Srpska, while there were only three computed tomography machines. Today there are more than ten magnetic resonance imaging machines and more than 15 computed tomography machines available to persons insured by Health Insurance Fund of Republic of Srpska. There is no magnetic resonance imaging and computed tomography wait-time in case of emergency and those emergency patients are hospitalized with magnetic resonance imaging or computed tomography scan performed in hospital settings without prior appointment by Health Insurance Fund of Republic of Srpska.

Over the past decade, more than 500 new treatment methods and diagnostics have been introduced into our healthcare institutions.There are about 1,500 medicines on Medicines List of the Health Insurance Fund of Republic of Srpska. Dispensing prescription drugs in 3-month supplies for chronic disease patients is available. Since 2006 number of prescription drugs has increased by 85 percent, while number of drug forms and dosage of prescription drugs on Medicines List has increased by 257 percent. Prescription drug is taken by patient to pharmacy that has contract signed with Health Insurance Fund of Republic of Srpska. So far Health Insurance Fund of Republic of Srpska has signed contract with more than 200 private pharmacies.

Ladies and gentlemen, I wish you successful work and pleasant stay in Banja Vrućica and Republic of Srpska!

Dr Dragan Bogdanic
Minister of Health and Social
Welfare Republic of Srpska

Respected coleagues, dear friends,

I am honored and pleased to welcome you to the Ninth International Medical Congress of the Southeast European Medical Forum in the period from 6th to 9th September of 2018. As a place of events, we chose Banja Vrućica - Teslić, a modern and well equipped complex, offering a wide range of health and tourist services, ideal for such gatherings.

Republic of Srpska Association of Medical Doctors is honored by SEEMF led by prof. Andrey Kehayov, to be co-organizer of this great and significant Congress. For that I would like to thank on this occasion professor Kehayov on certain trust.

Republic of Srpska Association of Medical Doctors is an association founded by doctors of medicine from Republic of Srpska on a voluntary, professional non-profit basis on April 7th, 1993 in Milići.Association of Medical Doctors consists of Branches, which are the basic form of organization on a territorial basis and also specialized associations. It is the largest volunteer organization of the doctors of the Republic of Srpska.

Our Association is organized into nine Branches, which constantly work on the professional development of their members and participates in the professional activities of all 33 specialist associations in the Republic of Srpska. Association has over 1600 members - doctors of medicine from the Republic of Srpska.The main goal of the Association is quality and professional development and continuous medical education, and in this way achievement of the highest professional level of our members - doctors of medicine.

Association of Medical Doctors also issues an expert magazine "Scripta Medica". This scientific-expert publication is 46 years old, and in Republic of Srpska is published over 20 years, with 45 issues issued continuously.I am proud of the fact that this Congress will mark the 25th anniversary of the successful existence of the Association and it is happening in the Republic of Srpska just in such an important anniversary.

The Ninth International Medical Congress of the Southeast European Medical will be an opportunity for younger colleagues to be in the role of a lecturer for the first time, and it is undoubtedly that we will all enjoy the lectures of eminent experts coming from 20 European countries.

I believe and I am convinced that this will be the most successful SEEMF congress until now, and that in this way we will justify the trust that was given to us when we were honored and given the opportunity to organize a congress in the Republic of Srpska.

Of course, with an interesting scientific program, we hope that the so-called social program will fulfill your expectations and that we will leave with good memories from our friendship and with the desire to see you again as soon as possible!

A warm welcome to you and see you in Teslić!

Prof. Siniša Miljković, dr sc. med
President of Republic of Srpska
Association of Medical Doctors

Dear Colleagues, Dear Friends,

It is a great pleasure and privilege to welcome you to the Ninth International Medical Congress organized by Southeast European Medical Forum in the beautiful city of Banja Vrućica.

The South East European Medical Forum is one of the most vibrant and dynamic Medical associations of our century in its modern approaches and abilities to gather international medical expertise. SEEMF has the ambition to creativity and originality in the medical concepts and methodologies. The Forum has been the epicenter for quality improvement in health care. Those who attend — from health care visionaries to improvement professionals, world leaders to industry newcomers — explore how improvement science methodologies can be used to effect real change in patient safety and care.

We tend to become operational and instrumental on the verge of the new technologies and follow world level medical developments.

The scientific programme this year is extremely ambitious. We dedicate strong emphasis to the modernity in the field of professional and scientific medicine and to exchange experience and know how.

Therefore, I am convinced that the Congress in Banja Vrućica will be one of the most outstanding social forums and events.

I wish you a very successful scientific and professional endevours and enjoyable stay in Banja Vrućica, Bosnia and Herzegovina.

Prof. Pavel Poredoš, MD, PhD
SEEMF Vice President

Dear Colleagues, Dear Friends,

It is my honor and privilege to welcome you to the Ninth International Medical Congress organized by Southeast European Medical Forum in cooperation with the Association of Medical Doctors of Republic of Srpska, Bosnia and Herzegovina.

SEEMF is one of the most active society which successfully unites medical doctors, scientists and health professionals from Southeast and Central Europe.

The multidisciplinary topics of our congresses, the prominent lectures and public health specialist make it possible for each of us to find the most appropriate way of professional development.

Your presence at the Congress brings satisfaction and stimulates us to continue sharing our findings and experiences in all fields of medicine.

I belive that the Congress will provide an opportunity for presenting new findings in professional and scientific field of medicine, to exchange experiences, to discuss controversies, to promote healthcare equity for each human being on our Planet.

I wish you all productive work and enjoyable stay in Banja Vrucica, Teslić.

Dr. Oleg Musii

SEEMF Vice President
President of the UMA
Deputy Chairman of the Committee of Health of Parliament of Ukraine

NINTH INTERNATIONAL MEDICAL CONGRESS OF THE SOUTHEAST EUROPEAN MEDICAL FORUM

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ABSTRACTS

SURGERY

ROLE AND PLACE OF VIDEOTHORACOSCOPY IN THE DIAGNOSIS AND TREATMENT OF GUNSHOT CHEST INJURIES

Prof. Sviataslau Shnitko, MD, PhD
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Background: The urgency of the problem of treatment of victims with gunshot chest injuries (GCI) is emphasized by a large proportion (up to 15%) among wartime injuries and high mortality (up to 10%).

Aim of the study. To show the effectiveness and safety of the use Video–Assisted Thoracoscopic Surgery (VATS) in the diagnosis and surgical treatment of victims from the GCI of peacetime.

Methods: The results of surgical treatment of 113 patients with GCI were analyzed. Exit wound was diagnosed in 60 (53,1 %), penetrating the GCI with injury of the chest – 93 (82,3 %) of the victims. The pacients were divided into 3 groups depending on the method of surgical treatment. The first group included 88 (77,9%) victims who were diagnosed and treated using traditional tactics (thoracocentesis and drainage of the pleural cavity). The second group consisted of 12 (10,6 %) victims who had undergone thoracotomy (TT). The third group – 13 (11,5%) wounded, for the diagnosis and treatment of which was used VATS.

Results: Postoperative complications in the form of pleural empyema developed in 5 (4,4%) victims of GCI, 10 (8,8%) – pneumonia and 10 (8,8%) – suppuration of the postoperative wound. Fatal outcome occurred in 3 (2,7%) cases.

After thoracocentesis and drainage of the pleural cavity postoperative complications were observed in 17 (19,3%) patients and fatal outcome – in one wounded. After TT postoperative complications – in 7 (58,3%) patients and fatal outcome – in two wounded. After VATS postoperative complications – in 1 (7,7%) wounded with no lethality.

Conclusion: Use of videothoracoscopy for gunshot wounds of the chest allows to reduce postoperative complications in 7 times and minimize postoperative lethality.

LAPAROSCOPIC TREATMENT OF INGUNAL HERNIA WITH NEW TYPE OF SELF-FIXATING MESH

Prof. Dr. Nikola Jankulovski, Doc. Dr. Svetozar Antovic-University Clinic of Digestive Surgery, University "Ss Cyril and Methodius", Medical Faculty Skopje.

Introduction: Inguinal hernia repair is one of the most frequently performed surgical procedures worldwide in general surgery. There are approximately 400 hernia repairs performed in our clinic every year. Open inguinal hernia repair, which uses a technique first described by Lichtenstein, is the Golden Standard. However laparoscopic and endoscopic care of inguinal hernia have an increasing presence. Transabdominal laparoscopic (TAPP) approach in the therapy of inguinal hernia seems to be a suitable alternative to classical open inguinal hernia repair, mainly in the hands of an experienced surgeon. According to several studies comparing open and endoscopic/laparoscopic hernia repair. Minimally invasive inguinal hernia repair is a

suitable alternative, mainly in case of recurrent hernias and bilateral hernias Numerous studies have now shown that the open technique and the endoscopic technique are procedures that are quite comparable, although the laparoscopic techniques offer advantages in certain respects, particularly in the hands of an experienced surgeon. Laparoscopic inguinal hernia repair offers the possibility of gentle dissection with posterior implantation of the mesh and possibility of minimal invasive fixation of implanted mesh. Recently there were several self-fixation meshes introduced to the market that were intended for open and endoscopic implantation, our clinic uses Parietex Progrip™.

Materials and Methods: During the last 6 months, 10 patients were operated with Laparoscopic TAPP (transabdominal pre-peritoneal repair) – using Parietex Progrip™. It is the first time that this type of mesh was used in our instititution and the aim was to assess the handling of the mesh and its application, postoperative pain in patients, occurrence of seromas and duration of hospitalization.

Surgical Technique: Preparation of the inguinal hernia using the standardized technique. Standard intravenous anesthesia with orotracheal intubation that enables Trendelenburg position. Operation was performed using 3 trocars, 12 mm trocar above umbilicus and 5 mm + 5 mm trocars at the level of the umbilicus. A 90° optics is used. After accessing, the inguinal region is performed dissection using the standardized technique. After termination of dissection in the groin, we introduced the previously rolled and prepared implant through 12 mm trocar. In the abdominal cavity is the implant spreaded and placed to the groin in order to cover hernia opening of at least 2–3 cm to all directions and also to cover other preformed weaker sites in the groin. Fixation to abdominal wall is accomplished with gentle pressing the implant against the abdominal wall using a surgical instrument, best with a tampon. Then follows reconstruction of parietal peritoneum with continuous V-Loc™ suture.

Conclusion: Laparoscopic inguinal hernia repair became one of the standard methods to treat inguinal hernia, mainly in cases of recurrent hernias, bilateral hernia, and femoral hernia. The satisfaction and the safety of the patient, especially in respect to post-operative chronic pain, can be increased, keeping the relapse rate low. In our clinic in the last 6 months, we had 10 inguinal hernia cases with TAPP technique and progrip mesh. These patients were monitored for the pain, occurrence seroma, bleeding and hospitalization. This led to the conclusion that this is an effective procedure in the hands of an experienced surgeon, following the instructions of the manufacturer of the mesh. Patients had minimal pain, reduced occurrence of seromas, no bleedings, and were released the next day of surgery.

SURGICAL SITE INFECTIONS IN SKELETAL TRAUMA – OUR EXPERIENCE

Kaftandziev I, University Clinic of Traumatology, Medical Faculty, Skopje, R. Macedonia, Spasov M, University Clinic of Traumatology, Medical Faculty, Skopje, R. Macedonia, Memeti-Rushiti B., Institute of Microbiology and Parasitology, Medical Faculty, Skopje, R. Macedonia, Kaftandzieva A

Introduction: Surgical site infections represent serious complication following surgery that may alter the clinical and radiological result and call into question the liability of the operator. Traditionally, risk-factors have been recognized as patient-related, surgical related and operative room-related. The aim of the present study was to verify the influence of surgical-related and operative room-related risk-factors on incidence and etiology on surgical site infections following surgery for skeletal trauma.

Materials and methods: Two-phase prospective study was conducted at the University clinic of traumatology and Institute of microbiology and parasitology – Medical faculty of Skopje. The study consisted of identifying incidence and etiology, as well as antimicrobial susceptibility of surgical site infections. In between, the program of prevention strategy regarding surgical-related and operative room related risk-factors focused on surgery residents, nurses, operative room personnel and patients was conducted. All the participants were followed for at least 3 months and the influence of the program of prevention strategy was evaluated by comparing the results of two separate phases.

Results: The results of our study showed that the incidence of surgical site infections remains close in two separate phases. In the first phase, there was predominance of Gram+ bacteria – 54% (*Staphylococcus aureus, Enterococcus, MRSA*). The microbiology results of the second phase showed that the predominance of Gram+ bacteria was much pronounced and represented 69%, while the findings of Gram – bacteria were significantly lower.

Conclusion: While the overall incidence of surgical site infections remained the same in two separate phases, the only difference that can be noticed is a change in bacterial flora (increase of Gram positive bacteria and decrease of Gram negative). The implemented educational program did not affect over the results on short term. The process decreasing the rate and severity of surgical site infections has many facets that should be followed diligently.

ROLE OF ENHANCED RECOVERY PATHWAYS AND ANESTHESIOLOGIST TO IMPROVE OUTCOME FOR COLORECTAL CARCINOMA SURGERY

dr Anita Djurdjevic Svraka, dr Mirko Manojlovic,dr Dragan Svraka, General Hospital Gradiska, Republic of Srpska, Bosnia and Herzegovina

Introduction: Enhanced recovery patways encompass a large range of perioperative elements that must be adopted into surgical specialties with the aim of reducing the stress response. Mayor abdominal surgery as it is colorectal carcinoma

surgery has to introduce new protocols on national level for improving outcome. Colorectal cancer is the second most common cancer in the Republic of Srpska and also the leading cause of cancer in the western world. The aim of the study was to compare surgical outcomes between two cohorts: patients who underwent management using the enhanced recovery after surgery protocol and patients who underwent conventional treatment.

Methods: Prospective data was collected from the study group (40 patients) who underwent elective laparotomy for colorectal carcinoma.Inclusion criteria included: age range 35-70 years. Exclusion criteria included: diabetes mellitus; prior colorectal surgery. The study was carried out at two separate institutions and the perioperative management was carried out by two anesthesiologist at each hospital. The ERAS protocol involved: no mechanical bowel preparation; no premedication; liberal fluid management (1 L intravenous crystalloid administered approximately one hour prior to surgery); induction of anesthesia with fentanyl, propofol, and atracurium; maintenance of anesthesia with sevoflurane, oxygen and air. For postoperative analgesia we used multimodal analgesia or epidural analgesia to reduce opioid consumption. The patients were mobilized the same day and liquid and solid food intake began the same day, or on postoperative day 1. Retrospective data was collected from the control group (40 patients) who had received conventional perioperative management.

Results: The mean age of patients in the study and control groups was 62 and 64 years old, respectively. Higher incidence of comorbidity was in the study group vs. the control group (67.5% vs. 50%) such as hypertension, cardiovascular and endocrine disease. The control group endured a higher incidence of postoperative complications: anastomotic dehiscence 5% vs. none; woundsite infection 7.5% vs. none: but equal incidence for ileus 5% vs 5%. Total hospital stay for the study group was 10,22 days vs. 12,65 days for the control group, without statistical significance. Pearsons Chi Square test of connection between mortality (control group mortality 3/40) and postoperative complications showed statistical significance (p=<0.001,Pearson Chi Square 24.979,degrees of freedom 3).

Conclusions: Successful implementation of Enhanced recovery after surgery programs requires that anesthesiologists become more involved in perioperative care and more aware of the impact of anesthetic techniques on surgical outcomes and recovery. Our study suggests using an evidence-based perioperative protocol such as the Enhanced recovery after surgery protocol can improve initial surgical outcomes in patients undergoing laparotomy for colorectal carcinoma.

THE ROLE OF THE MICROSURGERY IN HAND SURGERY – FROM REPLANTATION TO HAND RECONSTRUCTION

Dražan Erić MD, PhD, Plastic and Reconstructive Surgery Consultant, Mohamed Abdulla Al Emadi MD, Senior Consultant General Surgery/Laparoscopic and Bariatric Surgery Department of Surgery, Al Emadi Hospital, Doha, Qatar

Background: Hand and digits replantation is defined as reattachment of the amputated hand or digits using the neurovascular and musculoskeletal structures in order to obtain the functional recovery. In the situation when we have a mutilated hand

injury and the replantation is not possible, we use the reverse pedicled, local perforator or free flaps. Methods: From 2009 to 2015 year, 65 patients received replantation and revascularisation of hand and digits. 18 hands and 21 digits revascularisations and 9 hand and 17 digits replantations were performed using general anesthesia, axillary block or digital block.In the same period we performed reverse pedicled, local perforator and local hand flaps in 122 patients with soft tissue defects in the hands injuries. The parameters evaluated were: age, gender,comorbidities, trauma, time and type of ischemia, mechanism of the amputation and devascularisation,type of the flaps, number of anastomosed vessels and use of vein grafts. Also, we analyzed total active motion of MP and IP-joints, grip and pinch strenght. Sensibility of hand and digits was tested with static two-point discrimination test (2PD). Results: Ninty two percent of the 26 performed replantation survived. Of 39 revascularizations performed the survival rate was 89,74%. Twenty patients (30,77%) were smokers and thirteen patients had significant comorbidities (20%). The zone of injury was at the level of the distal phalanx in 12 cases (18,46%), the middle phalanx level in 9 case (13,85%), proximal phalanx level in 17 cases (26,15%) and 27 patients at midpalm and wrist level (41,54). Vein grafts from volar forearm were harvested in 9 digits and 4 hands. The average surgical time in the group of the replantation and revascularizations was 3.8 hours (range 1.3 to 5,9) while in the group of hand reconstruction was 2,3 hours. In 23 patients we harvsted reverse radial forearm flap, in 18 patients reverse interosseus posterior flap, in 33 patients local perforator flap and in 48 patients local hand flap. A temporary tourniquet was used in the all replantations, revascularisations and hand reconstruction only to aid in the identification and dissection of the blod vessels and nerves. Mean static 2PD in thumb was 12 mm, in fingers was 11 mm and centre of palm was 15 mm. Total active motion (TAM) was on average 149 degrees (range 25- 250 degrees) per injured digit. Conclusion: Factors that influenced succesfull replantation and revascularisation included correct anastomosis of the blood vessels, carefully removed of the adventitia, time and type of ischemia, level and mechanism of injury, general health, surgical experience and application of anticoagulant therapy. The methods of choice for the hand reconstruction are reverse pedicled flaps, perforator flaps, local hand flaps and free flaps.

INGUINAL HERNIA REPAIR. MESH REMOVAL DUE TO INFECTION

Evgenia Kalogridaki, MD, Intern of General Surgery, Eleni Bouka, MD, Intern of General Surgery, Spilios Papanikolaou, MD, Consultant of General Surgery, Stavros Adamopoulos, MD, Senior Registrar of General Surgery,Anna Kasouli, MD, Intern of General Surgery, Alexandros Dounavis, MD, PhD, Chief of General Surgery, Amalia Fleming General Hospital, Athens, Greece

Backround: Inguinal hernia repair is the most common operation, performed by a general surgeon. There is a plethora of techniques, used for over a hundred years. Lichtenstein hernioplasty using mesh yet is considered the gold standard. Many different types of meshes are available, mostly from polypropylene or polyester. Semi-absorbable meshes are also used.

Our surgical team performs the modified Lichtenstein technique for inguinal hernia repair during many years. In the last 20 years, two meshes had to be removed due to infection. Two more cases operated elsewhere, where referred to us recently. Mesh removal and also the attempt to avoid it, is analysed below.

Methods: A surgical team leaded by a senior surgeon (A.D.) applies a standard technique for inguinal hernia repair using patch and/or plug. More than 700 patients where operated the last two decades. Initially, heavy weight polypropylene meshes where used, although lately, light weight semi-absorbable meshes have been inserted in the surgical treatment. In two patients, operated more than 15 years ago, the mesh needed to be removed due to infection.

Case 1: Male patient 60 years old. A sinus tract was formed directly postoperatively. The persistent conservative treatment had no result and thus the mesh had to be removed 17 months later.

Case 2: Male patient 75 years old. Five years after an uneventful inguinal hernia repair, an incision abscess was formed, followed by a subsequent fistula. Conservative treatment failed in this case as well, therefore 8 months later the mesh was removed.

Case 3: Male patient 75 years old referred to us. His inguinal hernia was repaired with a heavy weight mesh. 15 months after the operation a swelling of the incision site appeared. A collection of fluid around the mesh was depicted in CT scan and the surgeon proceeded to drainage and removal of the mesh.

Case 4: Male patient 65 years old also referred. We had no information about the type of mesh. Immediately after hernioplasty a fistula was formed. Aggressive local treatment failed and 5 months later the mesh was removed. In this case the progress of the infection was followed up with ultrasound.

Discussion: Infection following hernioplasty with mesh is a complication that should be avoided by any means. Proper technique and meticulous hemostasis are necessary. Post-operatively, a scholastic monitoring of the wound is definitely needed. In case of possible infection, the antibiotic treatment is the first measure. Additionally, drainage and partial mesh removal are sufficient in many cases. In less severe infections, VAC may be mesh-saving. When every other means of treatment have failed, the surgeon is obligated to proceed to the removal of the mesh, as his last option. Hopefully, no further repair is usually necessary, due to fibrosis of the surgical area.

Nowadays light weight large pore meshes are used with minimal infection rates. Many surgeons prefer semi-absorbable meshes since less quantity of foreign material remains in the surgical field.

Conclusion: In conclusion, careful technique is essential when performing inguinal hernia repair. In case of infection of the mesh, aggressive conservative treatment is usually effective. Mesh removal should be the last option for a surgeon. Fortunately is not often necessary.

VAC TREATMENT OF PROSTHESIS INFECTION AFTER INCISIONAL HERNIA REPAIR IN THE LAST SIX YEARS

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Objective: To demonstrate a role of VAC therapy of mesh infection following complex abdominal defect repair.

Material and methods: Between June 2012 - June 2018 nine patients with absorbable or non-absorbable mesh infection following
complex abdominal wall defects repair were managed by VAC therapy. Complex abdominal wall defects (5 patients with burst abdomen, 1 with full thickness abdominal wall defect following abdominal wall tumor
resection, 1 patient with simultaneous operation of abdominal aortic aneurism and midline and parastomal incision hernia and 2 patient with umbilical eventration) were managed by various componnes separation
techniques (Ramiraz CST, Ennis „open book“ modified CST, Lindsay modified CST) with or withouth onlay absorbable or non-absorbable mesh reinforcement. Mesh infection occurred due to wound contamination or skin necrosis was managed by wound debridement, mesh exposure and VAC therapy.

Results: The mean hospital stay of patients treated by VAC therapy was 24.5 days (14-36). VAC therapy led to full
tissue ingrowths through the infected mesh in all patients: in 3 patients wound complete healed and no additional therapy was needed, in 4 patients complete wound healing was achieved by split skin grafting and 2 patients died (1 do to myocardial infarction and 1 do to sepsis). The mesh removal was not required in any patient managed by VAC therapy. There is no hernia recurrence or the signs of mesh infection during the mean follow up of 10 (1-24) months.

