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## WELCOME ADDRESS

**Constantin Ștefani**

Dear Generals, Admirals, distinguished guests and colleagues,

As the Chief of the Medical Directorate of Romanian Armed Forces, as well as the Head of Romanian Delegation at the 21st Balkan Military Medical Committee Congress, it is a real honour, but also a pleasure to welcome and host you in Bucharest, the capital of Romania.

For us, people destined by history to live in Balkans, the Congress of BMMC, has already acquired a well deserved successful tradition, being an opportunity of approaching the many-sided military medical issues. Together with our colleagues from Albania, Bulgaria, Greece, Serbia and Turkey we have been contributing to the increase of the prestige of this reunion and of its scientific periodical. I am sure that Romanian branch of BMMC will succeed in continuing the best achievements of the previous edition.

In a constantly evolving international environment, we all have numerous issues and perspectives to share and coordinate within the medical community and many questions are raised for many nations but, among these, one is particularly relevant: how to

maintain the high level of professionalism reached by military medical personnel. The main topic of this year edition “Balkan Military Medicine – Future challenges” is not only “Food for thought” but an opportunity to exchange ideas and knowledge on Military Medical topics, which is of great importance and value for all of us, considering the present geo-political circumstances in our area and in the world.

In the hope that the congress we are about to commence will be an outstanding example of true scientific, ethical and friendly spirit, I welcome you in Bucharest, a city with more than 800 years of history, once known as the “Little Paris”. For those who are for the first time in Bucharest I do hope they will enjoy it and for those, who have been before, to experience new places the capital of our country is willing to offer.

Yours sincerely,

Col. Assist. Prof. Constantin ȘTEFANI, MD, PhD  
Chief of the Medical Directorate of the Romanian Armed Forces  
President of 21st BMMC Congress



**Col. CONSTANTIN ȘTEFANI**  
*Chief of the Medical Directorate  
of Romanian Armed Forces*



## ORAL PRESENTATIONS

### OP session 1 – Military medicine

#### EXPLOITING STRATEGIES OF IMPROVING HUMAN PERFORMANCE FOR MILITARY OPERATIONS

**Radu Hertzog**

During military operations, the war fighters are exposed to several threats. CBRN agents, blast related events, extreme and austere environments, lack of family, stress and emotional shock jeopardize health, protection, performance and even human condition. Many medical approaches or technologies have been developed or proposed for human performance optimization (HPO), human systems integration (HIS) and human performance enhancement (HPE) in order to support sustainability and survivability as well as to improve combat readiness and effectiveness. The presentation covers few aspects of animal kingdom to understanding of biological underpinnings of high level performance. Nature is providing us an unlimited source to discover bio-tech solutions to counteract the threats that could affect the life of our soldiers.

#### MILITARY INFORMATION SUCH AS SPECIFIC IN NATURE AND USE INFORMATION

**Chobanov N., K. Hristova, S. Kolev, K. Paskalev**

##### PURPOSE

1. Defining the place of military medical information to the general flow of information that serves military science.
2. Determine the purpose and addressees of the information that is gaining SRLMMI.
3. Participation in the creation of a network for the exchange of military medical information.

##### MATERIALS AND METHODS

1. Materials – NATO standardization documents: Allied Joint Medical Doctrine (AJP - 4.10) and Allied Joint Medical

Doctrine for Medical Intelligence (AJMedP - 03); Doctrine for medical insurance. National publication of the Armed Forces of the Republic of Bulgaria (NP-4.10); collections, manuals, lectures and publications of SRLMMI.

2. Methods – systematizing, analyzing, evaluating and interpreting information.

##### RESULTS

1. Promotion of the mission, strategic goals and objectives of SRLMMI in the short and long term.
2. Creating conditions for future sharing unclassified products conducted by military medical intelligence structures with similar aims and purposes.

##### CONCLUSIONS

1. Identify hazards to health and life of soldiers during the preparation, implementation and after implementation of missions outside the Republic of Bulgaria is important for successful implementation.
2. The dissemination and exchange of classified military medical products conducted by intelligence structures with similar aims and purposes increases the efficiency of their operations.

#### ANALYSIS OF THE COST OF MEDICINES AT THE MILITARY MEDICAL ACADEMY

**Virsavia Vaseva, Ventsislav Mutafchiiski, Rumen Popov, Lyubomir Aleksiev, Nikolay Petrov**

Introduction: Facing conditions of market economy and financial deficits each health manager is challenged to provide cost-effective functioning of its entrusted hospital. In the structure of the treating costs, medicines take leading position, according to leading authors, their share reaches 40% of the total cost. For this reason, introducing scientifically based and cost-effective strategy for analysis and control the costs of medicines proves extremely relevant.

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Aim: To analyze the use of medicines at the Military Medical Academy and to propose a model for control.

Material and methods: We used data from Hospital Information System and Financial Department about received income from the National Health Insurance Fund and expenditure on medicinal products in MMA in 2014 and 2015. In 2015 the system for control of medicines spending was introduced. We compared the results of the 2 years. A comparative analysis was made on quantitative and qualitative criteria of medical services for 2014 and 2015. The share of revenue from the NHIF and the cost of drugs to all clinics was calculated. A relative ratio income/expense is calculated, as results are processed by comparative analysis.

Results: Our study shows that in 2015 revenues of NHIF exceed those of 2014 by 3% and the cost of medicines in 2015 decreased by 33% compared to 2014 as the quality of medical services retain their values. The share of the medicine cost to the price of the clinical pathways in 2015 decreased by 7% compared to 2014. For surgical clinics average rate of cost of drugs is 9% and 12% for therapeutic. Surgical clinics have better relative index income/expense than the therapeutic.

### **USE OF THE ELECTRONIC HEALTH RECORD FOR IMPROVEMENT DISEASES CONTROL IN BULGARIAN ARMED FORCES**

**Petkov Assen, Valchanova-Stoykova Lubomira, Alexandrov Alexandar, Aleksieva Ivanka, Popivanov Ivan**

Based on oral interviews conducted with medical advisers of Logistics Directorate - MoD, Joint Forces Command, Land Forces, Air Force, Navy and doctors from major military units, the authors found the most common reasons for hiding information on changes in health status of military personnel and civilian employees in Bulgaria Armed Forces: concern of dismissal due to unfitness, ethical concerns, discomfort of commanders and colleagues, ineligibility for certain positions, restrictions for participation in missions abroad. The impact of those reasons on the individual and group security in the permanent garrisons and on missions is analyzed.

Based on published till now data from the Ministry of Health and information from the authors about the project "Electronic Health Record" (eHealth record), the authors explore the possibilities of access to health information by military doctors for each serviceman and civilian employee in Bulgaria Armed Forces. The aim is strict control of

morbidity and prevention of threats to personal and collective security in both Armed Forces and society. Fundamental ethical and legal problems of access to the eHealth records are analyzed and well-grounded proposals for regulatory amendments are made.

### **INFORMATION SYSTEM FOR AUTOMATING AND MANAGING PROCESSES IN THE MILITARY MEDICAL ACADEMY**

**Anna Krasteva, Georgi Yanchev, Rumen Popov, Virsaviya Vaseva**

The information system GAMMA HIS possess every module needed for automating and managing the processes at a medical facility.

Military Medical Academy has the experience of creating and implementing medical software solutions for achieving automation and optimization of the processes in outpatient, hospital and para-clinical activities related to the collection, processing and storage of medical statistics.

Main directions of our activity of the Military Medical Academy are:

- Development and implementation of application software in the field of health
- Development of information systems for the needs of hospital care
- Consulting and training of staff in hospitals in the structure of MMA
- Operational maintenance of embedded systems

The range of software products in GAMMA are integrated into a single system, but can function independently on their own. All statements and specifications of software products comply with the requirements of The National Health Insurance Fund (NHIF) and the Ministry of Health, as well as the existing regulations under the Accounting Law. The product GAMMA CODEMASTER is intended to register outpatient and inpatients in hospitals and outpatient medical care. The program keeps the most important data on enrollments, it allows economic analysis and preparation of statistical reports.

The purpose of the program GAMMA MULTILAB is the implementation of automated management of activities related to the process of registration and control of paraclinical services, to store the results and their connection to the electronic medical record of the patient. The product supports a barcode labeling of specimens. Related to system analysts will automatically transfer data

and after validation are available for the recipients. The program meets the requirements of the NFC for software labs.

The software Gamma Store - "Hospital pharmacy and warehouse" is designed for automated maintenance of records in pharmaceutical and other warehouses of hospital units that are providing supply and dispensing of medicines and materials to the units of hospitals. The system allows the organization of the work of many warehouses in the health facility with sub warehouses for different types of materials: drugs, supplies, sanitation, food and more. Ordering of medicines and materials can be carried out electronically. The system supports restricting the visibility of availability and prices.

The software GAMMA PHARMA is designed for automated maintenance of records in hospital pharmacies and pharmaceutical warehouses ensuring supply and dispensing of drugs for bedridden patients in inpatient health establishments and other units of hospitals. The program has the ability for monitoring the supply of drugs in competitions and control correspondences between the contract and delivery prices, as well as set the order for delivery of drugs to a supplier.

### **MEDICAL INTELLIGENCE ORGANISATION IN ALBANIAN ARMY FORCES**

**Kukeli Edlira, Muhameti Rushan, Duraku Kujtime, Reso Elton**

Introduction: Medical Intelligence is a main factor in medical support planning and Medical Force Protection. Medical Intelligence Doctrine should be adapted and implemented in multinational operations conducted in the NATO- lead operations. Main principals, MI cycle and its organisation in Albanian Army Forces play an important role in assesment of operational risk.

Objective: The assessment of troop's healthy risks, preventive measures implementation, support medical services management in missions abroad.

Material and Methods: The descriptive study was conducted in the period of time 2010-2011. The study sample included military contingents redeployed back home from abroad missions. The data was collected from medical records of "Trauma University Hospital".

Results: This study was conducted at a military contingent (of 120 solders) with mission in Chad. There were identified 10 cases deployd back home with infective disease

(malaria). Medical Intelligence is necessary in operational planning and provides medical information for geografic factrors (clima, flora and fauna) endemic and epidemic deseases, enviroment, toxic, industial risks and taken measures related with Weapons of Mass Destruction (CRBN). Albanian Medical Service Structures lead and cordinate the organisation, planning and medical controls for medical force protection. Albanian Preventive Medical System included Health Inspectoratet that cordinates the medical activity and Military Medical Unit as a specialized institution for health insurance effectives.

Conclusion: Medical Intelligence has an important role for medical preventive measures, immunisations, healthy education and troop's medical evaluation in mission.

### **THE ROLE OF THE BULGARIAN MILITARY MEDICAL TEAM IN THE EU TRAINING MISSION IN MALI**

**Kesov Georgi, Svetlin Nikolov, Alexiev Lybomir, Karakanov L., Petrov Nikolay, Mutafchyski Ventsislav, Popivanov Georgi**

Introduction: Since 2013 by decision of EU a training mission was established in Mali in order to increase the preparation of the army and to improve the anti-terroristic response. Since its establishment ten Bulgarian military medical teams with 40 medics (20 doctors) have been participated. The purpose of the work is to present the specific tasks of the mission, the most common morbidity, security issues, climate characteristics and the costs.

On the background of the increased Islamic activity in the region this mission has a growing responsibility and significance. It requires specific military medical training of the participants. The close collaboration between medical teams (Role 1 and Role 2) in the training bases is a prerequisite for successful work of the team.

### **CONCERNING CREATING A STRUCTURAL MODEL FOR DETERMINING THE CROSS-BORDER ENVIRONMENTAL SECURITY ALONG THE BULGARIAN-ROMANIAN BORDER**

**Hristova Krassimira**

PURPOSE

1. Formulation of problems in cross-border environmental security.

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2. Theoretical studies to create a structural model for determining the cross-border environmental security along the Bulgarian – Romanian border.

#### MATERIALS AND METHODS

1. Materials – Transnational program "Danube 2014 to 2020"; „Cross-border program between Romania and Bulgaria for the period 2014-2020”.

2. Methods – systematization, analysis, evaluation and interpretation of available information.

#### RESULTS

1. New structural model by which to reflect the time and phases of the development of cross-border risks and threats.

2. Formulation of future researches on cross-border risks and criticality.

#### CONCLUSIONS

1. Cross-border environmental hazards are appropriate to define hypotheses as to their substance.

2. Cross-border environmental threats are a combination of information about the quantity, quality and composite indicators of all the constituent system components.

### **A SPECIAL POPULATION: PREGNANT WOMEN IN ARMED CONFLICTS**

**Karashin K. Emre, Fidan Ulas, Alanbay Ibrahim, Kinci Ferdi, Yenen Mufit Cemal**

**OBJECTIVE:** To investigate the possible effects of war on pregnant women and to delineate the basic healthcare standards for caring pregnant women in armed conflicts.

**MATERIAL AND METHOD:** An internet research was made using the keywords of “pregnancy” “war” “armed conflict”, “refugee” and “conflict”. It is understood that there is either not much data on the topic or the conflict zones were too busy or deprived for a reliable data to be presented.

**RESULTS:** Obstetrics can present a large health problem in case of a war. Despite the difficulties of war, high-risk pregnant women could be properly identified and could be referred to a more sophisticated center if cooperation with other (either governmental or non-governmental) organizations could be provided. Resources can diminish fast in cases of mass casualties or high number of people fleeing armed conflict zones. Small and efficient obstetric teams could be set up with mobile ultrasound, or cardiocographs may be helpful. Basic laboratory

elements for urinalysis and hematocrit are desirable. Normal delivery with as little cesarean as possible should be aimed.

**CONCLUSION:** Although there are numerous guidelines on management of pregnant women in disastrous states, the war situation can be quite different. Medical personnel should be ready to adapt to rapidly changing conditions, such as the weather, advancing hostile forces, the triage priorities, availability of surgical approaches etc. The medical personnel should be protected by solid legal approaches in order to be immune to malpractice cases due to the unforeseen outcomes in obstetric management in war zones. Neonatal outcomes cannot be predicted, and the survival of mother and the neonate may supersede the long term outcomes. The medical personnel should also be psychologically prepared and supported to complete the mission successfully.

### **A WAR SURGEON: CAPABILITIES AND EDUCATION**

**Harlak Ali, Kaymak Sahin, Eryilmaz Mehmet, Coskun Ali Kagan, Lapsekili Emin, Ersoz Nail, Unlu Aytekin, Zeybek Nazif, Kozak Orhan**

**OBJECTIVE:** This study aims to discuss the optimal capability of a war surgeon and his educational program. The main mission of military medicine is to treat wounded soldiers.

The War Surgery can be defined as advanced surgical management of war wounds. In daily surgical practice every surgeon works in his special area. For example general surgeons perform usually gastrointestinal operations. They don't interest in a thoracic pathology. If necessary a thoracic surgeon can participate to the operation. But military trauma casualties have usually complex injuries and their initial treatments are made in a field hospital with limited conditions. A war surgeon must have basic skills for the stabilization of wounded soldiers.

**MATERIAL AND METHOD:** This study evaluates the wounded compartment of casualties from a military conflict and the role of doctors from different specialties. We have tried to make a conclusion about the basic capabilities of a war surgeon. We also compared our training program in war surgery with the clinical practice.

**RESULTS:** Duration of war surgeon training program in Gulhane Military Medical Academy is two year after general surgery residency. In this period a war surgery fellow works 13 months in general surgery, 3 months in thoracic surgery, 2 months in orthopedic surgery, 1 month in plastic and reconstructive surgery, 1 month in radiology department. In

the latest military conflict, the distribution of wounded compartment and distribution of surgical specialist which participate to the treatment were as follows: cranial 10 %, facial 14%, neck 4%, thoracic 8%, abdominal 7%, pelvic 6%, extremities 54%, vascular 28%.

CONCLUSION: The results show that a war surgeon must have basic knowledge about orthopedic, vascular, abdominal, thoracic, cranial surgery.

### **CAN BLUE OCEAN STRATEGY BE APPLICABLE IN MILITARY HEALTHCARE INSTITUTIONS?**

**Ugur Ugrak, Ugurluoglu Ozgur**

OBJECTIVE: As we know, Blue Ocean Strategy can be defined as a new strategy without any competition. In this study, we aimed to analyze of applicability of “Blue Ocean Strategy” in healthcare sector including Military Healthcare Institutions.

MATERIAL AND METHOD: All publications reached in literature surveying with keywords “blue ocean strategy”, “healthcare”, “healthcare management”, “hospital”, “health” and various combination of all were analyzed in context of this study purpose.

RESULTS: Military Hospitals in Turkey have faced with competitive market after starting giving healthcare service to public. Competition is important, however, institutions focusing on competition strategy might skip more crucial strategic aspects. Blue ocean strategy, contrary to traditional rules, doesn't use competition as a comparison point, instead, aims at reaching untapped markets with creating new value for both themselves and consumers. Blue ocean strategy claims that with tools such as “strategy canvas” and “four action framework”, it can make competition irrelevant and get reached markets in which new demands exist. According to literature review “Blue Ocean Strategy” could be applied successfully in various sector. Even, Malaysia accepted “Blue Ocean Strategy” as a national strategy. Successful example of Blue Ocean Strategy were also seen in healthcare sector.

CONCLUSION: For Military Hospitals, which have been faced with competitive markets, Blue Ocean Strategy is thought to provide useful tools to make competition irrelevant and has a potential to lead those institutions to untapped markets in which new demands exist. Additionally, it is thought that “Blue Ocean Strategy” might be useful to determine unnecessarily focused factors in Military Health Care System, which are complex and highly specialized.

## **OP session 1 – Microbiology, clinical research and studies**

### **A NEW EXPERIMENTAL INVASIVE MODEL IN THE TREATMENT OF GASTROESOPHAGEAL REFLUX: IMPLANTATION OF ENDOSCOPIC STEM CELL INTO THE LOWER ESOPHAGEAL SPHINCTER**

**Caliskan Bahadir, Kantarcioglu Murat, Gunal Armagan, Demirbag Suzi, Bagci Sait**

INTRODUCTION: Gastroesophageal reflux disease has an incidence of 23% in Turkey. Endoscopic treatment modalities are used commonly. In this study we endoscopically implanted the stem cell derived from female endometrial tissue to rabbits low esophageal sphincter (LES), observe the differentiation to muscle cell in this area and the effect of this procedure to sphincteric pressure

MATERIAL METHOD: Stem cells  $1 \times 10^6$  implanted to 10

rabbits (Group 1) and % 0.9 NaCl implanted to ten rabbits (Group 2). Rabbits LES pressure were studied before implantation and 3 weeks later. On day 21 lower esophageal sphincter dissected.

RESULTS: Histopathological examination of group 1 showed GFP expressing cells in the lower esophageal sphincter of the rabbits. It has been observed that these cells express MYO D protein that play a key role in muscle differentiation and factor MYH-2 which contributes to the formation of myocytes. When compared to controls, increase in LES pressure in the stem cells-implanted group was obtained.

DISCUSSION: Endoscopic human endometrial progenitor stem cell implantation to LES leads to the differentiation and an increase in sphincter pressure. Our findings suggest that, implantation of autologous stem cells, using the natural human cells in selected gastroesophageal reflux disease patients with LES failure can be a new invasive

## MOLECULAR STUDIES REGARDING SOME TICK BORNE – PATHOGENS IN ROMANIA

**Alexandru Vladimirescu, Victoria Gabriela Dumitrescu, Lucia E. Ionescu, Valentina Elena Moraru, Marius Necşulescu, Simona Bicheru, Diana M. Popescu, Doina Daneş, Stelian Băraităreanu, Marius Ciocănu, Valeria Purcărea-Ciulacu, Gabriela Nicolescu**

Our studies undertaken between 2006 – 2015 have shown that the most frequent species of ticks in Romania is *Ixodes ricinus*. Three Romanian counties were selected as ticks sampling sites (Sibiu, Tulcea and Giurgiu). Over 400 *I. ricinus* and *Hyalomma* sp. ticks were collected and analyzed by Real-Time PCR methods (included in the new TickKitqPCR detection concept) that give us results on *Borrelia burgdorferi*, *Francisella tularensis*, TBEv and CCHFv presence in the vectors.

Total RNA and DNA were analyzed by in house real-time PCR reagents (included in the new TickKitqPCR detection concept) and 2 commercial kits for the BFTC detection in the *I. ricinus* and *Hyalomma* sp. pools. All reverse-transcriptions were made using random hexamers.

Specific DNAs from *B. burgdorferi* sl. were detected (Fla B gene target) in 20% of *I. ricinus* ticks and specific DNAs for *F. tularensis* and/or *Francisella*-like endosymbionts were detected (IS FtU2 genomic insertion-like element) in 2% of the same vector species.

Specific RNAs from TBEv were detected (3' UTR-genomic region) in < 1% of *I. ricinus* pools. No specific CCHFv RNAs were detected (S-genomic region) among the *Hyalomma* sp. pools.

The results strengthen the concern that already exists in Romania, for the enhancement the surveillance and the control measures for the tick populations but also for the means of active information of the human population about the danger of the diseases transmitted by ticks in some risk areas.

*Project funded by the MEN-UEFISCDI PN II „Partnerships in priority areas” program, National Research Grant No. 295/2014”*

## NERVE AGENTS SIMULANTS ISOPROPYL P-NITROPHENYL METHYLPHOSPHONATE AND ETYL P-NITROPHENYL METHYLPHOSPHONATE AND THEIR APPLICATION AS ACHETYLCHOLINESTERASE INHIBITORS

**Cristina Anca Secară, Bogdan Pătrinichi, Mihaela Ionescu, Lavinia Hinescu, Mihail-Silviu Tudosie**

Background: Armies of NATO member countries are interested in the synthesis and improvement of new antidotes against chemical warfare agents.

The inherent toxicity and limited laboratory supply of CWAs has led to the development and study of safer compounds that simulate the chemistry and the reactivity of CWAs.

Objectives: Reducing the risk of exposure to chemical nerve staff who test experimental therapeutic efficacy using their simulants suitable laboratory work;

Material and method: Two nonvolatile compounds were GC-MS identified as CWA simulants, 90% purity: 4-nitrophenyl ethyl methylphosphonate (NEMP, VX simulant), and 4-nitrophenyl isopropyl methylphosphonate (NIMP, sarin simulant). In vivo study of these compounds was performed in order to determine LD50 values, cholinesterase inhibition degree, and oxime assisted protective ratio.

Experimental data statistical analysis was performed by using Student's T test.

Results: NIMP: DL50  $0.45 \pm 0,002$  mg/kg i.p.; AChE inhibition in the range 53 to 95%, antidote protective ratio: 2.5; NEMP: DL 50  $0.51 \pm 0,003$  mg/kg i.p. AChE inhibition in the range 56 to 88%;

Conclusions: Comparative analysis of LD50 values for NIMP, NEMP and CWA correspondents showed lower intrinsic toxicity of the compounds synthesized. Inhibiting activity is sufficient to mimic exposure to CWa, being present all the clinical signs typical of poisoning.

Thus it can be concluded that the two compounds studied show similar pharmacodynamic effects and references due to lower intrinsic toxicity may be suitable as a surrogate for studies in the laboratory.