Conclusion: VAC therapy is a powerful treatment option in the management of patients with mesh infection following
complex abdominal wall defects repair. It reduces the length of treatment and stimulates secondary wound healing as well as mesh ingrowths.

PREDICTORS FOR IN-HOSPITAL MORTALITY IN UPPER GASTROINTESTINAL BLEEDING

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Background: Upper gastrointestinal bleeding (UGIB) is a potentially life threatment gastrointestinal emergency whose effective management depends on early risk stratification.

Methods: We retrospectively studied 50 patients admitted to emergency deprtment of Internal Medicine Clinic, University Clinical Centre of Republic of Srpsca, with UGIB between 1st January 2018 and 31st July 2018.We calculated the Pre-Endoscopy Rockall, the Glasgow-Blatchford and modified Glasgow-Blatchford risk scores nd we performed an analysis of the predictive value of these scores for in-hospital mortality.

Results: Of the 50 patients enrolled, 64% were male and 36% female, 56% was age between 60-79 years. 8% patients had a history of chronic liver disease, 16% chronic renal disease, 56% chronic heart disease, 6% malignancy and 28% had a previous episode of UGIB. Clinically, 78% of the patients presented with melena, 38% with hematemesis, 18% with hematohesia and 16% with syncope. 52% of cases were gastritis, 14% gastric ulcer, 6% oesophageal or fundic varix, 18% duodenal ulcer, 2% Mallory-Weiss syndrome and 6% malignancy. Eight patients (16%) died during hospitalization. The prognostic accuracy of all scores for in-hospital death was good.

Conclusion: The good predictive performance of these scores highlight the need for their use in day-to-day practice to select patients with likelihood of poor clinical outcome.

INTRAOPERATIVE ENDOSCOPIC ASSESMENT OF COLO-RECTAL ANASTOMOSIS AND EARLY DETECTION OF ANASTOMOTIC LEAK

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Anastomotic leak is one of most common and most important complications in colo-rectal surgery and valuable prognostic factor for overal survival, prolonged hospital stay and higher mortality. Anastomotic leak can lead to infection, fistulisation and eventualy can lead to abscess or peritonitis. Anastomotic leak in colo-rectal surgery leads to higher risk of local recurence.

Intraoperative endoscopic assesment of anastomotic integrity should be a routine. Anastomotic leak could be prevented if intraoperatively founded defect in integrity is managed with sutures, reanastomosis or exteriorization of anastomosis. Postoperatively identified anastomotic leaks requires antibiotics, percutaneus drainage of abssces or surgical removal of abssces and reoperation with higher rate of permanent stoma. We performed IOCS in 117 in patients during period of three years and founded 5 (4,27%) anastomotic bleading and 7 (5,98%) positive air leak tests performed IOCS. Respectively we managed all bleadings intraoperatively and 5 of 7 leaks so only 2 (1,7%) anastomotic leaks were identified postoperatively.

SEVERE HEMORRHOIDOPATHY. HAL-RAR TREATMENT

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Background: Hemorrhoidopathy is a very common disease. The initial treatment is conservative. In difficult cases surgery is an option. There are a lot of operations in the armamentarium of the surgeon. One technique that has been developed recently is hemorrhoidal artery ligation and rectoanal repair (HAL-RAR).

Methods: During a period of 4 years, 42 patients with advanced hemorrhoidopathy grade III and IV were treated using the HAL-RAR procedure. Ten patients among them, had also anal fistulas or polyps, therefore an adjunct procedure was added. The operation was performed with the patient under either general or regional anesthesia. In most cases, the analgesic requirements were restricted only in the first postoperative day and included NSAIDs and paracetamol. In rare occasions, mainly in the most complicated cases, tramadol was also used. Postoperative hospital stay was one day, except a few difficult cases that was two days. Minor bleeding was encountered in 15% of the patients. Moreover, one patient suffered from hemorrhoid thrombosis with fever that settled down with antibiotics and another elderly male needed a folley catheter because of urine retention. Concerning the surgical procedure, arterial branches ligation ranged from 4 to 11 and RAR rectopexy from 1 to 4.

Discussion: HAL-RAR hemorrhoidectomy was introduced 20 years ago as a minimal invasive alternative to conventional hemorrhoidectomy. In the HAL procedure small submucosal arterial branches are ligated above the dentate line, leading to reduced inflow of blood to the hemorrhoidal plexus. This operation proved to be very effective, not invasive and minimally painful for bleeding piles. Concerning the advanced cases, RAR intervention was additionally performed to correct the prolapse. In our experience we noticed the ease of the particular surgical procedure and its efficacy that is retained in our limited follow up of three years. Only one out of our 42 patients underwent the same operation again because of recurrence but he didn't present any other complications since then.

Conclusion: In conclusion, HAL- RAR hemorrhoidectomy is a very efficient, minimal invasive operation for bleeding hemorrhoidal venous cushions, even in advanced stages, with minimal morbidity.

THORACIC ULTRASONOGRAPHY IN DIAGNOSTIC AND MENAGEMENT OF PARAPNEUMONIC PLEURAL EFUSSIONS AND EMPYEMA IN CHILDREN

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Pneumonia is one of the most frequent reasons for hospitalizing children. According to many studies, between 28,3% -60 % of all cases with children hospitalized with CAP, had been complicated with effusion/empyema. That represents diagnostic and therapeutic challenge.

The goal of article is to reveal the role of thoracic ultrasound examination /TUE/ in determination of the stage of the parapneumonic effusion/empyema, as well as time and the type of surgical intervention in children.

Materials and methods: Between January 2009 – December 2013 at the paediatric thoracic surgery department of Pirogov University hospital, had been treated 170 children with clinical and radiological signs of parapneumonic effusion and empyema. TUE was performed with high frequency linear probes /5-13 MHz/ and broadband convex probes /3-6 MHz/. Findings were evaluated according to classification in four stages /modification of the classification of Hilliard T.N. 2003/

Results*:* In 42 of the cases we found anechoic collection without septations /free fluid/ – stage 1. In 91 children, at stage 2, we found heterogenous content of the pleural cavity/septations/, but we discovered thickened parietal in 35 children. That finding made us split this group into two -2a and 2b, according to absence or presence of thickened parietal pleura. 37 children was determined with stage 3.

Conclusions: Compared to other imaging modalities ultrasounography is broadly available, low cost and nonionizing examination. Transthoracic ultrasound examination gives accurate and dynamic evaluation of the pleural effusion and determines the exact stage of the parapneumonic effusion and empyema in children. The protocol accepted in our hospital for management of parapneumonic complications in children significantly optimized the diagnostic imaging and treatment.

Key words: ***Transthoracic ultrasound examination, pleural effusion, empyema, ultrasound***

SURGICAL TREATMENT OF COLORECTAL METASTASES IN LIVER

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Liver represents the most common site of metastases of all malignant diseases. Liver is the first site of colorectal carcinoma metastases appearance, and autopsies show that liver is often the only site of colorectal carcinoma metastases. Statistical analysis show thatevery second patient suffering from colorectal carcinoma develops metastases

in liver. Around 20 – 25 % of patients have metastases in liver at the moment of diagnosis of colorectal carcinoma. Average survival of untreated patients with colorectal carcinoma metastases is measured in months, while the five – year survival rate is less than 3 %. Patient treated only with chemotherapy and biotherapy have average survival of 20 months, with five-year survival rate of 10 – 15%. Contrary to that, the resection therapy of hepatic metastases gives the patients a chance of survival of 21 – 58%.

In this paper, surgical strategy of treating colorectal carcinoma metastases in liver will be shown depending on whether metastases are synchronous or metachronous, number, localization and size of metastases in liver.

Treatment strategy of synchronous colorectal metastases, which depends on whether patients have symptomatic or asymptomatic colorectal tumor, will also be shown.

Key words: ***colorectal carcinoma, liver metastases, surgical treatment***

RISK FACTORS RELEVANT IN DEVELOPMENT OF COLORECTAL ANASTOMOSIS DEHISCENCE

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Introduction: Colorectal anastomosis, which is formed in the pelvis in order to establish continuity of gastrointestinal tract after the resection of one part of the bowel, has its characteristics during the formation, healing and also when complications occur. International group for rectalcarcinoma defined dehiscence of anastomosis as a defect of the bowel wall, including stitch or stapler line of neorectal reservoir, which leads to communication between intra and extraluminal space.

Aim of the paper: Examine preoperative and perioperative risk factors relevant for development of colorectalanastomosisdehiscence.

Material and Methods: Research included 100 patients who were operated on in elective program, where radical surgery of rectal carcinoma with stapler colorectal anastomosiswas performed.

Results: Gender, comorbidities, disease stage, distance of anastomosis from anocutaneus line application of neoadjuvant chemoradiotherapy are relevant risk factors for development of colorectal anastomosis dehiscence.

Conclusion: Even with significant technological advancements, improvements of surgical techniques, better understanding of nature of malignant diseases, improvement of intraoperative and postoperative patient monitoring, introduction of new antimicrobial medications, problem in treatment of colorectal anastomosis dehiscence is still considerably present. By discovering colorectal anastomosis dehiscence in subclinical phase, identifying preoperative and perioperative risk factors relevant for development of dehiscence, would enable earlier discovery and more efficient treatment of dehiscence.

Key words: ***risk factors, colorectal carcinioma, anastomitic dehiscence***

EIGHT-YEAR BULGARIAN-ROMANIAN EXPERIENCE OF SPECIALIZED SURGERY CLINIC "MEDIKUS ALFA" IN PLOVDIV, BULGARIA AND DTL HIFU, ROMANIA IN HIFU FOCAL THERAPIES FOR PROSTATE CANCER.

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Background: HIFU (high-intensity focused ultrasound) is a therapeutically method that applies high-intensity focused ultrasound energy in order to destroy malign and benign tissue through thermal ablation. This article is intended to review HIFU experience in Bulgarian and Romania clinics with regard to treatment of prostatic localized cancer.

Methods: Outcome study for cases treated in Bulgaria and Romania in an 8-year period

Results: HIFU is a non-invasive treatment procedure for localized prostate cancer and for salvage therapy in recurrences; all treatments were performed with Sonablate 500 equipment.

Conclusions: HIFU treatment for localized prostate cancer can be taken into consideration either for localized prostate cancer patients that fulfil the treatment selection criteria or for salvage therapy. Although HIFU is a relatively new method of treating prostate carcinoma, it can be considered as a model of the next generation of minimally invasive surgical techniques. Localized prostate cancer treatments started to be performed in both Bulgaria and Romania starting second half of 2009 with Medicus Alfa clinic in Plovdiv as Bulgarian excellence centre for HIFU treatments in Bulgaria. Overall almost 300 procedures were performed in Bulgaria and Romania until the first half of 2018. Of course, long-term results and greater clinical experience would be needed to give a definitive assessment of this surgical technique. Still, HIFU should always be a serious consideration when discussing the primary treatment of prostate carcinoma. Most likely, this method will also be validated as a method of choice for relapse after previous radiotherapy.

ONCOLOGY

RARE CASE OF STOMACH GIST ASSOCIATED WITH CHRONIC LYMPHOCYTIC LEUKAEMIA: THERAPEUTIC APPROACH

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Introduction: The synchronous emergence and clinical manifestation of two neoplasms like chronic lymphocytic leukaemia (CLL) and gastrointestinal stromal tumor (GIST) is a very rare condition with an incidence of not more than 3 cases per 10 billion. In the available to us literature only two similar cases have been described. Naturally, there are no commonly accepted therapeutic strategies for patients suffering simultaneously of CLL and GIST.

We report a 68-year-old patient, who in 2014 had undergone surgery for GIST. Upon initial investigations, leukocytosis was detected and he was diagnosed with CLL.

Method: Ding the diagnostic process histological and immunohistochemical analyses of the tumor tissue were carried out as well as flowcytometry of peripheral blood (PB), fluorescent in situ hybridization (FISH) of PB leucocytes, fibrogastroscopy and computed tomography (CT).

Results: The GIST of our patient was proven by means of histological and dedicated immunohistochemical analysis. Upon initial investigation, leucocytosis and absolute lymphocytosis were established without any other deviations of the haematological and biochemical parameters**.** Lymphadenomegaly and hepatosplenomegaly at that time were also absent. The flowcytometry of PB demonstrated monoclonal B-cell population with immunophenotype of CLL. No clinically significant deviations in the values of the molecular-cytogenetic markers were detected. After surgical removal of GIST treatment with thyrosinekinase inhibitor (TKI) imakrebin was carried out. Concerning the CLL the patient was left without treatment, just under clinical observation. The clinical monitoring for 5 years including with fibrogastroscopy showed that the patient is in a state of remission of the GIST. No treatment of CLL was mandatory until February 2016 when progressing leukocytosis (up to 210 G/L), CT established clinical manifestations of generalized lymphadenomegaly and low grade hepatosplenomegaly were detected. After the first treatment course according to the protocol Rituximab + CVP complete and continuous normalization of the haematological parameters was achieved with no lymphadenomegaly and hepatosplenomegaly. Currently the patient is constantly under treatment with TKI and under clinical observation in terms of the CLL.

Conclusion: Our clinical experience in the treatment of simultaneous GIST and CLL shows that these completely different in biological nature diseases can be

simultaneously treated according the current clinical guidelines of treatment of each of them.

BENIGN TUMOR WITH MALIGNANT CLINICAL PICTURES

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Beckground: Giant condyloma acuminata or Buschke and Löwenstein tumor (GCABLT) was discovered as new entity in 1925 by Abraham Buschke and Ludwig Löewenstein in the genito-anal area. This condition remains both histopathologicaly and clinically a controversial topic, particularly noted in the fields of clinical management. Lauren V. Ackerman described 1948 a similar neoplasm of the oral mucosa that he termed "verrucous carcinoma” Arid Jonson described in 1954 a unique neoplasm of the foot named as "carcinoma cuniculatum." In 2005 these three entities were included in the World Health Organization (WHO) classification as a new variant as” Verucous carcinoma”. Nevertheless, there are still controversies with respect to true nature of Buschke Löwenstein tumour. Preventive, healthcare and treatment BLT is the subject of this paper. A typical characteristic of BLT is its benign-appearing histological morphology, which resembles that of condyloma acuminatum. The causative factors like tobacco, alcohol, chronic trauma and Human Papillomavirus (HPV- 6 and 11 although they are “non- oncogenic”) have been indicated as aetiologic agents. It presents like an exophytic tumour which in its early stages clinically appears identical to condyloma acuminata of the genito-anal area.

Advanced clinical picture shows atypical progression and complications such as: ulceration, fistulae, sinuses, abscess formation. It is common in patient with immunodeficiency syndromes (eg. HIV) and in particular with co-existing diagnosis of endothelioma. This phenomenon is locally aggressive but histologically innocuous.

Methods and Results: This paper will illustrate a series of seven cases of GCABLwhich were recognised among the group of 59 patients diagnosed with condyloma acuminate in the last 45 years of practice. We performed radical surgical excision, allowing a complete histological examination and assessment of tumor-free resection margins. Mortality statistiks was 42,85%.

Conclusion: The importance of prevention of this condition must no be underestimated which includes care of the region, high level of hygiene, regular medical checks and careful use of hygienic products as well as avoidance of any mechanical irritants.

Key words: *Condylomata acuminata, Buschke- Löwensteins tumor, perfoming surgery*

SIGNAL SYSTEMS AND THE OCCURENCE OF MALIGNANT TRANSFORMATION OF THE CELL

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These are systems through which the pulse is transmitted through the cell to the nucleus under the drive of the signal molecule. Living organisms are extremely complex information systems, and life is probably created by means of information mechanisms. It is quite clear that the basic biomolecules - nucleic acids and proteins - are information molecules and that transfer of information is the basis of life, its key characteristic. There are three basic pathways of intercellular communication: through hormones, plasma membranes, and contact signalling via pores.

A signalling disorder in a cell is one of the major causes of its malignant alteration. The proof of this claim is the fact that growth factors and their receptors, G-proteins and transcription factors, are the products of many oncogenes of protein kinases. These are all proteins that play a key role in signal transmission in the cell and significantly affect the growth, proliferation, differentiation and occurrence of apoptosis.

One of the most studied signalling pathways is the one under the control *ras* gene responsible for the synthesis of the "small" G-protein. Due to the mutation of this gene, especially codons 12, 13 and 61, GTP activity of G-protein was reduced. Consequently, permanent activation of the molecules involved in the transmission of the signals, primarily the adenylate kinase and phosphylipase C, occurs, and then via protein kinase, activation of transcription factors such as cyclin D, which regulates (in this case stimulates) the cell cycle.

Mutations in *ras* genes is present in 90% of cases of pancreatic cancer, 50% of cases of colon cancer and 30% of cases of lung cancer. Mutation of codon 12 indicates the occurrence of preneoplastic cells, which is significant for early diagnosis of these neoplasms. Activation of signal transmission pathways is present in chronic myeloid leukemia, which arises with the occurence of Philadelphia chromosomes, and where there is a BCR and c-abl gene fusion and occurrence of BCR-ABL fusion protein. The C-abl gene encodes the tyrosine protein kinase synthesis and the BCR gene encodes the synthesis of serine protein kinases. Both enzymes participate in the transmission of the signal. This results in the expression of multiple growth factors and enhanced proliferation.

A very clear connection with the occurrence of malignant alterations has also a mutation of the gene encoding the epidermal growth factor receptor (EGF-R). The receptor is a polypeptide that penetrates the plasma membrane. A part which is in cytosol has tyrosine protein kinase activity which performs autophosphorylation of the receptor. The extracellular domain contains a binding site for the epidermal growth factor, thereby activating the receptor. In the case of erythroblastomas, a mutation of the gene encoding the receptor and the occurrence of v-erb B oncogene occurs.

This oncogene encodes the synthesis of a shortened receptor, that is, a receptor that has only a cytoplasmic and transmembrane part, and therefore is permanently active

without binding the epidermal growth factor. This results in continuous proliferation and malignant alteration of the cell.

PROGNOSTIC SIGNIFICANCE OF TUMOR BUDDING, EPIDERMAL GROWTH FACTOR 2 AND E-CADHERIN EXPRESSION IN ADVANCED GASTRIC ADENOCARCINOMA

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Objective: Adenocarcinoma of the stomach is very aggressive biological behavior and has a poor prognosis in patients in an advanced stage of the disease. Testing new prognostic parameters and discovering new therapeutic targets is a long-standing challenge for pathologists and oncologists.

Methods: Tumor buds were determined on the invasive edge of the tumor and defined as individual or groups of less than five tumor cells. Paraffin-embedded tumor samples were examined for E-cadherin, CK20 and HER2 using immunohistochemistry. Additionally, gene amplification was examined using fluorescent in situ hybridization (FISH) for HER2.

Results: The minimum follow-up period was 6 months and a maximum follow-up period of 87 months. The survival rate of patients after 12 months was 80.2%, after 24 months 51%, after 36 months 28.5%. Budding was present in 76 of 96 cases and was associated with decreased overall survival (OS) (Log Rank=32,805,$p<0.001$). Reduced expression of E-cadherin was identified at the frequency of 74% and was associated with decreased overall survival (log rank=23,80, $p<0.001$). There was a significant difference in OS between HER2-positive and HER2-negative patients [median, 17.0 vs. 26.0 months; $p < 0.01$]. Multivariate analysis showed that high grade of tumor budding was an independent prognostic factor for overall survival [hazard ratio, 1,46 (95 % confidence interval, 1,25 – 1,69); $p<0.01$], but HER2 and E-cadherin did not show themselves as independent prognostic parameters.

Conclusion: Tumor budding is significant and independent predictors of poor outcomes in patients with gastric carcinoma.

Key words: *Adenocarcinoma, Gaster, budding, E-cadherin, Epidermal growth factor*

MELANOTIC SCHWANNOMA IN THE INGUINAL LYMPH NODE MIMICKING METASTASIS OF MALIGNANT MELANOMA - CASE REPORT

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Results: Schwannomas are benign tumors of peripheral nerve origin, very rarely localized in the lymph node. We present a patient aged 62 years who was admitted to our hospital for surgical treatment of tumor in the left inguinal region. Anamnestically the patient has recently noticed a lump in the left inguinal region, with tension and temporary pain. In the left groin, the tumor is on palpation 4 cm in diameter, painfully insensitive. Laboratory findings were within normal values. After the skin cut exploration, subcutaneously be found circumscribed encapsulated tumor node size 4x3x2,6 cm. Total extirpation of the tumor is done. Macroscopically, the tumor is dark brown, firm consistency. On microscopic sections, tumor tissue is built up of uniform spindle cells with abundant melanin pigment in the cytoplasm. On the periphery of the tumor tissue there is a capsule and subcapsular sinuses, as well as a very narrow area of the lymphoid tissue of the lymph node. In differential diagnosis, melanotic schwannoma and metastasis of malignant melanoma have been considered. Definitive pathological diagnosis is: Melanotic schwannoma in lymphonodi, is made only after immunohistochemical analysis of tumor tissue. The immunohistochemical tumor phenotype was: S100-positive reaction, Ki67-positive in 1-2% of tumor cells, and a negative immunohistochemical reaction to: CD45, GFAP, SMA, H-caldesmon.

Conclusion: Melanotic schwannoma is the rarest subtype schwannoma, and localization in lymph nodes is extremely rare. In differential diagnosis, it is always necessary to consider malignant melanoma, primary or metastatic. To establish a definitive diagnosis of melanotic schwannoma, an immunohistochemical analysis is necessary.

Key words: *melanotic schwannoma, lymph node, malignant melanoma*

CANCER-RELATED SYNDROMES IN THE POLYMORBID PERIOD. THE CONTRIBUTION OF HOMEOPATHY

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Emphasis is placed on a new concept that cancer is not an isolated nosological unit with certain disease symptoms. The malignant process involves various organs and systems, including pathological immune reactions, iatrogenic damage. Oncological polymorbidity is formed with a new disease state of cancer-related syndromes

Cancer-related syndromes (CRS), depression, pain, caesia.

Ubiquity and commitment to a vicious circle, the low efficiency of conventional methods in the final stages of suffering, require a new paradigm-inclusion of homeopathic treatment as an innocuous holistic approach to mastering these CRSs.