## THE IMPACT OF CYP2C19 POLYMORPHISMS, CLINICAL AND LABORATORY VARIABLES ON PLATELET RESPONSE TO ANTIPLATELET

**Alina Mărginean, Claudia Bănescu, Valeriu Moldovan, Alina Scridon, Mihai Mărginean, Rodica Bălașa, Smaranda Maier, Mariana Țăruși, Minodora Dobreanu**

**Introduction:** Antiplatelet drugs are widely used in patients with acute coronary syndromes or stroke. Despite adequate antiplatelet therapy, some patients develop acute ischemic events. This is partly attributed to the fact that they have poor inhibition of platelet reactivity despite treatment.

This study aimed to assess the impact of clinical and laboratory variables on platelet response to clopidogrel and/or aspirin, evaluated using impedance aggregometry in a Romanian population.

**Methods:** The study included 189 patients with acute coronary syndromes and non-cardiogenic ischemic stroke. Platelet aggregation was evaluated by impedance aggregometry. CYP2C19 loss-of-function polymorphisms were detected using the Polymerase Chain Reaction - Restriction Fragment Length Polymorphism technique. Various clinical and laboratory data were also recorded.

**Results:** In our data set, 81% of the patients were responders and 19% non-responders to antiplatelet therapy. The distribution of CYP2C19 polymorphisms was as follows: 61.1% of patients were CYP2C19 wild-type homozygotes, 27.7% CYP2C19\*2 heterozygotes, 1.1% CYP2C19\*3 heterozygotes and 10% of patients CYP2C19\*2 homozygotes. The highest level of association with clopidogrel response status was found for CYP2C19 polymorphisms, concomitant aspirin treatment, leukocyte and platelet count, history of myocardial infarction and arterial hypertension. Aspirin response status was associated with coadministration of beta-adrenergic blockers and with history of myocardial infarction.

**Conclusion:** The prevalence of antiplatelet resistance in our population was in line with that reported for Western populations. Clopidogrel response was significantly influenced by the presence of CYP2C19 polymorphisms. Interestingly, the concomitant use of aspirin had a significant impact on platelet response to clopidogrel, indicating a synergic interaction between these drugs.

## IS ONE-SIZE-FITS-ALL STRATEGY ADEQUATE FOR PLATELET STORAGE?

**Eker Ibrahim, Yilmaz Soner, Cetinkaya Riza Aytac, Unlu Aytakin, Pekel Aysel, Acikel Cengizhan, Sebahattin Yilmaz, Gursel Orhan, Avci Ismail Yasar**

**BACKGROUND:** Preservation of platelets in room temperature increases their recovery and survival in vivo following transfusion, thus their use decreases the frequency of prophylactic platelet transfusions and the risk of alloimmunization in patients with hypoproliferative thrombocytopenia.

However, recent data also shows that the viability and hemostatic functions of platelets preserved at 4°C are higher than the platelets preserved at 22°C. We investigated and compared the viability and hemostatic functions of platelets stored at both 4°C and 22°C.

**MATERIALS AND METHODS:** Fresh apheresis-derived (ADPs) and random platelet suspensions (RPSs) (n = 10 per group) were assigned to storage at 4°C or 22°C in agitators for 48 hours. Viability levels and hemostatic functions of all groups were assessed using flow cytometry and thrombin generation tests, respectively.

**RESULTS:** The mean platelet counts of ADPs and RPSs were  $1195.2 \pm 153.5 \times 10^3 /\mu\text{L}$  and  $1008 \pm 304.9 \times 10^3 /\mu\text{L}$ , respectively.

There were no statistically significant differences between the viability of platelets in ADPs stored either at 4 °C or 22 °C for 48 hours. Likewise, viability of platelets in RPSs stored either at 4 °C or 22 °C for 48 hours were not statistically significantly different. Although the ADPs and RPSs stored at 4 °C for 48 hours generated higher total thrombin levels, the differences were not statistically significant when compared to suspensions stored at 22 °C.

On the other hand, ADPs and RPSs at 4 °C for 48 hours groups generated statistically significantly higher peak thrombin levels. Moreover, 4°C/48 hours group ADPs' time to thrombin generation and time to peak thrombin generation were significantly shorter. (Table 1, 2)

**CONCLUSION:** The viability of platelets stored at 4°C was not different but their hemostatic activity was higher than the platelets at room temperature.

Given the superior safety profile of refrigerated platelets for bacterial contamination, creating storage conditions for specific transfusion targets may be a prudent approach, especially for improving the outcome of bleeding trauma casualties of military conflicts.

**Table 1:** Results of apheresis derived platelets stored at 4°C and 22°C for 48 hours.

Parameters	Storage at 4°C/ 48 hrs	Storage at 22°C/ 48 hrs	p value
Viability (%)	86,3 ± 12	94 ± 7,5	0,13
Lag Time (sec)	7,2 ± 1,3	9,4 ± 1,3	0,0001*
ETP (nM.min)	3164 ± 496,8	2789,3 ± 570,8	0,13
Peak (nM)	385 ± 37,2	292,7 ± 60,1	0,001*
Time to peak (sec)	11,2 ± 1,8	15,2 ± 2,1	0,0001*

\* Statistically significant.

**Table 2:** Results of random platelet suspensions stored at 4 °C and 22 °C for 48 hours.

Parameters	Storage at 4°C/ 48 hrs	Storage at 22°C/ 48 hrs	p value
Viability (%)	86,3 ± 13,7	86,3 ± 9,3	0,83
Lag Time (sec)	9,1 ± 1,2	10,3 ± 1,7	0,329
ETP (nM.min)	2641,6 ± 689,5	2464,3 ± 634,4	0,547
Peak (nM)	505 ± 82,9	255,7 ± 71,8	0,001*
Time to peak (sec)	15,4 ± 2,7	16,5 ± 3,1	0,455

\* Statistically significant

## THE PREVALENCE OF PARASITES IN DONKEYS FROM DIFFERENT REGIONS OF GREECE

**Starras Alexandros, Dimanopoulou Anastasia**

**Aim:** The purpose of present study was to investigate the prevalence of donkey parasites in Greece.

**Materials- Methods:** The total number of the donkeys examined was 143. From every donkey included in the survey there were collected samples of faeces directly from the rectum and blood samples from the jugular vein. Furthermore, every animal was inspected in detail so as to find ectoparasites such as: a) lice especially in the body regions of neck, crest, withers, shoulders and back, b) ticks in all over the body, c) mange mites with the use of scraping test from parts of the skin appearing relative symptoms and d) fleas by using a specific comb to examine the presence of the parasites or their faeces.

**Results:** The endoparasites found in donkeys' faecal samples were strongyles (71.32%), Anoplocephala spp. (29.37%), Parascaris equorum (18.18%), Strongyloides westeri (6.29%), stomach spirurids (Habronema spp, Draschia spp.) (3.49%), Oxyuris equi (1.39%) and Dictiocaulus arnfieldi (1.39%). On the other hand, the only ectoparasites found in this survey were the lice species Damalinia equi (14.68%).

**Conclusions:** Donkeys, as reservoir host for equine parasites, can affect the health of other equids still used in many native armies. Moreover, nowadays donkeys are used for milk production. Hence, knowledge about their health status is also essential for public health.

## SHOULD SANITARY DOOR OPENER BE USED TO PREVENT BACTERIA TRANSMISSION VIA THE HANDS OF KITCHEN WORKERS?

**Celik Cagatay, Oz Baris, Topcu A.**

**BACKGROUND:** WHO emphasizes the importance of preventing healthcare-associated infection (HCAI) by giving priority to the promotion of hand hygiene best practices in health care. poor hand hygiene has effects on Food Hygiene and Safety which may cause deadly foodborne illnesses all over the world. We aimed to determine bacterial flora on door handles as one of the main points of cross contamination in facility, and assess efficacy of "Sanitary Door Opener" as a troubleshooter.

**METHODS:** The study was carried out different 80 barracks in 3 months. Merck Swab Test Kit - Envirocheck® Contact C (Merck 1.02136) slides were used to obtain surface samples and bacteria counts. Samples were collected spontaneously from restrooms' door handles in facility used by dining facility and kitchen workers.

**RESULTS:** Eighty samples were collected and evaluated for Total Aerobic Bacterial Count and Coliform Bacteria Count. The results were obtained from plate count agar by counting colonies to obtain total aerobic bacterial count and from Chromocult coliform agar by counting red colonies to count coliforms. Overall, 81.25% and 81.25% of samples were positive for total aerobic bacteria and coliform bacteria, respectively.

**CONCLUSION:** Coliform microorganisms were present at significant levels, 81.25%, on restroom door handles in dining facilities and kitchens. At the handling level of food processing in kitchens, Coliform microorganisms are indicator bugs as in the other levels. Therefore, should take preventive measures to get rid of possibility of contamination from hand to hand by using restroom door handles. This study recommends use of "Sanitary Door Opener" more than the other options such as automatic folding door in terms of the cost effectiveness.

## PERIPHERAL NERVE INJURY AND NEURON REGENERATION

**Andreea Benga, Fatih Zor, Ahmet Korkmaz, Bogdan Marinescu**

Peripheral nerve injuries can be most disabling, resulting in loss of sensitivity, motor function and autonomic control in the involved anatomical segment. Although capable of

regeneration there is still no optimal solution for their reconstruction. Nerve regeneration has several vulnerable points that could be addressed to improve outcome: (1) neuron survival after trauma, (2) gap crossing and orientation of neurites, (3) neuroma formation, (4) target-organ tropicity.

Inflammation is an important sequence in nerve regeneration. Cytokines released by macrophages and fibroblasts have mitotic effect on Schwann cells. Fibroblasts are present in epineurium, perineurium and endoneurium. If they proliferate extensively, scar formation occurs that impedes nerve regeneration. Scar tissue contains repulsive proteoglycans (such as chondroitin sulfate) and semaphorins that inhibit neurites' elongation.

Nerve repair still faces two immense challenges: fascicles orientation that could be addressed by improving the surgical technique and the time race against fibrosis and end-organ atrophy amenable to pharmacological therapy.

The aim of this study is to review the literature for the most frequent chemicals used in experimental studies to address neuron survival, reduce scar formation and improve overall nerve regeneration.

**Mellidis Christos, Sfikas Georgios, Katsimardou Alexandra, Iosifidis Georgios, Iosifidou Eleni, Koumaras Charalambos, Doumaki Eleni, Psomas Evangelos, Tapazidis Vasileios**

**Purpose:** We investigated the percentage of influenza vaccinated patients among those who were clinically examined in the ER by an internal medicine specialist. Reasons for this percentage were sought.

**Materials and methods:** A total of 6528 patients with influenza symptoms visited the ER of 424 General Military Hospital during the influenza outbreak periods (November till March) from 2008 till 2014. During history taking, patients were given a relative questionnaire.

**Results:** High risk patients were found to be vaccinated 39% of the time, whereas 45% of the total patients examined were vaccinated. Reported reasons for the vaccination were: desire to avoid illness (61%), family doctor advice (35%) and desire to avoid illness spreading in family environment (4%). Reasons against the vaccination were: personal belief that one does not belong to a high risk group (37%), lack of family doctor guidance (48%), family doctor omitting vaccination (12%), vaccines shortage in the pharmacies (3%).

**Conclusions:** Total influenza vaccination coverage rate is low. Consulting high risk groups and general population about influenza and vaccination mainly via family doctors will aid in: increase of coverage rates among high risk groups, avoidance of vaccine shortage in the market.

## SEASONAL INFLUENZA VACCINATION: FACILITATING OR INHIBITING FACTORS

### OP session 1

#### EFFECTS OF LPS AND IFN- $\gamma$ COMBINATION ON MATURATION AND FUNCTION OF HUMAN MONOCYTE DERIVED DENDRITIC CELLS

**Danilovic Milos, Isailovic Jelena, Stevanovic Jovana, Tomic Sergej, Mihajlovic Dusan, Colic Miodrag**

**OBJECTIVE:** Dendritic cells (DCs) are potent antigen-presenting cells, which are increasingly being investigated in therapy of malignance. Their maturation is mostly

### Students session

induced by standard cocktail containing tumor necrosis factor- $\alpha$ , interleukin (IL)-1 $\beta$ , IL-6 and prostaglandin E2. Previous findings suggested that interferon (IFN)- $\gamma$  stimulates the synthesis of IL-12, which mediate a strong anti-tumorous immune response via T-helper (Th1) cells. Additionally, lipopolysaccharide (LPS) is a known DC maturation agent acting via Toll-like receptor (TLR)-4. Therefore, we compared the effects of LPS/IFN- $\gamma$  combination and standard cocktail on maturation, allostimulatory and Th polarization capability of human

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monocyte-derived DCs.

**MATERIAL & METHODS:** DCs were generated by cultivating monocytes with granulocyte macrophage colony-stimulating factor and IL-4 for 6 days. Immature DCs were then stimulated with the cocktail or with LPS/IFN- $\gamma$  combination. After 24h, phenotypic analysis and DCs functions were investigated.

**RESULTS:** The cocktail induced a higher expression of HLA-DR, CD54 and CD83, but a lower expression of CD40 by DCs. LPS/IFN- $\gamma$ -stimulated DCs produced more IL-12, but less IL-23. In addition, the co-culture supernatants of LPS/IFN- $\gamma$ -matured DCs and allogeneic CD4+T cells contained higher concentrations of IFN- $\gamma$  and IL-17, compared to the co-cultures with the cocktail-treated DCs. In contrast, cocktail-matured DCs induced a stronger allogeneic CD4+T cell proliferation.

**CONCLUSION:** Although the maturation protocol with LPS/IFN- $\gamma$  exhibits weaker phenotypic maturation potency for DCs, it induced much stronger Th1 and Th17 immune responses than the protocol with standard cocktail.

## **IMPACT AND INTERVENTIONS OF MUSIC ON HEALTH**

**Charitidis Nektarios, Pagkratl Vasiliki**

**Purpose:** Music is a universal feature of all human cultures and appreciated as such. The primary and specific aim of this study is to record the therapeutic effect of music as a healing tool for hospitalized patients and its' effect on a wide range of diseases. The secondary aim, is to investigate and document the positive contribution of music in all branches of general public health.

**Material and Methods:** Collected data came from a review of the international bibliography (research studies and articles found on Pub Med).

**Results:** From the comparison and screening of the collected data, most studies confirm and document the beneficial effects of music on separate and general fields of health. Regarding hospitalized patients, music helps and enhances the healing and recovery process of many diseases and unbalanced health conditions; it also generates a serene, stress-free and patient-friendly hospital environment for patients, within which, healthcare professionals can perform "lege artis". In terms of general public health, research proves that music is a beneficial factor that improves productivity and stamina and also results in physical, social and mental well-being, by reducing stress, depression, grief, loss, sorrow and similar emotional states.

**Conclusion:** Music is a low-cost, universal and multicultural therapeutic tool that can be used as an alternative therapy in many cases, a fact well supported by search-based findings, but not yet accepted by the majority of medical community. Therefore, healthcare professionals should be educated further in order to implement and evolve music in patient care, because of its effectiveness.

## **MULTIPLE CASUALTIES INCIDENTS – THE IMPORTANCE OF EARLY SPECIFIC TRAINING OF MILITARY MEDICAL PERSONNEL**

**T.C. Mures, Maria M. Ancuta, R. A. Zamfir, B. S. Zamfir**

**Introduction:** MCI has always been a challenge even for well-developed health systems. The geo-climatic and socio-economic current conditions clearly predispose us to increased incidence and magnitude of such events. Moreover, the current trend of the evolution of armed conflict to asymmetric and unconventional confrontations causes increasingly frequent incidents which involves civilians in armed military conflicts, representing an additional risk factor. In this context, the contribution of military medicine at the management of civil MCI can be particularly valuable both in human terms and in terms of capabilities.

**Material:** The sudden and unexpected onset, the major destructive effects, unpredictable developments and major impact both physical and psychological on the intervention personnel are the main features of the MCI. These characteristics superimposed over a high level of current activity destabilize the health systems. To ensure an adequate emergency response, procedures are conducted after specific and complex operation plans that differ substantially from those used in the current work routine. The knowledge and application of these procedures accurately by the staff involved is essential to ensure actional interoperability between the structures participating in the intervention.

**Conclusion:** Acquiring, maintaining and improving knowledge and skills needed to perform, in conditions of extreme physical and mental stress, the complex activities provided in emergency response procedures require completion of a gradual and continuous program of specific training. Ideally, this program will begin as early as possible in the medical career.

## **CONSIDERATIONS REGARDING TACTICAL**

## EVACUATION CARE

**Iulia-Madalina Staicu**

**Introduction:** Lessons learned from more than a decade of war in Afghanistan showed that many potentially preventable deaths have occurred until casualties reached a medical treatment facility (MTF).

**Materials and methods:** Research work on the available medical literature by searching databases (Medline, Wiley, Science Direct), selected articles published since 2012 to 2015. Search terms included: medical treatment facility, tactical evacuation care, stress, aeromedical assets.

**Results:** Our paper deals with one important factor which could reduce these deaths – the third phase of tactical combat casualty care – tactical evacuation care (TEC). After a brief history regarding medical evacuation, we describe the concept of TEC with stress on some important factors which influence the mortality during this phase of care when are used aeromedical assets.

**Conclusions:** Almost 90% of all combat deaths occur before the casualty reaches a Medical Treatment Facility (MTF). One of the most important factors to reduce the mortality in tactical evacuation phase of care is to have well equipped evacuation assets, manned with well-prepared medical personnel.

## RELATIONSHIP OF SOLITARY GLIOBLASTOMAS TO THE FUNCTIONAL REGIONS OF THE BRAIN

**Bulatovic Jelena, Ljubenic Nenad, Hadzija Helena, Despotović Dragana, Peric Predrag**

**OBJECTIVE:** Maximal safe resection of glioblastoma (GB) depends on its size and anatomical localization (AL). Functional localization (FL) limits or disables tumor resectability.

**AIM:** Determination of AL and size of GB, and their relationship to the functional brain regions (FBRs).

**MATERIAL & METHODS:** We analyzed pre-operative magnetic resonance imaging of the brain in DICOM format of 19 patients with primary, solitary GBs of the brain. The size of GB was determined as maximal clinical diameter (MCD) of tumor hyperintensity signal on T2W/FLAIR sequence, and as maximal morphological diameter (MMD) of tumor contrast enhancement on T1W+C sequence. FL was defined as FBRs according to Sawaya and co-workers.

**RESULTS:** In analyzed patients, GB was frequently localized

in temporal lobe and eloquent brain regions (52.6% and 42.1% respectively). In females, GB was significantly more frequent in eloquent regions ( $p = 0.039$ ). Independently to the tumor FL, significant correlation between MMD and MCD ( $p = 0.022$ ) was found, as well as highly significant difference between them.

## DEVELOPMENT OF A POLICY TO INCREASE DETECTION RATES OF RARE DISEASES

**M. Zahit Sarikaya, Halili Sik, Ferdi Yildirim, Mahir R. Turan, Kaan E. Bebek, Enes B. Biskiner, Huseyin Dulger, F. Cengizhan Fettahoglu, Mecit Bahar, Mustafa Gulec**

**Introduction:** The term “Orphan Diseases” refers to extremely rare medical conditions, rare being 1:2000 in the population according to the European definition and affecting less than 200.000 people worldwide according to the American definition. There are 6 to 8 thousand rare diseases on Earth. Countries use different strategies and policies to treat or cure these conditions. First in 1983 in America, then in 1999 in Europe, different political approaches have been adopted. Rare diseases constitute a global problem; thus, they require creation of shared databases and extensive studies. We don't have an extensive study about rare diseases in our country yet.

**Method:** First, the website “orpha.net” was utilized to collect information about the 100 most common rare diseases. Then, our hospital's data center was searched for records of the ICD-10 codes of these diseases between January 2011 - February 2015.

**Results:** We found 11.238 diagnoses of rare diseases among these admissions. We analyzed some clinical qualifications of these patients in SPSS.

**Discussion:** We aimed to acquire epidemiological data about these diseases, since there was not a related research in our country. If this research can be applied in other hospitals in the country, nationwide epidemiological results can be achieved, and a shared database for further studies will be possible.

## PUBLIC AWARENESS IN CHRONIC DISEASES

**Eda Demirtas, Bekir Dogan, M. Emin Karayigit, Yavuz S. Yalcin, Faruk Colak, Sevde B. Okuducu, Nurperi H. Acar, Aydın Bagdat, Okkes Yigit, Muhsin F. Yildirim, Abdulgani Bakar, Sumeysra Altun, Merve Arslan, Ugur Isik, Unal**

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**Zengin, Ilker Yilmaz**

Objective: By definition, a chronic disease is one lasting 3 months or more. Chronic diseases constitute 63% of all death causes. The most frequent causes of chronic disease are: 1. increased blood pressure (13%), 2. tobacco products (9%), 3. increased blood glucose (6%), 4. insufficient physical activity (6%), 5. overweight and obesity. We aimed to increase the awareness of people about hypertension, cigarette, diabetes and obesity risk factors.

Material- Method: Four different risk evaluation forms were developed to assess four major health problems of cigarette, diabetes, hypertension and obesity. Then, informative posters were prepared and communication booths were established in our hospital. Blood sugar levels, blood pressure, waist circumference, height and weight were recorded for every visitor. In light of the measurements, we filled the risk evaluation forms for each patient. We recommended patients whose conditions were found to be risky in terms of four health problems to visit related outpatient clinics. We also noted the contact information of the patients for further follow-up studies.

Results: In light of both our observations during the activity and results obtained from the risk evaluation forms, consciousness and awareness were significantly insufficient among the patients. Overall, our data suggest patients do not tend to quit cigarette unless they had had heart attack or malignancy. Also, patients do not develop healthy nutritional habits unless they are diagnosed with diabetes. There were some patients whose blood pressures were measured for the first time in their lives.

Conclusion: Public awareness in chronic diseases is lower than expected. Further studies aiming to inform the public about complications of chronic diseases are urgently needed.

**EVALUATION OF ENVIRONMENTAL HEALTH AND CONDITIONS OF STUDENT LIVING AREAS IN A FACULTY OF MEDICINE****Zeynep Eslem Gokcek, Furkan Taha Birinci, Burak Cengeloglu, Fethi Dilber, Hulya Kapucu, Talha Kivanc, Muhammed Muaz Kusen, Ali Uygun, Burhan Poyraz, Yavuz Selim Yalcin, Recai Ogur**

Objective: Environmental health is focused on the natural and built environments for the benefit of human health. In this study, we focused on 5 major factors that we considered are most influential on our campus life: microbiological air quality, electromagnetic radiation (EMR), noise, swab culture and illumination.

Methods: Microbiological analyses, EMR, noise measurements, swab culture and illumination measurements were carried out in the following places with respective specific devices: dormitories, study halls, bathrooms, public toilets, hallways and cafeterias.

Results: After the statistical evaluation of microbiological measurements, statistically significant differences were found between room population and bacterial pollution ( $p=0.020$ ). For EMR, a statistically significant difference was found between room population and study rooms' measurement at 20.00 PM. Also, statistically significant differences were found between room population and EMR measurements at 01.00 AM ( $p=0.028$ ,  $p=0.016$ ; respectively). Also, there were statistically significant differences between noise measurements at count time and 01.00 AM ( $p<0.001$ ) A significant statistical difference was found between gender and colonization in fridges according to colony counts of swab cultures ( $p=0.011$ ). There were statistically significant differences between room types and illumination in all conditions of lighting ( $p<0.01$ ).

Conclusion: Conditions and problems of our faculty were investigated using 5 major parameters.

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**OP session 1 – Nurses session****TURKISH NURSING STUDENTS' KNOWLEDGE OF AND****ATTITUDE TOWARD HIV/AIDS AND THEIR**

## WILLINGNESS FOR CARE RELATED TO PATIENTS WITH HIV/AIDS

**Kok Gulsah, Guvenc Gulden, Kaplan Zeliha**

**OBJECTIVE:** Studies have shown that healthcare providers have negative attitudes toward and fear of people living with HIV/AIDS because of lack of knowledge and the stigma attached to the disease, and fear of the possibility of becoming infected, and hesitate to provide care to HIV/AIDS. The aim of this study was to determine Turkish nursing students' HIV/AIDS knowledge, attitudes, and willingness care related to patients with HIV/AIDS.

**MATERIAL AND METHOD:** Cross-sectional design was used in this descriptive study. Participants were nursing students from a School of Nursing in Ankara, Turkey during 2013–2014 academic years. A total of 325 nursing students volunteered to attend this study and all of them were female. Data collection form, HIV/AIDS Knowledge Questionnaire, and AIDS Attitude Scale were used for data collection. The data were analyzed using SPSS for Windows version 15.0.

**RESULTS:** The mean age of participants was  $20.56 \pm 1.05$ . The mean score for AIDS attitude scale was  $49.50 \pm 10.57$ . The mean subscale scores for contagion, negative emotions, and professional resistance were  $20.88 \pm 4.24$ ;  $12.99 \pm 3.64$ ;  $15.61 \pm 6.10$  respectively. The mean knowledge score was  $13.76 \pm 2.88$ , and mean score for willingness to care was  $4.30 \pm 1.76$ . There were significant differences in median scores of knowledge, AIDS attitude scale and subscales among nursing students.

**CONCLUSION:** The current results reveal that nursing students have moderate level of knowledge about HIV/AIDS and that their attitudes need to be improved. Inadequate knowledge, negative attitudes towards patients with HIV/AIDS, and consequent fear may result in less than optimal care for patients with HIV/AIDS.

## FLIGHT NURSE SCHOOL IN THE HELLENIC AIRFORCE

**Katsika Alexandra**

**Purpose:** To inform about the operation of Flight Nurse School in the Hellenic Airforce, under the Aerospace Medicine Centre, in order to provide specialized nursing personnel for air evacuated patients, during peace and war time, as well as to advance the quality of nursing care and ensure their ability to respond in every emergency condition involving medevac. The structure and

performance of school conducted in accordance to US/Canada FN Schools, corresponded to the abilities and needs of our country.

**Material:** Data were collected from Flight Nurse School records and the Operation's Regulation of Aerospace Medicine Centre.

**Results:** Since 1988 a total number of 284 Officer Nurses and 27 petty officers of the HAF, 11 Officer Nurses of the HN, 20 Officer Nurses of the HA and 24 civilian paramedics of the Hellenic National Emergency Aid Centre, have graduated from school Education at school includes:

- Theoretical part about stresses of flight, mission planning, emergency situations in flight, combat casualty care and triage.
- Practical part includes low pressure chamber, practice in sea survival and real flights.

**Conclusions:** FN School offers a unique and broad field to professional nursing, with an opportunity to serve patients, community and Armed Forces as a basic part of Aerospace Medicine. Greece is one of NATO members that can afford specialized Flight Nurses during Medevac, according to NATO STANAGS, while we are considering the possibility of training others' countries officers, as soon as specific difficulties will be overcome.

## NURSE'S ROLE IN LASER ASSISTED REFRACTIVE SURGERY

**Mihai Florentina, Grigore-Ghita Ana-Maria**

**Introduction:** Refractive surgery is one of the most rapidly evolving fields in ophthalmology. It is used to correct refractive errors such as myopia, hyperopia, astigmatism and presbyopia.

This field of surgery evolved rapidly with the development of excimer laser assisted procedures, the most commonly used being LASIK.

**Systematic review methodology:** This study is a review on laser assisted refractive surgery, emphasizing the role of the nurse in patient's care.

**Results:** A critical part of this procedure is the perioperative care of the patient and, as such, the nurse. Nursing involves deep human interpersonal relationships between nurses and patients and it is an essential part of the patient's care.

**Conclusions:** The nurse is a critical part of the perioperative care of the patient.

If a patient decides, after careful consideration, to do this

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procedure, he must meet some criteria, carefully selected to limit the postoperative complications.

Even if patient's satisfaction after this type of procedure is usually high, there are various complications that may occur, depending on the type of procedure used.

## BREAST CANCER IN YOUNG WOMEN

### Margareta Popa

Living with breast cancer can be a difficult proposition. In women who have had a mastectomy, altered body image can be a challenge. Young women are especially vulnerable because of their age.

Breast cancer at a young age though the age definition for young is very variable, has been reported to pursue a more aggressive clinical course and to be associated with a more unfavorable prognosis compared with the disease in older patients.

About 5-10% of all breast cancer is thought to be hereditary. When a woman is diagnosed with breast cancer at a young age (i.e. under 40 years), we are concerned that she might have developed her cancer due to an inherited predisposition.

Young women who learn they carry a mutation in a gene conferring a high risk of breast cancer must make a plan for managing their cancer risk over time. Today, there are several options for women, but unfortunately, all involve significant trade-offs:

- Increased surveillance
- Prophylactic surgery
- Chemoprevention

Diagnosis of breast cancer presents the young woman with a whole range of challenges. In addition to the physical and existential threats, there are the prospects of disfiguring surgery and complex adjuvant treatment with its unpleasant side effects. She is also at risk of psychological, familial, occupational, financial and social problems.

Breast cancer at young age often occurs before reproductive plans have been completed and reproductive

issues, including fertility, pregnancy, contraception and menopause, are therefore of great importance for this growing number of young breast cancer survivors.

Expectations of young women concerning psychological intervention are slightly different from the needs of the older patients. However, family support is the most important for them, there is strong expectation of psychological support from clinical professional. Availability of such help should be maintained much more intensely.

## PRESENT AND FUTURE OF HEARING AIDS

### Ileana Mariana Mateş

The hearing aids (Receiver-In-The-Ear, Behind-The-Ear, In-The-Ear, Canal Hearing Aids, Cochlear Implants, Bone Anchored Systems) have performed a vital process for people suffering of hearing problems for almost two centuries, but fortunately they have rapidly evolved after discovering the microprocessor in 1970s.

If we look to the future, scientists are working for developing new and exciting solutions in hearing aid design. Scientists from all over the world are developing future devices including

- laser-signalled hearing aids with a larger frequency range,
- permanent in-ear hearing aids which never have to be removed because they use induction charging rather than batteries.
- regeneration of damaged parts of the inner ear using stem cells

In our days, the major players in the hearing aids market are Cochlear Limited (Australia), GN Store Nord A/S (Denmark), MED-EL (Austria), SeboTek Hearing Systems, LLC (U.S.), Sivantos Pte. Ltd. (Singapore), Sonova (Switzerland), Starkey Hearing Technologies, Inc. (U.S.), Widex (Denmark), William Demant Holding A/S (Denmark), and Zounds Hearing, Inc. (U.S.).

The hearing aid devices segment is expected to account for the largest share of the global hearing aids products market in 2016, and the global hearing aids market is expected to reach USD 8,373.9 Million by 2020 from USD 6,183.3 Million in 2016.

## OP session 2 – Aerspatial and diving medicine

### THE INFORMATION SEEKING BEHAVIOR OF GREEK AIR FORCE MILITARY DOCTORS

**Evangelos Persakis, Petros Kostagiolas, Eleni Lazaridou, Georgios Toloumis**

**Aim:** This paper aims to study the information seeking behavior of Greek Air Force military doctors and thereafter inference on the role of information needs satisfaction at operational level. We call this interaction “INFORMATION” combining the words “information and operation.”

**Material – Method:** The research was based on empirical evidence from a survey informed by Wilson's macro model of information-seeking behavior. The data includes 101 military doctors of 251 Air Force General Hospital, in Athens, Greece.

**Results:** The method was successful in identifying operational information needs, information resources employed and the obstacles military doctors face when seeking information. The most important information needs of the physicians were related to diagnosis, treatment, research, updating of knowledge and instruction-educational issues. Online resources such as scientific databases, search engines and scientific journals were the most important information resources, while the major obstacle encountered by the doctors was the lack of access to online scientific databases from the workplace. Significant associations were identified and discussed.

**Conclusions:** The information seeking behavior and needs of Greek Air Force military doctors should be, at operational level, addressed as an integral part of the development of information systems and information services especially for that category of doctors.

### NIGHT VISION DEVICES USE IN HELICOPTER AIRCREW - HUMAN FACTOR ASPECTS

**Stefanescu Cristina, Stefanescu Cristian-Dragos**

**Introduction:** Night Vision Devices (NVD) have become an essential component of modern military aviation. It offers enhanced performance qualities compared to unaided night vision, more useful during the execution of missions at night, but at the same time their use is tributary to some limitations that should be known and accepted (both technical, and human factor related).

**Material and methods:** We used an anonymous questionnaire (transversal observational study) applied to helicopter pilots using different types of NVD (military flight), totaling 46 respondents. Thus we could analyzed various aspects of using these devices in terms of human factors (assessment of their benefit in terms of morphoscopic acuity for different distances, stereoacuity and depth perception, visual field extend ,contrast sensitivity quality, benefits in different phases of flight and in various flight conditions), and problems faced by the user: the fatigue phenomenon (description, cause, duration), spatial disorientation and “black hole illusion”, if the simulator can reproduce the situations faced by the pilot in real flight, and the importance of a basic professional course as well as continuous training.

**Conclusions:** The aria of concerns about flight safety must include the mandatory use of NVD. Most important for quality skills are proper and continuous training.

### ROMANIAN MILITARY MEDICINE CONTRIBUTION IN AIRMEDEVAC CAPACITY BUILDING IN BOSNIA AND HERZEGOVINA

**Pintilie Daniel-Iacob, Tudose Dragoş-Cristian, Nică Daniel-Florin**

As of 2008, Bosnia and Herzegovina applied for NATO membership as Partnership for Peace member. Therefore, in order to achieve NATO standards, one of the objectives was to develop a structure to provide AirMEDEVAC capabilities for Bosnian and NATO forces as well. The project started in 2010 with Romanian Air Force Mobile Training Team as part of ALTHEA mission in BiH, and continued from 2012 with Romanian Air Force AirMEDEVAC Advisory Team. The Romanian Air Force developed an Air Medevac structure, evaluated by NATO through STARTASSES process.

**Materials & methods:** This paper provides a review of the most important aspects of the capacity building regarding AirMEDEVAC capability: available resources, project development, challenges, and further development. The project is to be evaluated by NATO during 2017.

**Results:** The long term mission and the tremendous logistic, medical and operational challenges resulted in building an updated functional structure in BiH Armed Forces dedicated to Air Force missions in general and medical

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evacuation in particular.

Conclusion: The recent experience of Romanian Air Force in developing an AirMEDEVAC structure is of help for surpassing the tremendous challenges encountered by BiH Armed Forces in the process of building their own AirMEDEVAC capacity.

## **DECOMPRESSION RISK AND INTENSIVE PHYSICAL EFFORT AFTER DIVING**

**Shopov Nikola, Vazharov Ivaylo**

Introduction: The effect of post-dive exercise on bubble formation remains controversial. There are studies, including ours, showing that moderate physical activity before diving can reduce the risk of decompression. One 2006 study suggests that heavy post-dive exercise might be beneficial, although it was done on fit military. After the number of cases of decompression sickness (DCS) in divers involved in catching shells does not diminish, our hypothesis is that heavy exertion immediately after diving is probably inadvisable.

On the other hand the most likely factor initiating DCS is believed to be the formation of bubbles in the blood and the tissues. It is generally accepted that the incidence of DCS is lower when few or no bubbles are present in the circulation from hyperbaric exposures. Further, it is hypothesized that heavy anaerobic efforts immediately after the dive will significantly increase Doppler detected bubbles, which may be the reason for the increase in cases of DCS.

Purpose: The purpose of this study was to examine the impact of strenuous physical activity after a dive on decompression risk.

Materials and Methods: 22 non well-trained divers participate for this study (average age:  $32 \pm 8$  years and Body Mass Index:  $24 \pm 4.2 \text{ kg m}^{-2}$ ). Each diver performed two type of dives (during 3 days) in a hyperbaric chamber in depth 18 m for 60 min with decompression stop on 3 m for 5 min according to the French Tables de plongee a l'air Marine Nationale (MN 90). One type dive is without performing physical effort after decompression and after the second dive was carried out intense exercise. Physical exercise consisted of two cycles of five minutes, with one minute rest, consistently performing 10 crunches, 5 push-ups and 10 squats with 20 kg weight. After each dive be performed Doppler monitoring by using a bi-directional Doppler (BIDOP ES 100-V3 – HADECO, Japan) with 2MHz transducer. Bubbles are detected in the precordial area

with the usage of the Kisman-Masurel code. Monitoring was performed at 30, 60 and 90 min after surfacing and we observed for the maximum bubble grades - MBG (bubble peak). The bubble grade was subsequently used to calculate the Kisman integrated severity score (KISS). KISS was assumed to be a meaningful linearised measure of post-decompression intravascular bubble activity status that may be treated statistically.

Results: Anaerobic intensive workloads significantly increased Maximum Bubble Grades ( $\Delta = 0.53$ ;  $r = 0.718^{**}$ ;  $p < 0.01$ ) and KISS ( $\Delta = 6.72$ ;  $r = 0.869^{**}$ ;  $p < 0.01$ ). Nobody demonstrated a decrease in venous bubble grade after dives with exercises.

Conclusion: These results suggest that post-dive strenuous exercises after a single dive significantly increased post-dive gas bubble formation in poorly trained divers and perhaps leading to increased of decompression risk.

## **COSMIC RADIATION AFFECT ON WOMEN WHO USE WARPLANES: A CUMULATIVE DOSE STUDY**

**Ozturk Mustafa**

BACKGROUND During flights, pilots, flight personnel, and passengers are exposed to cosmic radiation originating from galactic rays and solar system. The term cosmic radiation is the conjunction of solar and galactic radiation that originates from the sun and other planets and stars, respectively. Cosmic radiation consists of neutrons, protons, electrons, and photons, and human skin is permeable to these particles, which can cause alterations within live cells on a molecular level. This article reviews the effects of cosmic radiation on women who use warplanes.

MATERIALS AND METHODS We calculated the cosmic radiation exposure of women who use warplanes. We implanted cosmic radiation calculators into pilots' (F 16, CASA and helicopter) uniforms. Exposure to cosmic ionizing radiation was calculated by the Turkish Atomic Energy Authority after 1 month. All flights were calculated according to July datasets because the maximal radiation exposure effect is considered to be in the month of July.

RESULTS According to the reports of the ICRP in 2003 and 2007, doses below 10 rads (1 rad = 10 mSv) have no demonstrable influence on humans. For nonpregnant people, the cosmic radiation response dose has been established at 50 mSv per month. The allowed radiation doses are 0.5 mSv per month during pregnancy. Domestic flights do not exceed the recommended monthly limit for

women.

**CONCLUSION** We evaluated the maximum cosmic radiation exposure effects on women using warplanes. The exposure for pilots was found to be below the risk level.

### **AEROMEDICAL EVACUATION OF ABDOMINAL GUN SHOT WOUNDED PATIENTS IN POSTOPERATIVE EARLY PHASE**

**Acar Yahya Ayhan, Uyguner Cem, Tezel Onur, Salman Necati, Dede Hakan**

**OBJECTIVE:** There is still debate on optimal post-operative time for aeromedical evacuation of abdominal surgery patients. This study aims to evaluate the risk factors associated with aeromedical evacuation of patients with abdominal gunshot injury in early postoperative phase.

**MATERIAL AND METHOD:** This is a retrospective analysis of abdominal gunshot wounded patients which were transported by air ambulance system of Turkish Armed Forces. Data were collected retrospectively from the patient records between 1998 and 2015. Patients divided into two groups according to postoperative transport time; patients transported within postoperative three days (GROUP 1) and later than three days (GROUP 2). Besides demographic data, flight crew number, pre- and post-transport vital signs of the patient, airway status (spontaneous, mechanically ventilated), vasopressor and/or volume replacement therapies used in flight were recorded. SPSS 15.0 (SPSS Inc., Chicago, IL) was used for statistical analysis and  $p < 0.05$  considered as statistically significant.

**RESULTS:** A total of 217 patients were enrolled in the study. All of them were transported with a fixed wing aircraft (CN-235) air ambulance. No deaths occurred during transport. There was not any difference in age and gender between two groups ( $p=0.385$  and  $0.244$ , respectively). Mechanically ventilated patients and vasopressor use showed a higher rate in group 1 ( $p=0.001$  and  $0.011$ , respectively). There was not any difference in pre- and post-flight systolic blood pressure levels and flight crew number between two groups ( $p=0.122$ ,  $0.775$ , and  $0.865$ , respectively).

**CONCLUSION:** Patients with abdominal gunshot injury can be transported safely by air ambulance in early postoperative phase.

### **THE ROLE OF MILITARY AIRCRAFTS IN TRANSPORT OF ROMANIAN CITIZENS INVOLVED IN MASS CASUALTY INCIDENTS**

**Leonard-Marin Lupu, Bogdan Teusdea**

A mass casualty incident (MCI) is any incident in which emergency medical services resources, such as personnel and equipment, are overwhelmed by the number and severity of casualties.

A MCI can involve many and varied types of responders and agencies. Once an MCI has been declared, a definite and well coordinated flow of events will occur, using three separate phases: triage, treatment, and transportation. When a complex type of injuries are present (for example severe burns or major trauma injuries), which need special medical facilities to be treated, then the situation may become critical considering the public impact of the incident.

A complex process must be implemented very quickly in order to identify domestic or foreign hospitals specialized in burn or trauma treatment, to make all the necessary arrangements, to transport the patients in a proper way and to sustain all this efforts.

The use of military medical aircrafts proved to be a valid option for long-distance evacuations. Military assets could play a great role in an MCI situation but without preplanning and scenario based exercises this missions may become difficult.

### **PATIENTS' SATISFACTION LEVEL IN A GREEK MILITARY HOSPITAL**

**Trachanatzis Theodore**

**Aim:** The last decades, the interest of health care professionals increasingly focuses on patients' satisfaction level of the provided care. The cost of hospitalization coupled with general quality has been the subject of a heated debate. The main objective of this research is to estimate the patients' satisfaction level in the 251 Air Force Hospital of Athens. Additional objectives are the investigation of the factors that define it.

**Material-Methods:** The study population consisted of patients just before their discharge from the hospital. 150 questionnaires (close-typed) were distributed within a six-month period (May-October 2014) in total to the orthopedic and cardiology clinics. Of these, 109 were

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completed correctly and used in the analysis. For the statistical evaluation, Cronbach's coefficient, and the SPSS program were used.

Results: 58.7% of the sample were men. The majority of the participants was above 61 years old (26.6%), married (47.7%), with an average monthly income of 1001-1500 euros. Overall satisfaction in terms of friendliness and courtesy among patient- therapist seemed to be in a high level (81.9% and 84% respectively for the 2 clinics). Furthermore, based on the regression analysis, the education of the patients affects mainly their perception about the quality of the services.

Conclusions: On the whole, useful conclusions have been drawn regarding the provision of care. It is a fact that the high educational level and general competence of the physicians and nurses are the key elements that reflect on the patients' high satisfaction score. Quality is undoubtedly a challenge, and also an inalienable right based on the principle of humanism, and the Hippocratic ideal!

### **THE PREVALENCE OF THYROID ABNORMALITIES ON ULTRASONOGRAPHY AND ASSOCIATED FACTORS PREDICTING RISK PROFILE IN AVIATORS**

**Okur Aktaş Gökcan, Karacaer Zehra, Karaduman Mehmet, Tirmik Uzeyir**

**OBJECTIVE:** To evaluate the prevalence of thyroid abnormalities detected on ultrasonography and its relationship with metabolic parameters which are important to describe a risk profile among aviators.

**MATERIAL AND METHOD:** We retrospectively reviewed

medical charts of 259 aviators who were admitted to the Military Aviation Medicine Center for the annual examination in year 2014. Thyroid ultrasonography findings, age, body mass index (BMI), presence of liver steatosis on ultrasonography, laboratory parameters (TSH, fasting blood glucose, BUN, creatinine, total cholesterol, LDL, HDL, VLDL and triglyceride, TC/HDL ratio) were obtained.

**RESULTS:** Mean age was 35.12±5.9 years. All subjects were male. 67 subjects (26%) had thyroid abnormalities on ultrasonography. According to BMI, 69 subjects (26%) were slightly overweight (BMI 25-30 kg/m<sup>2</sup>) and of them 19 subjects had thyroid abnormalities on ultrasound (28%). Liver steatosis was found in 67 subjects (26%) and 20 subjects with liver steatosis had thyroid abnormalities on ultrasonography at the same time (17 subjects were overweight and 3 subjects had normal BMI).

Older age, higher BMI were found closely related with the presence of thyroid nodules (p<0.05 for all). Presence of liver steatosis and laboratory parameters including TSH were identified as independent predictors for the existence of thyroid nodules.

**CONCLUSION:** This study showed a positive relationship between metabolic parameters and thyroid abnormalities in aviators. Our results support that increases in thyroid nodules is partly secondary to increase in obesity.

Metabolic and sonographic abnormalities of thyroid gland and liver might be clinical indicators for further evaluation of aviators whose clinical risk profile could be underestimated by classical risk factors and hence, annual examinations for aviators should be designed to include thyroid ultrasonography.

## **OP session 2 – Emergency medicine and trauma management**

### **COLECTIVE MASS CASUALTY INCIDENT – OUR EXPERIENCE**

**Negoitã DD, Teuşdea CB, Toma LM, Butoi A**

On the 30th of October 2015 a fire occurred in a nightclub where there were a few hundred people, causing tens of deaths and dozens of injuries. A few of them got by their

own means to the ED of the University Emergency Central Military Hospital Bucharest. Several of them were brought by SMURD ambulances from 2 other Emergency Hospitals (Floreasca and Coltea) following the Emergency Red Intervention Plan. 11 patients were admitted to ICU during that night. One patient denied admission at his own risk (having minor injuries). We present the peculiarities of management of these burn patients in the ER.

## **ULTRASOUNDS CAN ESTIMATE CEREBRAL EDEMA IN MANY WAYS THAT CAN ALSO BE APPLIED TO PREHOSPITAL EMERGENCY CARE**

**Karellas Ioannis, Plakas Sotirios, Lafazanios Spiridon, Tsakalakis Christos, Liapis Georgios, Gourtzelidis Pavlos**

**Purpose:** Traumatic Brain Injuries (TBIs) are a leading cause of morbidity and mortality in modern battlefield. Increased Intracranial Pressure (ICP) due to cerebral edema is a serious complication of TBIs. This study is investigating if Transcranial Doppler (TCD), Doppler of Internal Carotid Arteries (ICAs) and Ocular Nerve Sheath Diameter (OSND) can estimate increased ICP, very important for decision making and guidance of therapy.