The author discusses the potential of a number of homeopathic drugs based on their pathogenesis -Arnica mont.9-15CH, Arsen.alb. 9-15CH.Ignatia am. 9-15CH Plumbum met. 9CH. Kalium carb. 9-15CH, Natrum mur. 9-15CH, Natrum sulfur. 9-15CH, bromine Radium. 9-15CH, Silica 9-15CH Talium met. 9-15CH, Causticum9-15CH, China rubr.5-9CH, Phosphorus 9-15CH, Phosph.ac 9-15CH, Psorinum 9-15-30CH, Stanum met. 9-15CH, Hypericum perf. 9-15CH, Ranunc. bulb 9-15CH Cuprum met. . 9-15CH, Mezereum. 9-15CH, Asa foetida5CH, Aurum metalicum. 9-15CH Kalium iodatum. 9-15CH, Rhus tox. . 9-15CH, Sanguinaria can. . 9-15CH Bryonia.alba 9-15CH Colocyntis. 9-15CH Dioscorea villosa. 9-15CH, Chamomilla. 9-15CH Pyrogenium 9-15CH, Eupatorium perfoliatum. 9-15CH, Gelsemium. 9-15CH, Phytolacca dec. 9-15CH Carbo anim. . 9-15CH Tarentula cubenis. 9-15CH Hydrastis. 9-15CH Carbo vegetabilis. 9-15CH

The presented clinical cases illustrate the effectiveness of homeopathy in oncology.

Key words: *Cancer-related syndromes - fatigue, depression, neuropathic pain;homeopathic treatment*

CARDIOLOGY

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ATHEROSCLEROSIS SYSTEMIC DISEASE – HOW TO MANAGE IT?

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Aim of study: Atherosclerosis is considered as systemic disease. Therefore, patients with proven atherosclerotic disease are likely to have similar lesions in other vascular beds. The CAPRI Study showed that the most frequent manifestation of atherosclerosis: cerebro-vascular, coronary and peripheral artery disease are closely interrelated, and particularly patients with peripheral artery disease have frequently preclinical or clinical atherosclerosis in other vascular territories. At least 10% of patients with PAD had cerebro-vascular and 28% coronary artery disease. Consequently, morbidity and mortality of patients with PAD is very high and account about 30% in 5 years. Regardless whether symptoms of PAD are evident or not, these patients are 6 times more likely to die within 10 years than subjects without PAD. Further, in-hospital mortality of patients with acute myocardial infarction is association with the presence of PAD and cerebro-vascular disease.

Results: It was shown that arteries of lower limbs and carotids represent surrogate marker and window to the general atherosclerotic disease. Using Doppler US investigation of peripheral arteries and determination of ankle brachial index (ABI) is very important indicator of the presence of atherosclerotic disease and is predictor of cardiovascular morbidity and mortality. Decreased ABI including border-line values (0.9) is related to increased risk for cardiovascular events. Further, meta-analysis was shown that each degree of ABI for 0.1 is related with increased risk for cardiovascular events and death for 10.2%. If ABI is lower than 0.6, generalized atherosclerosis is suspected with 10 years survival less than 50%. There is also close interrelationship between PAD and cerebrovacular disease. In one of our study it was shown that there is close interrelationship between ankle brachial index and preclinical atherosclerotic lesions on carotid arteries. Most of PAD patients (93%) had preclinical atherosclerotic lesions (increased intima media thickness and/or atherosclerotic plaques) in internal carotid arteries.

Conclusion: Therefore, patients with proven atherosclerotic disease should be investigated very carefully and the presence of atherosclerotic lesions in other vascular territories have to be identified. Treatment of proven atherosclerotic disease should base on estimation of the grade and the importance of vascular lesions in different territories, particularly in coronary and cerebral arteries. Atherosclerotic lesions of arteries of lower limbs should be treated after elimination of critical stenosis in coronary or carotid arteries.

PROMOTION OF GUIDES FOR PRACTICAL APPLICATION OF NEW ORAL ANTICOAGULANAS (NOAK)

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Introduction: Atrial fibrillation (AF) is the most common heart rhythm disorder in people over 65 years of age. The most severe AF complication is a stroke. One in six patients with AF will experience a stroke, which is generally massive, difficult to treat and causes severe consequences in the form of permanent disability. In the prevention of stroke in patients with non-valvular atrial fibrillation, drugs from the group of vitamin K antagonists (warfarin, acenocoumarol) can be used, which by 62% reduce the risk of stroke and drugs from the group of new oral anticoagulants (NOAC) (rivaroxaban, apixaban, dabigatran) which are equally effective.

The aim of the study: Association of Doctors of Family Medicine, Association of Cardiologists and Association of Neurologists of Republic of Srpska wrote guidelines for the practical change of NOAC for family medicine doctors in order to increase safety for their application in everyday practice.

Results: The guide systematically displays all the segments needed for everyday work. Selecting patients with non-valvular atrial fibrillation, setting indications for the introduction of drugs, pharmacological properties of drugs, dosing of drugs, use of CHA2DS2 -VASc score and HAS-BLED score. Since it is necessary to evaluate the renal function prior to the introduction of NOAC therapy, the guide provides a simple and practical recommendation for the assessment of renal function when administering the drug in therapy, as well as recommendations for monitoring renal function during drug use. The guide provides practical advice, necessary in everyday practice, which relates to the eventual discontinuation of the therapy before the planned surgical intervention; safety of NOAC; disinfection of bleeding; the need for laboratory tests; interactions with other drugs. Practical tips for everyday work, such as translating a patient from one anticoagulant to another, or how to act if a patient misses the dose of a drug, is extremely important for everyday work. The guide also provides the latest guidance on the introduction or reintroduction of NOAC after TIA / stroke or intracerebral haemorrhage.

Conclusion: A guide to the practical application of new oral anticoagulants, intended for doctors of family medicine, provides a clear and transparent way to family doctors with all the necessary information on the use of NOAC.

Key words: *non-valvular atrial fibrillation, stroke, new oral anticoagulants (NOAC)*

RESEARCH INTO PRIMARY HEALTH CARE IN REPUBLIKA SRPSKA: SCREENING OF ATRIAL FIBRILLATION

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Introduction: Stroke is a common cause of mortality and disability, as well as dementia. Atrial fibrillation (AF) increases the risk of ischemic stroke by 4-5 times and is responsible for the occurrence of 15% of strokes in the world.

The aim of the study was to discover new patients with atrial fibrillation and to motivate the use of anticoagulant therapy to reduce the stroke.

Methodology: The research was conducted in seven health centers in Republic of Srpska. Twenty doctors of family medicine collected data in the period from 01.12.2016. until 31.05.2017. In this period, every first patient over 60 years of age was interviewed every working day and blood pressure was measured with an apparatus that at the same time recognized and atrial fibrillation.

Results: Of a total of 1,883 subjects, 151 (8%) of them had atrial fibrillation. In subjects with AF, 60 (3%) had a newly detected AF. The prevalence of AF increased with years of life. The most common comorbidities, but also the risk factors for AF, were hypertension and diabetes. The incidence of stroke was found to be higher in patients with AF and was 3.23%. Anticoagulant therapy was used by 51% of patients with AF.

Conclusion: Screening AF is significant because about one-third of patients with AF had newly detected AF that was asymptomatic. Early detection of AF would enable timely education of patients, introduction of anticoagulant therapy and prevention of stroke.

CASE REPORT: HEMORRHAGIC SHOCK ASSOCIATED WITH HEPARIN ANTICOAGULANT TREATMENT

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Summary: Usage of heparin is correlated with numerous adverse events, so should be very precautious. The most common adverse events are various bleedings, including hemorrhagic shock. This case report represents a 53-year-old male patient, who got heparin before preoperative coronarography, preparing for aortic valve operation. Five days after coronarography, patient developed hemorrhagic shock and died. Autopsy discovered he had gastric cancer and hypophysis tumor, he didn't know.

Key words: *heparin, hemorrhagic shock.*

INTRAVENOUS THROMBOLYTIC THERAPY - DO WE HAVE AN IDEAL DOSE?

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Stroke is the most devastating disease. We can say that stroke is a disaster. Acute ischemic stroke causes substantial morbidity. Acute ischemic stroke is one of the leading causes of death worldwide. Every year 15 million people wordwide suffer a stroke. According to the data stroke was a second cause of death in 2012. The global burden of ischemic stroke is on a rise. The treatment with intravenous thrombolytic therapy using alteplase within the window period of 4.5 hours is the most effective and established immediate management strategy of this pandemic.

Intravenous thrombolysis with recombinant tissue plasminogen activator (rtPA) is proven to be beneficial for patients with acute ischaemic stroke. In 1996, the Food and Drug Administration (FDA) approved the use of rt-PA for the treatment of acute ischaemic stroke. This recommendation was based on the results of the National Institute for Neurological Disorders and Stroke of Recombinant Tissue Plasminogen Activator (NINDS rt-PA). Dose of 0.9 mg/kg of body weight (standard-dose) was accepted as an effective treatment for AIS. This dose was approved by the FDA. Therapy of rt-PA significantly improves the probability of a favorable outcome compared to placebo. A favorable outcome was determined as minimal or no disability 3 months after stroke. But the increased risk of intracerebral bleeding is the most significant complication of this therapy.

Symptomatic intracerebral hemorrhage (sICH) represents a major treatment complication. This is linked to adverse outcome. sICH is the most severe complication of intravenous thrombolytic therapy. sICH is related to greater morbidity and mortality. NINDS and ECAS III study showed a significant increase in overall incidence of intracerebral hemorrhage in rt-PA treated patients in comparison to placebo group.There are some controversies related to the optimal dose of alteplase. However, some authors (mainly from Asia) use a lower rt-PA dose. The lower thrombolysis dose is 0.6 mg/kg body weight. It is estimated that 40% of intravenous

thrombolysis in Asia is done at a lower dose. The low-dose alteplase has become an attractive option, particularly in elderly patients.

The results of some studies clearly indicated that the standard-dose was better then the low-dose. In contrast, the results of some other studies have clearly shown that the low-dose is better than a standard-dose. Several trials conducted in Japan showed that the low-dose alteplase had beenas effective as the standard-dose. The incidence of sICH was similar with data for the standard-dose.

Conclusion: Well-developed, randomized research is still needed to clarify the best dose of intravenous thrombolysis.

Key words: *Dose, intravenous, thrombolysis, ischemic stroke*

TELEMEDICINE SOLUTIONS FOR ATRIAL FIBRILLATION AND CEREBRAL INCIDENTS. THE BULGARIAN EXPERIENCE

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Up-to-date medical information: Ischemic strokes are over 80% of brain events. Over 25% of ischemic incidents are so- called cryptogenic strokes.
A cryptogenic stroke is a sudden focal neurological event in the absence of cause (uncontrolled hypertension, intracranial hemorrhage, carotid artery lesion, atrial fibrillation, intra-cardiac thrombus, degenerative neurological disorder or neoplasm. In recent years, a new therapeutic unit has emerged in the medical literature - **embolic stroke of undetermined source / of unknown origin**, defined as cerebral infarction without proximal arterial stenosis or cardio-embolic sources. Some experts propose to replace the term **cryptogenic stroke** as the leading cause is undiagnosed atrial fibrillation leading to thrombus formation in the heart and embolization.

Information about Bulgaria: Bulgaria has the highest cerebrovascular morbidity in the European Union (58/1000). In 2015, 35,311 strokes (10% of them with severe disability and 7,175 patients ending with fatal outcome) were registered, and in 2016 - over 50,000. Bulgaria has the highest age-standardized stroke mortality. In 2016 deaths from cerebrovascular diseases were 19715 (relative share 18.3%, 276.6 / 100 000).

National Project: We announced our initiative at the Athens Forum. Based on recent European and American guidelines, recommending continued ECG monitoring for cryptogenic strokes and transient ischemic attacks, which increases the possibility of diagnosing atrial fibrillation episodes, our activity among neurologists and cardiologists, patient organizations etc, has yielded good results. We provide you with data from the first 6 months.

THROMBOLYTIC THERAPY OF ACUTE ISCHEMIC STROKE

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Introduction: Intravenous thrombolysis is the only medical therapy shown to improve patient outcomes in acute ischemic stroke when given in time frame. The more earlier we applied therapy the treatment is more successful.

Aim: To examine thrombolytic therapy on functional recovery, connection with other risk factors, death rate after therapy application, and average time from arrival to therapy application

Methods: Retrospective observational study which included 232 patients who were hospitalized in Neurology clinic UKC Republic of Srpska from 2007 until 2018, due to acute ischemic stroke who received intravenous thrombolytic therapy. The sample is relatively uniform according to gender with 54,7% male, 45,3% female patients. According to age they are categorized into three groups. Data was collected after searching through patients medical history. Statistical analysis is done in software package IBM SPSS Statistics 21.

Results: Most common risk factor is arterial hypertension which is present in 89,2% patients. Average value on risk is 4,26 on admission, and 2,60 on discharge. Paired samples t-test suggests that there is statistically significant difference. Average NIHSS score on admission was 12,07, and on discharge 9,13which is statistically significant. Actilyse dose is 74,1% or 74,1% in all patients. During hospitalization 27 patients died, which represents 11,6% of total number.

Conclusion: Further monitoring of patient after thrombolytic therapy and new guidelines for better outcome, reduction of mortality and wider use of this kind of therapy are needed.

Key words: *stroke, thrombolysis*

ADVANTAGES OF PRIMARY PERCUTANEOUS CORONARY INTERVENTION IN RELATION TO MEDICATION THERAPY IN PATIENTS WITH STABLE ANGINA PECTORIS

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Introduction:The aim of this paper is to illustrate the procedure of percutaneous coronary intervention in patients with stable angina pectoris and its advantages, since routine PCI in patients with stable angina is not recommended according to current recommendations obtained on the basis of large radomized studies, which will be described in the article.

Case Report: Patient, a man, age of 66 years, was admitted to the Internal Department, Interventional Cardiology Department becouse of chest pains by type of stable angina pectoris. In ambulatory conditions he was made non-invasive diagnostics, and after a positive ergometric test, a decision was made to make invasive diagnostics and possible PCI. Coronarography: LCA: LM: correct deviation, direction, lumen, no

stenosis, is broken down into LAD and LCx. LAD: correct deviation, direction, proximal in the long segment narrowed by tubular stenosis of about 95%, distal stenosis about 50%. LCx: the correct deviation, direction, gives OM1 a branchless limb, the OM2 branch that is proximal narrowed about 60-70% (tandem lesion) and the OM3 (PD) branch is proximal subcoded to 99%. RCA: no stenosis, minor. PCI LAD: Implanted stent DES Orsiro 3.0x35mm insufflation to 14 atm. Proximally implanted stent ower lap by BMS Integrity 3.5x15mm insufflation to 16atm. After that, POT technique was made, balloon of BMS stent insufflation to 18atm and postdilatation of ower lap with insufflation of up to 18atm. PCI OM3: Replaced guidwire BMW in PD direction and Direct technique implanted BMS Integrity stent 2,5x18mm insufflation to 18atm. PCI OM2: Placed guidwire Runtrough floppy in the direction of OM2 branch and Direct technique implanted stent DES Resolute integrity 2.5x22mm insufflation to 16atm.

Conclusion: The procedure must be gradual, carefully planned and only after initial and good non-invasive diagnosis, a decision on percutaneous coronary intervention should be reached. A significant degree of stenosis in the coronary arteries and the pain that patient has got are crucial in the decision to perform PCI. If it is carefully performed, PCI can still be considered a valuable technique for selected patients in relation to the medicament therapy itself.

Key words: *angina pectoris stabilis, percutaneous coronary intervention, medication therapy*

PSEUDOTHROMBOCYTOPENIA

Aleksandra Pejcic, Department of Labaroratory diagnostic Sasa Jovicic, Department of pediatrics, Milanka Bajic-Zivanic, Department of Internal medicine, General Hospital Gradiska, BiH RS

Poster presentation: Pseudothrombocytopenia (PTCP) is rare and often unnrecognised phenomenon in hematology laboratoryes since EDTA as a anticoagulant and autamated blood analyzers are in use.It is anticoagulant or temperature induced aggregation of plateletes usually occuring with EDTA anticoagulant at roome temperature less commonly with citrat or heparin anticoagulant. Spurious thrombocytopenia most of the time is associeted with autoimun, cardiovascular, liver, neoplastic and viral disease as well as during therapy with valoproic acid, insulin, olanzapin and levofloxacin.

Case report: A 65 old male patient was referred to our laboratory for investigation of thrombocytopenia which was 43/ µl.T hrombocytopenia was diagnosed in rutine control.In medical hystory he had therapy for arterial hypertenson-ACE inhibitors.Physical and sistemic examination was good.Other laboratory investigation for liver (AST,ALT,Ap,bilirubin total),renal function (urea,creatinin),glucosa,Crp were in reference values. Patient venous blood was drawn into standard collection tubes with three different anticoagulant, EDTA,Na-citrat and Li-heparin.The blood samples were analyzed by the Sysmex XN-550 automated hematology analyzer for three times.First time of analysis was immediately after blood sampling,second time was one hour after sampling,and third time was four hours after sampling.The analysis showed there was

no diference during the first time of anlalysis betweensamples, second time of analyses showed significant difference in the platelet count especially in the tube with EDTA.Third measurment showed that the most largest difference between platelet counting was in the tube with EDTA almost for 70%, compared for the first measurment. Recognition of pseudothrombocytopenia may avoid unnecessary hospitalization, transfusion of platelet concentrated bone marow aspiration, bone biopsy, long-term.

Key words: ***cortison therapy, cancelled surgical procedures, and avoid patient expenses and anxiety.***

HYPERTENSION – NEW RECOMMENDATIONS

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A first presentation on the new Guidelines for treatment of hypertension was given at the ESH conference in Barcelona on June 9, 2018. One of the main messages was the unchanged classification of blood pressure (BP) and the definition of hypertension from previous European guidelines with an office systolic BP >140 mmHg and/or diastolic BP >90 mmHg, in contrast to the new definition in the 2017 ACC/AHA Hypertension Guidelines (>130/80 mmHg).

One of the reasons for leaving the classification and definition of hypertension unchanged, was the difficulty of interpreting the results of the SPRINT trial according to the Task Force of the ESC/ESH guidelines, as BP was measured differently in this trial compared to other trials. White coat hypertension was not present in SPRINT due to unattended BP measurement and resulted in lower BP values. The authors suggested that SPRINT BP values may correspond to a higher conventional office SBP (130-140 for the more intensive treated group, and 140-150 for the less intensive treated group).

Updates in the new guidelines include a lower BP threshold and treatment target for older patients (<140/90 mmHg and for those ≥80 years <160/90 mmHg). For all patients, the first treatment objective should be to lower BP to <140/90 mmHg, and provided that therapy is well tolerated a target of <130 mmHg should be applied. For most patients a two-drug combination of treatment is recommended as initial therapy and preferred combinations are a RAS blocker (ACEi or ARB) with CCB or diuretic. Ideally this two-drug combination will be taken as a single pill therapy, to improve adherence.

One of the lead authors of the new guidelines, Professor Giuseppe Mancia (Milan, Italy) said: “The 2018 ESC/ESH guidelines issue new recommendations on how to optimally treat hypertension. Drug therapy extends to additional groups of patients. Also, blood pressure values to aim at with treatment are lower than in the past. In addition, combination therapy is now recognized as the most effective initial treatment strategy in most patients.”

IMPACT OF CONTEMPORARY PREDICTIVE SCORES IN THE PREVENTION OF CARDIOVASCULAR DISEASE

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It is widely known that cardiovascular disease over the last decade, has become the leading cause of death worldwide. The Framingham Heart Study (1948) remains the most famous and cited research in epidemiology of cardiovascular disease. Much of the now-common knowledge concerning heart disease, such as the effects of diet, exercise, and common medications such as aspirin, is based on this longitudinal study.

The **Framingham Risk Score (2008)** is a gender-specific algorithm used to estimate the 10-year cardiovascular risk of an individual. The Framingham Risk Score was first developed based on data obtained from the Framingham Heart Study, to estimate the 10-year risk of developing coronary heart disease.

The SCORE project was initiated to develop a risk scoring system for use in the clinical management of cardiovascular risk in European clinical practice. **The SCORE system (2003)** estimates the 10-year risk of a first fatal atherosclerotic event (heart attack, stroke, aneurysm of the aorta, or other). In 2007 risk was given as a 10-year risk of cardiovascular death and not of cardiovascular events, fatal and non-fatal together. This is in contrast with other risk scoring systems as the Framingham score. A 5% SCORE risk of cardiovascular death is equal to a 10– 25% of value calculated by using the Framingham risk score for total cardiovascular risk. Equivalent contributions of prevention initiatives (Framingham Risc Score, Score system), pharmaceutical developments and technological improvements, have led to an important success in the reduction of mortality related to cardiovascular diseases.

Key words: ***prevention, predictive, risk scores, cardiovascular disease***

ANALYSIS OF THE EFFECT OF RESVERATROL ON THE NUMBER OF STEM CELLS, CYTOKINETIC AND CYTOGENETIC PARAMETERS IN VITRO

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Introduction: At present cardiovascular diseases are the major cause of cardiac morbidity and mortality all over the world. It's very important to develop new methods of prevention, diagnosis and treatment of cardiovascular diseases, study new properties of substances and drugs to treat this pathology.

Resveratrol (3,4′,5-trihydroxystilbene) is a polyphenolic compound, which is found in grapes, peanuts, pistachios, cranberries, blueberries and bilberries. Resveratrol has many benefits, including antioxidant, cardiovascular protective, stimulation the function of heart, anti-inflammatory, antiplatelet, blood glucose-lowering and etc.

Purpose: To investigate cytokinetic and cytogenetic effects of resveratrol in the experiment *in vitro.*

Methods: The influence of resveratrol (trans configuration) (it was isolated from *Polygonum sp.*) in different dosages on the mobilization of CD117+ stem cells,

distribution of cells at stages of cell cycle, quantity of apoptotic cells and cells with micronuclei was studied *in vitro* using bone marrow of C57Bl/6 male mice. Flow cytometry method was applied for the experiment.

Results: The capacity of resveratrol to stimulate mobilization of CD117+ stem cells was investigated *in vitro*. It was found that resveratrol in lower doses (1 μg/ml, 5 μg/ml and 10 μg/ml doses) didn't change the ratio of CD117+ stem cells in cell culture in comparison with the control. Resveratrol at 50 μg/ml doses significantly raised the number of CD117+ stem cells in comparison with the control ($p<0.05$).

Cytotoxic effect of resveratrol was studied in the experiment. It was established that the tested substance didn't change the number of apoptotic and micronucleated cells in comparison with the control. Distribution of cells at stages of cell cycle corresponded to parameters in the control. It means that resveratrol is safe, not cytotoxic and also capable to enhance the differentiation of stem cells.

Conclusion: It was demonstrated that resveratrol is effective for stimulation of formation of endothelial progenitor cells *in vitro* and promising for development new safe drug displaying neoangiogenesis capacity and reparative processes in cardiovascular system.