**Material and Methods:** 24 TBI patients, presented with Glasgow Coma Score < 8, were sedated, intubated, mechanically ventilated and admitted in ICU. In all patients intracranial catheters were applied for direct monitoring of ICP, Mean Arterial Pressure (MAP) was invasively monitored and OSND was measured. When Cerebral Perfusion Pressure (CPP=MAP-ICP) decreased below 50 mmHg, in parallel to aggressive therapy, a TCD scan was held, the spectral analysis of flow in ICAs was obtained and OSND was measured. Blood flow velocities were measured in both Mean Cerebral Arteries, PI (PI=Peak systolic velocity-End diastolic velocity/Mean velocity) and CPP were calculated. The TCD spectral analysis was compared with that of ICAs.

**Results:** 365 TCD examinations were conducted and PI and CPP was calculated. There was a strong correlation between CPP and PI (Pearson's Correlation Coefficient: -0.782,  $p < 0.0001$ ) and between OSND and ICP (Spearman:  $p < 0.05$ ). The ICAs Doppler spectral analysis resembled that of TCDs and lost its diastolic component when  $ICP > dBP$ .

**Conclusion:** There are many ways that ultrasounds can estimate of CPP in TBI patients. Compact devices make ultrasounds applicable to prehospital care most useful at frontline for the on site evaluation of casualties.

## **SEPSIS – AN UPDATE**

**Dogaru S, Teusdea CB, Popa Luminița Mariana**

Sepsis is not something new. Neither is the increasing awareness toward associated morbidity, mortality and costs burden. Many organizations, including regulatory agencies and hospitals are focused on sepsis quality improvement programs.

In addition, greater understanding of underlying pathophysiologic mechanisms responsible for cellular dysfunction and the significant amount of data obtained through evidence based medicine led to constant updated definitions, biomarkers study, admission criteria and protocol based treatment (Surviving Sepsis Campaign 2008 and 2012).

Fast growing medical knowledge and increasing standardization require active concern toward the very essence of this subject. This is the reason why the Sepsis Definition Task Force recently (February 2016) updated the definitions for sepsis and septic shock of whose previous versions dated back in 1992 and 2003.

Although great progress had been made there much still to be done.

## **POINT-OF-CARE TESTING (POCT) DEVICES IN THE EMERGENCY DEPARTMENT – OUR EXPERIENCE**

**Teusdea CB, Toma LM, Dogaru S, Popa Luminița Mariana**

Point-of-care testing (POCT), or bedside testing is defined as medical diagnostic testing at or near the point of medical care - that is, at the time and place of patient care. POCT is to bring the test conveniently and immediately to the patient, making the results quicker, which allows for immediate clinical management decisions to be made.

POCT includes: blood glucose testing, blood gas and electrolytes analysis, rapid coagulation testing, rapid cardiac and sepsis markers diagnostics, drugs of abuse screening, urine strips testing, pregnancy testing, infectious disease testing and cholesterol screening.

In this study, we made a comparison between the results obtained from blood tests on POCT instruments (blood count and biochemistry), and blood tests obtained in the Central Laboratory of the hospital to determine if these analyzers can be used routinely to the emergency room.

Our study showed little difference between the two laboratory tests but with no statistical significance. Thus, POCT type tests can be successfully used in evaluating patients in ED, representing a possibility to reduce the time to treatment and to other medical decisions.

## **TRAUMATIC RUPTURE OF THE DIAPHRAGM**

**S. N. Romedea, S. Luncă, R. Tiutiuca, B. S. Zamfir**

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Introduction: Diaphragmatic rupture remains a diagnostic challenge because of the lack of an accurate test demonstrating the injury. The aim of this paper was to analyze our experience with management of these injuries and to identify predictors of outcome.

Material and method: Sixty-five patients were treated for diaphragmatic rupture in "St John" Emergency Hospital Iasi and Emergency Military Hospital "Jacob Czihac" Iasi, between January 2003 and April 2012. They were 52 men (80 %) and 13 women (20 %), with a mean age of 39.34 ±6.35years. Blunt trauma accounted for 16 injuries (24.61%) and penetrating trauma for the rest of 49 injuries (75.38%).

Results: The preoperative diagnosis was established for 18 patients, 7 blunt and 11 penetrating. Thirty-one patients (47.69%) presented with hemorrhagic shock upon admission and 50 patients (76.92%) had associated injury with an average Injury Severity Score of 25. Sixty-one cases (93.84%) were operated within 12 hours from admission. Two blunt lesions were treated after 18, respectively 24 hours and two cases presented after 5 respectively 12 years from the trauma episode. Intraoperatively 16 right lesions (24.61%), 49 left (75.38%) were identified. There were 8 deaths (12.30%) and 17 patients (26.15%) developed complications. Hemorrhagic shock upon admission, Injury Severity Score, mechanism of the injury and age strongly influenced the outcome ( $p < 0.05$ ).

Conclusions: In emergency trauma settings the diagnostic for diaphragmatic injuries is mainly established by laparotomy. A high index of suspicion and a thorough examination of both diaphragms during laparotomy is mandatory in order to avoid missing traumatic diaphragmatic injuries.

## **MANAGEMENT OF MASS CASUALTY INCIDENT IN ROMANIA**

**Teusdea CB, Toma M, Dogaru S, Popa Luminița Mariana, Negoită DD**

Romania is a Central European country, which has a various relief and it can be affected by many hazards. Hazards can be classified in natural and technological hazards.

In this context the healthcare system in Romania has two parts: civil and military which are providing the medical assistance in our country in every situation. The assessment and the coordination of an emergency situation are realized by National System for Emergency Situation and his components.

The system is activated by any person who calls 112 – "the unique number for emergencies", where a trained dispatcher assesses the emergency: type, type of hazard involved, location, number of victims, status of the victims and the need for help. The dispatcher from 112 Center/ Integrated Emergency Dispatch Center alerts the qualified first responder team – an ambulance for first aid from SMURD (Emergency Mobile Resuscitation and Extrication Service) or from the Ambulance Service which goes to the incident/accident site. If the dispatcher has information's that is a Mass Casualty Incident (MCI)/disaster he alerts the coordinator (medical doctor from a Regional Hospital - Emergency Department) and also the Chief Inspector for Emergency Situation from Regional Inspectorate for Emergency Situation. The Chief Inspector announces the Prefect which declares active the Red Intervention Plan for prehospital activities and the White Plan for in-hospital activities. At the MCI site goes also the Police intervention team and a team from the Fire Department.

## **THE ENCOUNTER OF ASYMMETRIC WARFARE INVOLVES ADDITIONAL SUPPORT TO THE EMERGENCY NATIONAL HEALTH SYSTEMS**

**Karellas Ioannis, Daliakopoylos Stavros, Houliaras Eleutherios, Sourlas Sotirios, Arsenoglou Athanasios, Liapis Georgios**

Purpose: Asymmetric warfare, bypassing armed forces, can cause mass casualties mainly civilians. Depending on the scale of the event, timely medical support can be demanding. This study is investigating the potential of National Health Systems to respond promptly to such a challenge and the readiness of Armed Forces to contribute, minimizing the time that proper medical help is provided to the site of incident, on the ground that the frequency of such incidents in large cities is increasing and that proper medical care on site is lifesaving.

Material and methods: At a 4000000 people city, we investigated how medical emergencies are managed. We interviewed the paramedics and recorded the patients that daily and yearly, emergently requested medical support. We acknowledged the patients that were properly evacuated. The readiness of Armed Forces to support National Medical Services in a mass casualty's situation was examined.

Results: In a year, almost 240000 patients emergently request medical help. From those, 40000 (16%) choose own ways to access medical care. Anytime, 30-60

ambulances are on the move and yearly, respond to 200000 medical requests, performing 160000 emergency evacuations. Additionally, they perform 50000 scheduled medical evacuations. Great work burden and lack of psychological support the main complains of employed paramedics. Armed Forces use a significant number of ambulances but not specially trained paramedics.

Conclusion: National Emergency Health Systems manage to meet the emergency demands in peace time. Mass casualties can also follow asymmetric warfare. It would be expected, the additional support needed in such occasion, to come from the potential of Armed Forces.

### **THE MANAGEMENT OF THE MAJOR BURNT PACIENT WITH ASSOCIATED AIRWAY INJURY IN THE CLINICAL CONTEXT OF MULTIPLE CASUALTIES INCIDENT: CASE PRESENTATION – EXPERIENCE ACQUIRED**

**Marinescu B., Marinescu Penelopia, Ioana Tuhar, Benga Andreea, Popescu F., Oprea T**

Purpose: The objective of this study is to present the outcomes of the correct management of the burned patient, and to share the experience acquired secondary to this event.

Methods: The case sample included 12 patients from the

same multiple casualties' incident, with the severity of the burn lesions varying between gr IIb-III and between 5-50% body surface, mainly affecting the upper half of the body (thorax, upper limbs, head and neck). As a common determinant all the cases presented respiratory tract lesions due to the nature of the event-fire in inclosed space followed by toxic fumes inhalation.

The surgical team involved was able to ensure in less than 10 hours the emergency surgical primary care for all of the 12 patients admitted.

Discussion: The distinctiveness of the presented cases consists in the great number of patients simultaneously admitted and treated.

Results: We can report a 100 % survivability, at 50 days all patients being discharged only with minor granulating areas left to heal spontaneously under local treatment. Most of the studies that we have found and we could refer to, on the matter of proper airway burn injuries and toxic fume inhalation did not statistically differ from our outcomes, even compared with consecrated burn centres from Western Europe.

Conclusions: The good overall results can be related to the interdisciplinary approach, right from the admission of the patients. Our hospital is a level I medico-military unit, conceived from the beginning to provide emergency medical assistance for the most complex cases.

## **OP session 2 – Neurology and toxicology**

### **COULD ERYTHROPOIETIN BE USED AS A GOLD STANDARD NEUROPROTECTIVE AGENT IN PATIENTS WITH SEVERE CLOSED BRAIN INJURY?**

**Stavros Gourgiotis, Stavros Aloizos, Georgios Veloudis, Evangelos Falidas, Constantinos Villias**

Aim: Our research was focused on the neuroprotective function of erythropoietin (Epo) in patients with severe closed traumatic brain injury (TBI).

Material - Methods: Our model examined the influence of the outcome and neurological recovery in 42 adults with TBI who were admitted to ICU within 6hrs of their injury and were recruited into a randomized controlled study of two groups; only the patients of the intervention group received 10,000 i.u. of Epo for 7 consecutive days.

Prognostic model based on CRASH II injury model and outcome was measured by survival and Glasgow Outcome Scale-Extended version (GOS-E) score at 6 months post-injury.

Results: Six patients (18.7%) died during the first two weeks; 4 of the control group and 2 of the intervention group. A mortality rate of 22.2% and 8.3% for the control and intervention group respectively was observed. A lower rate of good outcome (GOS-E score >4) at 6 months was mentioned among patients of the control group.

Conclusions: The study provides evidence of lower mortality and better neurological outcome for the patients who received Epo increasing the possibility that Epo therapy could be used in clinical practice, limiting neuronal damage induced by TBI.

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## **VALIDATION OF HIPPOCAMPAL VOLUMETRY USING 3-D MAGNETIC RESONANCE IMAGING ACQUISITION IN MULTIPLE SCLEROSIS PATIENTS**

**V. Petrova, K. Genov, M. Penkov**

**Introduction:** Different Magnetic Resonance (MR) imaging methods have been used to investigate and follow the pathological changes in central nervous system and their evolution in multiple sclerosis (MS) patients. Measuring tissue loss (brain atrophy) is considered a global marker of the adverse outcome of the disease. Hippocampus is a structure critical for cognition. It is sensitive to inflammation. Hippocampal atrophy is detected early in the disease course. MR determination of hippocampal volume (HV) could be useful tool in evaluating correlation between neurodegeneration and cognitive impairment in MS.

**Purpose:** Validation of hippocampal volumes measured using 3-D acquisition in a PERP protocol.

**Methods:** MR imaging was performed on a 1.5-T unit. We got 3-D volumetric acquisitions of hippocampus for each subject in a plane perpendicular to the axis of hippocampal formation (PERP protocol). 10 healthy subjects were studied. The results were compared with data obtained from hippocampal volume determination in 10 relapsing-remitting multiple sclerosis patients (RRMS). Both groups were age matched (20-40 years).

**Results:** For the control group (right hippocampus) the mean hippocampal volume was 9.46 cm (standart deviation 0.98). For the RRMS group was registered mean HV of 8.16cm (standart deviation 0.54). The difference of the mean volume is statistically significant ( $P = 0.003$ ) between two groups. The correlation with age was not significant in both groups (considering the small number of subjects).

**Conclusion:** Brain volume acquisition provides a measure of axonal loss. Atrophy is a sensitive and reliable marker in evaluating the neurodegenerative process in multiple sclerosis. Hippocampal biometry, in particular, could be applied in estimating data obtained from nonconventional MR techniques like magnetic resonance spectroscopy.

## **NEUROLOGICAL AND NEUROMUSCULAR SYMPTOMS CAUSED BY WEST NILE VIRUS INFECTION**

**Diana M. Popescu, Viorel Ordeanu, Marius Neculescu, Alexandru Filip Vladimirescu, Simona N. Bicheru, Lucia E. Ionescu, Gabriela V. Dumitrescu**

West Nile virus (WNV), isolated first from the blood of a febrile woman in the West Nile district of Uganda in 1937, was then identified and re-isolated from sick people, birds and mosquitoes in Egypt (since 1950). The virus have been classified in the genus *Flavivirus*, family *Flaviviridae* and since 1999 its geographical distribution include in addition to Africa: Europe, South Asia, Middle East and U.S.A.

The Encephalitic flaviviruses, including WNV, usually crosses the blood-brain barrier and probably they have the ability to multiply in the vascular endothelium.

The clinical manifestations of West Nile fever are medium to severe, occurring after 2-15 days (average 1-6 days) of incubation. Most human infections are clinically inapparent.

About 1 in 150 infected people, presents severe illness. The most important risk factor for neurological damage is age. People over 50 years have a higher risk of developing neurological symptoms. The most common neurological manifestations are: meningitis, meningo-encephalitis and encephalitis.

During the epidemics in the US from 2002 to 2003 neuromuscular manifestations (severe muscle weakness) were recognized as the main causes that have led to increased morbidity and mortality.

Although the potential for contamination, infection and invasion of neurotropic viruses is very high, infections and illnesses of central nervous system are rare. This is explained by the functioning of the host defense mechanisms.

## **IS THERE A CORRELATION BETWEEN HAND PREFERENCE AND VERTEBRAL - SUBCLAVIAN ARTERY DIAMETER AND VERTEBRAL ARTERY VOLUME FLOW?**

**Karaman Bulent, Hamcan Salih, Abduramani Asaf, Tasar Mustafa**

**Introduction:** Systemic mastocytosis, often termed systemic

**OBJECTIVE:** During cerebral angiography of cerebral vascular structures it may be necessary to predict the dominant vertebral artery side. The reason of the right and

left vertebral artery diameter asymmetry is not clear. We think that there may be a correlation with hand preference and vertebral artery dominance and subclavian artery diameter. In this article we aimed to present a study that investigates correlation between hand preference and vertebral-subclavian artery diameter and vertebral artery flow.

**MATERIAL AND METHOD:** A total 112 patient were included to the study. We examined fourteen left handed and 98 right handed individuals. The measurements were done with 7.5 MHz linear probe between the fifth and sixth cervical vertebrae at each side. Vertebral artery diameter and volume flow and subclavian artery diameter was measured by two different radiologist and average values were taken.

**RESULTS:** There were no significant difference in diameter and volume flow of right and left VA between right and left handed individuals ( $p < 0.05$ ). Beside this, any significant difference was found in diameter of both subclavian artery between right and left handed individual ( $p = 0.042$ ).

**CONCLUSION:** We found no correlation between differences in vertebral artery diameter and hand preference. Beside that there was no correlation between differences in right and left vertebral artery volume flow and hand preference either. We also found any correlation between both subclavian artery and hand dominance. New and comprehensive researches are needed for the reason and mechanism of vertebral artery diameter asymmetry.

#### **METHOD FOR STUDY THE ELIMINATION ALUMINIUM TO PATIENTS WITH CHORONIC KIDNEY DISEASE**

**Caragea G., Tudosie M.T., Ștefani C., Forje M., Ardelean L., Bărcănescu S., Ioniță M**

Alluminium is a toxic microelement. Some toxicity can be traced to deposition in bone and the central nervous system. The toxicity is particularly increased in patients with reduced renal function. In patients with chronic renal disease, the trace elements are removed only during the dialysis procedure. For the determination of alluminium concentrations, a Varian graphite furnace – atomic absorption spectrometer (GF-AAS) was used. We have performed a comparative study concerning alluminium concentrations in blood, determined on subjects in a control group, versus blood alluminium concentrations in subjects belonging to a group of patients undergoing dialysis procedure. Average concentrations of aluminum in

the blood of patients with chronic kidney disease, before and after the dialysis procedure is not significantly different statistically, but it is different for subjects with normal renal function. In order to emphasize the dynamic removal of the aluminum in the dialysate during the dialysis procedure, six samples were taken from the dialysis time: zero, 30 minutes, 1, 2, 3 and 4 hours. These values were interpolated using a polynomial Lagrange method. By integrating this equation, one can calculate the amount of aluminum removed during dialysis procedure or can appreciate the amount that could be eliminated if it increased during the dialysis procedure. The average amount of alluminium removed by dialysis procedure is about 5 times higher than the amount removed in 24 h by the patients with normal renal function. GF-AAS method is sensitive, reproducible and has a relatively low cost.

#### **CURRENT DRUG RECIPES EVOLUTION**

**Forje M., Tudosie M.T., Ștefani C., Caragea G., Ioniță M.**

Drug recipes suffered an increasing evolution from heroin-carbamazepine mixtures and traditional abuse substances to new “psychotomimetics” with complex structure including ingredients with different functions as: psychotropes, addiction accelerators, nonspecific cholinesterase inhibitors, synthetic drug design LSD, LSA and synthetic cannabinoids. Despite restrictive policies, these products are still commercialized with other uses and benefits, apparently harmless, such as: traditional and medicinal plants, plant fertilizer, bath salts. Consumption of this association can result in very severe clinical symptoms that can be in some cases fatal.

The FPIA and GC-MS techniques highlighted the presence of opiates, antipsychotics, anticonvulsivants, benzodiazepines, and antidepressants of different generations, phencyclidines, cocaine, amphetamines, methamphetamines and LSD-like structures completing the formula of these “recreational” drugs. Because many of assayed compounds lack monoclonal antibodies and also mass spectra required for identification for the new drug design compounds it is necessary to continuously improve methods and techniques in extraction, detection, quantification and assay of biological samples.

The authors present a FPIA and GC-MS method to be used in the identification of psychotomimetic mixtures and special condition liquid-liquid extraction for LSD-like structures to be used in GC-MS method.

The urine samples have been collected from the patients

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presented in the ER and other similar medical facilities in Bucharest and have been analyzed on a FPIA-COBAS Integra 400 Plus and also on a GC-MS Saturn 2000 Varian. PMW, NIST, Wiley libraries were used for identification.

### **A CASE OF ACUTE VOLUNTARY INTOXICATION WITH INSECTICIDES CHOLINESTERASE INHIBITORY**

**Dumitrașcu M., Macovei R.A., Dănescu I., Tudosie M.T., Caragea G, Forje M., Ionică M.**

In the Clinical Emergency Hospital Bucharest, cases of poisoning are frequent cholinesterase inhibitor compounds, representing a challenge for physicians in the therapeutic conduct. The use of these compounds widely in agriculture and households, leads to an increased number of accidental poisonings. At the same time, it remains a method used quite frequently suicidal purposes. Always laboratory tests guides physicians regarding treatment. Therefore, the development of toxicology lab was a priority. These compounds are quickly metabolized in the body, causing either laboratory compound itself, but more often, its metabolites. The method is the determination of the compounds and/or their metabolites is gas chromatography coupled with mass spectrometry (GC-MS). The clinical picture includes symptoms of associated diseases, the most important remains rapid determination of compound that produced intoxication, thus leading doctor right treatment.

The paper presents a case of voluntary intoxication with a mixture of insecticide widely used: cyfluthrin, transluthrin, prallethrin, propoxur and chlorpyrifos, an old patient with cardiac and neurological pathology associated. Existing flaws could mislead the physician in the diagnosis, the patient is comatose, found by neighbors in the house, without being able to perform a history too broad. Cardiac and neurological symptoms could mask toxidrom cholinergic if some signs would not be determined doctor, who examined the patient, to recommend a toxicological

analysis, which was done quickly and confirmed the suspicion of acute poisoning with cholinesterase inhibitors. Treatment was symptomatic management reactivated without cholinesterase, as in this case, they can produce serious neurological side effects.

### **ADMINISTRATION OF VITAMIN K IN PATIENTS WITH OVERDOSE OF ORAL ANTICOAGULANTS**

**Truță E., Ștefani C., Tudosie M.T., Constantin L., Stoica A., Caragea G., Forje M., Ionică M**

The relation between the anticoagulants and body's ability to control homeostasis is complicated. Doses that are too low may prevent clots, while doses that are too high may cause severe bleeding. In order to obtain a clinical efficacy and limit the risk of either bleeding or clothing vitamin K antagonists require rigorous and continuous adjustment of INR (international normalized ratio). Vitamin K is mainly indicated as an antidote against hypoprothrombinemia due to excessive coumarin anticoagulation. Our aim was to assess if vitamin K is being used according to the available clinical evidence, estimating the impact of unnecessary prescriptions. We included 40 oral anticoagulants prescription written during 2015 year. The patients handed their treatment on their own (100%) and took an average 5.5 different drugs a day. All patients had increased INR. The main reasons for increased INR were: neglect monitoring INR; did not meet the doses indicated by the doctor (10); were not able to travel for collection of biological samples (3); voluntary ingested (2); mistook drugs (2); overdose history (2), possible drug interactions (10). Length of hospitalization was between 2 - 19 days. Vitamin K used as an antidote was not required, 5 patients, or doses administered were not recommended by the literature, 20 patients. It is one of the medical staff's responsibility to make sure that the patients have a good understanding of their treatment and it's monitoring.

## **OP session 3 – General surgery**

### **DAY SURGERY DEVELOPMENT AND PRACTICE: KEY FACTORS FOR A SUCCESSFUL PATHWAY**

**Rasvan Hristea, Cristian Dragos Stefanescu**

To understand history is to begin to understand the future. This paper explores the beginnings of modern day surgery

and via its growth and advantages looks at how it can develop in the future. The advantages of day surgery are clear and well documented. But, as in the past, barriers exist to its expansion and these are examined. The reasons for this include medical conservatism and protectionism. However, in the longer term there is no doubt that no country, rich or poor, will be able to resist a move to day surgery because of the economic benefits combined with quality treatment that accrues from this approach. In the not too distant future, the question will not be 'Can this patient be treated on a day basis?' but 'Why cannot this patient be treated as a day case?' Day surgery rather than inpatient surgery will become the norm for elective surgery.

### **ANESTHESIA FOR DAY SURGERY**

**Teodora Serban, Simona Butoi, Rasvan Hristea, Cristian Dragos Stefanescu**

As with all cases of surgery, the choice of a proper anaesthetic drug and technique for day surgery should be based on considerations of safety, quality and cost effectiveness, with the safety issue as the most important concern. As day surgery has some specific characteristics, the way of looking at these three main issues may be different from major inpatient surgery. Day surgery should be well planned, elective surgery done during daytime, usually of minor or intermediate invasiveness and involving stable patients of good or fairly good general health. This implies that the risk of severe problems arising from patient safety is less likely to occur. On the other hand, if problems do occur they will be much less tolerated and accepted by patients and society. The discussion on the ideal choice of anaesthetic technique should be based on demands for a close to zero risk of mortality and permanent disability, and then moving the focus into aspects of quality and cost efficacy. Further, the success of a chosen anaesthetic is highly dependent upon adjuvant issues, such as the skill and routines of the personnel involved, proper monitoring and dosing, and the use of non-anaesthetic adjuvant drugs and methods for pain and nausea protection.

### **SLEEP SURGERY IN ONE DAY IN ONE PLACE**

**Cristian Dragos Stefanescu, Cristina Stefanescu, Teodora Serban**

**INTRODUCTION.** The appropriate level of postoperative

monitoring for most patients undergoing surgery for obstructive sleep apnea (OSA) remains controversial. Our objective was to document the postoperative course of patients undergoing OSA surgery.

**MATERIALS AND METHODS.** Study Design: Prospective cohort study. All patients were evaluated (polisomnography included) at the somnology department of The National Institute of Aerospace Medicine and undergoing „on demand” to surgery for OSA at our day surgery center, from 2009 to 2012. Outcome measures were: 1) incidence of respiratory complications requiring nursing intervention, 2) level of postoperative blood oxygen saturation divided into three groups: mean oxygen saturation in recovery room, mean oxygen saturation in step-up unit and lowest oxygen saturation over the 24 hour period.

**RESULTS.** The overall incidence of nursing intervention in response to a respiratory complication was less than expected. Mean SpO<sub>2</sub> was above 90%.

**CONCLUSIONS.** In selected patients undergoing to planned and minimally invasive surgery for OSA routine ICU (intensive care unit) postoperative monitoring is not mandatory.

### **MINIMALLY INVASIVE vs OPEN GASTRIC CANCER RESECTIONS**

**Kyosev Vasil, Kotashev Georgi, Mutafchiyski Vencislav, Vasilev Krasimir, Ivanov Plamen, Grigorov Grigor, Hristova Vasilena, Popivanov Georgi, Petrov Hristo**

**Aim:** Minimally invasive surgery of gastric cancer has emerged as a result of the technical advances, better understanding of gastric physiology, and more knowledge of the biologic behavior of gastric cancer. The aim of this study was to present our experience with minimally invasive radical resection for distal localized gastric tumors, to compare with open gastric resections, to evaluate the surgical outcomes and oncologic efficacy of minimally invasive approach.

**Material and Methods:** This study included 20 patients: eight (40%) underwent minimally invasive subtotal gastrectomy (MG), while twelve (60%) patients open subtotal gastrectomy (OG). The following variables were evaluated: age, sex, comorbid conditions, tumor size, and histological type, depth of wall invasion, and presence or absence of lymph node metastasis. The surgical variables investigated included operating time, blood loss, postoperative complications, and length of postoperative stay.

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Results: The demographics, preoperative data, and characteristics of the tumor were similar. Median operative time for the minimally invasive approach was 258 min (range 150-385 min) compared with median of 136 min (range 85-205 min) in the open group ( $p < 0.01$ ). Minimally invasive surgery resulted in less intraoperative blood loss compared with OG. All resected margins in two groups were free of tumor invasion. The mean number of resected lymph nodes was  $31.6 \pm 14.4$  in the OG group and  $28.0 \pm 11.9$  in the MG ( $P =$  not significant). MG-patients had an earlier return to normal bowel function and length of hospital stay was 6 days (range 4-14 days), compared with 8 days (range 6-19 days) in the open group ( $p = 0.01$ ).

Conclusions: This study demonstrated that minimally invasive subtotal resection for gastric cancer had good result and were feasible and safe procedure. Minimally invasive approach can obtain adequate margins, follow oncologic principles and is an excellent alternative to the more traditional open approach.

### **THE IMPORTANCE OF BARIATRIC SURGERY IN ARMY FORCES – PRESENTATION OF OUR PRELIMINARY RESULTS**

**Tasis Nikolaos, Sotiropoulos Georgios, Barkolias Christos, Fradelos Aggelos, Barbalia Ioanna, Panagakis Georgios, Terzis Ioannis, Xanthopoulou Georgia, Georgopoulos Nikolaos**

Aim: Aim of our study is to highlight the effect of bariatric surgery in improving quality of life and working efficacy of obese personnel.

Material – Method: Our department contacted a retrospective study, collecting data from 41 patients who underwent bariatric surgery in our hospital between February 2009 and November 2014. Patients were asked to fill a questionnaire collecting their demographic data and calculating their BMI before surgery, at its lowest point and at present time. Furthermore, the patients were asked to evaluate their changes in quality of life and working efficacy after surgery in a scale from 1 to 10, with 5 indicating stability, 10 maximum improvement and 1 maximum aggravation.

Results: Thirty eight patients completed our questionnaire. Five, of them, underwent gastric bypass surgery and thirty three, of them, laparoscopic sleeve gastrectomy. The average body mass index before the procedure was 45.99. The average body mass index after the procedure was 33.67. The average lowest body mass index after the

procedure was 31.59. Mean evaluation of their working efficacy after surgery was 8.26. Mean evaluation of their quality of life after surgery was 8.31.

Conclusions: Significant improvement was recorded in both working efficacy and quality of life. Patients productiveness was increased, their working environment improved, as well as, their social life. Further data is collected by our department, at the moment, for future more detailed reports on this subject.

### **BARIATRIC SURGERY: TWO YEAR OF PRACTICE IN OUR CENTER**

**Diana Toma, Serban Vasile, Mircea Lica, Rely Manolescu, Paula Neicutescu**

Introduction: Bariatric surgery is the most effective therapy available for morbid obesity and can result in improvement or complete resolution of obesity comorbidities.

The morbid obese patient have a diversity of clinical and occult obesity-related comorbidities that necessitates a multidisciplinary team approach in the preoperative evaluation - cardiac, pulmonary, psychiatric, and endocrine.

Laparoscopic sleeve gastrectomy (LSG), it's a procedure that reduce the dimensions of the stomach to about 15-20% of its original size by removing of a large portion of it, following the greater curve.

We present our results after two years of constant practice of LSG in morbid obese patients in Medlife - Life Memorial Hospital.

Material and method: In our bariatric center, 82 patients with obesity, underwent to laparoscopic sleeve gastrectomy, between 2014 – 2015. Body Mass Index (BMI) at admission ranged from 32 to 53 (mean 42) and most of the patients were women (86 %). 39 patients (47 %) presented associated comorbidities – hypertension, diabetes mellitus, sleep apnea syndrome. Laparoscopic sleeve gastrectomy was performed in all patients; conversion rate was null.

Results: No major complication (leakage or active bleeding) was encountered. Readmission rate was 4.8 % (4 patients) mostly for postoperative nausea and vomiting. One year scheduled control from the beginning of the programme encountered excess weight loss percentage (% EWL) of 68.4 %.

Conclusions: Bariatric surgery gained a major role in the treatment of severe and morbid obesity. Low complications rates and weight loss above 50% entitle us to consider that

sleeve gastrectomy is a safe and effective method of treatment in severe and morbid obesity.

### **OUR FIVE YEARS EXPERIENCE IN SLEEVE GASTRECTOMY ON MILITARY PERSONNEL – OUR PRELIMINARY RESULTS**

**Barkolias Christos, Sotiropoulos Georgios, Tasis Nikolaos, Fradelos Aggelos, Panagakis Georgios, Barbalia Ioanna, Terzis Ioannis, Xanthopoulou Georgia, Georgopoulos Nikolaos**

**Aim:** Aim of our study is to assess the long term results of laparoscopic sleeve gantrectomy regarding BMI reduction and patient satisfaction.

**Material – Method:** Our department landed a retrospective study, including 34 patients who underwent laparoscopic sleeve gastrectomy in our hospital between 2009 and 2014. Patients were divided in 3 groups. The first consisted of those who received surgery in 2014 (group A), the second of those who received surgery in 2013 (group B) and the third from patients who were subjected to surgery between 2009 and 2012 (Group C). Demographic and somatometric data was collected in order to calculate BMI score before surgery, at the lowest point after surgery and at present time. Satisfaction of patients from the surgical results was evaluated in a scale of 1 to 10, 5 indicating neutrality, 10 maximum satisfaction and 1 maximum dissatisfaction.

**Results:** Both groups A and B achieved similar maximum BMI reduction (32% and 34% respectively) and managed to maintain a steady BMI until today. Group C reached a similar maximum BMI reduction (33%), but it presented a partial relapse, as it now presents a 26% BMI reduction compared to its original BMI. Satisfaction remains high in all groups.

**Conclusions:** Our preliminary results indicate the promising role of laparoscopic sleeve gastrectomy in treating obese personnel. The partial relapse of group C might urge the need for choosing gastric bypass as treatment for selected patients. Further data is collected by our department for more conclusive results.

### **CYSTIC DUCT REMNANT CALCULUS AS A CAUSE OF POST-CHOLECYSTECTOMY SYNDROM: CASE REPORT**

**Atanaskovic Aleksandar, Kostic Zoran, Neskovic Branimir**

**AIM:** There are several causes of post-cholecystectomy syndrome (PCS), and the presence of stones within cystic duct remnant is one of them, with estimated incidence <2.5%. The objective of this work is to emphasize cystic duct remnant calculi as potential cause of PCS, its diagnostics and treatment.

**MATERIAL-METHOD:** 67 year old patient who has undergone cholecystectomy 28 years ago, were evaluated for unspecific abdominal pain and dyspeptic symptoms, with no jaundice. The patient was diagnosed with stone in remnant cystic duct by MSCT and US of the abdomen, gastroscopy and endoscopic US of biliary tree, and then treated surgically.

**RESULTS:** PCS is defined as the recurrence of symptoms similar to those before the cholecystectomy. It usually takes the form of upper abdominal pain and dyspepsia, with or without jaundice. The symptoms were unspecific and could have indicate to several conditions. Laboratory findings were in refered range. US of the upper abdomen indicated, and MSCT of the abdomen as well as endoscopic US confirmed diagnosis. Surgery has been performed trough right subcostal laparotomy, and excision of remnant cyst duct with stone removal has done. Dilatated remnant cystic duct 4cm wide is found, with 2cm cholesterol calculus in it.

**CONCLUSION:** Leaving behind a cystic duct stump for too long predisposes stone formation as a cause of PCS, even many years after cholecystectomy. MRCP is the imaging modality of choice, and is not mandatory in all patients.

### **OPEN ABDOMEN - EARLY OR DELAYED FASCIAL CLOSURE?**

**V. Oprea, D. Leuca, D. Gheorghescu, F. Buia**

**Background:** Open- abdomen is an effective treatment for abdominal catastrophes in traumatic and general surgery with a formidable task upon surgeon and patient. We analyse a retrospective series of patients with open abdomen in order to determine when the best moment for fascial closure is: early or delayed.

**Methods:** between January 2010 and December 2015 all medical records patients with open abdomen admitted in the Department of Surgery of the Military Hospital from Cluj-Napoca were reviewed. Demographics, co- morbidities, etiology of the open-abdomen and the time and methods of fascial closure were recorded. Patients were classified

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according to Bjork open abdomen grading system. The morbidity and mortality of the method and of the fascial closure were analysed.

Results: 27 patients (9 female) with a median age of were analysed. Average time for open abdomen therapy was 12 days (2-39 days). Etiology of open abdomen was a major leakage of visceral anastomoses in over 50% of cases. Other cause: visceral perforation, severe acute pancreatitis, abdominal compartment syndrome and mesenteric ischemia. Mean width of the abdominal defect - 21 cm (17-27 cm). The abdomen was open in 16 patients (59%) from which 6 died. Global mortality - 63%.

Conclusions: high mortality rate for both primary cause and method too.

### **MINIMALLY INVASIVE TREATMENT OF SPIEGEL'S HERNIA**

**A. Popentiu, D. Moga, I. Barb, C.G. Smarandache, V. Marcu, A. Sabau, D. Sabau**

The purpose of this paper is to provide an overview of laparoscopic procedures used for the treatment of Spiegel's hernia. A number of methods using mesh prosthesis or just the hernioraphy were imagined in time, each presenting several advantages and disadvantages.

At present, minimally invasive treatment is becoming more and more the gold standard in terms of treating the abdominal wall defects, including the rare forms of hernia, such as Spiegel's. The laparoscopy offers several advantages, resulting in decreased length of hospital stay, reduced rate of complications and recurrences.

Spiegel's Hernia, as an uncommon clinical entity, benefits from the rapid evolution of laparoscopic techniques.

Technical execution variants must be chosen according to the surgeon's experience, technical capabilities of the department and not at least, to the patient's will.

## **OP session 3 – Thoracic surgery and surgical oncology**

### **CHEST WALL TUMORS – RECONSTRUCTION OPTIONS AFTER THORACIC PARIETAL TUMORECTOMY**

**C. Grozavu, M. Iliaş, D. Marin, D. Pantile**

Introduction: Chest wall tumors are complex surgical conditions with a complex treatment which includes surgical thoracic teams with plastic surgery training. Authors propose surgical procedures and a classification for chest wall tumors based on histological type and solutions. We analyze parietal reconstruction methods used in our department.

Material and method: Patients with chest wall tumors undergoing resection during the past 10 years were reviewed. The analysis was made on a lot with chest wall tumors with various topographies. Diagnosis was established with: CT, MRI, bone scintigrafic scan. The surgical intervention includes: tumoral resection within oncological limits and chest wall reconstruction (soft tissues and bones). The target of reconstruction is chest wall stability and lung hernia prevention.

Results and conclusions: The results were very promising using our surgical techniques. "Spider web" technique and prosthetic materials (Thoratex reinforced mesh) and

STRATOS osteosynthesis system we used in chest reconstruction give resistance and stability to the chest wall. We did not have any lung hernia in postoperative period. Rebuilding soft tissues was made with mammary gland and skin/muscle flaps from neighboring region. The outcome was normal.

### **MINIMALLY INVASIVE REPAIR FOR PECTUS EXCAVATUM – A SINGLE INSTITUTION EXPERIENCE**

**C. Grozavu, M. Iliaş, D. Marin, D. Pantile, T. Augustin**

Introduction: Pectus excavatum is the most frequent anterior thoracic wall congenital malformation. This malformation becomes more evident with the aging process and has its peak incidence during teenage, when the clinical symptoms become more acute and psychological effects are real important. Over time many treatment techniques have been proposed, conservative or surgical. The minimally invasive repair of pectus excavatum, "Nuss technique", developed after 1987, is the most used technique worldwide.

Material and Method: This presentation analyzes 85

patients, admitted on University Emergency Military Hospital "Carol Davila" - Thoracic Surgery Department, over an 8-year timeframe (2007 – 2016), diagnosed, investigated and surgically treated according to Nuss procedure. Therapeutic and diagnostic protocols will be presented and analyzed: clinical and paraclinical evaluation, indications and contraindications of Nuss procedure, as well as possible intraoperative and postoperative complications.

Results: Nuss procedure's esthetical benefits will be presented, as well as improvements of lung functional parameters. Patients' degree of satisfaction is presented according to the 2-step Nuss questionnaire.

Conclusions: Nuss procedure has a series of advantages: minimally invasive surgical procedure reduced operative time, minimal blood loss and fast socio-professional reinstatement.

### **UNCOMMON APPROACH FOR A GIANT SOLITARY FIBROUS PLEURAL TUMOR**

**C. Nistor, A. Ciuche, A. Iordache, D. Pantile, D. Marin, Olivia Arhire, B. Petre, Roxana Brîncoveanu**

Introduction: Primary pleural tumors are either localized (solitary mesothelioma) or diffuse pleural lesions. The etiology of solitary fibrous tumors of the pleura is unclear – most authors consider that these tumors arise from the mesenchymal cells of the mesothelium's subjacent areolar tissue, rather than the pleural mesothelial layer. Besides, asbestos exposure, typical for pleural mesotheliomas, is uncommon in solitary fibrous pleural tumors.

Material and method: We discuss the case of a patient admitted in our Thoracic Surgery department for a giant thoracic tumor, occupying the entire left hemithorax. The patient accused fatigue, severe dyspnea, palpitations, and left thoracic heaviness. Chest X-Ray shows an opacity occupying the whole left hemithorax, with right tracheal and cardiac deviation. The CT scan identifies a 25 cm diameter tumor, well defined, without invasion into any adjacent structure, occupying the whole left hemithorax. We decided to perform surgery in order to resect the tumor. Left bi-thoracotomy is performed (intercostal 4th and 6th spaces) with the "en-bloc" excision of a giant pleural tumor (weighting approximately 5 kg).

Results: With a favorable postoperative outcome, the patient was discharged 6 days after surgery. The left lung was fully expanded, and the abnormal heart rhythm, as well as the dyspnea, disappeared.

Conclusions: We believe that the surgical intervention was the optimal choice for the patient, with all the perioperative risks that might have appeared. Postoperative the patient had a comprehensive socio-professional reintegration.

### **MULTIDISCIPLINARY APPROACH FOR A GIANT TORACO-LUMBAR TUMOR**

**C. Nistor, A. Ciuche, A. Iordache, D. Pantile, C. Năstase, V. Ștefănescu, B. Petre, Roxana Brîncoveanu**

Introduction: Hereditary exostosant malady (Ombredanne malady) represents a congenital condition with autosomal dominant transmission, characterized by the onset of multiple skeletal osteochondromas.

Material and method: We discuss the case of a 19 y.o. male, admitted in our Thoracic Surgery Department for a giant tumor, located at the base of the left hemithorax and upper left lumbar area. The patient accuses fatigue and thoraco-lumbar heaviness caused by the tumor's mass effect. The CT scan shows a tumor with its origin at the level of T12-L3 vertebral bodies, invading the left 12th rib and the left iliac crest.

We decide to perform the surgical intervention with a mixed team: thoracic surgeon, general surgeon and neurosurgeon. A 25 cm long incision is performed at the tumor's level, from the spine to anterior of rectus abdominis muscle. Complete tumor resection is then performed, also resecting the 12 rib, performing T12-L3 laminectomy and T12-L3 foramenotomy.

Results: With a favorable postoperative outcome, the patient was discharged 6 days after surgery.

Conclusions: We consider this mixed approach the right choice of surgical treatment for this type of tumor. The favorable postoperative outcome sustains our decision for a mixed surgical team.

### **THORACOSCOPIC RESECTION OF A BRONCHOGENIC ESOPHAGEAL CYST**

**A. Ciuche, C. Nistor, D. Pantile, D. Marin, O. Arhire, A. Tudose, S. Bucurica, C. Betianu, R. Brîncoveanu**

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Introduction: Esophageal bronchogenic cyst is an uncommon entity and surgical experience of their removal by thoracoscopic surgery is limited.

Material and method: We present our patient outcome and surgical thoracoscopic technique in the treatment of an esophageal bronchogenic cyst.

The study included 1 patient, male, 52 years with important obesity. The only clinical manifestation was intermittent dysphagia. Some imagistic findings at CT scan and transesophageal echography suggest the presence of a solid intraparietal benign esophageal tumor.

The intervention was performed using 4 thoracoscopic entry points. Thoracoscopic removal of the cyst needed careful manipulation and subsequent dissection of the cyst sac from the structures to which it was attached (esophageal wall and mediastinal pleura). The intramural esophageal localization with local esophageal mucosa being intact and the particular aspect of the tumor (filled with mucoïd material and contain cartilage fragments) were able to make the positive diagnosis (cystic intramural esophageal tumor) and eliminated the preoperative diagnosis (solid intramural esophageal tumor).

Results: The patient had a favorable outcome, without any complications and was discharged the 3rd day after surgery. The dysphagia was relieved immediately after the operation. The follow-up was well 6 months after the surgery.

Discussions and Conclusions: The preoperative computed tomography and endoscopic ultrasound had some limits in this case (distinguishing between cystic and solid tumor was difficult).

Standard surgical treatment is removal of the cyst by thoracotomy. While difficulties in removal and possible complications and recurrence are similar to those of classical posterolateral thoracotomy, video-assisted thoracoscopy offers clear postoperative advantages.

### **INTRALOBAR LUNG SEQUESTRATION- THORACOSCOPIC SURGICAL PROCEDURE**

**Adrian Ciuche, Claudiu Nistor, Dragos Marin, Daniel Pantile, Laura-Mariana Constantin, Roxana Brîncoveanu**

Introduction. The authors present the case of a 73 y.o. male admitted for a left lower lung lobe tumor identified on a standard chest X-Ray.

Material and method. First we present the radiological findings and then intraoperative images. Using minimally

invasive thoracic surgery we managed to diagnose a left lower lung lobe sequestration (highlighting the vascularization of the sequestered lung territory from the descendent aorta, right above the diaphragm), and to perform a thoracoscopic wedge resection of the lesion, clipping the aberrant vessel.

Results. With favorable surgical outcome, several aspects are being detailed: postoperative evaluation, as well as the radiological findings one-month postoperative.

Conclusion. Minimally invasive thoracic surgery has permitted a better exposure of this rare lung malformation, allowing at the same time a better diagnosis and treatment procedure (thoracoscopic wedge resection), with a fast and complete postoperative recovery of the patient.

### **UNINTENTIONAL PARATHYROIDECTOMY DURING THYROID SURGERY**

**Dimitrios K. Manatakis, Nikolaos Stamos, Dimitrios Balalis, Sotirios Gantzoulas, Vassilios Berdelis, Georgios Bouboulis, Dimitrios P. Korkolis, Nikoalos Kouris, Georgios Plataniotis, Emmanouil Gontikakis**

Purpose: Incidental parathyroidectomy is a well recognised complication of thyroid surgery, occurring in 5-30% of patients, however controversy still remains concerning its clinical impact. The aim of our study was to evaluate the incidence of unintentional parathyroidectomy in our Department, its clinical and biochemical consequences and to identify potential patient-related risk factors.

Material and Methods: A retrospective study of prospectively collected data was conducted, on patients who underwent total or near-total thyroidectomy between January 2006 and December 2015. Demographic characteristics, preoperative and postoperative data were collected for each case. Pathology reports were reviewed to identify those patients who had an inadvertent parathyroidectomy. Calcium levels were calculated preoperatively, on the day of surgery and on postoperative days 1 and 2.

Results: 205 patients underwent total/near-total thyroidectomy between January 2006 and December 2015 (47 males, 158 females) with a median age of 55 years (range 17-85). Incidental parathyroidectomy was noticed in 56 (27%) cases, with 44.6% (25/56) found in an intrathyroidal location. Evidence of postoperative biochemical hypocalcemia was noticed in 66% of patients with inadvertent parathyroidectomy (37/56), compared with 30% (44/149) in the no-parathyroidectomy group

( $p < 0.001$ ). Symptomatic hypocalcemia was observed in 3.6% (2/56) and 3.4% (5/149) respectively ( $p > 0.05$ , NS). Thyroiditis was recognized as a potential risk factor ( $p < 0.001$ ), whereas age, sex and malignancy did not differ significantly between the two groups.