NUTCRACKER SYNDROME – REIMPLANTATION OF LEFT RENAL VEIN

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Rare clinical case of a patient with Nutcracker Syndrome (NCS) - compression of the left renal vein (LRV) between the superior mesenteric artery (SMA) and the abdominal aorta. The clinical presentation may vary from childhood to the seventh decade of life. NCS is characterized by a set of symptoms with substantial variations. Due to the variety of symptoms and lack of consensus on the diagnostic criteria, the exact incidence is unknown. This is a case of a 25-year-old male with angiographically proven NCS. This patient has been treated conservatively with a one year follow up. Due to the aggravation of the clinical picture the patient was proposed for surgical treatment. Leading in the choice of surgical treatment was the lack data on long-term outcomes of endovascular treatment of NCS and the need of antiplatelet therapy. Reimplantation of left renal vein was executed.

Key words: *Nutcracker Syndrome (NCS), Left renal vein (LRV), Superior mesenteric artery (SMA), Reimplantation of left renal vein*

VARIA

CURRENT STATE OF PATIENT SAFETY CULTURE IN BULGARIA

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Introduction: Patient safety culture is strongly related to organizational culture, specific of healthcare. It is a main determinant of the quality of healthcare services. Aim: The aim of this research is analysis of current literature, based on the complex evaluation of the publications in the available national and international literature, related to hospital patient safety culture.

Methods: A literature review was conducted via searching the MEDLINE, PubMed, Google Scholar and Sofia Central Medical Library electronic databases. Relevant publications were also retrieved from the paper based collection at the Medical University in Plovdiv, using the "de visu" approach. "Patient safety", "safety culture", "hospital safety culture", "prevention of medical errors", "patient safety reporting system" and "medical error" served as search keywords.

Results: The study selection identified a total of 224 surveys. Finally, only 21 articles were examined and discussed in the review.

Conclusion: The current literature review shows the need to develop and maintain a positive patient safety culture in the healthcare settings in Bulgaria. It requires amendments to the existing regulations, the introduction of uniform taxonomy, universal measuring instruments of patient safety culture and registration of medical errors in healthcare settings.

RISK BASED AUDITS OF THE EXECUTIVE AGENCY MEDICAL AUDIT IN HOSPITALS

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Quality control and patients' safety control has gradually been replaced by so called medical audit. Medical audit is perceived as proactive instrument of stakeholders, including control authorities, while control is associated with reactive action. This is due to the fact that the audit includes a number of instruments which ensure the process quality when delivering services, while control includes various activities whose aim is to ensure quality services by focusing on identification of already committed errors that is reaction to an event.

The report indicates that risk management approach should be actively used by competent institutions in their work as control authorities. With regards to quality medical services and patients' safety, risk management can be seen as careful and in

detail study of medical services provision system in order to, first, identify the factors, which potentially could lead to patients' harm during treatment and second, to design and undertake actions to prevent these mistakes from happing again in the future. Therefore, risk management can be seen as an important precondition for correct identification of risk bottlenecks and subsequent intervention by the control authorities in order to improve the quality and safety of the treatment process.

The authors goal is to analyse medical specialists' mind-set towards patients' safety as an element of quality medical services in five hospitals, and results can be used for risk assessment in hospitals. Research hypothesis is that irrespective of the current rules on patients' safety and quality in diagnostics and treatment, there are medical errors omitted in hospital establishments. The most common error omissions and undesired outcomes in health establishments over one-year period, identified by Executive Agency Medical Audit have been studied.

Key words: *risk assessment, quality control, medical audit, safety and security, risk management, medical errors, control of medical activities*

NUCLEAR MEDICINE IMAGING IN ORTHOPEDICS

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Bone imaging is one of the most versatile and time proven nuclear medicine procedures. There are many radiopharmaceuticals in conventional nuclear medicine that have been used to image skeletal malignant and benign disorders (99mTc labeleld phosphate complexes, 67Ga citrate, 201Tlchoride, 99mTc-MIBI, 99mTcHMPAO – labelled white blood cells, 99mTc-Ubiquicidin).

The most common radionuclide referrals in orthopedics are primary tumors (Ewing, osteosarcoma) and bone secondaries (staging and follow up as well as distribution of osteoblastic activity prior to radiomeatabolic therapy). Also there is variety of non neoplastic diseases where skeletal scintigraphy could be used – in the evaluation of traumatic injuries, especially stress and occult fractures, musculoskeletal inflammation and infection, assessment of bone viability (grafts, infarcts and osteonecrosis), metabolic bone disease, arthritis, complicaton of prostetic joint replacement (loose or infected joint prosthesis), heterotopic ossification, complex regional pain syndrome, other bone diseases (Paget, Langerhans histiocytosis, fibrous dysplasia) and congenital or developmental anomalies.

Imaging acquisition in nuclear medicine has revealed enormous development during the last few decades in the beginning as limited bone scintigraphy or spot views, whole body planar images of the entire skeleton, to SPECT and hybrid SPECT/CT imaging, overcoming difficulties in precise localization of the bone metabolism abnormalities in complex anatomy skeletal structures.

There is clear benefit in adding SPECT/CT, allowing definitive diagnosis in over 50% and providing information relevant to the further diagnostic work-up in another 30% of patient studies.

For a great range of skeletal pathology bone scanning can provide the

surgeons with practical information concerning the cause of the patient`s pain, the true significance of otherwise questionable radiographic findings, the extent of disease and the results of the surgical treatment. Multidiscilinary reporting and integrated diagnostic and imaging algorithms will enable usage of the nuclear medicine investigations in orthopedics as a complement to other imaging modalities.

BIOLOGICAL STUDY OF ANODIC FILMS WITH CHEMICALLY DEPOSITED SILVER

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An innovative approach for developing of a modern metal implants is a combination of properties of different materials in order to be received a product with high biocompatibility, good osteogenic capacity and elimination of bone resorption, allergies etc. Nowadays, different combination of biomaterials, including noble metals, such as gold and silver, are very prospective in the medical field.

Silver has good bioactive and microbiological properties which is the reason for expanding its application in creation of medical devices with various usages. Aluminum in the other hand has application in very different technological fields. But it has not been widely studied as a potential metal for constructing medical implants. The advantages of the aluminum are easy processing, high tensile strength, high heat and electro conductivity, low coefficients of friction and deformation, etc. There are studies whitch prove that Al_2O_3 is an inert compound introduced to biological systems.

In the present work, the biocompatibility of anodic films formed on the surface of aluminium alloy EN AW 1050A/3105isinvestigated. For this purpose, a method for obtaining porous coatings in sulfuric acid isdeveloped. Silver particles arechemically embedded in the pores of these oxides.

The methods in use are related toobtainingaproper surface of the potential implant material in two steps formation of porous oxide structures by anodizing of a technical alloy EN AW 1050A and chemical deposition of silver by modified Tollens method. Another part of the study is different bioassays such as biocompatibility, vitality and cytotoxicity testing.

The biological assessments are conducted under *in vitro* conditions of co-cultivation with cell cultures PDL. The influence of the oxide film thickness and of the silvering time on the cell numbers, viability and proliferation is examined. The development of the cells was observed within 96 hours, and the changes is recorded at 24, 48 and 96 hours.

To sum up the results: Firstly, the samples of series A (10 μmthick anodic films of Al_2O_3) create very good conditions for a cell adhesion, stretching, proliferation and a cell culture growth. Values of the cell numbers are close to that of the control samples. Secondly, the samples of series B (20 μmthick oxide films) do not favor co-cultivation with PDL cells. Values of the cell numbers are low and close to the ones of the negative control samples. The silvering time and the amount of the incorporated silver particles does not affect the biocompatibility of all investigated samples of series A and B.

In conclusion it is found that coatings having thickness of 10 μm provided more favorable conditions for cell adhesion, spreading and proliferation of the cell culture.

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THE ROLE OF NITRIC OXIDE IN PHYSIOLOGICAL AND PATHOPHYSIOLOGICAL CONDITIONS

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Nitric oxide (NO) is a potent vasoactive and antiplatelet agent that is derived from L-arginine, by nitric oxide syntetase (NOS) enzyme activity in vascular endothelium. It is involved in cardiovascular, renal, immune, digestive, respiratory, and in neuro-endocrine physiology. In oxidative and reductive reactions, NO forms many types of oxides - free radicals. Depending on its blood concentration, NO may manifest antioxidative and prooxidative role. Its protective role on endothelial function contributes for normal peripheral vascular resistance and keeps the physiology of renal blood circulation. It supports immunity by macrophages functioning, modulates smooth muscle cells in digestive system, and improves respiratory circulation and ventilation. It has a role on insulin and rennin secretion and on other endocrine glands activity as well as it has an impact in memory, perception of pain, and in neurotransmission of peripheral blood vessels which makes NO an important agent of regulatory systems in physiology. On the other hand, its toxicity is manifested by its conversion in reactive nitric intermediate compounds: nitryl chloride, nitric dioxide, and peroxynitrite. Under hypertension condition, the formed endothelial dysfunction contributes for increased peripheral vascular resistance in arteries as well as vascular complications as a result of functional changes in L-arginine / NO metabolic pathway. Reactive nitric intermediates in renal failure pathogenesis and may be a marker of chronic renal failure. It may also play a role in the pathology of inflammation and infectious disease, via its signal molecules. It has a strong influence on different conditions such as: atherosclerosis, septic shock, neurodegenerative process, respiratory impairment, accelerated aging, etc. As NO has an important role in physiological and pathophysiological mechanisms, it may be used in discovering and evaluating many diseases, with possibility to become a pharmacological modulator in disease therapy.

Key words: *nitric oxide, physiology, diseases, hypertension, renal failure.*

GLAUCOMA SCREENING: PROS AND CONS

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Introduction: Glaucoma is a chronic eye disease, which eventually can lead to irreversible blindness. Symptoms often go unnoticed; half of the patients are undetected at a certain moment. Treatment can slow down the progression of glaucoma, screening could be useful. Because the disease is asymptomatic, except in its late stages, many screening programs have been used to try to diagnose the disease in patients at an early stage and thus prevent irreversible vision loss. At this moment, there is no nationwide periodic population-based screening programme for glaucoma in the Bosnia and Herzegovina, except for occasional individual screening actions every year on World Glaucoma Day.

Purpose: The aim of the paper is to present the results of glaucoma screening conducted in March 2018 in 3 cities Doboj, Petrovo and Šamac in Republic of Srpska.

Material and methods: Glaucoma screening was conducted in health care institutions of primary health care in March 2018. Participant underwent the screening questionnaire, Non contact tonometry (IOP) and optic nerve cup/disc ratio by an ophthalmologist. Glaucoma suspects werw defined by IOP ≥21 mmHg and abnormal cup/disc ratio ≥0,5.

Results: 298 participans where screened in three days**.** Of the 298 screened 211 or 70,6% were womens and 87 were men. 31 participans where referred for glaucoma evaluation and 65 or 21,7% of participans where reffered for an ophthalmic evaluation and eye exam for another pathology like diabetes. Glaucoma was confirmed in 54,8% of the individuals who followed up.

The youngest participans was 23 and the older one was 85 years old. 7,4% or 23 participans have a family history of the disease, and 3 of them have elevated IOP ≥21 mmHg and abnormal cup/disc ratio. The highest measured value on the right eye was 33mmHg, and on the left eye was 29mmHg, with average mean IOP on both eyes 17mmHg.

Conclusion: Screening in a traditional sense means identifying people who are at high risk of having a specific disease. Screening also educates people about the signs and symptoms of glaucoma. For screening, you want a test you can do rapidly that's accurate, portable and highly associated with the disease. Tonometry is a poor screening tool because a large proportion of patients with glaucoma don't have elevated IOP—and conversely, a large proportion of people have high IOP but no glaucoma. Therefore, most glaucoma screening tests examine the visual field and/or optic disc.

Key words: *glaucoma, glaucoma screening, tonometry, population, health menagemen*

MINIMALLY INVASIVE PERCUTANEOUS NEPHROLITHOLAPAXY AS AN EFFECTIVE AND SAFE PROCEDURE FOR LARGE RENAL STONES

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Introduction: Miniaturized percutaneous nephrolitholapaxy (miniPCNL) was first introduced by Jackman et al. as an alternative treatment method compared with conventional large bore (24–34Ch) PCNL in a pediatric population. In the subsequent years the technique was adopted for adult patients and was initially mainly used for smaller lower calyceal and diverticular stones. Meanwhile the technique has further been modified towards a 'minimally invasive PCNL' (MIP), characterised by the use of a 12 F nephroscope and an 16 F access sheath, a continuous low-pressure irrigation stream allowing for quick stone clearance and immediate closure of the access tract without placing a nephrostomy tube. We classified stones as simple (isolated renal pelvis or isolated calyceal stones) or complex (partial or complete staghorn stones, renal pelvis stones accompanying calyceal stones), regardless of their size. The goal of this trial was to report our experience in treating patients with complex large renal stones (>20 mm) using the MIP technique, focusing on stone clearance, complications and retreatment rate.

Patients and methods. All patients (38) treated for large renal stones (greatest diameter on plain X-ray or CT>20 mm) using MIP technique at the Department of Urology of the University Hospital Kaspela from January 2016 to August 2017 were included in the study. All patients underwent MIP prone using the modular miniature nephroscope system with automatic pressure control (Karl Storz, Germany). Percutaneous access was obtained under combined control - ultrasonographic and fluoroscopic guidance (via retrograde placed ureteric catheter). Single-step dilatation with a 14Ch metal dilator was applied and then an 16Ch metal Amplatz sheath was introduced. Using the 12Ch nephroscope, stones were fragmented by holmium laser (Calculase II 20W Holmium Laser, Karl Storz, Germany) under vision and stone fragments were evacuated under continuous irrigation without additional pressure or suction using the hydrodynamic effects of the PCNL system. Only if fragments adhered to the collector system of kidney, a 3Ch nitinol basket (Urotech, Germany) was used for stone retrieval. At the end of the procedure, the ureteric catheter was removed and a JJ stent was placed antegradely. The Amplatz sheath was withdrawn and the tract was closed. In cases of remaining large fragments at the end of the procedure, the access tract was not closed but a 14Ch nephrostomy tube was placed to allow for a second-look PCNL 2–3 days later. Haemoglobin level was monitored pre- and postoperatively. The clinical records were retrospectively reviewed for the following clinical parameters: stone complexity, operative duration (defined as the time from puncture to closure of the access tract), decrease in haemoglobin level and stone-free rate.

Results: Between January 2016 and May 2017, 38 patients with renal stones of >20 mm were treated with MIP in the Department of Urology, University Hospital Kaspela. The mean stone size was 31.5 mm(27-37mm). In all, 22 stones were classified as complex stones and 16 as simple stones. The mean operative duration for all 38 renal units was 99.2 min. The mean operative duration in complex stones was not

significantly longer than in simple stones, at 104.7 vs 90.7 min The mean decrease in haemoglobin level was 4.2 g/ dL, with no significant difference between the two groups for complex and simple stones. In all, 29 cases were stone-free after the first procedure (primarily stone-free). Patients were considered stone-free in the absence of any detectable stone fragment upon nephroscopy at the end of procedure and on postoperative X-ray and ultrasonography. Four patients underwent a second-look MIP, five ESWL (all of them form complex stones).

Conclusion: The present retrospective analysis of 38 MIP procedures shows that this approach is not only effective in small stones but also in patients with a large stone burden and complex stones. The method has a stone-free rate comparable with large bore conventional PCNL and is similarly effective in complex renal calculi. There is endency to a longer operative duration; however, one major advantage is the low blood loss and transfusion rate, as well as the lower parenchyma trauma. The MIP may be equally effective as conventional PCNL independent of stone size.

FUNCTIONAL DIAGNOSTICS IN PATIENTS WITH HAEMOPHILIA. CLINICAL CASE

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Introduction: History of present complaint – 7 y.o. boy with haemophilia A; Minimal trauma – knee sprain while walking, second for this knee; Past medical and surgical history-Home treatment with rFVIIa on demand; Inhibitor status – Inhibitor treatment (18 BE) from 2011; Family and social history - Uncle and cousin (mother line) with haemophilia A; Examination findings – significant haematoma of right knee; Pain in every attempt for movement, knee joint in 90° flexion with no possibility of flexion or extension. Methods: Surgical options and subsequent compulsory rehabilitation: Hospitalized for two days – while sufficient quantities of rFVIIa was supplied; Immediate regression of haematoma; Conservative treatment option; Results: Medical management plan and treatment regimen - RICE (rest, ice, compression, and elevation); No splint immobilization, just pillows; Analgesic therapy; Normalization of the coagulation process; Continuation of hemostatic treatment; Bed keeping advice and walking with crutches. Joint status and physiotherapy assessment - Start of physiotherapy - ASAP after pain disappear - Walking with crutches – still; Decreasing the flexion – first passive, then active; Increasing the extension - first passive, then active; Ice; Stretching; Conclusion: This case is one of the several in our hospital every year. His case is interesting with the confirmation of the lack of protocol in treatment and follow up of the patients with hemophilia.

FORENSIC DNA EXPERTISE OF SKELETAL REMAINS

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Background: There are a variety of forensic techniques in use today that can be applied to the identification of human remains. The choice depends upon the circumstances and the condition of the remains to be examined. Routine techniques are often insufficient to address the identification of human remains in mass graves, mass disasters and missing persons from different reasons. The major complicating factors include delayed exhumation, commingling of skeletal remains, lack of ante-mortem information and attempts to conceal evidence of criminal activity. Bones and teeth's are amongst the hardest structures of the human body which are resistant to adverse conditions such as incineration, immersion, trauma, mutilation, decomposition and hence, used in forensic investigations. It is also a valuable source of DNA as other parts of the body gets destroyed or degraded in mass disasters. In this paper we present several cases of forensic DNA expertise's of skeletal remain like mass graves, mass disasters and murders.

Methods: All the teeth and bone surfaces were cleansed of the remnants of soft tissues and soil contaminants, brushed in warm water and mild detergent, rinsed several times in distilled water and air-dried. The bone fragments were washed in a commercial bleach solution and subsequently washed 3 times in de-ionized water and twice in 70% ethanol solution, prior to air-drying for 24 h. The bones and teeths were pulverized using Retsch bone shaker. DNA was extracted by BTA forensic extraction Kit protocol on Automate express robot. Multiplex PCR amplification was performed using 1 - 3 ng of genomic DNA according to the manufacturer's protocol for the AmpFISTR Identifiler kit, AmpFISTR Globlafiler kit and AmpFISTR Y filer kit.

Results and Conclusion: All of the abovementioned cases were successfully accomplished by identification of the all missing persons. The application of DNA technology has revolutionized forensic identification procedures since its advent 25 years back. Teeth's and bones provide an excellent source of quality DNA compared to other parts of the body and has to be considered in all the forensic investigations. There is a great progress in the field of DNA research from just understanding the repeat sequence of the base pairs to predicting the physical characteristics, geographical origin and sex determination.

Key words. *DNA, extraction, bones, teeth's, mass disasters, mass graves*

INTERDISCIPLINARY CLINICAL DIAGNOSIS IN PATIENTS WITH HAEMOPHILIA

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Introduction: Interdisciplinary clinical diagnosis in patients with haemophilia is an important factor in their treatment. Centralized care is needed. **Methods:** Interdisciplinary treatment - specialists immunologists, orthopaedists, a specialist in physical and rehabilitation medicine. Creating an individual program for the treatment of patients with haemophilia - preoperative rehabilitation, post-operative rehabilitation functional diagnosis and treatment of the affected joint.

Results: Joint status and physiotherapy assessment. Bilateral flexion contracturs hinder walking; back is hunched, hips in decent position Walking with crutches, max 30m . Significant valgus position in right knee, left is neutral, almost varus, scoliosis upper extremity status and need for strengthening (to allow optimal post-op rehab).

Rehabilitation plan: •Comprehensive rehabilitation specialist evaluation and recommendations for physiotherapy •Custom made shoes and evaluation for other aids •Bone health management •Muscle and soft tissue health management •Pre-op physiotherapy, water-therapy •FVIII replacement therapy, regular prophylaxis tailored for physical activities. Medical management plan and treatment regime •Lab evaluation 1-2 weeks pre-op •rFVIII replacement 50 IU/kg 30-60min pre-op (5000 IU) •4h lab evaluation: FVIII level •rFVIII replacement continues post-op •q8h for the first 24h •then q8-12h for 1-3 days with FVIII trough goal 60-80% •Then q8-12h for days 4-7 with FVIII trough goal 30-50% •Then q12-24h for days 8-14 with FVIII trough goal >20% •Blood pressure aim is normotensive •Pain management; COX2-inhib, tramadol or paracetamol w/codeine •No im injections, no LMWH prophylaxis, no joint cooling •Regular tailored prophylaxis.

Anticipated complications: Soft tissue status will affect results – long history of flexion contractures resulting in muscle atrophy •PS-model versus hinge model affecting ROM •Execution of replacement therapy during recovery to prevent bleeds •Secure venous access •Home care and continued physiotherapy •Awareness inhibitor development •Treatment and follow-up compliance?

Conclusion: It is important to make a follow-up plan: Regular follow-up and care •Coordination of care with patients local health care providers and other support persons; Regular FVIII prophylaxis tailored for physical therapy and activity; Other health maintenance; Regular physiotherapy, different modalities – pt has experienced pre-op PT very helpful, walking distance 50m, re-considering surgery?; Optimal timing for surgery?; Motivation for independence and self care; Meaningful daily activities and possibilities to work; Aiming to improved quality of life.

ETHICAL ISSUES OF AESTHETIC MEDICINE IN ADOLESCENTS

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Introduction: Medicine is the „science and art dealing with the maintenance of health and the prevention, alleviation, or cure of disease." Considering this definition, the focus of aesthetic medicine differs. Aesthetic medicine is a relatively new branch, which includes different medical specialties, aimed at improving cosmetic appearance. Western culture idolizes the perfection of the human body. This, along with the greater accessibility of aesthetic procedures leads to an increase in their demand. Adolescents can be considered as a specific vulnerable group. They do not have full autonomy, and their health decisions are taken by their parents or guardians. Even more delicate is the case according to procedures not aimed at recovering patient's health.

Aim and Methods: The aim of this study is to examine and analyze the ethical issues of aesthetic procedures in adolescents. In order to achieve this goal, we have used general and private science methods and approaches, including documentary method, analysis and synthesis, comparative method.

Results: Medical manipulations on healthy individuals, especially on minors, raise many questions as the ethical acceptability of these procedures, informed consent and responsibility for their implementation. Although the aesthetic procedures are not directly related to the health of adolescents, they can significantly improve their quality of life, mental and social well-being. In this paper we discuss the ethical application of aesthetic medicine in teenagers using the four basic principles in medical ethics (respect for autonomy, beneficience, non-maleficience and justice).

Conclusion: One of the aims of aesthetic medicine is to satisfy the wishes of the clients. Physicians have a moral and legal obligation to obtain consent from parents for conducting any medical intervention to their children and adolescents. The real need to apply any medical intervention should be taken into account in each individual case. The cosmetic procedures that bring a health risk should be restricted to adolescents, which is also important for the formation of their values and personal self-esteem.

Key words: *aesthetic medicine; informed consent; adolescents; autonomy; nonmaleficience*

WHAT A TREATMENT PLAN WE WOULD RECOMMEND TO A PATIENT WITH HAEMOPHILIA

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Introduction: A specialized rehabilitation program for patients with haemophilia should be performed 2-3 times a year. It is consistent with the individual rehabilitation potential of the patient. Training programs help restore bleeding in the muscles or joints and prevent future bleeding episodes. The ultimate goal of physiotherapy for hemophilia is to restore normal motor function.

Methods: What treatment plan would you recommend? • Product utilized, dose and duration. • Use of antifibrinolytics • Pain control • When to initiate physical therapy. Specific physical methods: Maintaining healthy joints and avoiding deformations • Pain reduction • Improvement of the function by maintaining a range of motion (ROM) • Increase muscle strength to minimize bleeding potential • Improving balance and intuition, helping to avoid trauma • Helping patients stay in good shape / active and maintain a healthy weight.

Results: Example results in a man with arthropathy in both knee joints - Training in walking without aids, reducing swelling and pain, increased volume of flexion and extensibility movements, climbing stairs and terrain with a slope. **Conclusion:** Physiotherapists should be specially trained to work with patients with haemophilia. Special care should be taken to avoid bleeding or worsening of symptoms during assessment or exercise.

SPECIALIST OUTPATIENT MEDICAL CARE- THREATS AND PERSPECTIVES

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Summary: Efficiency and stability in healthcare depends on the successful functioning of the organisational structure as a whole also in terms of effective interaction between various levels of medical care. Unresolved issues in Specialists' Outpatient Medical Care should be seen within the structured levels of medical care and the overall issue of effective healthcare. Delays in solving these issues will lead to disappearance of the sector which in its own turn will have negative impact on the health care system exemplified by delays in patients' treatment, poor quality of medical services and increased number of unnecessary hospitalisation- guaranteed source of increased costs in the system.

The goal is to analyse the present situation of SOMC, to highlight some of the reasons behind the negative results, threats to development as well as the opportunities for overcoming them with the aim of preserving the healthcare system in the name of improving quality of medical care and patients' health outcomes.

Method: The legal framework regulating the work of different levels in the healthcare structure is analysed along information from National Health Insurance Fund and by questionnaires among medical doctors working un SOMC.

Results: Medical doctors working in SOMC are 11044, 6215 of them working in hospitals and on shifts. More than half of the specialists that is 65% are between 55 and 65 years of age. The average monthly transfer made by NHIF to a SOMC medical doctor is only 1649 leva. Between 80 to 85% of hospital income is budgeted to salaries. The amount of the average salary of health staff in more than half of the health establishments which participated in the research is between 750 to 850 leva. The average salary of medical doctors in 68% of health establishments is between 850 to 950 leva while only in 4% of health establishments pay is above 1100 leva. 80% of health establishments have outstanding debt to National Revenue Agency, to providers and compensations to staff. Three main issues are identified linked to normative,

financial and staff which hurdle the work of SOMC. The short-sighted reforms and imperfections in the legal framework as well as the undervalued financing of SOMC create conditions of financial pressure which are precondition of the sector's collapse. The lack of effective and efficient specialists' outpatient care will resonate negatively to the whole healthcare system due to impeded access of patients to timely specialists' outpatient services which consequently will lead to increased hospitalisation and respectively increase hospital costs.

Conclusion: Specialists outpatient medical care should be preserved and developed in order to keep the balanced pyramidal structure of health care. Reforms are needed in order to guarantee effective priority of Outpatient Medical Care both for Primary Outpatient Medical Care and Specialist Outpatient Medical Care. Providing for efficient and quality medical care on every organisation level of the system is a guarantee for better healthcare.

Key words: *SOMC financing, priority of Outpatient Medical Care, Pyramidal organisational structure of healthcare, threats to SOMC*

INFLUENCE OF PSORIASIS OVER THE QUALITY OF LIFE OF THE PATIENTS

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Introduction: Psoriasis is one of the most common skin diseases, which affects 1-2% of the population in different countries. Often the disease is associated with joint pain, cardiovascular diseases, metabolic syndrome, gastro-intestinal symptoms, anxiety and depression. The patients have difficulties with social adaptation and professional realization, which leads to dramatical impact of their quality of life. Worsened quality of life is defined by the features of the disease with recurrencies and remissions with unpredictable sequence and severity of the clinical manifestation. The need of local treatment requires additional time and finance resources. The objective judgment of the quality of life contributes to clarification of the level of disability of every single patient.

Methods and objectives: Our point of interest in this study are 111 patients with psoriasis. The clinical manifestation is judged by a clinical examination. Determining the severity of the disease we used Psoriasis Area and Severity Index (PASI). The quality of life was examined with the self-assessment questionary Dermatology Life Quality Index (DLQI). The collected data has been processed with the statistic software product SPSS-SPSS for Windows 13.0. For the level of significance, in which the zero-hypothesis is rejected, the $p < 0,05$ has been chosen.

Results: The results of the study of the quality of life show, that it remains unaffected in only 3,6 from the respondents. The rest of the patients (96,4%) report for an influence in a various degree.

Conclusions: The collected data show severe worsening influence of the quality of life of the patients with psoriasis. This affects various everyday activities of the patients. This is a fact, which has to be known by the relatives and even more by the medical personnel, including general practice doctors and nurses. Determining the level of affection of the quality of life of every single patient would contribute to the right choice of therapeutic strategy and reaching a satisfactory end-effect of the treatment.

Key words*: psoriasis, quality of life, Dermatology Life Quality Index (DLQI)*

COMPLICATIONS AFTER BURN TRAUMA. PHYSICAL AND REHABILITATION METHODS

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Introduction: Complications after burning are a frequent cause of poor quality of life and, in large part, for permanent disability. Our goal is to prevent them.

Methods: Treatment in three stages: early rehabilitation in intensive care units to prevent respiratory complications, post-rehabilitation in rehabilitation and outpatient treatment. Methods - inhalation therapy, passive and active kinesitherapy, healing massage, preformed physical factors.

Results: During the last 8 years, about 201 patients with different types of thermal damage were treated - 184 adults and 17 children. Of these, 78 patients were complicated: post-term infections (clinically treated), deep adhesions and parathyroid events in the area affected. Individual kinesitherapeutic techniques (with regard to rehabilitation potential) and treatment with physical factors were conducted in these patients, with the aim of restoring trophic, muscle imbalance.

Conclusion: Complications in the victims of thermal trauma are a serious long-term problem and their treatment is a huge challenge.

WHAT IS THE RECURRENT PERIOD AFTER THERMAL TRAUMA?

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Introduction: The recovery period in patients who have suffered thermal damage is different and depends on the percentage of affected areas.

Methods: For each patient, an individual kinesitherapeutic program and a long-term treatment strategy were developed to: • Improving the general condition of the patient • Maintaining the trophic of the muscles • Maintaining the strength of the healthy limbs • Preventing complications from bedtime - hypostatic bronchopneumonia, vascular complications, decubital wounds, etc. • Improve trophy of the operative zone and stimulate recovery • Overcome orthostatic reactions • Gesture training with / without aids in lower limb • Training in some day-to-day activities.

Results: 201 patients with different thermal damage were treated. Researches: respiratory assessment, functional assessment of affected areas, trophi assessment and muscle imbalance. Patients are tracked in dynamics. 14 of them had 18 months of treatment, 102 patients were 6 months, 45 had treatment for 4 months, 40 patients with less severe illness were treated between 2 and 3 months.

Conclusion: The recovery period for patients with thermal injuries is usually long. The treatment for this trauma is interdisciplinary and kinesitherapy is the main method of returning to everyday activities and improving the functional state.

ADVANTAGES OF DAMAGE CONTROL ORTHOPAEDICS (DCO) v/s EARLY TOTAL CARE (ETC) IN POLYTRAUMA PATIENTS

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Introduction: Damage control orthopaedics (DCO) refers to limited early surgical intervention for stabilization of musculoskeletal injuries in the unstable polytrauma patient. The goals of damage control orthopaedics are to limit ongoing hemorrhage and soft-tissue injury through efficient fracture stabilization while minimizing additional physiologic insult. Early stabilization of major skeletal injuries was the mainstay of treatment in trauma surgery in the 80's and early 90's. Early Total Care **(**ETC) involves definitive surgical stabilization of all long-bone fractures during the early phase of treatment (24–48 h). The concept of the ETC holds the merit to focus the attention of the international medical community on the need to stabilize long-bone lesions; this constituted the first step in the development of the modern management of multiple traumas.

Methods: A prospective study was carried out and the data of 93 patients with polytrauma were processed in "Pirogov Hospital - Sofia. Patients had an average age of 42.23 ± 16.07 years in the range of 7-81 years, of whom 60 (64.5%) males and 33 (35.5%) females. Results: Regardless of the type of fracture open / closed, following the principles of the DCO, the fractures are stabilized by an external fixator. Only in 2 patients the femoral fracture was initially stabilized with nail. Conclusion: •DCO reduces the mortality rate polytraumatic patient •DCO reduces stay in intensive care unit and general hospital stay • The safe term for the definitive fixation is between 4-6 days.

PERTHROCHANTERIC HIP FRACTURES 31 A2 and 31 A3 - MANAGEMENT AND COMPLICATIONS

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Introduction: Hip fractures are common and their incidence is likely to rise over the next decade as the elderly population increases. Hip fractures can have a devastating effect on the lives of the elderly who are most at risk of this injury. In many

cases hip fracture results in long-term loss of independence. This article focuses on extracapsular hip fractures, excluding subtrochanteric fractures. These pertrochanteric fractures account for approximately 50% of hip fractures. The sliding hip screw and cephalomedullary devices remain the most common implants for fracture fixation. A high rate of union can be expected in simple, stable fracture patterns. Unstable fracture configurations in patients with poor bone quality are more challenging to treat, with an increased risk of excessive fracture collapse, malunion and lag screw cut-out.

Methods: The mane tool for treatment of unstable pertrochanteric fractures is intamedullary nail- Fi-twin screw nail. For the period of four years 1381 patients were treated- 464 males (33,5%) and 918 females (66,5%). Fractures classified according the AO as 31A2 and 31A3.

Results: Complications after fixation are shown in 48 patients (3.5%). The complications are divided into the following groups: shaft medialization and fracture collapse – 13 (27%); cut out – 17 (35%); Z-effect – 15 (31%) and nonunion – 1 (2%). Conclusion The reasons for the complications are: positioning of the trochanteric screw; bone quality; early weight bearing. The Fi-twin screw nail is a good implant for treating unstable trochanteric hip fractures.

AIR POLLUTION IN SOFIA, BULGARIA AND HEALTH PROTECTION MEASURES

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Ambient air is a major component of the environment and its quality is essential for the health of the population. Contaminated air leads to a number of acute and chronic diseases, mainly to the respiratory, circulatory and nervous systems (accounting for about 30% of the total morbidity).

Background/Aim: to analyze the quality of the ambient air in the city of Sofia and to evaluate the health protection measures.

Methods: A network for monitoring of the quality of ambient air has been built in Bulgaria, through automatic measuring stations to the structures of the MoEW, in Sofia they are nine. The control is carried out by the Clean Ambient Air Act and the Ordinance on the concentration of harmful substances in the air. The reported pollutants are fine particulate matter, PM, SO_2, NO_2, CO, O_3, PB, gasoline, polycyclic aromatic hydrocarbons, heavy metals.

Results: The main problem in the airspace over Sofia is the fine particulate matter. Other pollutants have concentrations below the average annual rate. During the period 2013-2016 PM10 exceeded the 40 μg/m^3 rate from 49,04 μg/m^3 to 40,11 μg/m^3 and from 3 to 98 times the average daily rate in six of the stations, mainly around major road arteries and industry sites. For PM2,5 at rate of 25 μg/m^3 for the same period, rates from 30,57 μg/m^3 to 22,14 μg/m^3 were reported, mainly during the heating season. To improve the quality of the ambient air, protection measures have been developed by both the MoEW and a special program of Sofia Municipality with a period up to 2020,

which has led to improvement of the air quality. In 2013, concentrations of fine particulate matter were higher than in 2016.

Key words: *ambient air; pollutants; health protection measures*

CRITICALLY POISONED PATIENTS IN THE INTESIVE CARE UNIT

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Background: Clinicians are often challenged to manage critically ill poison patients. The clinical effects encountered in poisoned patients are dependent on numerous variables, such as the dose, the length of exposure time, and the pre-existing health of the patient. The American Academy of Clinical Toxicology and the European Association of Poisons Centres and Clinical Toxicologists are the international leaders in the field of toxicology and their guidelines were generally followed. The goal of this study is to introduce the basic concepts for evaluation of poisoned patients and to establish concise guidelines for the initial management of the acutely poisoned patient in the Emergency Centre. Methods: Acute poisoning (accidental or intentional) requires accurate assessment and prompt therapy. Early identification of the involved toxin/s is crucial and the majority will be identified by a thorough history and physical examination. An ABC-approach should be followed ensuring a protected airway, adequate ventilation and hemodynamic stability. Supportive and symptomatic care remains the cornerstone of treatment. A stepwise approach may be followed to decrease the bioavailability of toxins. Indications, contra-indications, risks and dosage regimens are describe for decontamination procedures including both termination of topical exposures and decreasing exposure to ingested toxins. Furthermore, procedures to increase the elimination of toxins and a short section covering specific toxins and their antidotes are also included. Conclusion: The management of toxicity in critical care requires significant effort by the clinician to recognize and rapidly evaluate patients in order that focused therapies may be instituted. Incorporation of available scientific data and evidence along with clinical judgment is necessary to determine the best possible therapeutic course. As new agents are introduced into clinical practice or illicit use, it is vitally important that clinicians maintain knowledge of toxic effects and their management.

Keywords: *Intesive care, drugs intake, poisoning*

РОЛЬ СЕМЕЙНОГО ВРАЧА (GP) В СОВРЕМЕННОМ ОБЩЕСТВЕ

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В последние года в Болгарии наступили перемены во всех секторах и структурах государственного устройства, в частности и система здравоохранения.

Реформа в здравоохранений началось в 2000г. и она является частью организационных перемен системы здравоохранения в мире.Реформ началось во всех секторах здравоохранения и привела к кардинальнѝым переменом в управлений, финансирования и организаций медицинского труда. Так появились новые социальные взаимоотношения здравоохранений. Перемены наступили в больничном и внебольничном секторах, как и в начальной медицинской помощи. Реформа еще не закончена и ищутся ефективные методы работы в здравоохранений.

Каждые политические перемены в здравоохранений надо чтобы были обоснованы. Чтобы наступили необходимые перемены в здравоохранений необходимо широкая общественная дискусия и научные анализи.

Внедрение медицинские, общественые, гуманитарные науки в системе здравоохранения требуют серьиозных перемен в системе медицинской помощи. В болгарском здравоохранений наступили перемены, в нормативной базе, прав пациентов и этичных взаимоотношений врач - пациент. Первая медицинская помощ, которую практикуют ОПЛ, это и есть основная помощ.

Удовлетворенность пациента и их мнение это особено важно для врача. Это не посредственно влияет на отношения, мотивацию и поведение, связанных с их здоровье, и выбором врача и лечебного заведения.

Цель магисторского исследования роли общепрактикувающего врача в современном обществе это содействие улучшения, организации и эфективности медицинской деятельности.

Чтоби достич етого используется метод-анкета.

В медицинской литературе предоставлени теория разних учених. Описана роль Семейного врача (GP)и его обязаности, основние функции, психологические и социальние аспекти общения между врачом и пациентом. Есть хипотеза которая допускает что в действующей здрявоохранительной системе пациенти останутся довольни от лечения и советов, которие им предлагает ОПЛ. Для проверки етой хипотези било проведено иследование. В етом иследование приняли участие 50 человек в возрасте от 18 до 60лет. Дание етой хипотези били подтверждени.

ДИАГНОСТИЧЕСКИЙ СКРИНИНГ ДЛЯ ДИСПАНСЕРИЗАЦИИ

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Задачи повышения эффективности отрасли здравоохранения ограничены развитием диагностических, оздоровительных, профилактических, лечебных, реабилитационных и реанимационных медицинских технологий, а также технологий управления в медицинских системах.

Развитие диагностических технологий имеет особое значение. Оно создает необходимую информационную основу для повышения эффективности всех остальных технологий (оздоровительных, профилактических, лечебных, реабилитационных и реанимационных). Так, для эффективного оздоровления необходимо выявлять индивидуальные системные риски, а для эффективной профилактики – индивидуальные нозологические риски [1]. Для эффективного лечения необходима ранняя диагностика, а для эффективной реабилитации – системы диагностического мониторинга.

В рамках отрасли здравоохранения основной вклад в конечную эффективность ее работы вносит первичная медицинская помощь в лице организаций здравоохранения, оказывающих помощь в амбулаторных условиях. В свою очередь, главным фактором повышения эффективности первичной медицинской помощи является расширение возможностей ранней диагностики заболеваний.

Пессимистичные оценки позволяют утверждать, что ранняя диагностика обеспечит снижение совокупных экономических потерь на этапах амбулаторного и стационарного лечения и потерь от смертности лиц трудоспособного возраста как минимум на 10% Умеренно оптимистичные оценки приводят к заключению о возможности снижения потерь по этим позициям на 20%. Если исходить из возможности снижения экономических потерь только на 10%, то экономический эффект может достигать 0,7% ВВП региона или страны [1].

Медицинскую эффективность первичной медицинской помощи в наибольшей степени определяют возможности диагностики ранних стадий заболеваний в процессе диспансеризации населения. Без обеспечения доступной и надежной ранней диагностики диспансеризация во многом теряет смысл.

Задачу повышения эффективности диспансеризации необходимо решать путем внедрения высокотехнологичной системы диагностического скрининга как первого этапа диспансеризации. Основным требованием к системе диагностического скрининга является достоверная возможность ранней диагностики заболеваний. В качестве дополнительных требований желательными являются простота, быстрота и достаточная универсальность диагностического метода.

Возможность создания высокотехнологичной системы диагностического скрининга для диспансеризации населения, которая отвечает основному и дополнительным требованиям, появилась благодаря развитию методов и средств функциональной спектрально-динамической диагностики (ФСД-диагностики).

ФСД-диагностику выполняют с помощью Комплекса медицинского спектрально-динамического (КМСД) [2].

В контексте решения задач диспансеризации ФСД-диагностика имеет следующие преимущества:

1. Реальные возможности ранней диагностики распространенных заболеваний, включая их латентные стадии, по всем системам организма;
2. Возможность использования режима экспресс-диагностики [3];
3. Малое время записи ФСД-сигнала - 35 секунд (запись сигнала с ладони пациента);
4. Пассивность основного режима диагностики (без воздействия на организм);
5. Возможность передачи записанного ФСД-сигнала по сети Интернет или по иным каналам связи для телediагностики;
6. Простота интеграции данных телediагностики в существующие медицинские информационные системы;

Эффективность применения ФСД-диагностики в системе диспансеризации оценивали в рамках выполнения пилотного проекта «Оценка эффективности применения ФСД-телediагностики в системе диспансеризации». Работы по пилотному проекту выполнены в сентябре - ноябре 2017 г. врачами УЗ «35-я городская клиническая поликлиника» г. Минска и медицинского центра «Здрава».

Выполнение проекта осуществлялось на первом (скрининговом) этапе диспансеризации с помощью сетевой версии КМСД по технологии ФСД-экспресс-диагностики нозологических рисков, ранних (латентных) и манифестных стадий заболеваний.

Результаты выполнения пилотного проекта показали, что удаленная (телемедицинская) ФСД-экспресс-диагностика на скрининговом этапе диспансеризации обеспечивает раннюю диагностику распространенных заболеваний по основным системам организма. По сути, этот результат является первым прецедентом успешной реализации старой идеи введения скринингового этапа диспансеризации.

Ранняя диагностика на скрининговом этапе диспансеризации призвана обеспечить повышение эффективности первичной медицинской помощи, которая, в свою очередь, вносит основополагающий вклад в повышение эффективности всей отрасли здравоохранения.

Отметим, что ранняя диагностика – это ключ к раннему лечению и профилактике не только первичных заболеваний, но равно – рецидивов и осложнений. В частности, вторичная индивидуальная профилактика и раннее лечение (на латентной стадии развития процесса) сосудистых нарушений, прежде всего коронарных и мозговых, позволит многим пациентам избежать инфаркта миокарда или инсульта.

40 лет, прошедшие после Алма-Атинской декларации по первичной медико-санитарной помощи показывают, что больших успехов пока нет. Политические призывы проблему не решают, но они помогают осознавать ее масштаб и значимость. Осознание значимости необходимо, чтобы в случае появления в данной области новой технологии, способной внести существенный

вклад в решение проблемы, этой технологии было уделено соответствующее внимание. Как показано выше, главной для первичной медицинской помощи является проблема ранней диагностики заболеваний и она уже имеет технологическое решение.

Ранняя первичная диагностика способствует повышению эффективности лечения и сохранению здоровья населения, а ранняя вторичная диагностика – уменьшению преждевременной смертности и, тем самым, – улучшению демографической динамики.

ТЕРРИТОРИАЛЬНЫЕ РАЗЛИЧИЯ СМЕРТНОСТИ НАСЕЛЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ ВО 2-ой ПОЛОВИНЕ XX – НАЧАЛЕ XXI СТОЛЕТИЯ

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Рост показателей смертности городского и сельского населения Республики Беларусь начался в 60-х годах прошлого столетия, а показатель смертности сельского населения в настоящее время превышает показатель смертности городского населения Рост смертности населения, в определенной степени связан с увеличением в структуре населения лиц пожилого и старческого возраста. Удельный вес лиц старше 60 лет в общей структуре населения республики с 13,1% в 1970 году увеличился до 19,6 % в 2013 году, при этом, в структуре городского населения до 17,2%, сельского до 27,5%. В результате активной миграции населения из сельской местности в города, в структуре сельского населения возросло число лиц старших возрастов, что обусловливает более высокие показатели смертности населения, поживающего на селе. Различия возрастной структуры, в частности доля лиц пенсионного возраста в структуре сельского населения, обусловливает разницу показателей смертности городского и сельского населения. Исследованию различий смертности населения по типу территории проживания посвящен ряд работ отечественных авторов. Отмечены нарастающие различия смертности городского и сельского населения на основе оценки грубых показателей смертности с 1.3 раза в 1960 году до 2.4 раза в 1985 году и 2.2 раза в 2001 году.

Оценка сверхсмертности (далее ССМ) сельского населения представляет научно – практический интерес для широких кругов исследователей и руководящих работников здравоохранения. В связи с этим, исследование влияния изменения возрастной структуры населения на различия смертности по территориальному признаку является актуальным направлением научно – практических исследований медико – демографических процессов. Результаты изучения различий смертности городского и сельского населения являются необходимой информацией для разработки и принятия научно - обоснованных решений по сохранению и укреплению здоровья населения, могут быть

использованы для оценки эффективности программ по обеспечению демографической безопасности.