Conclusion: Incidental parathyroidectomy is a relatively common complication of total thyroidectomy and a significant percentage of those cases is due to the intrathyroidal location of parathyroid glands. Our study found an association of unintentional parathyroidectomy with postoperative biochemical hypocalcemia, but not with clinically symptomatic disease.

### TOTAL THYROIDECTOMY IN THE ELDERLY

**Dimitrios K. Manatakis, Nikolaos Stamos, Vassilios Berdelis, Sotirios Gantzoulas, Dimitrios Balalis, Konstantinos Damalas, Georgios Bouboulis, Dimitrios P. Korkolis, Nikolaos Kouris, Emmanouil Gontikakis, Georgios Plataniotis**

Purpose: Prevalence of thyroid nodules increases with age and thyroid neoplasms in older patients tend to be more aggressive. Our study aimed to analyze surgical indications and perioperative outcomes of thyroid surgery in elderly patients (>65 years).

Material and Methods: Patients who underwent total thyroidectomy between January 2005 and December 2015 were retrospectively reviewed and data were collected on demographics, pathology and postoperative complications.

Results: In total, 234 patients were divided into group A (<65 years,  $n=172$ , mean age  $48.1 \pm 11.1$  years) and group B (>65 years,  $n=62$ , mean age  $71.8 \pm 5.0$  years). Male-to-female ratio and preoperative TSH levels did not differ significantly. Incidence of malignancy, incidental papillary micro-carcinomas and thyroiditis were also comparable. Graves disease, although rare in our sample, occurred only in the younger group (4/172). Malignant tumors were marginally larger in group B (1.95 vs 2.39cm,  $p=0.06$ ). Perioperative mortality was nil. In group A, 3 patients suffered transient RLN palsy, while 2 patients required reoperation due to postoperative haematoma.

Unintentional parathyroidectomy rates were comparable (24.4 vs 32.3%,  $p > 0.05$ ), however evidence of biochemical

hypocalcemia was significantly more frequent in younger patients (36.6 vs 11.6%,  $p < 0.01$ ). Symptoms of hypoparathyroidism were only noticed in 5/172 (2.9%) and 2/62 (3.2%) of patients respectively ( $p > 0.05$ ).

Conclusion: Total thyroidectomy is a safe procedure in the elderly and age should not be contraindication to surgery. Moreover our study did not find any differences in postoperative pathology reports, in terms of malignancy or thyroiditis.

### RECURRENT HYPERTHYROIDISM AFTER SUBTOTAL THYROIDECTOMY

**Vesela MIHNEVA, Ventzislav Mutafchiski, Tzvetelina Totomirova, Ivona Daskalova**

Background: Subtotal thyroidectomy is a surgical procedure, in which the surgeon leaves a small thyroid remnant in situ to preserve thyroid function, thereby preventing lifelong thyroid hormone supplementation therapy.

Aim: To evaluate thyroid function after subtotal thyroidectomy for hyperthyroidism.

Subjects and Methods: We retrospectively reviewed the medical records of all patients ( $n = 36$ ) who underwent subtotal thyroidectomy for recurrent hyperthyroidism between 2010 and 2014 in Military Medical Academy - Sofia. Thyroid function was defined according to plasma TSH and free T4 values.

Results: Median followup after operation was 6 months (range 4.1–7.9 months). Only 9 % of patients were euthyroid after surgery. The majority of patients (76 %) became hypothyroid, whereas 15% of patients had persistent or recurrent hyperthyroidism. Permanent recurrent laryngeal nerve palsy and permanent hypocalcaemia were noted in 1.2% and 2.8 % of patients, respectively.

Conclusion: In our series, subtotal thyroidectomy for hyperthyroidism was associated with a high risk of postoperative hypothyroidism and a smaller, but significant, risk of persistent hyperthyroidism. Our data suggest that subtotal thyroidectomy seems to provide very little advantage over total thyroidectomy in terms of postoperative thyroid function.

## OP session 3 – Orthopedic surgery

### TREATMENT PRINCIPLES FOR OSTEOCHONDRAL LESIONS IN THE FOOT AND ANKLE

**Athanasios Badekas, Maria Takvorian, Erasmia Politi, Vasiliki Malkaki**

**Purpose:** To assess the efficacy of surgical correction of stage II tibial tendon deficiency with medial translational calcaneus osteotomy and flexor digitorum longus tendon transfer to the navicular,

**Material and methods:** A medial translational osteotomy of the calcaneus and transfer of the flexor digitorum longus tendon into the navicular were done. The patients were examined, radiographs were obtained, and isokinetic evaluation of both feet was performed at a mean of 5.2 years postoperatively. The AOFAS Score and Short Form Health Surgery (SF-36) were used to evaluate patients postoperatively.

**Results:** The mean AOFAS score at follow-up was 79 points (range, 54-93). There were seven significant complications in six patients. Isokinetic inversion and plantarflexion power and strength were symmetric with the contralateral limb in 95 patients, mildly weak in 18 patients, and moderately weak in eight patients. Subtalar joint motion was normal in 56 (44%), slightly decreased in 66 (51%), and moderately decreased in seven patients (5%). Correction was significant ( $p < 0.05$ ) in all four radiographic parameters evaluated. Patients were entirely satisfied (118 patients), partially satisfied (seven patients), or dissatisfied (four patients). Further, 125 (97%) experienced pain relief, 121 (94%) showed improvement of function, 112 (87%) experienced improvement in the arch of the foot, and 108 (84%) were able to wear shoes without shoe modifications or orthotic arch support.

**Conclusions:** The surgical correction of stage II posterior tibial tendon deficiency with medial translational calcaneus osteotomy and FDL tendon transfer to the navicular yielded excellent results with minimal complications and a high patient satisfaction rate.

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### AUDIT OF ORTHOPAEDICS DEPARTMENT AT ATHENS NAVAL & VETERAN HOSPITAL - RECORDING THE OPERATION NOTES OF ARTHROSCOPIES ACCORDING TO THE RCS GUIDELINES

**Tsouknidas Ioannis, Festas Georgios, Papoutsis Konstantinos, Tsioros Konstantinos**

**Purpose:** Accurate record of surgical procedures are of crucial meaning nowadays, because of clinical, academical and medicolegal reasons. This essay is meant to examine the way that arthroscopies' operation notes were written comparing to the guidelines of Royal College of Surgeons of England.

**Material and Methods:** A list of shoulder and knee arthroscopies that took place during the period 01/01/2014 – 31/05/2015 were detected in the operation lists. Arthroscopies' operation notes were collected from the Electronic System "Medico" and the recorded files of the Hospital. A random sample of the arthroscopies operation

notes were assessed against the criteria of RCS guidelines. Other supplementary data, concerning the hand written/ electronic record, the legibility of hand written operation notes were recorded too. Findings were presented and discussed at the clinical meeting of Orthopaedics Department.

Results: The structure of 56 operation notes were compared to the 20 points of a right recorded operation note according to the RCS guidelines: Criteria such as the date of the operation, the names of surgeons and anaesthesiologist and the surgical procedure were covered in more than 80% of the operation notes. However time of the operation, elective/emergency of the procedure, postoperative care instructions and some other points were poorly described or not referred at all.

Conclusion: New operation note templates regarding shoulder and knee arthroscopies were proposed and discussed at the clinical meeting. The new templates were modified to meet the standards of arthroscopies procedure. A second re-audit is meant to be done in 3 months time.

## VAC IN ORTHOPEDIC AND SEPTIC SURGERY

**Kovachev G, Mutafchiyski V, Stefanov D, Dimitrov D, Popivanov G, Petrov. N**

The most frequent problems encountered in acute and chronic wounds are bacterial contamination or infection, tissue edema and wound secretion, which significantly hamper the wound healing process. Numerous reports in the last three decades have been shown that Negative Pressure Wound Therapy facilitates the wound healing and is superior to the conventional techniques. It allows for complete exudate evacuation, reduction of tissue swelling, stimulation of granulation tissue. Additionally it significantly improves the quality of life, alleviates the nursing care and decreases the hospital costs.

Here we present a part of our 10-year experience with severe combat injuries, open fractures, wounds with major tissue insufficiency and decubital ones.

## CALCIUM PHOSPHATE CERAMICS IN NON-UNIONS:

## WHAT CAN WE EXPECT?

**B. Zlatev, A. Iotov, L. Stokov, G. Kovachev, Tzachev, A. Nikolova**

Introduction: Achieving bone regeneration in some cases still presents a substantial problem. The numerous current strategies for stimulation of bone healing do not guarantee a 100% success and an individual approach to each case is indicated.

Material and methods: The series include 8 males and 2 females at the age between 23 and 57. There were 3 infected non-unions and 7 aseptic. The non-unions are: 1 hypertrophic, 4 oligotrophic and 5 atrophic. All NU are after operative treatment of fresh fractures. Two fractures were open, GA II. In 2 cases there were 2 previous reoperations including autologous bone grafting in at least one of them. The non-union locations were following: tibial shaft-3, humeral shaft-3, distal tibial metadiaphysis – 1, radius - 2, femur – 1. The used bone substitutes included bone marrow aspirate and calcium deficient hydroxyapatite in 3 cases; nanocrystalline hydroxyapatite in 4;  $\beta$ -TCP in 3.  $\beta$ -tricalcium phosphate is used in 2 atrophic nonunions /radius shaft, femur shaft/ and 1 oligotrophic/ tibial shaft/; bone marrow aspirate and calcium deficient hydroxyapatite is used in 3 infected nonunion /tibia – 2, radius - 1/ as a second stage procedure; nanocrystalline hydroxyapatite in 1 hypertrophic NU /humeral shaft/ and 3 oligotrophic ones/ humeral shaft 2, tibial shaft 1/. Three reosteosynthesis are performed.

Results: Bone healing is achieved in 8 of 10 patients. Two developed again atrophic NU/  $\beta$ -TCP used/.

Conclusion: Synthetic CaP ceramics are not contraindicated for usage in non-unions. Their use requires a good assessment of the local biological environment and if needed, a combination with osteoinductive or osteogenic substitute.

## CaP BONE SUBSTITUTES IN TRAUMA SURGERY: DO WE GET THE SAME?

**Zlatev Borislav, Yotov Andrei, Stokov Lubomir, Kovachev Georgi, Nikolova Ana**

Introduction: The management of bone defects caused by trauma requires consideration of different patients' factors such as age, co-morbidities, nutritional status, and state of the soft tissues and the characteristics of the bone defect.

Material and method: For a period of 60 months, 33

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patients with 33 closed fractures were operated and followed up. There were 17 women and 16 men at the age between 23 and 71 years old. In each case the bone defect was a result of acute fracture. The involved bones include proximal humerus, proximal tibia, calcaneus and metacarpals. The lost of substance was mainly cancellous and cortico-cancellous. The synthetic bone substitutes include - beta tricalcium phosphate in 13 cases, calcium deficient hydroxyapatite in 11 cases and hydroxyapatite in 9. Osteosynthesis was performed in 33 cases. The volume used is between 5 and 15cc.

Results: The follow up period was between 12 and 60 months. The criteria of Irwin et al. for radiological assessment of graft incorporation were used for assessment of the osteointegration process. Bone healing was achieved in 33 patients. Resorption of the substitutes and the bone regeneration process were defined as two simultaneously going processes with equal speed. The biodegradation process was assessed as faster for TCP and calcium deficient hydroxyapatite than synthetic hydroxyapatite. No case of fibrous encapsulation of the substitute or heterotopic ossification was observed.

Conclusion: Different biodegradation rate do not lead to clinical and functional differences. The different mechanical strength did not lead to secondary collapse in load bearing areas. The biodegradation rate depends on the recipient bone, area, ceramics' properties and the volume used.

#### **HYPERBARIC OXYGEN THERAPY IN THE TREATMENT**

#### **OF OSTEONECROSIS OF THE FEMORAL HEAD: A SYSTEMATIC REVIEW**

**Uzun Gunalp, Mutluoglu Mesut, Ersen Omer, Yildiz Senol**

OBJECTIVE: To review the current literature on the use of hyperbaric oxygen therapy (HBO2) in the treatment of osteonecrosis of femoral head (ONFH).

MATERIAL AND METHOD: We searched PubMed, Directory of Open Access Journals (DOAJ), EMBASE, Web of Science, Academic Search Complete, CINAHL and MEDLINE through April 2015. We hand searched relevant textbooks, conference proceedings and the reference lists of review articles and clinical studies Randomized controlled trials (RCT) and observational studies (cohort study, case-control study, case series) that reported the outcome of patients that received HBO2 therapy for ONFH were included. Only English language articles were included. Study quality was not used as an exclusion criterion. Two authors independently assessed trials for inclusion, extracted data and presented to other authors. Disagreements were resolved by consensus.

RESULTS: We identified eight clinical studies; two RCTs; one historically controlled study; and five case series. The majority of the studies were small-scale, heterogeneous and methodologically weak. In four of the studies HBO2 therapy was combined with other treatment modalities, making it impossible to draw firm conclusions on the specific effects of HBO2 therapy. Hip survivorship in studies wherein HBO2 therapy was used alone was 95.5% in Steinberg Stage I lesions, 89% in Steinberg Stage II lesions and 100% in Ficat Stage II lesions.

CONCLUSION: There is a room for HBO2 therapy in the management ONFH. Further randomized controlled trials, however, are required to better elucidate the role of HBO2 therapy in the treatment of ONFH.

## **OP session 4 – Mental health and psychology**

#### **EXAMINATION OF THE RELATIONSHIP BETWEEN PERSONALITY CHARACTERISTICS AND EMPATHY OF TURKISH MILITARY PHYSICIANS**

**Uzuntarla Yasin, Teke Abdulkadir, Cihangiroglu Necmettin, Bakir Bilal**

OBJECTIVE: Empathy, the essence of good relation between health workers and patients has been found to be related clinical competency and personal satisfaction. This study has been conducted to examine the relationship between personality characteristics and empathy tendencies of the military physicians at the biggest military hospital in Ankara.

**MATERIAL AND METHOD:** This was a cross sectional study which carried on 415 physicians working at all internal and surgical services of Gulhane Military Training Hospital between 9 to 16 April 2015. An inquiry form with three parts including The Big Five Inventory (BFI) and Jefferson Scale of Physician Empathy (JSPE) scales was used to collect data among physicians. Data was analyzed using SPSS package program version 22.0.

**RESULTS:** It was found the majority of physicians have openness personality and their empathy skills are higher than moderate level. While a negative relationship was found between Neuroticism and empathy scores, a positive relationship was determined between empathy and other personality characteristics namely extraversion, friendliness (Agreeableness), Conscientiousness and openness ( $p < 0.01$ ).

**CONCLUSION:** The empathy tendencies of physicians have varied depending on their personality characteristics. If physicians use more empathy skills, this will contribute the quality of health services and will improve communication with patients.

### **“BURN-OUT” SYNDROME, IN MILITARY HOSPITAL PERSONNEL**

**Vasha Dorela, Basha Entela, Reso Elton, Beja Ergina**

**Objective:** “Burn-out” is a phenomenon characterized by fatigue and frustration, usually to professionals whose work is faced with high level of stress that comes as a result of dedication to a cause or a way of living that does not match expectations of the person. Although this appears to be associated with risk factors derived from professional environment, this problem can be present in every person. The aim is to evaluate the level of “burn-out” in the military hospital personnel.

**Method:** This is a cross-sectional study conducted through the burnout self administered test to the military medical personnel. The Maslach Burn-out Inventory was used as it is the most commonly used tool to self-assess whether you might be at risk of burn-out through three components: exhaustion, depersonalization and personal achievement. According to the level of burn-out it was made a comparison to the types of clinic (therapeutic, surgical, and emergency) and to the level of responsibility.

**Results:** The study shows that medical personnel of surgical and emergency clinics have a higher level of burn-out than those of the therapeutics clinics. The head of clinics and doctors have a higher level of burn-out than nurses.

**Conclusions:** There is a clear need for adaptation and expansion of a conceptual framework for a promising approach for designing interventions to help clinicians in mitigation, which cause anxiety and prevent build the flexibility they need to support themselves in clinical services.

### **AUDIO-VISUAL ENTRAINMENT: AN IMPORTANT TOOL IN MANAGING MALADAPTATIVE STRESS RESPONSE IN THE MILITARY**

**Ciumașu-Rîmbu Mălina**

Occupational stress in the military comes from a variety of sources both in the form of chronic, garrison stress through work overload, insufficient logistics, troubled work relationships, role conflicts etc and acute, combat stress in a challenging new environment with unknown biological, physical, chemical and psychological stressors. The ability of the military to cope with different stressors is critical for its own health and safety or its unit and the military organization. Thus limbic system becomes a leading actor in this equation of coping and the ability to modulate it through medication or non-drug treatment method of therapy becomes a major target of the occupational stress management protocols in the military. Audio-visual entrainment (AVE) consists of constant, repetitive stimuli of the proper frequency and intensity to stimulate the thalamus and neocortex thus improving cognition and behavioral problems, and alleviating stress and pain. AVE achieves its effects through several mechanisms simultaneously including altered EEG activity, dissociation, limbic stabilization, improved neurotransmitter production and altered cerebral blood flow. The aims are to present the possibilities of AVE in managing maladaptative stress response and even PTSD and the experience of our lab with AVE technique. **Material and methods:** We used standardised protocols and the Romanian AVE device. **Results:** AVE produces a calming effect on limbic structures regulating exaggerated cardiovascular stress response. **Conclusions:** AVE can be considered a reliable tool part of the occupational stress management protocols in the military aiming limbic stabilisation.

### **THE IMPORTANCE OF THE 24-HOUR HELPLINE IN THE HELLENIC ARMED FORCES**

**Aikaterini Stasini, Miltiadis Soutanis, Foteini**

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### **Athanasiadoy, Nektarios Voydiklaris**

AIM: To present the history, function, usefulness and the general impact of the Helpline, as well as to underline its important connection to the crisis intervention services, especially in the Armed Forces.

MATERIAL & METHODS: The official form –questionnaire was used in order to collect the data. The analysis of the data was conducted using the Queries Database SQL and the MS Excel.

RESULTS: The Helpline offers its services to both military personnel as well as civilians. Comparative results will be presented in relation to several requests of the callers. In addition, systemic, psychodynamic and group-analytic perspectives for the qualitative analysis of the statistical data will be illustrated.

CONCLUSIONS: The 24-hour psychological support Helpline promotes preventive, counseling and therapeutic mental health services for the Hellenic military personnel without excluding the civilians.

### **EVALUATING THE INTENSITY OF PAIN AND THE EMOTIONS OF PATIENTS WITH LOW BACK PAIN ACCORDING TO THEIR SOCIOECONOMIC STATUS. A CROSS-SECTIONAL STUDY**

#### **Michalea-Dimoulea Eleni**

Aim: (1) To record the incidence of low back pain in pain clinics in Greece; (2) to determine whether patient's demographic and socioeconomic characteristics affect the intensity of pain and their emotional situation.

Material-Methods: A cross-sectional study of patients complaining about low back pain was conducted at 6 different pain clinics in Attica. Patients' demographic and socioeconomic characteristics, their pain intensity and their emotional situation had been evaluated. Multiple linear regression analysis in a stepwise method was used. Statistical significance was set at  $p < 0.05$  and analyses were conducted using SPSS statistical software.

Results: Most of the patients were women (69.7%), over 60 years old (64.2%) and had low income (76.2%). University alumni and patients with postgraduate studies having less intense pain than primary/ middle school and high school graduates ( $\beta = 0.09$ ;  $SE = 0.03$ ;  $p = 0.005$  and  $\beta = 0.07$ ;  $SE = 0.03$ ;  $p = 0.045$  respectively). Female sex ( $\beta = 0.30$ ;  $SE = 0.14$ ;  $p = 0.038$ ), painkillers use ( $\beta = 0.37$ ;  $SE = 0.18$ ;  $p = 0.036$ ) and increased pain score ( $\beta = 0.37$ ;  $SE = 0.04$ ;  $p < 0.001$ ) were

associated with greater negative emotions. Age ( $\beta = 0.57$ ;  $SE = 0.18$ ;  $p = 0.003$  for patients 60-69 years old and  $\beta = 0.63$ ;  $SE = 0.17$ ;  $p < 0.001$  for patients over 70) and marital status ( $\beta = 0.44$ ;  $SE = 0.15$ ;  $p = 0.004$ ) were associated with more positive emotions.

Conclusions: Low back pain was the first non-malignant reason for someone to visit a pain clinic. Patients' demographic and socioeconomic characteristics seem to affect the intensity of their pain and their emotional situation.

### **PSYCHOLOGICAL SUPPORT GROUPS FOR THE STAFF AT THE NAVAL HOSPITAL OF CRETE**

#### **Asimina Eleftheria**

Aim: Occupational burnout in the field of military hospitals is a reality. The testimonies of professionals prove that daily encounter with disease, pain and death affects them emotionally.

At the Naval Hospital of Crete, in an attempt to prevent occupational strain, psychological support to the staff was provided by the psychiatric department.

Material-Methods: The head nurse of the consultation-liaison psychiatry service organised and coordinated individual as well as group sessions from 2009 to 2015. There were 7 groups developed on a monthly basis and 561 individual sessions took place. These sessions were based on a group-analytic and socio-therapeutic approach and the principles of the therapeutic community.

The subjects discussed were professional relationships, managing confrontation and work-related stress, facing disease and death, interpersonal relationships, personal and family problems, financial and social crisis.

Results: The results achieved by these sessions are emotional discharge, an attempt to better understand one another, setting boundaries on both professional and personal relationships. An increased awareness of personal responsibility for improving working conditions and professional relationships is remarkable. This has minimized the attribution of responsibility and passive expectation of solutions by Administration.

Conclusions: In conclusion, we are confident that psychological support for the staff at a military hospital enables better cooperation and improves their psychological well-being without affecting the military structure or hierarchy. Fears and reluctance were expressed by both the personnel and the administration.

The participants' request and the administration's sensitivity to preventing occupational burnout was stronger than any doubts or difficulties.

### **RELATIONSHIP BETWEEN ANXIETY AND CARDIOVASCULAR DISEASE RISK IN HEALTHY HELLENIC ARMED FORCES**

**Athanasiadou Foteini, Koukia Eumorfia, Alevizopoulos George, Kallergis George**

AIM: Coronary heart disease (CHD) is referred to as a psychosomatic disease.

Phenomena such as anxiety, depression, mental exhaustion and socioeconomic situation have not been well examined (Albus et al., 2004).

The aim of this study was to examine the relationship between anxiety and the risk of CHD appearance in healthy Greek Military Earth Force population.

MATERIAL-METHODS: Four sixty four (464) Earth Force officers (358 men and 106 women) aging from eighteen (18) till sixty (60) years old complete the 20-item State-Trait Anxiety Inventory (STAI) (Spielberg et al., 1970). Responses are recorded on a four-point scale. Two anxiety traits were measured. Pearson r correlations were conducted to reveal if any relationship between trait and/or state anxiety and the risk of CHD appearance exists.