Цель исследования: определить динамику различий смертности населения Республики Беларусь по типу территории проживания и оценить влияние изменения возрастной структуры населения на территориальные различия смертности

Объект и методы исследования: медико – демографические показатели здоровья населения. Проведен расчет грубых (ГПС) и стандартизованных (СПС) показателей смертности методом прямой стандартизации по Standard "World", одобренному ВОЗ (2000), индексов сверхсмертности (ИССМ) и отношений СПС городского и сельского населения Республики Беларусь за 1959 – 2016 годы.

Результаты и обсуждение: В 1959 году ГПС сельских жителей 8.52‰ превышали значение ГПС городских жителей 6.00 ‰ в 1.42 раза. Сравнение ГПС смертности сельского и городского населения в 1959 – 2016 гг. на основе вычисления ИССМ показало, что минимальные различия 1.35 значений ГПС сельского 7.13‰ и 5.27‰ городского населения наблюдались в 1961 году. Максимальные различия отмечены в 1985 году, когда ГПС сельских жителей 16.48‰ превысил ГПС городских 6.98‰ в 2.36 раза. То есть, за 24 года (1961 – 1985) различия смертности увеличились в 1.7 раза. На протяжении 2012 – 2013 и 2015 – 2016 годов различия смертности городского и сельского населения продолжали оставаться на уровне 2.17. С 2.36 в 1985 году ИССМ снизился к 2016 году до 2.17, когда соответствовал по значению различиям уровня 1992 и 1994 годов. Мера возвращения к этому уровню составила 22 и 24 года соответственно.

В 1959 году СПС сельских жителей 8.15‰ превышало значение СПС городских жителей 8.09 ‰ на 0.06‰. Превышение значений СПС городского населения над СПС сельского населения в период с 1960 по 1969 гг. снижалось и в 1969 году достигли минимального значения 0.87, когда на 100 умерших городских жителей приходилось 86 умерших сельских жителей. В последующем превышение значений СПС сельских жителей над СПС городских жителей привело к росту различий, которое достигло максимального значения 1.45 в 2011 году. На 100 умерших горожан приходилось 145 умерших сельских жителей. За 42 года (1969 – 2011) эти различия увеличились в 1.6 раза. С 2011 года происходит снижение отношения СПС городского и сельского населения. К 2016 году отношение СПС достигло значения 1.40, что соответствует значению отношения СПС 2009 года., когда оно составляло 1.41. Мера возвращения к этому уровню составила 7 лет. На протяжении 1959 – 2016 гг. значения ИССМ превышали значения отношения СПС сельского и городского населения. Минимальные значения этих показателей разнились в 1.5 раза, а максимальные в 1.6 раза. Период роста отношения СПС сельских сельского и городского населения (1969 - 2011) составил 42 года и был на 18 лет продолжительнее периода роста значений ИССМ (1961 – 1985). При этом, значения ИССМ и отношения СПС увеличились в 1.7 раза и 1.6 раза соответственно.

Таким образом, значения ИССМ не полной мере характеризуют различия смертности городского и сельского населения. Анализ различий смертности населения по типу территории проживания показал, что изменение возрастной структуры населения потенцировало различия смертности городского и

сельского населений. Выявленные различия были не только более выражены по сравнению с отношением СПС, но и имели отличие по продолжительности и времени периода роста. Более низкие значения отношений СПС сельского и городского населения по сравнению с традиционно рассчитываемыми для оценки различий смертности по территориальному признаку ИССМ, свидетельствуют о менее выраженных различиях смертности населения по типу территории проживания. Минимальные значения ИССМ в 1.6 раза превышали минимального значение отношения СПС городского и сельского населения. Различие максимальных значений ИССМ в 1.5 раза превышало отношения СПС городского и сельского населения. За период 1959 – 2016 гг. различия смертности населения Республики Беларусь по типу территории проживания на основании оценки отношения СПС увеличились в 1.6 раза на основании оценки ИССМ были в 1.7 раза.

Выводы:

1. Изменение возрастной структуры населения Республики Беларусь в 1959 – 2016 гг. потенцировало степень различий смертности городского и сельского населения.
2. Минимальные различия смертности населения Республики Беларусь по типу территории проживания наблюдались в 1969 году, которые к 2011 году увеличились в 1.6 раза.
3. В результате реализации комплекса государственных программ по сохранению и укреплению здоровья населения Республики Беларусь с 2011 года наблюдается снижение различий смертности городского и сельского населения.

HYPODYNAMIA AND OVERWEIGHT IN THE POPULATION OF THE REPUBLIC OF BELARUS

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Introduction: The analysis of the results of several population and group studies conducted in the Republic of Belarus for evaluating the prevalence of overweight and hypodynamia and the experience of interventions for the period from 1997 to 2017 has been carried out.

Materials and methods: All studies have been conducted in the groups of adult population and included the anthropometry and questionnaires. The first study was carried out within the program “CINDI” (“Countrywide Integrated Noncommunicable Disease Intervention”) in 1997-2002. The study STEPS 2016 was conducted in 2016-2017 and used the methodology of the same name proposed by the World Health Organization. A fragment of the study within the program “Generations & Gender Survey” (GGS, 2017-2018) was aimed at estimating the prevalence of overweight and high body mass index values among the population and their impact on self-assessment of health.

Results: In the Republic of Belarus, 9 demonstration projects of the program "CINDI" have been implemented with assessing the nutritional status and physical activity. The most significant and long-term project concerned the assessment of risk factors for cardiovascular diseases in the urban men aged 40-59 years (more than 2000 people). High baseline body mass index and hypodynamia indicators made 15,3% and 10,2%, respectively. The scope of intervention included the impact on risk factors (including smoking); primary and secondary prophylaxis of cardiovascular diseases (control and correction of hypertension and hypercholesterolemia); systematic follow-up for 5 years. The intervention resulted in decreased risks of cardiovascular diseases (caused by hypertension and ischemic heart disease) against the background of an increased number of persons with excessive body weight (+4,0%) and without any dynamics in physical activity indicators. The results of the study STEPS 2016 in the Republic of Belarus have demonstrated that 60,6% of adults present with excessive body weight (body mass index >25 kg/m^2), while a quarter of respondents (25,4%) are obese. Low physical activity (less than 150 minutes a week) has been revealed in 13,2% of respondents. During three years preceding the study, 42,7% and 41,0% of respondents were receiving medical recommendations to normalize body weight and were informed about the importance and need in physical activity, respectively. A fragment of the study "Generations & Gender Survey" has revealed the trend to an increased proportion of people with excessive body weight associated with age, the maximum values being recorded in the age group 60-69 years, reaching 62,0% in men and 74,0% in women.

Conclusion: The problem of overweight is very important for the adult population of the Republic of Belarus. Low physical activity is typical for 10,0-13,2% of the population. Respondents show the adherence to take medication, control blood pressure and biochemical values, while they have a low motivation to change their food behavior and bring the caloricity of nutrition in accordance with their physical activity. That is why the prophylactic activity of the primary medical care should be obligatorily complemented by long-term demonstration projects that provide individual, group and populations levels of intervention, with a subsequent countrywide intervention.

ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ ЗАГОТОВКИ ПЛАЗМЫ ДЛЯ КЛИНИЧЕСИХ ЦЕЛЕЙ И ФРАКЦИОНИРОВАНИЯ

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Введение: В Республике Беларусь плазма крови заготавливается из дозы крови методом центрифугирования, а также методом плазмафереза. Автоматический плазмаферез - процедура заготовки плазмы крови с использованием автоматических сепараторов крови, основным принципом работы которых является экстракорпоральное сепарирование (разделение) крови на плазму и клеточные элементы с возвратом донору собственных клеточных элементов крови во время проведения процедуры. Автоматический плазмаферез

проводится в соответствии с инструкцией завода-изготовителя и стандартными операционными процедурами организации переливания крови с интервалом не менее 14 дней между донациями плазмы (максимальный объем забора компонентов крови суммарно в течение календарного года не должен превышать 20 л).

Цель: Разработать технологию получения донорской плазмы методом автоматического плазмафереза с потенциалом увеличения общего объема её заготовки для клинических целей и фракционирования.

Материалы и методы: Проведены среднеинтенсивные плазмаферезы в исследуемой группе доноров (36 человек), контрольную группу сравнения составили 28 доноров. С использованием гематологических, биохимических, иммунологических и клинических методов проводили обследование доноров обеих групп с последующей статистической обработкой данных.

Результаты и обсуждение: Разработан и апробирован алгоритм донаций плазмы методом автоматического афереза по схеме умеренной интенсивности (10 процедур в цикле с интервалами 7 дней между процедурами и 4-6 недель между циклами). Разработка позволяет увеличить среднегодовой объем заготовки плазмы от одного донора на 30 %, что даст возможность иинтенсифицировать получение различных спецификаций плазмы для удовлетворения потребностей клинической практики в плазме для переливания и в лекарственных средствах, произведенных методом фракционирования плазмы. Показано, что процедуры среднеинтенсивного плазмафереза не оказывают негативного влияния на гомеостаз организма доноров, включая изоиммунных доноров. Разработаны алгоритмы расчета необходимых запасов плазмы различных спецификаций (плазмы доноров-мужчин, редких групп крови, цитомегаловирус- негативной, др.).

Выводы: Предложенный алгоритм донаций плазмы методом автоматического афереза по схеме умеренной интенсивности позволит увеличить количество плазмы-сырья для производства необходимых организациям здравоохранения препаратов их плазмы крови человека, а также повысить качество и безопасность плазмы для клинического применения

Ключевые слова: *доноры, среднеинтенсивный автоматический плазмаферез, плазма для клинических целей, плазма-сырье*

МОТИВАЦИЯ ТРУДА В ЗДРАВООХРАНЕНИИ БЕЛАРУСИ VS ХИТ-ПАРАД НАГРАД

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В каждой общественно-экономической формации действует своя система стимулирования к труду. Характер и содержание стимулов определяются общественными отношениями, уровнем развития производительных сил, традициями, взглядами, нравами. Для того, чтобы стимулирование труда было эффективным должны соблюдаться его основные требования. К ним относятся: комплексность, дифференцированность, гибкость и оперативность.

Обойтись без наград, премий не удавалось ни одному государству. Верных сынов отчизны награждали не только землями или деньгами, но и перстнями, табакерками и даже кафтанами.

Раньше всех стали награждать военных, в том числе врачей, отличившихся во время боевых действий. По достоинству была оценена работа морских врачей в Крымскую войну 1853-56 гг. Ф.И.Зброжеку пожаловано три ордена и подарок по чину, 1855. Врач награжден орденами св. Анны 2 ст., св. Станислава 2 ст. с мечами, перстнем с бриллиантами. По окончании военных действий Ф.И.Зброжек работал вольнопрактикующим врачом в Гродно и затем в м. Друзгеники Гродненской губернии.

Врач Бусман М.О. (ум. 1852, Могилев, 67-ми лет от роду) за участие в Отечественной войне 1812 г. получил в награду бриллиантовые перстни "За отличное искусство при пользовании и деятельность, оказанную в подаянии пособия во время сражений". В 1832 г. ему пожалован бриллиантовый перстень.

Врач Табаровский В.П. (р. 1783) награжден бриллиантовым перстнем за военную кампанию с турками, 1811.

К царским подаркам относятся и табакерки, как правило, с портретом царя. Заведующий Витебской больницей Сварика А.В. (р. 1752) награжден золотой табакеркой за искусство и неустанные труды в разведении плантации ревеня в Витебске, 1807. Подарок сопровождался "высочайшим рескриптом" — личным посланием императора. Награждаемый имел право отказаться от табакерки и получить ее стоимость деньгами. В 1892 году положением о наградах было установлено, что единовременные денежные выдачи не могут превышать годового оклада.

За добросовестную службу король польский Станислав II Август IV Понятовский наградил доктора медицины Вириона К.-И. (1749, Нанси, Франция — 1817, Несвиж) золотой медалью и подарил 2-этажный каменный дом в Гродно, 1793.

Царскими подарками гордились и включали упоминание о них в собственный титул.

Большое значение в системе мотивации имели премии молодым ученым-медикам, для которых меценаты и состоявшиеся крупные ученые учредили немало наград. Как правило, это осуществлялось следующим образом: в банк ложилась определенная сумма денег, проценты с которых и выплачивались в качестве премии. Так, например, в 1850 году Николай I утвердил положение об Ивановской премии: "По желанию покойного председателя Екатеринославской казенной палаты, действительного статского советника Иванова... оставленный завещателем капитал в 5 тыс. руб. внести в Опекунский совет для приращения процентами, и, когда он возрастет до 40 тыс. руб., предоставить Академии Наук, отделив 10 тыс. руб., употребить из них 7 тыс. руб. в награду за лучшее сочинение 'О премудрости и непостижимости Творца вселенной', а остальные на напечатание оного, затем 30 тыс. руб. обратить в неприкосновенный капитал... и получаемые через каждые 50 лет проценты употреблять... в награду за сочинение по части нравственной и физической".

Сочинение доктора медицины и хирургии Грум-Гржимайло К.И. (1794, Могилев — 1874, Царское Село) «Монография паховых грыж» удостоено

половины Демидовской премии (две с половиной тысячи рублей государственными ассигнациями).

Премией профессора, доктора медицины И.Ф.Буша удостоены Богдановский Е.И. (1833, д. Подсолтово Мстиславского уезда Могилевской губернии — 1888, С.-Петербург) и Костюрин С.Д. (1853, Николаев — 1898, Ялта).

Брайцев В.Р. (1878, с. Забелышино Климовичского уезда Могилевской губ. – 1964, Москва) в 1910 году защитил диссертацию на степень доктора медицины по теме «Рак прямой кишки, оперативное его лечение», за которую был удостоен почетной премии имени профессора И.Н. Новацкого.

Августинович Т.М. (1810, м. Кривичи Минской губ. — 1891, Свенцяны Виленской губ.) за атлас и гербарий удостоен Медико-хирургической академией в Вильно денежной премии 300 рублей серебром.

Голынец Л.И. (1858, м. Головчин Могилевской губернии — 1895, Воронеж) в связи с успешным окончанием учебы в С.-Петербургской Военно-медицинской академии удостоен именной денежной премии Пальцева, 1882. На эксклюзивность премии указывает то, что ею были отмечены такие будущие медицинские светила России как Бехтерев В.М., Оппель В.А., Боткин Е.С.

Пришедшие в 1917 г. к власти большевики не отказались от различных поощрительных средств. Нуждаясь в квалифицированных специалистах, большевики были готовы сохранить за ними не только высокие зарплаты, но и систему премий. "Необходимо оставить на известное время более высокое вознаграждение специалистов,— писал в 1919 году В. И. Ленин,— чтобы они могли работать не хуже, а лучше, чем прежде, и для той же цели нельзя отказываться от системы премий за наиболее успешную и особенно за организаторскую работу; премии будут недопустимы при системе полного коммунизма, но в переходную эпоху от капитализма к коммунизму обойтись без премий нельзя, как свидетельствуют и теоретические соображения, и годичный опыт советской власти".

В советское время труд врачей, ученых-медиков Беларуси отмечался значимыми наградами. Это были оружие, отрез ткани, пара сапог или ботинок, полтора пуда муки, мешок картошки, комплект нательного белья, путевка на учебу (повышение квалификации) или на отдых.

Душман А.Д. (1889, Минск—1949) награжден орденом Красного Знамени (РСФСР) и почетным революционным оружием (приказ Революционного военного совета республики № 156 от 1922 г.).

Врач Минска Лапидус Р.И. (1889 — 1973, Минск) постановлением президиума ЦП союза Медсантруд к 14 годовщине Октябрьской революции премирован бюстом Ленина как лучший ударник, 1934.

Заведующая Шкловской больницей Мышковская Н.Я. (р. 1878) в честь 30-летия врачебной деятельности премирована НКЗ БССР 3-месячной научной командировкой в Москву, Ленинград и путевкой в Кисловодск, 1935.

Выдающийся хирург СССР Сапожков К.П. (1874, Сестрорецк — 1952, Иркутск) отмечен денежной премией академика Н.Н.Бурденко 2-й степени, 1946.

Работе Смулевича Б.Я. (1894, г. Влоцлавек Варшавской губернии—1981) «Критика буржуазных теорий и политики народонаселения» (М., 1959) присуждена АМН СССР премия им. Н.А. Семашко, 1960.

Школьников Л.Г. за монографию «Повреждения таза и тазовых органов», которую он написал в соавторстве, стал Лауреатом премии имени Н.И. Пирогова, 1966.

Многие из наград сомнительны, забыты, девальвированы и дискредитированы. Например, в России в XIX веке любой желающий мог внести в казну 20–30 тысяч рублей и за это ему выдавали орден Св. Анны («Анну на шею»).

Некоторые награды не потеряли своего значения и в настоящее время. Горбатовский В.-Н.К. (р. 1862, д. Слижи Могилевской губернии) удостоен премии имени Э.Х. Икавитца. Эдуард Христианович Икавитц (1831, Москва — 1889) - российский врач, хирург, доктор медицины, общественный деятель. Перед смертью он завещал 1000 рублей для ежегодных премий представителям медицины за лучшие научные работы в области биологии, химии, медицины. Премия имени Э.Х. Икавитца существует в наше время.

Если анализировать другую сторону процесса – научные труды, действия, поступки за которые происходило награждение, то некоторые из них с позиции сегодняшнего дня спорны, неоднозначны. Однако многие работы не потеряли своего значения и в наши дни. Награды действительно справедливы и заслужены. Один из основоположников гигиены детей и подростков в СССР Гуткин А.Я. (1894, г. Витебская губ.—1964) совместно с архитекторами А.С. Гинцбергом и Л.Е. Ассом спроектировал детский сад, отмеченный премией и ставший типовым для многих регионов СССР. А.Я. Гуткин сформулировал идею блочной школы, которая воплощена в типовом проекте, разработанном совместно с архитектором А.С. Гинцбергом и Л.Е. Ассом.

Главной премией страны являлась Сталинская премия, учреждена в 1939 году, во время празднования шестидесятилетнего юбилея И. В. Сталина. Эльберт Б.Я. (25.12.1890 (06.01.1891), Дубно Волынской губ. – 19.12.1963, Минск) за успешную работу по созданию биологического оружия на основе бактерии туляремии удостоен Сталинской премии (вместе с Н.А.Гайским), 1946. Сумма вознаграждения — 100 000 рублей.

В постсоветский период прежняя стимулирующая система рухнула. Затем государство вновь взяло это дело в свои руки, о чем, в частности, свидетельствуют многочисленные законодательно-нормативные акты и премиальные инициативы последнего времени.

На протяжении веков происходила выработка системы поощрения и стимулирования труда. Как показывает отечественный опыт, сбалансированная и обоснованная система стимулов с учетом традиций и исторической практики позволяет повысить лояльность граждан, воздействовать на людей для успешного выполнения задач, стоящих перед страной, социальной группой или организацией.

ПЕРЕДОВОЙ МЕТОД УВЕЛИЧЕНИЯ ЭФФЕКТИВНОСТИ ТРУДА: НОВОЕ МЕСТО ПОМОЩНИКА ВРАЧА В МОДЕЛИ ОКАЗАНИЯ ПЕРВИЧНОЙ МЕДИКО-САНИТАРНОЙ ПОМОЩИ НА ПРИНЦИПАХ «БЕРЕЖЛИВОЕ ПРОИЗВОДСТВО»

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Актуальность: Стратегия политики Здоровье–2020 направлена на поддержку действий белорусского государства и общества по «значительному улучшению здоровья и повышению уровня благополучия населения, сокращению неравенства в отношении здоровья, укреплению охраны общественного здоровья и обеспечению наличия универсальных, устойчивых и высококачественных систем здравоохранения, ориентированных на человека».

Цель исследования: изучение становления профессии помощника врача (Пвр) и поиск нового места в организационно-функциональных моделях оказания первичной медицинской помощи (ПМП) на принципах «Бережливое производство».

Задачи исследования:

1.Определить динамику развития за 2011-2016 гг. и место Пвр в организационно-функциональных моделях оказания ПМП

2. Анализ возможностей применения новых технологий типа «Бережливая поликлиника» в работе Пвр.

Методы исследования: аналитический, графический, математической статистики, SWOT-анализ – метод стратегического планирования, используемый для оценки факторов и явлений, влияющих на проект или предприятие. Все факторы делят на 4 категории: Strengths – сильные стороны; Weaknesses – слабые стороны; Opportunistic – благоприятные возможности и Threats – угрозы, риски.

Результаты: Система здравоохранения Республики Беларусь динамично развивается, как возрастает и число Пвр в 2010-2017 гг. Фактическая потребность данных специалистах в 2013 г. составляла 1236 человек и постоянно изменяется согласно запросам практического здравоохранения, составляя в 2017 г. 1734 человек.

Анализ существующей модели оказания ПМП свидетельствует о ее достоинствах и недостатках (табл.1). Введение должности специалиста Пвр позволило повысить эффективность через использование механизмов типа «Бережливое здравоохранение».

Таблица 1 – Анализ модели Пвр по оказанию ПМП

Достоинства	Недостатки
Оказание комплексной медицинской помощи (диагностика, лечение, реабилитация, профилактика)	Отставание нормативной базы от реалий социально-экономической политики
Выше доступность консультативной помощи для Пвр, коллегиальность в принятии решений	Несоответствие внутренней структуры амбулаторно-поликлинической организации

	(АПО) и содержания работы Пвр современным подходам, следствием чего становится низкая конкурентоспособность
Система лечебно-профилактических и реабилитационных мероприятий базируется на комплексном оснащении оборудованием, аппаратурой, реактивами, технологиями, алгоритмами медицинской помощи по смежным направлениям	Несовершенный финансовый и экономический механизмы стимулирования деятельности организаций здравоохранения (ОЗ), подразделений и специалистов
Имеются условия для организации работы команды медицинского персонала по разным направлениям	Недостатки в координации и преемственности оказания медицинской помощи на разных этапах (амбулаторный, стационарный, специализированный), консультативных, оздоровительных, медико-социальных организаций

Одним из путей повышения качества ПМП является передача функций немедицинскому персоналу (табл. 2).

Определение места Пвр в новой модели оказания ПМП лежит в плоскости понятий: оптимизация функций Пвр за счет передачи ее части немедицинскому персоналу; перераспределение функций врача и Пвр по содержанию профилактической работы; изменение содержания имеющихся функций и пересмотр норм нагрузки на Пвр по системе 5С.

Таблица 2 – Варианты предложений по передаче функций немедицинскому персоналу при оказании ПМП

Функции	Варианты предложения
Ведение документации	Пвр, медицинская сестра (МС)
Сопровождение пациента по маршруту к др. специалисту	Регистратор
Оказание всего объема доврачебной помощи	Пвр
Обеспечение консультативной помощи в «Школе пациента» по	Пвр, валеолог

формированию здорового образа жизни	

«Бережливое производство» - передовой метод увеличения эффективности труда согласно концепции управления организацией, направленный на повышение качества через минимизацию всех возможных издержек. Его применение в организации труда в здравоохранения не может использоваться, как калька в полной мере и сопряжено с рядом особенностей: инструменты «Бережливого здравоохранения» переработаны для медицинской деятельности; система Lean, как логическое развитие управления в японском менеджменте, включает большое число инструментов и методик, перечислить которые сложно в силу зависимости применяемых инструментов от конкретных задач в медицине.

Основные инструменты и подходы управления, входящие в состав инструментов «Бережливого производства»: точно в срок - подход к управлению на основе потребительского спроса на какой-то вид медицинской помощи, позволяющий производить продукцию в нужном количестве в нужное время; улучшение качества (подход к управлению через непрерывное улучшение качества предоставляемой помощи, когда все сотрудники активно работают над совершенствованием деятельности); 5S – методология улучшения, входящая в состав подхода Кайдзен, позволяющая сократить потери вследствие плохой организации рабочего места; андон (визуальная система обратной связи при оказании медицинской помощи, дающая возможность всем видеть состояние работы других и себя, предупреждает о необходимости помощи коллегам, позволяет исполнителям медицинской помощи остановить производственный процесс в случае возникновения проблем). Продолжением инструментов управления являются также: Канбан – система регулирования потоков материалов и товаров внутри организации здравоохранения и за ее пределами с поставщиками, заказчиками, что позволяет сократить потери, связанные с запасами и перепроизводством; SMED (система, позволяющая сократить потери времени, обусловленные подготовкой медицинской аппаратуры, рабочего места к использованию; стандартизация работ - элемент подхода кайдзен, позволяющий документировать процессы; poka – Yok – метод моделирования ошибок и их предупреждения при оказании медицинской помощи, позволяющий сократить потери.

Анализ возможности применения концепции «Бережливого производства» в деятельности АПО позволяет выделить ее достоинства и недостатки (табл. 3).

Таблица 3 – Возможные достоинства и недостатки применения концепции «Бережливого здравоохранения» в деятельности АПО

Достоинства	Недостатки
Возможность сотрудничества в команде медицинских работников (врач – Пвр - МС)	Недостаточное число Пвр в АПО

Повышение доступности медицинской помощи	Недостаточное финансирование на обеспечение особого рабочего места Пвр, его сумки-укладки, оснащение кабинета
Удовлетворенность пациента качеством и сроками получения МП	Отсутствует разница в зарплате за сложность и напряженность труда Пвр и терапевта участкового, семейного врача
Организация информационных потоков экономит время пациента	Не решен вопрос этичности предоставления медицинских услуг за дополнительную плату
Улучшение маршрутизации в зависимости от цели посещения ОЗ (профилактическая, лечебная, оздоровительная)	Несовершенство IT навыков и программного обеспечения работы Пвр, МС
Эффективное использование имеющихся площадей ОЗ	Психология рентных отношений с низкой приверженностью к культуре профилактики населения
Устранение временных потерь в очередях, при передвижении по ОЗ, при составлении отчетности, при осмотрах	Недостаточная доступность IT программ для работы в системе АПО

Выводы.

1. Исходя из применения 5С принципов организации рабочего места Пвр, согласно концепции «Бережливого здравоохранения», необходима подготовительная работа руководителя к мотивации людей для работы в команде:

– повышать эффективность труда за счет новых организационных технологий;

– внедрять новые организационные модели оказания медицинской помощи в АПО силами Пвр;

– постепенное обучение кадров в системе дополнительного образования взрослых;

– снижение уровня ошибок за счет внедрения организационных технологий, регулирования норм нагрузки, новых организационных технологий и совершенствования психологии делового взаимодействия с пациентом.

2. Передовым методом по увеличению эффективности труда помощника врача может стать применение модели оказания ПМП на принципах «Бережливое производство», устранив недостатки применения концепции «Бережливого здравоохранения» в деятельности АПО и передав часть функций немедицинскому персоналу.

PREVENTION OF INFECTIOUS DISEASES (VACCINATION)

EFFICACY AND SAFETY OF OMBITASVIR/PARITAPREVIR/RITONAVIR ± DASABUVIR±RIBAVIRIN IN PATIENTS TREATED AT THE CLINIC FOR INFECTIOUS DISEASES REPUBLICA SRPSKA BANJA LUKA

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Introduction / Purpose: It is estimated that around 130-150 million people worldwide are suffering from Hepatitis C, chronic infections can lead to severe liver disease, liver cancer and death. We evaluated the efficacy and safety of therapy with ombitasvir/ paritaprevir/ritonavir (OBV/PTV/RTV), dasabuvirom (DSV) and ribavirin (RBV) in patients with chronic hepatitis C.

Methods: We showed patients with HCV genotype 1 and 4 infection with and without cirrhosis treated with dasabuvir / oupitasvir / paritaprevir / ritonavir during 12/24 weeks, in order to achieve a stable virological response. The primary end point was the stable virological response rate at 12 weeks after the end of the treatment. The second point was the assessment of drug safety in our patients.

Results: This study included a total of 55 patients. RBV is given to all patients except those with HCV subgenot 1b. DSV was not used in patients infected with HCV genotype 4. For most patients, the duration of treatment was 12 weeks. Eight patients with liver cirrhosis who were infected with HCV genotype 1 had a 24-week duration. Vivoemia was evaluated at four points in time: at the beginning, 12 or 24 weeks after the onset of treatment (end of treatment) and 12 weeks after the end of the treatment (stable viral response - SVO). Complete ETR after 12 weeks of treatment was achieved in 47 patients, while in 8 high risk patients achieved after 24 weeks of treatment. Complete SVR was observed in all patients 12 weeks after treatment was completed. This therapy was well tolerated and mild side effects were observed only in 10 patients. Treatment of patients with chronic HCV infection with OBV / PTV / RTV + DSV + RBV resulted in excellent antiviral activity and mild side effects. During the year 2018, 30 patients were treated, out of which 15 had a viral response at the end of treatment, and the rest were in the period of follow-up of the final outcome of the treatment.

Conclusion: The therapeutic regimen applied to our patients gave a high rate of stable viral response with good drug tolerability. The therapeutic regimes in the Republic of Srpska need to be aligned with the new European guidelines from 2018.

Key words*: hepatitis C, viral response, interferon free therapy.*

MEASLES–THE IMPORTANCE OF VACCINATION

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Introduction: Measles is a highly contagious, acute infective disease with exanthema. Together with scarlatina, large cough, rubella and varicella are considered the one most common disease of childhood. No nation, no race has a natural immunity. After a person was survived the disease gets a life time immunity. Vaccination against measles as the most effective preventive messure implemented during the seventies of

the twentieth century. In the BiH MMR vaccine is an obligation since 1980 years. If enough people are not vaccinated, then an epidemic can occur.

Methods: A retrospective study included 170 patients who were treated at the University Hospital Foča and the Public Health Institute of East Sarajevo. During the epidemic in the period 2014/2015 years we analyzed the patients by sex, age and vaccinal status. Patients were examined in the following order anamnesis (with reference to socioepidemiological survey and vaccinal status) and physical examination. From laboratory findings: we were more based on: complete blood analysis, C reactive protein, transaminases, radiography of the lungs, ultrasonography of the abdomen. Observation characteristics were subjected to desriptive analyzes (mean value, variability measures). Were analyzed by non parametric an parametric methods. Statistical significance tests used (Hi square test, single factor analysis of variance ANOVA). We used statistical data for statistical data processing SPSS.

Results: From the general number of people only 16,5 % is vaccinated, 5,3% have to recived the full dossages, and with the rest 78,2 % have not been vaccinate or are unknown. A significant difference between the subjects, considering age, complications, comorbidet and laboratory results has not been noticed.

Conslusion: During the civil war 1992-1995 year there was not enough vaccines and the number of inflicted people had risen. Vaccination is the only and the best preventive messure against measles.

MEASLES IN HEALTHCARE WORKERS IN BANJA LUKA DURING THE EPIDEMIC IN 2018.

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Introduction: Nosocomial infection control management includes the set of measures to minimize the risk of transmission of infectious agents within a healthcare settings (including healthcare workers, patients and visitors).

Measles is a very contagious disease which spreads rapidly in healthcare facilities, much faster than influenza for example, and that is the reason why transmission-based precautions and control of vaccination status in healthcare workers should be used in adition to standard precautions.

During May 2017 epidemic of measles was declared in the territory of the city of Banjaluka, with 44 suspected cases of disease and incidence rate 23.15/100000, with

domination of two clusters: patients in Orphanage "Rada Vranješević" and healthcare workers who were exposed to a confirmed case of measles in their healthcare facilities.

The aim of this study is to demonstrate the incidence rate of measles in health care workers and to monitor the implementation of measles infection control measures in healthcare facilities.

Methods: We used descriptive epidemiological method. The WHO measles case definition was used. We analyzed epidemiological, laboratory and clinical data of our patients. The vaccination status of patients was obtained from their medical records or on the basis of information given in anamnesis.

Results: Among the total number of measels cases in epidemic in Banjaluka, 14 cases (31.82%) were healthcare workers. Six of them were medical doctors, four medical nurses, and four medical students. For two patients we couldn't track transmission pathways, while the others were exposed to confirmed cases of measles in their healthcare facilities. Seven patients were hospitalized, and the others had mild to moderate forms of measles without complications. Most of the patients were in the age group of 20-30 years (35.72%), followed by the age group of 30-40 years (28.57%), 40-50 years (28.57%) and 60-70 years (7.14%). The majority of patients were women (92.8%). Vaccination status of patients was as follows: 64.3% were vaccinated (77.78% incomplete and 22.22% complete), 28.6% were not vaccinated, and 7.1% had unknown vaccination status. Vaccinated patients had milder forms of measles, without complications. Laboratory confirmation of a case of disease was performed in 10 patients by ELISA anti-mumps IgM and IgG antibodies, of which four had positive IgG in high titers and other positive IgM and IgG antibodies. In addition to standard infection control measures, there were no prescribed measures to prevent the spread of the virus by droplets.

Conclusion: Healthcare workers have an increased risk of acquiring measles during epidemic. Infection control policies and procedures with everyday monitoring of their implementation together with continuing education for healthcare workers are an imperative. Adequate transmission-based precautions are necessary for healthcare workers as well as the control of vaccination status for all new employees.

ASSESSMENT OF THE EFFECT OF THE USE OF THE MEDICAL PRODUCT VAGINAL PROBIOTIC "NARINE" IN WOMEN WITH BACTERIAL VAGINOSIS

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Bacterial Vaginosis and Causes of Occurence: By its biological nature, the bacterial vaginosis is an inflammation of the vaginal mucous membrane, caused by anaerobic pathogenic bacteria. Normally, about 90% of the vaginal microflora should consist of lactobacillales producing lactic acid which inhibit the growth of pathogenic bacteria.The factors that disrupt the normal vaginal balance are antibiotic treatment, the use of menstrual tampons, sexually transmitted infections, such as chlamydia, mycoplasma, ureaplasma, gonorrhea, hygienic vaginal showers, intrauterine spiral.

In our single center clinical analytical study we used the medical product Vaginal Probiotic "Narine" containing living Lactobacillus acidophilus, strain n.v. Ep 317/402 and their metabolites in a nutrient medium.

Observation Methods: The study included 31 women diagnosed with bacterial vaginosis. Each of them received equal doses the medical product Vaginal Probiotic "Narine" and was under gynaecological observation for 30 days.The medical product Vaginal Probiotic "Narine" was applied in the following way: the patients applied the probiotic in their vagina by themselves, using five applications of 20 ml each night after going to bed, before sleep.During the study, we monitored the effect of the medical product on the dynamics of the corresponding symptoms, the changes in health condition, safety, the morbidity rate during the relevant period of time.The medical assessment of the results is based on the IMOS scale, while the patient satisfaction score is based on the IMPSS scale.

Results: The medical assessment is "complete „recovery" in 15 women, "significant improvement" in 13 women, and "moderate or insignificant improvement" in 3 women. The patient satisfaction score is: "completely satisfied" in 9 women, "satisfied" in 20 women, and "neutral" in 2 women. Objectively, there was an effect and improvement of the symptoms in all women – vaginal discharge, burning, itching and discomfort around the vagina – after the application of the medical product Vaginal Probiotic "Narine". The best results were observed after the 8th day.

Safety: The results show that the medical product Vaginal Probiotic "Narine" is completely safe.

Conclusions:

1. 28 women initially had at least two of the following symptoms: increased amount of whitish or greyish vaginal discharge, unpleasant smell of the vaginal secretion, itching and/or burning sensation in or around the vagina. 3 patients had only increased amount of vaginal discharge.
2. During the last visit, the abovementioned symptoms have disappeared in all women, except two patients with persisting increased amount of vaginal discharge.
3. There was an improvement in the results of the vaginal smear in all women.
4. The medical assessment of the patient condition is:

- complete recovery – 48.4%
- significant improvement – 41.9%
- moderate or insignificant improvement – 9.7%

5. The patient satisfaction score is:

- completely satisfied - 29%
- satisfied - 64.5%
- neutral - 6.5%

Final Conclusion: The medical product Vaginal Probiotic "Narine" has a very good tolerability and effectiveness for vaginal microflora recovery in women with bacterial vaginosis. It provides good conditions for biological inhibition of the pathogenic microorganisms in vagina, which leads to the recovery of the natural balance of the microflora helping for the recovery of the self-regulatory systems.

For higher effectiveness, it is recommended that the manufacturer provides not 5, but 10 applications of the Vaginal Probiotic "Narine".

DIABETES

LABOR DISEASES IN DIABETES

Prim dr Maja Bošković, co-author Dr Radmila Popović

Aim: The aim of this paper is to: Explore more frequent liver disease in diabetic patients than patients who are not in the general health service at the Health Center in Niš.

Method: The study covered 350 diabetics of health care beneficiaries of the Health Center Nis.

Work outcome: Of the treated patients, more than 4/5 diabetics or more than 80% is obese. Very common acute liver inflammation - acute viral hepatitis 2 to 4 times is more common in diabetics. Chronic liver inflammation - Chronic hepatitis and cirrhosis of the liver as the ultimate form of chronic inflammation of this organ more often affect diabetics by 10% more than other patients. The cause of diabetes deaths due to liver cirrhosis is more than 16%, while in people who did not suffer from diabetes 8%.

Conclusion: Liver is particularly sensitive to diabetes. She is swollen in every poorly treated diabetic and very often ill. If obesity is present, the liver is most often steatosis or oily. Fat liver is common in diabetics who are prone to alcoholism. In the treatment of sick liver in diabetics, there is a basic rule: diet, drugs and physical activity of the treated diabetes mellitus can successfully suppress changes in the liver.

PRIMARY PROSTHETIC REHABILITATION IN PATIENTS WITH DIABETES AT INSTITUTE FOR PHYSICAL MEDICINE AND REHABILITATION "dr Miroslav Zotović" DURING 2017 AND 2018

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Introduction: Institute for physical medicine and rehabilitation „dr Miroslav Zotović" is the referent institution for primary and secondary prosthetic rehabilitation following amputations. Diabetes is the leading cause of lower limb amputations. Diabetes mellitus is one of the most common chronic, noncommunicable diseases and a major public health problem that is approaching epidemic proportions globally.

Objective: The goal of this study was to show that the number of diabetic amputees who underwent primary prosthetic rehabilitation at Institute for physical medicine and rehabilitation „dr Miroslav Zotović is increasing, that their average age is decreasing, and to investigate whether the ratio of transfemoral vs.transtibial amputations is changing.

Material and Methods: This was a retrospective study that included all patient who underwent primary prosthetic rehabilitation at Institute for physical medicine and rehabilitation „dr Miroslav Zotović" during 2017 and 2018, and whose main cause of amputation was diabetes mellitus and its vascular complications. Patients were observed within groups divided according to age, sex, level of amputation and final result of rehabilitation. Descriptive statistics was used for data evaluation.

Results: In 2017. **94 patients (62%)** underwent primary prosthetic rehabilitation after lower-limb amputation caused by complications of diabetes, out of

which **80%** were men, and **20%** women. During first seven months of 2018. (01.01.-01.08) **57 patients (60,6%)** underwent primary prosthetic rehabilitation after lower-limb amputation caused by complications of diabetes, out of which **77%** were men, and **23%** women. Average age of these patients in 2017 was **66,11**, and in 2018. this number was **65.** In 2017 64 patients (68%) underwent transtibial amputation, 17 patients (18%) transferomal and 12 patients (13%) bilateral. In 2018 33 patients (58%) underwent transtibial amputation, 18 patients (31%) transfemoral and 6 patients (11%) bilateral. Average age of patients with transfemoral amputation in 2017 was **65 years**, and in 2018 **63 years**. In 2017 out of 94 patients, 86 of them (92%) underwent successful primary prosthetic rehabilitation, and 8 patients (9%) were not evaluated as eligible candidates for prosthesis. In 2018 out of 57 patients, 49 of them (86%) underwent successful primary prosthetic rehabilitation, and 8 patients (14%) were not evaluated as eligible candidates for prosthesis.

Conslusion: The number of lower limb amputations caused by complications of diabetes is increasing, the average age of patients who underwent transfemoral amputation is decreasing, and the ratio of transfemoral vs. transtibial amputations is increasing in the favour of transfemoral amputations.

Key Words: *amputation, diabetes mellitus, prosthetic rehabilitation,*

DIABETES IN BULGARIA – SUCCESSES AND PERSPECTIVES

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Diabetes mellitus is a socially significant disease that poses numerous challenges to any healthcare system. The aim of the presentation is to outline the epidemiology trends and the status of diabetes care infrastructure in Bulgaria. The pathway from diagnosis to treatment and the access to healthcare providers and medicines are described in details. Bulgarian National Diabetes Registry data is used to evaluate the effectiveness of diabetes management in terms of HbA1c levels and life-span of people with diabetes for the period 2012-2016. Health economics studies show that the interventions for improvement of glycemic and metabolic control are cost-effective in Bulgarian settings and should be encouraged in the future. The structured approach toward diabetes management and the introduction of innovative health technologies are shown to be effective in prevention of diabetes complications. National Diabetes Program is assumed to be a pragmatic and effective tool for primary, secondary and tertiary prophylactics of diabetes in Bulgaria, and is a massive opportunity to limit the burden of diabetes.

GYNECOLOGY AND REPRODUCTIVE HEALTH

HUMAN PAPILLOMA VIRUS AS A PRIMARY CERVICAL CANCER SCREENING TEST

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Cervical cancer is the fourth most common cancer in women, and the seventh overall, with an estimated 528000 new cases in 2012. There were estimated 266000 deaths from cervical cancer worldwide in 2012, accounting for 7.5% of all female cancer deaths. With the implementation of cervical cancer screening programs during the past four to five decades, cervical cancer incidence and mortality have declined dramatically in developed countries. The success of Papanicolau (Pap) test to detect early stage of cervical cancer and precancerous lesions lies in the natural history of cervical cancer precursors. As science is developing, it is proved that HR HPV anogenital types are meritorious for cervical cancer development. Current cervical cancer prevention programs are designed according to their natural history and are consisted of five parts: 1. Screening (normal women), 2. Triage of equivocal screening results with another co test, 3. Histologic prove of abnormal screening results, 4. Post-colposcopy follow up, and 5. Post-treatment follow up. With the invention and development of liquid-based cytology, certain disadvantages of the conventional cytology has been overcome. Nevertheless, HPV testing has 25-35% higher sensitivity than cytology, but lower sensitivity, 5-10% for detecting high grade lesions. The so called co-testing (Pap and HPV) achieves very high sensitivity and negative predictive values, but the disadvantage of this is an increased rate of needed further evaluation. Current studies performed has shown that current screening policy (Pap test every three years) is less cost-effective than HPV DNA test every five years. The U.S. Food and Drug Administration in April 2014 approved the first HPV DNA test for women under 25 and older, that can be used alone to help a healthcare professional to decide whether additional diagnostic test are needed to be performed. The test can also provide the information of the patient's future risk for cervical cancer. All previous mentioned lead to the conclusion that, organized screening programs should consider accepting HPV testing as a primary cervical cancer screening test especially in women above 30 years old, thus remembering that, to achieve the maximum benefit of screening we should continue to identify women who are unscreened or under-screened.

SEXUAL DYSFUNCTION IN INFERTILE COUPLES

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Background: The physical health and emotional well-being of many individuals and couples of reproductive age are significantly affected by infertility. Sexual function is one of the important components of health and overall quality of life.

Methods: The relation between sexual disorders and infertility outlines the potential effects of diagnostics and treatment in the context of reproductive medicine on the couples' sexuality. We conduct research using the well-established medical and

psychological literature database with the keywords "infertile" or "infertility" and "sexual dysfunction" or "sexual satisfaction."

Results: Sexual dysfunctions of organic or of psychological origin as a cause of infertility are relatively unusual. We found that temporary sexual disorders resulting from diagnosis and medical therapy are common in couples with fertility problems, with women more frequently affected than men.

The prevalence of sexual dysfunction in group f infertile couples is probably higher comparing to couples who don't have fertility problems. The role of demographic factors, relationship parameters, and infertility per se in the prevalence of sexual dysfunction in infertile couples remains to be determined.

Conclusions: The role of the infertility expert is to address all the problems connected with infertility and should involve counseling for couples which should include specific approach to addressing sexuality and sexual disorders.

NON-INVASIVE PRENATAL DETECTION OF FETAL MATURITY USING ULTRASOUND EVALUATION OF FETAL THALAMUS

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Background: Neonatal respiratory distress syndrome is one of the biggest causes of fetal mortality with approximately 1 000 000 death cases in 2013. It is the leading cause of fetal mortality in nearly all cases of preterm birth. Our motive was to perform a study that will give a little contribution to the world science in reducing the fetal mortality by timely determination of fetal maturity with non-invasive method, thus giving the opportunity of timely treatment with optimal dose therapy for fetal lung maturation.

Methods: We have examined 100 patients, 50 with impending preterm birth, and 50 control cases. The study was performed at the University Clinic for Gynecology and Obstetrics, Medical Faculty, University "Ss. Cyril and Methodius", Skopje, Republic of Macedonia. The fetal maturity was examined before and after treatment for fetal lung maturation by non-invasive technique using the ultrasound signal transformations of the fetal thalamus compared to the surrounding brain tissue. All patients were divided into five groups according to their gestational week. The patients were followed for up to 72h and then the results were compared with the standard procedure for detection of postpartum respiratory distress syndrome. If the patients were not delivered, they were excluded from the study.

Results: In our study we have found that with the increasing of the gestational week the ratio between signal transformations of the thalamus and the surrounding brain tissue is approaching to 1. This non-invasive technique showed significant difference before and after the administered protocol therapy for fetal lung maturation. The method showed significant correlation with the previously used standard invasive technique for prenatal detection of fetal lung maturation. Regarding the respiratory distress syndrome, our non-invasive technique showed significant results ($p<0, 0001$).