RESULTS: Frequency results revealed that a total of 46.0% feel a little calmness, 28.6% feel a continuous agony for bad situations that might happen. Respectively, 31.0% was in an anxiety state, feeling nervous, 24.6%, and in continuous arousal, 27.7%. Pearson r resulted in a positive correlation between smoking habit and State Anxiety,  $r=.238$ ,  $p=.010$ , as well as with Trait Anxiety,  $r=.238$ ,  $p=.010$ . Results showed that STAI statements directly connected with anxiety are positively correlated with either State Anxiety,  $r=.920$ ,  $p=.010$ , and Trait Anxiety,  $r=.920$ ,  $p=.010$ . Positive correlations were found between given STAI statements and blood measurement results (blood pressure, LDL).

CONCLUSIONS: Results confirm the initial hypothesis that anxiety as autonomous trait has a direct relationship with CHD appearance. This research applauds the influence of anxiety to sudden cardiac death.

### **THE EMPLOYEES' PERCEPTION OF HUMAN RESOURCE PRACTICES AND THEIR RELATION TO THE ORGANIZATIONAL COMMITMENT AND JOB**

### **SATISFACTION IN A TERTIARY GREEK HOSPITAL**

**Stavros Gourgiotis, Evangelos Falidas, Georgios Veloudis, Constantinos Villias**

Aim: Human resources management (HRM) is an important task in the field of healthcare. We tried to evaluate the HRM practices in the health sector through the practical investigation of employees' perceptions about the HRM practices and the possible relation of these perceptions to the organizational commitment and job satisfaction.

Material - Methods: A structured questionnaire including social-demographic characteristics, HRM policies and practices scales, organizational commitment scale, and job satisfaction scale was distributed among the departments of a tertiary hospital. 206 questionnaires were properly filled out.

Results: Employees' attitudes regarding the reward, the compensation, and the evaluation of job performance HRM practices were negative, while the commitment and the job satisfaction ranged in low levels. Gender, age, education, marital status and the years of experience did not influence the perceptions of employees' about HRM practices in contrary with specialty. The doctors in training, the technology staff, and the nurses had more negative views than the specialized doctors and the administrative staff. The position of the respondents influenced the views of employees about the HRM practices were related to the possibility of involvement. There was also statistical positive relationship between employees' perceptions about HRM practices and job satisfaction and organizational commitment.

Conclusions: The health sector regarding remuneration, evaluation, and reward needs significant improvement in the terms of HRM practices. Although practices such as selection, training, participation, and working conditions have moderately improved, organized strategies mainly regarding the lower hierarchical levels of the hospital are needed.

### **PROGNOSTIC SIGNIFICANCE OF IPDE DIMENSIONAL SCORES IN THE PREDICTION OF SUICIDE. A STUDY IN MILITARY, CLINICAL AND CONTROL GROUP**

**Tony Donchev, Krasimir Kostadinov**

Introduction: We used our data from the validation study of the Bulgarian version of IPDE for a statistical analysis, seeking a correlation between dimensional scores of IPDE

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and suicide attempts in our population.

Methods: We studied 457 subjects between 18 and 40 years in three groups: 185 inpatients; 178 soldiers, control group of 94 students. They were evaluated with IPDE for ICD-10. Binary logistic regression was used to assess the relationship between the probability for a suicide attempt and dimensional personality traits measured by IPDE.

Results: Binary logistic regression model showed that

dimensional traits that have a prognostic value are schizoid, histrionic, emotionally unstable - borderline and impulsive type and dissocial.

Conclusion: The study showed that personality dimensional scores carry prognostic significance in the assessment of the probability of a future suicide attempt. Our results support the view that personality disorders characterized with the impulsivity traits have higher suicide risk.

## OP session 4 – General surgery, urology and gynaecology

### SURGICAL TREATMENT METHODS OF COLORECTAL CANCER

Savulescu Florin, Cirlan Cristian

The evolution of science as well as the technological advances have allowed, over time, the development of several methods for surgical treatment of colorectal cancer. From all of these methods, we will consider only those therapeutic methods that have proven effective over time. We will not discuss a certain procedure, but we will refer to the following therapeutic categories as follows: classical surgery, laparoscopic surgery and robotic surgery.

Materials and methods: The information collected came from a retrospective study conducted over a period of 18 months starting with October 2014. In this study were included patients diagnosed with different colorectal cancers.

Conclusion: The findings of this study are presented as tables that have centralized the information obtained.

Discussions: In the conclusions of this presentation, based on the information and findings presented, calling upon the free will, are depicted some ideas regarding the three therapeutic methods, leaving the reader to determine the appropriateness of applying a certain method.

### KEY POINTS IN FUNCTIONAL SURGICAL TREATMENT OF RECTAL CANCER

O. Albita, T. Rogin, O. Sima, D. Orosan, C. Dutu, C. Musat, R. Nica, N. Bajenaru, V. Varjoghe, F. Savulescu

Introduction: The colorectal cancer (CCR) represents the 3rd main cause of neoplastic disease and the 2nd cause of death worldwide. Modern complex treatment of CCR involves association of various paraclinic investigations with modern surgical techniques and postoperative chemotherapy, aiming to obtain best oncological outcomes and a good quality of patient's life.

Materials and Method: This study compares Group 1(57 patients 2004-2014) with Group 2(61 patients 1998-2002) regarding postoperative genitourinary function, with or without pelvic autonom nerves preservation (PANP-Sugihara).

Results: Statistical study of results reveals reduction of urinary impairment from 67% to 43.75% and sexual disorders from 32.1% to 28.1%, emphasizing the leading role of PANP.

Conclusions: The Gold Standard of CCR's surgical treatment is the total mesorectal excision (TME) with PANP and saving

sphincter technique. Only adequate knowledge of pelvic autonom nerves anatomy facilitates identification and preservation during surgery with optimal postoperative outcome of genitourinary function.

### **DEEP SURGICAL SITE INFECTIONS WITH FASCIAL NECROSIS - CLINICAL ASSESSMENT AND COST ANALYSIS - PRELIMINARY RESULTS**

**Mutafchiyski V, Popivanov G, Petrov N., Savov E., Vaseva V, Kjossev K, Gergova I, Ivanov P, Petrov H, Penchev D, Tabakov M**

**Introduction:** Deep surgical site infections are a significant source of morbidity and increase significantly the hospital costs. Although negative pressure wound therapy has been received worldwide recognition as an effective technique for temporary abdominal closure in several conditions, the results of treatment of fascial necrosis and dehiscence are rather unsatisfactory. We sought to perform clinical assessment and economic analysis of the deep SSIs and the effectiveness of NPWT in such cases.

**Material and methods:** The study includes only cases with neglected deep surgical site infections and partial or complete fascial dehiscence. All cases were treated by serial debridement and V.A.C® from one team in the period September 2013-February 2016. Open abdomen was applied in 13 cases with partial or complete fascial dehiscence. No major break in the surgical technique was noted. They were compared with 20 matched controls with uncomplicated postoperative course. The hospital stay and the cost of the treatment were considered as a primary outcome measure, whereas PFC rate, days with NPWT and mortality were set as secondary outcome measures.

**Results:** The mean age was 70 years and 76.5% (n=13) of them had at least two risk factors. The rate of SSI was 1% (17/1610). Microbiological confirmation of the infection was achieved in 11 cases (64.7%). Polyresistant hospital strains were isolated in 4 cases (23.5%). NPWT was applied for a mean of 19.5 (4-36) days with mean 7.8 dressing changes. The mean hospital length of stay and hospital costs per patient in complicated and uncomplicated cases was 30 vs 7.3 days and 86 vs 719 Euro, respectively.

Primary fascial closure was achieved in 6 of 13 patients (46%), whereas planned ventral hernia through skin closure only was created in 10 (59%). None of the patients develop enteroatmospheric fistula. Lethal outcome was noted in 1 case (5.9%).

**Conclusion:** Deep surgical site infections led to fascial

necrosis and dehiscence are troublesome postoperative complication associated with a tremendous increase of the hospital costs. NPWT alone yields low PFC rate and the combination with dynamic fascial closure is highly recommendable.

### **LAPAROSCOPIC RETROPERITONEAL LYMPH NODE DISSECTION FOR RESIDUAL POST-CHEMOTHERAPY NON-SEMINOMATOUS TESTICULAR CANCER**

**Dimitrios K. Manatakis, Georgios Bouboulis, Ioannis Passas, Dimitrios Balalis, Konstantinos Damalas, Sotirios Gantzoulas, Vassilios Berdelis, Georgios Sakorafas, Georgios Plataniotis, Emmanouil Gontikakis, Dimitrios P. Korkolis**

**Purpose:** The role of laparoscopic retroperitoneal lymph node dissection (RPLND) for residual post-chemotherapy retroperitoneal masses in non-seminomatous tumors remains controversial, largely due to its inherent technical difficulty and long learning curve. The aim of this retrospective study is to present our technique and initial perioperative results with the laparoscopic approach for modified template dissection in clinical stage II non-seminomatous testicular cancer.

**Material and Methods:** Between January 2014 and December 2015, 28 patients underwent post-chemotherapy therapeutic RPLND, of whom 10 selected patients with a mean age of 28.8±7.7 years were offered and consented to the laparoscopic approach. Six left-sided and 4 right-sided modified template dissections were performed, for residual masses of 2-5 cm (mean 3.5 cm).

**Results:** Mean operative time was 240 minutes (range 150-330) with an average estimated blood loss of 250 ml (range 100-1500). One patient (10%) was converted to the open approach, due to significant hemorrhage from injury of the ipsilateral renal vein. Mean length of hospital stay was 3.2 days (range 2-7). Antegrade ejaculation was maintained in all cases, while one patient (10%) developed chylous ascites postoperatively, due to intraoperative injury of the cisterna chyli and was managed conservatively. An average number of 12 lymph nodes were harvested (range 5-25) and harbored disease in 70% of patients (viable tumor cells 20%, mature teratoma 50% and fibrosis/necrosis 30%).

**Conclusion:** Laparoscopic RPLND is a technically challenging operation, however in experienced hands it is a feasible and safe option for residual post-chemotherapy retroperitoneal masses in non-seminomatous testicular cancer, with similar oncological results compared to open

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dissections. The laparoscopic approach offers all the advantages of minimally invasive surgery, in terms of shorter hospitalization, faster return to normal activity and better cosmesis.

## **CONSERVATIVE TREATMENT OF TUBAL PREGNANCY**

**Nicolae Niculescu, Ovidiu V. Nicodin, Bogdan Panaite, Costin Parvulescu, Ioana Niculescu**

**Objectives:** Establishing the indications of conservative treatment in ectopic pregnancy.

**Materials and Methods:** Between 2012-2014, thirteen patients with ectopic pregnancy have been treated with conservative surgical techniques.

**Pre- and intraoperative exclusion criteria were:** ectopic gestational sac size exceeding 6 cm, fetal heart activity,  $\beta$ -hCG serum levels > 20,000 mIU/ml, previous surgery on the affected fallopian tube, isthmic ovular implantation.

Thus were selected the following cases: absence of the controlateral fallopian tube/functional compromised, gestational sac unruptured and ampulo-pavilionar implantation; we decided to apply laparoscopic linear salpingotomy, gestational sac extraction with bipolar hemostasis.

**Results:** We have obtained five intrauterine pregnancies and two ectopic pregnancies which required radical treatment (salpingectomy). Two pregnancies have been completed with gestation carried to term. There were no favorable results in patients who had other associated factors of infertility.

**Conclusions:** In selected cases laparoscopic surgery allows the anatomical and functional restauration of the fallopian tube affected by pregnancy and offer a chance in getting a desired pregnancy.

## **PROINFLAMMATORY CYTOKINES IN PATIENTS WITH BENIGN PROSTATE HYPERPLASIA**

**Florin Rusu, Ovidiu Pacu, Armand Iliescu, Andrei Paun, Marius Dinu, Viorel Jinga, Emilia Rusu, Dan Mischianu**

**AIM:** Inflammation of the prostate may be a mechanism for hyperplastic changes that happens in the prostate. In this

study it was evaluated the relationship between anthropometric, metabolic factors, and proinflammatory cytokines in patients with benign prostate hyperplasia (BPH).

**METHODS:** 312 men were included into prospective study for prostate cancer screening. 25 patients were diagnosed with prostate cancer and were excluded from this analysis. Others (287 patients) were divided into 2 groups – group A 180 patients without BPH and, group B – 107 patients with BPH. Body weight, waist circumference, hip circumference, blood pressure were determined. Body mass index (BMI) was calculated. Biochemical analyses including fasting plasma glucose (FPG), HbA1c, total cholesterol, triglycerides, high-density lipoprotein (HDL-C), fasting plasma insulin (FPI), adiponectin, leptin, TNF alpha, IL-6 and prostate-specific antigen (PSA) were performed. Insulin resistance (IR) was determined using Homeostasis model assessment (HOMA-IR). The prostate gland volume was measured using transrectal ultrasound.

**RESULTS:** Men with BPH were older ( $58.05 \pm 9.1$  versus  $57.91 \pm 7.58$  years). Body weight, waist circumference, hip circumference, BMI, systolic and diastolic blood pressure don't differ into groups. Patients with BPH (group B) have fasting plasma glucose, HbA1c, total cholesterol and triglycerides, HOMA-IR significantly higher (all  $p < 0.05$ ). Leptin, TNF alpha, IL-6 were higher in patients with BPH (all  $p < 0.05$ ). PSA level was correlated positively with age ( $r = 0.69$ ,  $p = 0.005$ ), triglycerides ( $r = 0.45$ ,  $p = 0.03$ ), total cholesterol ( $r = 0.32$ ,  $p = 0.04$ ), fasting plasma insulin ( $r = 0.46$ ,  $p = 0.03$ ), and HOMA-IR ( $r = 0.49$ ,  $p = 0.02$ ) and negatively with BMI ( $r = -0.22$ ,  $p = 0.03$ ).

**CONCLUSIONS:** PSA level was influenced by age and metabolic factors (BMI, triglycerides, HDL-C, fasting plasma insulin, insulin resistance). Obesity, elevated level of triglycerides, total cholesterol, fasting plasma insulin, HOMA-IR are associated with BPH. The results suggest that BPH can be a facet of metabolic syndrome. Chronic inflammation may lead to events that can cause proliferation within prostatic tissue through a variety of mechanisms which involves proinflammatory cytokines.

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## **OPEN SURGERY – STILL A VIABLE ALTERNATIVE TO THE MINIMALLY INVASIVE TREND TREATMENT OF STAGHORN STONES**

**Andrei Paun, Ovidiu Pacu, Cornel Stanescu, Florin Rusu, Armand Iliescu, Marius Dinu, Dan Mischianu**

In literature there are described several methods of treatment of renal lithiasis:

- extracorporeal shock wave lithotripsy (ESWL)
- percutaneous nephrolithotomy
- retrograde or antegrade ureteroscopy
- open surgery

Considering that minimally invasive techniques can sometimes require adjacent procedures to resolve remaining fragments that can spread over long periods of time, in selected cases open surgery can be used.

We would like to bring to your attention the case of a 60-year-old male patient diagnosed with type A bilateral staghorn stones.

Blood tests - within normal limits.

KUB – bilateral type A staghorn stones

Urinalysis - Proteus mirabilis UTIs.

IVU – secretion/excretion present bilateral associated with bilateral grade 1 hydronephrosis.

Left pielolithotomy is performed with full removal of the staghorn stone. Postoperative evolution is favorable. The patient is discharged after 7 days.

One month after the first surgery patient returns to continue therapy management. Right pielolithotomy is performed. Postoperative evolution is simple. The patient is discharged after 6 days.

Radiological and ultrasound investigations performed after the two surgical procedures did not show any remaining stones. Urinalysis – sterile.

In certain selected cases of kidney stones open surgery can be performed to achieve the goal of "STONE FREE".

## **EXTRAGONADAL GERM CELL TUMOR**

**Cornel Stanescu, Florin Rusu, Ovidiu Pacu, Marius Dinu, Adrian Marincas, Armand Iliescu, Andrei Paun, Cristian Iatagan, Dan Mischianu**

**INTRODUCTION:** Extragenadal germinal tumors have a low incidence, of 1-5% of all germinal cell tumors, and malignant transformation is due to the remaining germinal cells along the longitudinal axis of the body (from the pineal gland, through the mediastinum to the retroperitoneum and sacrococcygeal region) during their migration in early

embryonic stages.

**METHODS:** We present a clinical case of an extragonadal retroperitoneal germinal cell tumor in a 44 years old patient.

**RESULTS:** A 44 year old male patient diagnosed using imaging with gigantic retroperitoneal lymph nodes, in correlation with a high seric level of beta-hCG is admitted for further investigation and appropriate treatment. The clinical exam and scrotal echography reveal solely a hypotrophic left testicle. Decision is made for surgery and biopsic orchidotomy is practiced under spinal anesthesia trough an inguinal approach: normal macroscopic semblance; extemporaneous HP exam shows no malignant lesions, the gland is conserved. Echographic percutaneous guided biopsy is performed on a giant laterocystic lymph node with a positive HP diagnostic of seminoma. The patient undergoes polychemotherapy. The follow-up PET-CT reveals the retroperitoneal lymph nodes to be residual and metabolically inactive.

**CONCLUSIONS:** The first line of treatment for large volume germinal seminal tumors (with lymph nodes > 5cm) is polychemotherapy. For the exposed case we accomplished full metabolic response to the oncological treatment.

## **MESH SURGICAL TREATMENT FOLLOW-UP IN GENITAL PROLAPSED**

**Ovidiu Bratu, Dragoş Marcu, Dan Spânu, Marius Dinu, Dan Mischianu**

**Objective:** Genital prolapse represents a frequent pathology in elderly women and it is the source of many genital and urinary complications.

The aim of this article is to evaluate the surgical and functional results of minimally invasive procedures that we have used in this pathology.

**Material and methods:** We have analysed 50 women with genital prolapse. For anterior compartment prolapse we have used a four arm mesh and for posterior prolapse a two arm mesh anchored to the sacrospinous ligament.

**Results:** We have encountered three relapses in the cases of patients with IVth grade prolapse. Occult urinary stress incontinence appeared in 7 out of 20 cases with cystocele. 7 women out of 16 who have undergone mesh procedures for posterior prolapse were sexually active and 5 patients out of these 7 have complained of pain during intercourse, postprocedure. No mesh rejection or septic complications

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have occurred.

Conclusions: Nowadays, mesh surgical treatment represents the standard treatment for genital prolapse. Most of the late complications are well accepted by patients. We don't recommend posterior implant in sexual active women.

### **LAPAROSCOPIC VERSUS OPEN PYELOPLASTY FOR URETEROPELVIC JUNCTION OBSTRUCTION**

**Mădan V, Aungurenci A, Rădulescu A, Spînu D, Iatagan C, Pacu O, Farcaș C, Botea V, Mischianu D, Dinu M**

Introduction: Among the multitude of surgical techniques, the dismembered pyeloplasty (Heynes-Anderson) is considered the gold standard for ureteropelvic junction obstruction treatment. In the last two decades the laparoscopic approach started to replace open surgery. The aim of our study is to compare the surgical and functional outcomes between laparoscopic and open pyeloplasty.

Method and materials: We analyzed a series of 30 patients admitted in our clinic between January 2015 and March 2016. Twelve patients underwent laparoscopic pyeloplasty

while the rest of 18 underwent open surgery. For the patients operated open the retroperitoneal approach was elective. The laparoscopic transperitoneal approach was performed in 10 cases, while the retroperitoneal was performed only in 2 cases. A ureteral stent was inserted to all operated patients.

Results: The surgical time for laparoscopic pyeloplasty ranged between 240 and 360 minutes while for open surgery ranged between 90 and 210 minutes. The number of hospitalization days for laparoscopy was between 5 and 12 days (mean ratio - 6.63), while for open pyeloplasty was between 7 and 21 days (mean ratio - 12.68). Postoperative complications appeared at 6 patients out of 18 operated openly, while only 3 out of 12 patients operated laparoscopic had complications. Functional outcomes were evaluated by mean of Uro-CT scan or renal scintigraphy at 3 months postoperative. Most patients (28) had improved postoperative results.

Conclusions: In our experience, both laparoscopic and open pyeloplasty had similar functional results, but laparoscopic technique is favourable because of reduced hospitalization time and lower postoperative complications.

## **OP session 4 – Oral and maxillofacial surgery, ophthalmology**

### **IDENTIFICATION OF MYOEPIHELIAL CELLS AND THEIR ROLE IN DIAGNOSIS OF SALIVARY GLAND TUMORS**

**Gunhan Omer**

OBJECTIVE. Myoepithelial cells are an important component of salivary gland tumors and are responsible from the diverse histology of them. This study is focused on the myoepithelial cell differentiation by using immunohistochemical stainings in a various types of salivary gland tumors. The relation of myoepithelial cells with stromal matrix and the associated epithelial cells were evaluated.

MATERIAL AND METHOD. Retrospective analysis of histologic slides of twenty benign and twenty malignant salivary gland tumors were examined for morphologic and immunohistochemical identification of different myoepithelial cells such as; spindle-stellate, polygonal-epitheloid, plasmacytoid, basal and clear types. P63, S-100 protein, smooth muscle actin, cytokeratin 7 antibodies were used for identification of myoepithelial and epithelial cells.

RESULTS. The best examples of myoepithelial cells were

detected by immunohistochemically and particularly in pleomorphic adenomas. Basal and clear cell types of myoepithelial cells closely resembled the epithelial cells and their identification was relatively difficult. More than one, different type antibodies are necessary for myoepithelial cells identification. Morphologic identification of myoepithelial cell types was easier when they were associated with stromal matrix material.

CONCLUSION. Myoepithelial cell components of various salivary gland tumors may be quite different and identification of myoepithelial cell types may pose difficulties. A confident identification of myoepithelial cells can be achieved with the use of combination of morphology and antibodies of P63, S-100 protein and smooth muscle actin. Correct identification of myoepithelial cells is one of the critical part of diagnosing salivary gland tumors.

### **FEATURES REGARDING VICIOUSLY CONSOLIDATED ORBITAL BLOWOUT FRACTURES**

**Moraru L., Dumitru C., Gabără A., Bădoiu C., Căruntu A.**

**Introduction:** The isolated blowout orbital fractures occur when traumatic agents that are comparable to the size of its aperture frontally hit the orbit. The traumatic energy is transmitted to eyeball, which transmits it to orbital walls that fracture easily, thus sparing visual analyzer. The symptoms are influenced by the displacement of the fracture, ranging from periorbital bruise to diplopia. Since orbital walls cannot be directly examined, many cases go undiagnosed and heals in a vicious manner being accompanied by atrophy and scarring of soft tissue thus making surgery difficult.

**Methods:** We retrospectively reviewed cases with blowout orbital fractures viciously healed with secondary diplopia treated surgically in our unit over the last two years.

**Results:** Compared with recent fractures, treatment, though identical (reconstruction of orbital walls with preformed low profile titanium mesh) was more difficult and required more time in the operating room. The interventions resulted in remission of diplopia shortly after surgery without complications, but couldn't equally correct enophthalmia.

**Conclusions:** Viciously consolidated orbital blowout fractures can be successfully treated in terms of eyeball functionality, but technically more difficult, with potentially higher perioperative risks and variable aesthetic results. Therefore proper diagnosis and early treatment are preferred.