Conclusion: The non-invasive technique for prenatal detection of fetal maturity using ultrasound evaluation of fetal thalamus compared with the surrounding

brain tissue is a method with high sensitivity and specificity and may become the leading technique for prenatal evaluation of fetal maturity. Moreover, this technique may achieve timely treatment with the best therapy response due to adjustment of the administered therapy dose for fetal lung maturation, according to the individual case requirements.

CONSEQUENCES OF INADEQUATELY TREATED DIABETES IN PREGNANCY: FETAL MACROSOMIA – A CASE REPORT

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Background: The term fetal macrosomia is used to describe a newborn with an excessive birth weight. A diagnosis of fetal macrosomia can be made only by measuring birth weight after delivery of the neonate. Fetal macrosomia is encountered up to 10% of deliveries and it is defined as birth weight greater than 90% of weight predicted for gestational age after correcting for neonatal sex and ethnicity (1,2). Factors associated with fetal macrosomia include genetics, duration of gestation, presence of gestational diabetes, and class A, B and C diabetes mellitus. Racial and ethnic factors influence birth weight and the risk of macrosomia. Male newborns weight more than female. Most macrosomic infants do not have identifiable risk factors (2). Fetal macrosomia is associated with neonatal morbidity, neonatal injury, maternal injury, and cesarean delivery (3).

Case presentation: In this case report, we describe childbirth of pregnant woman suffering from diabetes mellitus type 2, which resulted in a birth of a macrosomic newborn, with no signs of life.

A 34-year-old-preganat woman with inadequately treated diabetes mellitus type 2 came in obstetric ambulance of the General hospital Gradiška in her 38th week of preganacy due to nonspecific symptoms, pain in the lower abdomen and general weakness.

After examination in obstetric ambulance blood samples were taken for laboratory tests – complete blood count (CBC): red blood cells (RBC) 4,39 x 10^{12}/L, hemoglobin (HGB) 103 g/L, hematocrit (HCT) 0.335, wihte blood cells (WBC) 12.2 x 10^{9}, lymphocyte (LYM) 11%, mixture of monocytes, basophils and eosinophils (MXD) 13.7%, neutrophils (NEUT) 75.3%, platelets (PLT) 176 x 10^{9}, total bilirubin 7 μmol/l, aspartate animotrasferase (AST) 16 U/l, alanine aminostransferase (ALT) 11 U/l, alcaline phosphatase (AP) 398 U/l, total proteins 68 g/l, glycemia 6.0 mmol/l, hemoglobin A1c (HBA1c) 6.7%, urea 5.2 mmol/l, creatinin 74 μmol/l, normal

electrolytes. Biochemical analyze of urine showed opalescent proteins, positive ketones (+), and in the sediment of urine 14-15 WBC. Blood type was ABO/Rh positive. Blood pressure was within normal limit.

Cardiotocography (CTG) was conducted, and it showed fetal bradycardia (HR 53-58/min). Emergency ultrasound examination also showed fetal bradycardia. The pregnancy was ended by emergency C-section and women gave birth to a male boy, birth body weight was 6695 g and body length was 60 cm. The newborn had characteristic morphology: hypertrophic subcutaneous adipose tissue, round face, scrotal hypertrophy, generalized cyanosis, he was atonic, with no signs of breathing and heart rate (Figure 1). Abgar score was 0/0. After the initial evaluation resuscitation measures were conducted by a pediatrician and anesthesiologist. Twenty minutes of resuscitation showed no improvement in vital signs: newborn wasn't breathing and had no pulse; so intervention has been suspended, and declared a lethal outcome.

Autopsy revealed general organomegaly with myocardial hypertrophy and large stocks of glycogen in the liver.

Hyperglycemia of mother results in the stimulation of fetal insulin, insulin-like growth factors, growth hormone and other growth factors, which, in turn, stimulate fetal growth and deposition of fat and glycogen. Advanced gestational age results in a larger birth weight at delivery by allowing the growth process to continue in utero (3).

Macrosomia in the neonate of a diabetic mother can occur as a consequence of poor glucose control. These infants are at increased risk of intrauterine death and thus require close monitoring and ante partum fetal testing (4). Hyperinsulinemia and hyperglycemia create fetal acidosis, which can increase of stillbirth (5).

Conclusions: In patients suffering from diabetes, a special monitoring during pregnancy is necessary (well-controlled diabetes, ultrasonic monitoring). Birth of diabetic mothers should require cautious approach, due to the increased risk of neonatal complications.

Key words: *Fetal macrosomia, bradycardia, resuscitation, diabetic mother*

DISORDERS OF THE MALE REPRODUCTIVE HEALTH

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Background: Reproductive health is a state of complete physical, mental and social well-being in all areas related to the reproductive system and its functioning in all life cycles. The basis of reproductive health for men are the organs of the reproductive system through androgen homeostasis, spermatogenesis, transport and storage of semen, normal erection and ejaculatory ability. Disorders of these functions lead to infertility injuries, "reproductive system diseases, inability to achieve clinical pregnancy after 12 months or more of uninterrupted unprotected sexual intercourse with a fertile woman."

Methods: The current state of male reproductive health has been analyzed in recent literature. We analyzed the etiology and clinical manifestations of infertility and sexual disorders of our patients, men aged 20-50 years in the period of 2015-2017.

Results: A systematic review of relevant literature indicates that the etiology and pathogenesis of disorders of reproductive health are very complex, especially in the

simultaneous occurrences of male infertility and sexual disorders. Abnormal spermatogenesis can cause many pathological conditions: infections of urogenital organs, varicoceles testis, congenital and acquired anomalies, malignancies, endocrine disorders, genetic anomalies and immune factors. Many chronic diseases, such as vascular, neurological and metabolic diseases, with hormonal and psychogenic disorders, occur usually combined and can lead to infertility and sexual dysfunctions. In literature, the etiopathogenetic relations of reproductive and lifestyle disorders have been reported, especially for: chronic alcoholism, drugs and steroids abuse, the harmful effects of some drugs (antibiotics, antidepressants), cigarette consumption, the effects of metabolic syndrome (obesity, diabetes mellitus, hypertension), exposure to extreme temperatures, toxic substances and radiation.

In practice between 2015-2017, infertility was diagnosed for 365 of our patients.Abnormal parameters of spermogram: Hypospermia:12 (3.2%), Oligospermia: 54 (14.8%), Azoospermia: 8 (2.2%), Asthenozoospermia: 220 (60.3%), Teratozoospermia: 3 (0.8%), Pyospermia: 10 (2.7%), Hyperspermia: 2 (0,5%) and Aspermia: 1 (0,27%)

Possible causes of pathological spermograms: Bacterial etiology: prostatitis 35 (9.6%), orhiepididimitis: 12 (3.2%), Parotitis epidemica: 3 (0,8%), Varicocele: 18 (4.9%), Sexually transmitted diseases: 125 (34.2%), Previous surgery due to varicocele, cryptorchidism, inguinal hernia, hydrocele: 20 (5,4%), Radical orchiectomy due to testicular tumors and oncological treatment: 3 (0,8%), Sexual dysfunction: 32 (8,7%), Erectile dysfunction: 24 (6,5%), Premature ejaculation: 6 (1,6%).

Comorbidity: Diabetes mellitus: 3 (0,8%), Hypertension: 2 (0,5%) , Psychogenic etiology: 27 (7,3%) and Obesity: 18 (4,9%).

Conclusion: Infertility and sexual dysfunction of men are clinical manifestations of complex comorbidity. The etiology and pathogenesis of male infertility are often not clearly defined. For the alarming decline in the total fertility rate the male factor is increasingly responsible. Disorders of male reproductive health are not only a medical but also a global problem of demographic change.

NEUROLOGY, PSYCHOLOGICAL TRAUMA AND MENTAL ILLNESS

BURDEN OF INFORMAL CAREGIVERS OF INDIVIDUALS WITH SEVERE MENTAL DISORDERS

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Introduction: Individuals with severe mental disorders (SMD) mostly require the attendance of a caregiver (CG), especially considering the current tendency for short hospitalization in psychiatric institutions. Most often, CGs are members of the close family, and are usually of female gender.

Goal: To explore all aspects of the burden of CGs caring for individuals with SMD.

Method:A narrative review in Medline via PubMed, EMBASE, Google Scholar, and Cochrane Library was carried out to identify quantitative and qualitative studies investigating the burden of CGs of individuals with SMD using keywords: burden AND caregiver AND severe AND mental AND disorders. Articles were rigorously critically appraised. Data from 46 full articles were used to compile this narrative review.

Results: Analysis of the results of studies reviewed revealed that burden of CGs had three main aspects: socio-economic, psychological distress and mental disorders, and physical disorders. Social isolation, family malfunctioning, stigma, work absenteeism, and financial problems were found. CGs had more psychological distress and lack of emotional support. They felt guilty for causing illness or not helping enough. CGs were much more concerned, sad, energy-drained, frightened, feeling "empty" with sleep disturbances. They were more tired, irritable, unhappy and without interest in important activities, including sex. CGs had a high prevalence of depression, anxiety, substance abuse, and violent behaviour. Higher prevalence of physical illnesses such as hypertension, heart disease, diabetes, was found. Finally, CGs had a higher mortality rate than those of the same age who did not care for individuals with SMD.

Conclusion: Considering these results, family physicians should focus on all aspects of the CG's burden. Working collaboratively with other health and social services they can prevent or reduce the burden. Prevention and early diagnosis of the mental and physical disorders connected with caregiving have to be the ultimate goal.

Keyword: *burden, caregiver, severe mental disorders*

REDUCTION OF LETHAL OUTCOME AFTER APPLICATION OF INTRAVENOUS THROMBOLYTIC THERAPY

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Background: The only medical therapy shown to improve patient outcome in acute ischemic stroke when given in time frame is intravenous thrombolysis. In clinical practise it has been noticed better results in terms of neurogical deficit withdraw, better

functional recovery and lower death rate in patients who have recived thrombolytic therapy as soon as the symptoms of stroke begin. The aim of the study was to investigate the reduction in lethal outcome in patients after receiving thrombolytic therapy

Methods: Retrospective observational study which included 232 patients who were hospitalized in Neurology clinic of the University Clinical Center of the Republic of Srpska from 2007. untill 2018., due to acute ischemic stroke who recived intravenous thromobolytic therapy. The sample is relatively uniform according to gender with 54,7% male, 45,3% female patients. According to age they are categorized into three groups. Data was collected after searching through patients medical history. Statistical analysis is done in softwere package IBM SPSS Statistics 21.

Results: Statistical analysis of data showed that during hospital treatment 27 patients died, which is 11,6% of all patients. Comparing to gender we havn′t found statistical difference, and comparing to all risk factors for stroke we found statistically significant difference between hyperlipidemia and lethal outcomes, were frequency of lethal outcome is higher in patients without hyperlipidemia. Results also showed significant reduction in lethal outcome in patient with shorter " door to needle" time which is 20%. Average duration of hospitalisation patients who died is 6,19 days, that means that lethal outcome came in average at 6 day after the admission. Lethal outcome in 8 patients, 30 % of total deaths, was at first day of hospitalization. During period between 2 and 10 days 14 more patients died, which is about 50% of all, and the other 5 patients or less then 20 % died after 10th day of hospitalization.

Conclusion: Thrombolytic therapy significantly reduces the neurological deficit, improves chances of survival, and reduces permanent disability of patients. Reducing time from hospital arrival to applying therapy contribute in reduction of lethal outcome, so it needs to be reduced to a minimum. Further monitoring of patient after thrombolytic therapy and new guidelines for better outcome, reduction of mortality and wider use of this kind of therapy are needed.

FUNCTIONAL HEAD IMPULSE TEST (F HIT TEST) WITH ACUTE VESTIBULAR SYNDROME (AVS)

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Introduction: Vestibular ocular reflex (VOR) detects head movements and producescompensatory eye movements with the goal of keeping still on the retina the image of the outside world as long as possible. The Functional Head impulse test is an objective method capable of measuring and recording eye movements during this test.

Goal: The main goal of this research is to present the results of the Functional Head impulse test for patients with acute vestibular symptoms caused by the damage of peripheral vestibular parts.

Material and methods: We present the result of the Functional Head impulse test done on a patient who came to the Hospital with acute vestibular symptoms and normal neurological test. We did the testing in the first 24 hours after the first symptoms appeared, then after 3 and 6 months.

Results: The Functional Head impulse test done in the first 24 hours was positive. Neurological tests were normal. MR endocranium test normal. The patient was submitted to vasodilation, vestibular rehabilitation. There was a subjective improvement after 3 months, but the Functional Head impulse test was still positive. After 6 months the Functional head impulse test was negative, a peripheral vestibular sense recovered.

Conclusion: The Functional Head impulse test is the most certain method to detect a onesided complete loss of the function of semi-circular canals. In the early stages of the acute vestibular syndrome HINTS testing (Head impulse test –Nystagmus-Test of skew) is more sensitive than MR for differencing peripheral from central vestibular lesion.

Keywords: *acute damage of vestibular sense, Head impulse test.*

ORAL ANTICOAGULANT THERAPY AFTER ISCHEMIC STROKE IN PATIENT WITH ATRIAL FIBRILLATION AND SECONDARY THROMBOCYTOPENIA – CASE REPORT

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Background: Several prospective randomized studies have demonstrated a benefit of oral anticoagulant therapy in the prevention of stroke in patients with atrial fibrillation. Oral anticoagulants, either vitamin K antagonists or non-vitamin K antagonists (NOAC), effectively reduce thromboembolism associated with atrial fibrillation. Despite the proven benefit and strong desire of patients to prevent stroke, insufficient and improper use of these medications remains a significant problem. The aim of this case report was to present patient with persistent atrial fibrillation without oral anticoagulant therapy due to secondary thrombocytopenia who survived ischemic stroke.

Methods: Male patient, with initals M.S, age 78, was admited in Neurology Clinic of the University Clinical Center of the Republic of Srpska with motor dysphasia and right hemiparesis. NIHSS score (National Institutes of Health Stroke Scale) on admission was 16, which indicate moderate severity stroke. Computer tomography revealed acute ischemic lesion of the left frontoparietal cortex. Initial laboratory results showed low platelet count 90 x 10^9/L (referent values 158-424x10^9/L). In patient medical record we found that he was hospitalized one month earlier in Cardiovascular Clinic because of congestiv heart failure. Diganostic revealed low platelet count (57x10^9/L), perisistant atrial fibrillation on ECG, atrial septal defect type secundum on heart ECHO, and congestiv heart failure with ejection fraction 30% (NYHA III). Hematologist was consulted, the diagnosis of secondary thrombocytopenia was set and further diagnostic examination was also recommended. Cardiologist has initiated application of oral anticoagulant therapy. CHA_2DS_2-VASc score was 4 which indicates

high risk for stroke but the oral anticogulant therapy was not prescribed on discharge due to high risk of bleeding because of low platelet count, HAS-BLED score was 3.

Results: During hospitalization on Neurology clinic, platelet count was monitored, hematologist was again consulted and diagnostic examination was conducted. After all laboratory results came in hematologist then recommended use of oral anticoagulant therapy if the platelet count is always higher than $50x10^9/L$. Cardiologist agreed with folowing recommendation. On 9^{th} day of hospitalization patient started using oral anticoagulant therapy rivaroxaban in dose of 15 mg as secondary prevention of stroke. Therapy was well tolerated, and side effects was not reported. Platelet count was monitored ones a week, and ranged between 70-90 $x10^9/L$. Three and six month follow up was conducted, therapy was still well tolerated, bleeding and side effects was not reported.

Conclusion: In our everyday practice, there are missed opportunities to prevent stroke and our previous failures in improving and implementing prevention strategies should serve as a motive for further work in order to minimize the number of strokes and its consequences.

ROUND TABLE

МЕДИЦИНСКАЯ ОШИБКА МЕДИЦИНСКИЕ И ЮРИДИЧЕСКИЕ АСПЕКТЫ

Д-р Павлина Здравкова**Error! Bookmark not defined.** главный секретарь Правления Софийского медицинского колледжа Болгарской медицинской ассоциации, Д-р Димитр Дамянов, заместитель председателя Правления Софийского медицинского колледжа Болгарской медицинской ассоциации, Юрист Иван Сотиров, юрист Правления Софийского медицинского колледжа Болгарской медицинской ассоциации.

Введение: Юридические и медицинские определения медицинской ошибки, правила хорошей медицинской практики - сравнительный правовой и медицинский режим в Европейском Союзе.

I.Гражданские дела о деликте (статья 45 (1) и (2) Закона об обязательствах и контрактах).

- Ответственность физических лиц - врача и / или группы врачей,

Ст. 45. Каждый человек обязан нанести ущерб, который он виновным причинил другому лицу.

Во всех случаях деликта считается, что вину доказывают обратное.

- Ответственность юридических лиц - медицинских учреждений (договаривающихся органов, работодателей) - по ст. 49 Закона об обязательствах и контрактах.

Ст. 49. Любое лицо, отдавшее работу другому лицу, несет ответственность за ущерб, причиненный им в связи с выполнением этой работы или в связи с ее выполнением.

Прецедентное право: Верховного кассационного суда за присуждение компенсации за материальный и моральный ущерб.

Представление мультимедиа суждениям. Комментарий.

II.Уголовные дела по статье 123 Уголовного кодекса -

Ст. 123. (1) Тот, кто причиняет смерть другому из-за незнания или небрежного совершения профессии или другой юридически регулируемой деятельности, составляющей источник повышенной опасности, наказывается лишением свободы от одного до шести лет.

(2) Любое лицо, которое по неосторожности причиняет смерть другому путем действий, принадлежащих профессии или деятельности по предыдущему пункту, которые он не имеет права осуществлять, наказывается лишением свободы от двух до восьми лет.

(3) Если в случаях, предшествующих предыдущим параграфам, преступник был пьян или если было убито более одного человека, наказание должно быть лишением свободы на срок от трех до десяти лет, а в особо тяжелых случаях - тюремное заключение от пяти до пятнадцати лет.

(4) Если исполнитель после совершения действия сделал все в зависимости от него, чтобы спасти жертву, наказание должно быть: по абз. 1 и 2 - лишение свободы на срок до трех лет; по пар. 3 - тюремное заключение сроком до пяти лет, а в особо тяжелых случаях - тюремное заключение от трех до десяти лет.

III. Административные дела по статье 81 Закона о здравоохранении

Ст. 81. (1) Каждый болгарский гражданин имеет право на доступное медицинское обслуживание в соответствии с условиями и порядком этого закона и Закона о медицинском страховании.
(2) Право на доступное медицинское обслуживание осуществляется с применением следующих принципов:
1. своевременность, достаточность и качество медицинской помощи;
2. равное отношение к приоритетной медицинской помощи детям, беременным женщинам и матерям детей в возрасте до 1 года;
3. сотрудничество, согласованность и координация деятельности медицинских учреждений;
4. уважение прав пациентов.
(3) Условия и порядок осуществления права на доступ к медицинской помощи по п. 1, определяется постановлением Совета министров.

ОЦЕНКА ЭФФЕКТИВНОСТИ ЗДРАВООХРАНЕНИЯ

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Оценка эффективности здравоохранения включает медицинский, системный, социальный, технологический и экономический аспекты [1, 2]. Медицинскую эффективность оценивают, как правило, на основе прямых медицинских показателей на различных уровнях рассмотрения (индивид, группа, учреждение, регион).Оценку системной эффективности здравоохранения, как целостной социальной системы, отражает доля населения, относящегося к первой группе диспансерного наблюдения. Социальную эффективность системы здравоохранения оценивают на основе прямых (удовлетворенность здравоохранением пациентов и населения в целом, их качество жизни, продолжительность жизни и др.) либо косвенных (например, рождаемость) показателей, которые принято называть индикаторами.

Технологическую эффективность оценивают путем сравнения результатов применения конкретных медицинских технологий. Оценку экономической эффективности обычно производят по сокращению потерь ВВП вследствие текущей медицинской или социальной деятельности, либо в результате применения новой медицинской технологии. Система здравоохранения включает два сектора – отраслевой и социальный. Часть рассмотренных выше аспектов эффективности применимы к отрасли здравоохранения (медицинский, технологический и экономический), часть – к социальному сектору (социальный и экономический) и часть – к системе здравоохранения в целом (системный, социальный и экономический).

При оценках эффективности работы в отрасли здравоохранения используют два подхода:

- плановый подход (процент выполнения плановых показателей),

- дельта-подход, суть которого заключается в расчете разности (дельты) между значением показателя базисного периода и значением показателя отчетного периода. Эта разность может быть выражена в процентах по отношению к показателю базисного периода. Многие исследователи справедливо отмечают главное – оценка эффективности должна отражать реальный результат по отношению к реальному прошлому, а не степень достижения запланированного результата [3]. В этом контексте дельта-подход имеет неоспоримые преимущества.Многие исторические примеры и текущая практика показывают, что выполнение плановых заданий и показателей нередко осуществляется лишь на бумаге. Дельта-подход не требует плановых и сверхплановых достижений. Он требует устойчивого развития, чтобы результаты работы имели устойчивую положительную динамику.

С позиций обеспечения надежности дельта-оценок эффективности работы существенное значение имеет выбор длительности базисного периода и выбор длительности периода для оценки динамики.

Для обоснования выбора длительности базисного периода мы исследовали вариацию дельта-оценок при различной длительности базисного периода на примере числа случаев заболеваний острым инфарктом миокарда и цереброваскулярными болезнями, зарегистрированных у лиц в возрасте 18 лет и старше в 2009 – 2017 годах.Результаты исследования показали, что усредненные по выборкам значения линейных коэффициентов вариации дельта-оценок составили: для длительности базисного периода 3 года – 3,61%, для 4 лет – 4,2% и для 5 лет – 4,34%. Отсюда следует, что предпочтительная длительность базисного периода составляет 3 года. Оптимальная длительность периода для оценки динамики показателей эффективности работы также составляет 3 года, поскольку число точек менее трех не допускает аппроксимации, а более трех, как правило, не изменяет локальной тенденции.

Таким образом, основными являются два критерия эффективности:

1. Дельта-оценка эффективности работы за отчетный год (положительная или отрицательная);

2. Критерий динамики (положительный или отрицательный).

Совокупность двух критериев предоставляет возможности более взвешенных оценок эффективности деятельности. Принцип общей (итоговой) оценки эффективности по любому показателю эффективности деятельности прост: если хотя бы один критерий положителен, то итоговая оценка положительна. Например, дельта-оценка показателя эффективности отрицательна, а критерий динамики положителен и, в итоге, общая оценка положительна. Для отрасли здравоохранения применение реальных (апостериорных) критериев эффективности вместо плановых (априорных) является назревшей необходимостью.

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