### **PIEZOSURGERY WITH PLATELET-RICH PLASMA OR CONVENTIONAL ROTATORY INSTRUMENTS FOR INFERIOR THIRD MOLAR EXTRACTION**

**Cheshmedzhieva Atanaska, Mitov Stefan, Kolev Stanislav**

**PURPOSE:** The surgical removal of mandibular third molars is frequently accompanied by significant postsurgical sequelae, and different protocols have been described to decrease such adverse events. The aim of this study was to investigate the performance of piezosurgery compared with traditional rotating instruments during mandibular third molar removal.

**PATIENTS AND METHODS:** Our research includes 40 patients who needed surgical removal of bilateral mandibular third molar teeth. They are served in Departement of Oral and Maxillofacial surgery in Military Medical Academy, Sofia. Each patient was treated, at the same appointment, using bur removal on 1 side of the mandible and a piezoelectric device on the contralateral side. On the side where we used ultrasonic surgery we put

Platelet-Rich Plasma (PRP) in the socket of third lower molar after its extraction. Postoperative sequelae as oedema, trismus, pain, and the duration of surgery were analyzed.

**RESULTS:** The study consisted of 40 healthy patients, 20 male and 20 female. The pain evaluation reported by patients who underwent surgery with piezosurgery was significantly lower than that reported after bur (conventional) removal, reaching statistical difference 2 days ( $P = .043$ ). The clinical value of orofacial swelling and trismus at day 3, was lower in the piezosurgery group ( $P < .005$ ). The average surgical duration was significantly shorter in the cases with bur extraction than in the piezosurgery cases combined with PRP. ( $P < .05$ ).

**CONCLUSION:** The results of our survey showed that piezoelectric surgery and applying PRP significantly reduced the occurrence of postoperative sequelae -oedema, trismus, and pain compared to the conventional rotary instrument technique in lower third molarsurgery. The only disadvantage of the piezoelectric technique was the duration of the, which was increased by approximately 8 minutes; however, this effect was offset by reducing the morbidity and increasing patients's post-op comfort.

### **OPERATIONAL TREATMENT OF A HEAVY FRACTURE OF AN EYE-SOCKET AND A CHEEK-BONE**

**Mitov St., Chesmedjjeva At., Karjin E.**

Major S M. was transported to the Military Medical Hospital in the beginning of May 2015. He had been injured during the safemaking of the detonated munitions store near the village of Iganovo. He had fallen from a height of about three metres in the course of the execution of his duties. As a consequence of this height trauma, he had a broken leg, three ribs on his left side, a left eye socket and a left cheek-bone, as well as a concussion of the brain.

S M. first entered intensive care unit for the treatment of this combined trauma. After a seven day treatment in the reanimation ward, his condition was stabilized and a traumatological operation on his broken left leg was performed. No operational treatment was necessary for his broken ribs as the fracture was without a displacement.

On the eighth day after his trauma, he was admitted to maxilla-facial surgical department for treatment. A new X-Ray was done and-a 3D reconstruction of the facial skeleton performed. It was established that due to the heavy eye-socket fracture, there is a collapse of the floor of the eye-socket in the direction of the upper- jaw sinus. The broken

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left-hand side cheek-bone was wedged into its underlying bone structures. This had led to a change in the position of the left eye and the corresponding sight disturbance-double vision. After pre-operative preparation, we proceeded to surgical treatment under general anaesthesia. A horizontal slit was made in the area of the lower lid of the left eye and a vertical one of the side edge of the left eye-socket reaching up to the lower end of the left eyebrow. After the fracture lines with the help of the Limberg bone hook through a horizontal skin slit in the area of the left cheek were revealed, we reached the fracture line in the area of crista zygomaticomaxillaris. In this way, the wedged eye-socket was moved and pulled outwards and upwards with the help of the Limberg bone hook. A good reposition of the fragments was achieved. A defect of the bone with dimensions of 2/1.5 cm was established in the area of the floor of the eye-socket. A titan net was set in the area of the defect which was fixed with a screw at about 1 cm below the infraorbital edge. A disk osteosynthesis was made in two places-infraorbital, and a second one in the area of the link of the cheek-bone with the frontal bone. A very good fixation of the fragments was achieved. The post-operational period proceeded well and the patient was discharged from the hospital seven days later. It was established during a check examination 30 days after the discharge that the patient had no visual disturbance. S. M. returned to work three months after the trauma and now he performs his everyday military duties.

### **PROBLEMATIC AIRWAY IN MAXILLOFACIAL SURGERY - ANAESTHESIOLOGIC APPROACH**

**Krstic Lecic Ivana**

Today it is well known that over one third of unfavourable anaesthesiological outcomes are connected to inadequate ventilation, while almost one third of lethal outcomes due to anaesthesia direct consequence of impossibility establishment and maintenance of problematic airway.

Specificity of anaesthesiology work during maxillofacial surgical procedures is based on fact that the most of the patients because of the characteristic pathology belongs to category of those in whom difficult or impossible ventilation and complicated intubations is expected in advance. Protocols for management of difficult airway are pretty similar in most countries that have them, and all these protocols are renewed and reviewed in difficult periods of time. Numerous appliances and device for easier establishment and maintenance of problematic airway are

available today, such as for example, various types of LMAs, laryngeal tubes, rigid fiberoptic guides, flexible bronchoscopes and sets for percutaneous tracheotomy. Each of these appliance and device are of a great help in cases of expectedly or unexpectedly problematic airway, but only in hands of skilled, educated and experienced staff. Of course, evaluation of the patient remains the most important factor that is going to have an impact on choice of strategy and evaluation of the airway itself, especially onto the site which is at the same time an operation field that has to be easily approached by surgeon, while monitoring a stable and safe patient.

### **COMPUTER BASED PROGRAMME FOR SCREENING OF MACULAR DISEASES AND AFTER EYE TRAUMA**

**Vidinova Christina, Voinov Latcezar**

**Aim:** The aim of this survey is to describe our programme for early screening for macular changes in diabetic retinopathy, AMD and after eye trauma.

**Material – Method:** We present 32 patients who have been examined in our clinic after being screened for macular diseases with MACUTEST.

In all cases VA examination, computer perimetry tests, fundus photography and OCT have been performed. The OCT programmes include: HD line, Cross line and EMM5.

**Results:** For early screening of macular diseases we use - MACUTEST. An online internet based test, broadly accessible and easy to use.

From the 32 patients referred to us after screening 7 were with diabetic retinopathy with macular edema. The hard exudates and foveal changes have been detected on the fundus photographs and OCT.

In 5 patients traumatic maculopathy after eye injury has been diagnosed. Apart from edema and epiretinal gliosis, cases of post traumatic macular holes have been found.

In the majority of patients - 20 different stages of AMD have been found. Patients with macular atrophy, neovascularisation and RPE detachments have been detected.

**Conclusions:** Macular diseases are a large group of eye disorders whose early detection is of substantial importance for their successful treatment. The MACUTEST is a screening test, which can be done at home, easily and without specialized equipment. That makes it very useful in finding patients with macular disorders and enables their quick hospitalization and treatment.

### **REGENERATING AGENTS (RGTA) – MATRIX THERAPY IN OPHTHALMOLOGY**

**Ștefan Cornel, Timaru Cristina Mihaela, Anghel Gheorghe, Burcea Marian, Șelaru Daniela, Mușat Ovidiu, Zemba Mihail, Manole Horațiu, Macovei Laura, Pulbere Liliana, Armegioiu Monica**

**Introduction:** The RGTA- based technology (“ReGeneraTing Agents”) is a new therapeutic approach also named “Matrix Therapy”, aiming to preserve and even restore the extracellular matrix (ECM) and providing encouraging results in ocular tissue regeneration. The results of this therapy are promising for the management of anterior segment diseases, especially corneal diseases – persistent epithelial defects and neurotrophic keratitis.

**Material and method:** Patients with persistent epithelial defects or corneal superficial punctuate keratitis of various etiologies, refractory to conventional treatments and patients who underwent refractive surgery or corneal transplant surgery, were included in a single-center uncontrolled, prospective study. The clinical examination included slit lamp biomicroscopy, fluorescein staining and anterior segment OCT.

**Results and conclusions:** The RGTAs appear as a promising new therapy in the context of persistent epithelial defects and neurotrophic keratitis. It is effective in improving subjective and objective symptoms, corneal healing and patient’s comfort, thus providing a solution for patient’s refractory to conventional treatment.

### **OCULAR TRAUMA WITH RETAINED FOREIGN OBJECT. SURGICAL PARTICULARITIES**

**Gh. Anghel, O. Musat, C. Ștefan, D. Șelaru, M. Zemba, H. Manole, M. Armegioiu, L. Pulbere, L. Macovei**

This paper presents, by the use of videos, surgical solutions for penetrating ocular trauma with retained foreign object of hospitalized patients in the ophthalmology department

of the Central University Emergency Military Hospital.

In all cases the retained foreign object removal was followed by pars plana vitrectomy, laser treatment, tamponading agents such as expanding gases and silicone oils as required by each case.

### **VISION RELATED QUALITY OF LIFE IN SERBIAN PATIENTS**

**Kovac Bojan, Vukosavljevic Miroslav, Resan Mirko, Kotic Marko, Petrovic Nenad**

**PURPOSE:** To assess vision related quality of life and health related quality of life in most common ophthalmic diseases and to measure effectiveness of cataract surgery through quality of life assessment.

**METHODS:** The Serbian version of NEI VFQ-25 was translated in accordance with standard methods that have been adopted internationally. Descriptive analyses and a generalized linear estimating equation analysis were undertaken to measure change in vision related quality of life after surgery.

**RESULTS:** The overall index score on the NEI VFQ-25 ranged from 65.3 to 67.8 with a mean of  $67.4 \pm 15.0$ . The average value of a composite score before surgery was equal to 73.1 (SD, 18.8). After cataract surgery on the worse eye, there was an increase in the value of the composite score by an average of 20.2 points on 93.3 (SD, 11.6).

**CONCLUSION:** Cataract surgery significantly improved vision related quality of life among bilateral cataract patients and this study has provided valuable information about change in vision related quality of life after surgery in Serbia. Due to the benefits that cataract surgery has for vision-related quality of life, ensuring that the older population has access to regular eye examinations and timely treatment for cataract is paramount.

## **OP session 5 – Gastroenterology, diabetes and nutrition**

### **INTESTINAL PERFORATION AS THE FIRST PRESENTATION OF CROHN’S DISEASE: A RARE CASE**

### **IN A YOUNG ADULT**

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**Pachiadakis Ioannis, Sfikas Georgios, Lttzakri Dimitra, Psochias Polykarpos, Katsimardou Alexandra, Gatsiou Marina, Kafalis Nikolaos, Pehlivanidis Anthimos**

**Purpose:** We report the case of a young male who presented with fever of a ten-day duration and intestinal perforation as first manifestations of Crohn's disease with no other symptoms from the gastrointestinal tract.

**Materials and methods:** A male of 19 years with no medical record was admitted to our hospital because of fever over 39 C that persisted for ten days. The patient mentioned no other symptoms. The clinical examination revealed no findings and the laboratory evaluation showed elevated inflammation markers and thrombophilia. The tests for antibodies against a wide spectrum of viruses were proven negative. The patient underwent a CT scan of the thorax and upper and lower abdomen, which revealed a severe inflammation of the ileum and sigmoid, intestinal perforation and presence of contrast dye in the urinary tract. After ten days of conservative treatment, the patient underwent a new CT scan of the abdomen, which further revealed the formation of an intraabdominal abscess. The patient complained of haemorrhagic stool and his general condition deteriorated. He was submitted to surgical drainage of the abscess. He further underwent colonoscopy that revealed ileitis and colitis.

**Results:** The patient was treated with corticosteroids, immunosuppressive therapy and antibiotics and his clinical and laboratory status substantially improved. The pathologic findings were indicative of Crohn's disease.

**Conclusions:** Crohn's disease may rarely present as a mild feverish condition with no symptoms from the gastrointestinal tract which, despite the good clinical condition of the patient, may hide very severe complications.

## **THE EXPRESSION AND THE SURVIVAL EFFECT OF B-CATENIN IN RELATION TO PATIENTS' OUTCOME IN COLORECTAL CANCER**

**Constantinos Villias, Georgios Veloudis, Dimitrios Keramidaris, Christos Liatsos, Stavros Gourgiotis**

**Aim:** Aberrant activation of the Wnt signaling pathway has been implicated as a key regulator of colorectal cancer (CRC) tumorigenesis.  $\beta$ -catenin plays a key role in the signaling output of the Wnt cascade. There are many reports about the significance of  $\beta$ -catenin in CRC, yet correlations with prognosis remain highly variable and

contradictory. The aim of this study was to investigate  $\beta$ -catenin expression and its relationship to clinicopathological parameters and prognosis in CRC.

**Material - Methods:** The study included 29 female and 28 male patients with a mean age of  $67 \pm 10.4$  years. Immunohistochemistry analyses were performed to characterize the expression of  $\beta$ -catenin in CRC tissues.

**Results:** Cytoplasmic and focal nuclear accumulation of  $\beta$ -catenin was observed in 88% (50/57) and 25% (14/57) of patients respectively. There was no significant association between  $\beta$ -catenin overexpression in the cytoplasm and the patients' clinicopathological parameters.  $\beta$ -catenin overexpression in the nucleus was associated with advanced N stage ( $p=0.04$ ). Kaplan-Meier survival curves demonstrated that patients with  $\beta$ -catenin overexpression in the nucleus presented a significantly unfavorable overall survival (OS) time ( $p=0.04$ ). Multivariable COX regression analysis adjusted for age, gender, tumor location, TNM stage and grade of differentiation, showed that  $\beta$ -catenin overexpression in the nucleus is an independent prognostic factor for OS. There was no significant association between  $\beta$ -catenin overexpression in the cytoplasm and OS.

**Conclusions:** The protein expression level of nucleus, rather than cytoplasmic  $\beta$ -catenin predicts CRC patients with worse prognosis.

## **EXPRESSION AND PROGNOSTIC SIGNIFICANCE OF E-CADHERIN IN PATIENTS WITH COLORECTAL ADENOCARCINOMA: RESULTS FROM A RETROSPECTIVE STUDY**

**Georgios Veloudis, Stavros Gourgiotis, Christos Liatsos, Dimitrios Keramidaris, Evangelos Falidas, Constantinos Villias**

**Aim:** The epithelial-mesenchymal transition (EMT) represents a critical event in the progression and metastases of many epithelial tumors. E-cadherin is the best-characterized molecular marker of EMT and loss of expression has been linked to poorer prognosis in several cancers. However, in patients with colorectal cancer (CRC), the correlation between E-cadherin and patients' prognosis remains controversial. The aim of this study was to investigate the E-cadherin expression in CRC patients.

**Material - Methods:** E-cadherin mRNA/protein expression was investigated in a series of 57 patients and related with their clinicopathological features and prognosis. Quantitative PCR and immunohistochemistry analyses were

performed to characterize the expression of E-cadherin in CRC tissues.

Results: The positive expression rates of E-cadherin mRNA and protein were 53% and 42%, respectively. E-cadherin immunostaining showed no correlation with the patients' clinicopathological features. There was a trend towards higher mRNA expression levels in patients with well in comparison with them with poor differentiated tumors ( $p=0.09$ ). Kaplan-Meier survival curves demonstrated that patients with negative E-cadherin mRNA and protein expression, presented a significant and marginally significant unfavorable disease-free survival (DFS) time ( $p<0.001$  and  $p=0.05$ , respectively). Patients with negative E-cadherin mRNA expression presented a significant unfavorable overall survival (OS) time ( $p=0.02$ ). Multivariable COX regression analysis adjusted for age, gender, tumor location, TNM stage, and grade of differentiation, showed that E-cadherin mRNA expression was an independent prognostic factor for OS.

Conclusions: E-cadherin downregulation is an important component of disease progression in CRC patients. Gene expression levels are a strong predictor of OS and DFS.

### 3D REGIMEN FOR TREATMENT OF HCV INFECTION

**Konaktchieva Marina, Simonova Marieta, Katzarov Krum**

Hepatitis C virus (HCV) infection is one of the most common etiology of liver disease requiring liver transplantation (LT). HCV causes almost always a re-infection of the graft, often resulting in rapid progression to severe fibrosis or cirrhosis, and even graft failure. Cirrhotic patients and liver transplant recipients are difficult to treat with combination of pegylated interferon and ribavirin because of the limited efficacy and severe side effects.

The aim of this paper is to present the initial experience in treatment of HCV with the new direct-acting antiviral agents (DAAs) in our center.

Seven patients with various liver diseases, caused by HCV infection were included in the study. We evaluated the efficacy and safety of Viekirax (ombitasvir/paritaprevir/ritonavir), Exviera (dasabuvir) and weight based ribavirin given for 12 and 24 weeks.

In all patients HCV RNA was undetectable on week 4, measured by real-time PCR. Side effects like fatigue, headache and asthenia were mild in severity. Three patients had haemoglobin levels decreased to less than 9.0 g/dL and underwent a ribavirin dose reduction on week 2 and discontinued therapy with ribavirin on week 3. One

patient experienced post-baseline serum ALT and bilirubin elevation on week 4. Dosage adjustment of tacrolimus was required in all patients (3/7) with HCV re-infection after liver transplantation. HCV RNA was undetectable by all patients on week 24 after end of treatment.

Our results suggest that the introduction of DAAs is a very promising option for safer and more effective treatment of patients with HCV infection, which are experiencing reduced quality of life and survival.

### THE RELATIONSHIP BETWEEN ACUTE PANCREATITIS DISEASE ACTIVITY AND IL-6 AND PROCALCITONIN LEVELS

**Gul Vahit Onur, Ahioglu Serkan, Destek Sebahattin**

OBJECTIVE: Acute pancreatitis (AP) is the formation of autoactivation of pancreas tissue as a result of pancreatic enzymes become active inside in the pancreas. Various scoring systems are used to determine the prognosis and clinical severity of acute pancreatitis. This study aims that compare Ranson, APACHE II and Balthazar scoring with procalcitonin and IL-6 levels and investigate the relations between statistically.

MATERIAL AND METHODS: 49 patients with a diagnosis of acute pancreatitis in Edremit Military hospital between 2011-2015 (32 male, 17 female age: 29-75) were included in this study. Ranson and APACHEII scores with serum procalcitonin and Interleukin-6 (IL-6) levels were determined for all patients. Patients were classified as mild and severe AP according to Ranson and APACHE II scores. Abdominal CT were performed for all severe patients.

RESULTS: Biliary causes for 23 patients (%47), hypertriglyceridemia for 5 patients (%10), chronic alcohol abuse for 3 patients (%6), and idiopathic causes for 18 patients (%37) were responsible in the etiology of acute pancreatitis. The patients were separated into two groups as mild and severe AP. Correlation of AP severity, according to APACHE II and Ranson scores between procalcitonin levels and interleukin-6 levels ( $P < 0.001$ ) were statistically significant. Abdominal CTs were performed to the severe AP patients and scored according to Balthazar classification. Balthazar classification scores also showed statistically significant correlation ( $P < 0.001$ ) with Procalcitonin and IL-6 levels.

CONCLUSION: Ranson, APACHE II and Balthazar scoring used to determine the acute pancreatitis severity and measurement of early inflammation markers IL-6 and procalcitonin levels were both statistically significant for

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disease severity.

### **STEP BY STEP TREATMENT OF DIABETIC FOOT - NEW TREATMENT POSSIBILITIES**

**Ciprian Constantin, Georgiana Constantin, Marinela Sirbu, Ana Spuderca**

Introduction: Different drugs and therapies for the management of diabetic foot ulcers comprises: local therapies, vasodilatation drugs, antibiotics, neuropathic and neurotrophic drugs, wound dressings, skin substitutes, growth factors and inflammatory modulators.

Background: The majority of therapies target the treatment of diabetic foot ulcer, but a local intervention (surgical intervention) to address the local area and to remove ulcers and necrotic areas is necessary. However, do not apply only one treatment, but applies a lot of intervention and a serial procedures are necessary to be practice on this situation in tentative of a tratment for diabetic foot ulcers.

Material and method: This is a case presentation of a 68 years old patient who was hospitalized in our clinic in February of 2015. This patient with known type 2 diabetes mellitus is presenting wounds in the region of single leg, left side of the plant straight appearance of necrotic ischemic purple of finger 5 and lesions located in region between finger 4 and 5, swelling and redness in the middle plantar region, which progressively worsened.

Results: Despite unfavorable initial prognostic and despite the medical advice to amputate a large part of the limb, the patient was recovered with a minimal intervention. Actual stage of disease and actual risk factors expose this patient to a new amputation.

Conclusion: Some new therapies (as growths factors or stem cells) could be an inovative solution for this kind of patient, ideally before that this stage of disease is diagnosed. We need a lot of other markers to diagnose this kind of pathology before the stage when is necessary a large amputation.

### **COMBINED METHOD OF INTRA- AND POSTOPERATIVE ANALGESIA IN PATIENTS WITH DIABETIC FOOT BY CSEA AND TREATMENT WITH HBO – A CASE REPORT**

**Bozov H.**

For diabetes is known to have many complications and one of the most anxiety is from diabetic foot ulcer, which often leads to amputations.

The aim of this study is to present a new own methodology for intra - and postoperative behavior of the anesthesiologist in patients with diabetic foot, who undergone amputation of the part of lower limb. Hyperbaric oxygenation therapy (HBO) is a good addition to the treatment.

Material and method:

51 - year old man with diabetic foot, treated with conventional therapy and HBO undergone surgery - debridement and amputation of the finger remains on the right foot. Anesthesia - combined spinal and epidural/CSEA/. A level of puncture for spinal anesthesia - L3-L4, 15 mg 0,75% Levobupivacaine was introduced, level of analgesia Th 10 - S 5. Epidural catheter was placed at the level L2-L3. Tip of the catheter at the level L1. Postoperative analgesia with a mixture of Levobupivacaine 0.5% 4 ml and 1% Lidocaine 4 ml bolus 2 times a day. In the postoperative period were conducted 6 HBO treatment sessions. 10 minutes before entering in the hyperbaric chamber in the Epidural catheter were injected 3 ml of 2% Lidocaine. Hemodynamic was monitored immediately before and after leaving the decompression chamber.

Results:

1. Blood pressure - drop by 5-10 mm Hg from baseline after application of Lidocaine and return to the original values after HBO treatment sessions.
2. Pulse rate - unchanged.
3. Touch block - change in temperature sensation after application of Lidocaine, Became back to the normal after 70-80 minutes.
4. Motor block - without dynamics.

After significant improvement in the local status patient was signed out from the hospital.

Conclusion: Although only one clinical case is presented, methodology shows good healing result.

### **CONTINUOUS GLUCOSE MONITORING SYSTEM IN TYPE 2 DIABETES - EXPECTATIONS AND PRACTICAL USE FOR THE DIABETOLOGIST**

**Brindusa Cofaru**

Context: The overall assessment of glycaemic control in patients with type 2 diabetes should include the monitoring of three parameters that are usually described as “glucose triad”: HbA1c, fasting plasma glucose and postprandial glucose excursions.

However, one additional marker, the so-called “glucose variability” might be as important as the three others since it has been demonstrated that both upward and downward glucose fluctuations are potent activators of oxidative stress.

Self monitoring of blood glucose (SMBG) can provide only intermittent snapshots of blood glucose levels, missing often hyperglycaemic or hypoglycaemic excursions.

In the modern diabetes monitoring, Continuous Glucose Monitoring (CGM) could be considered as an important pillar, since it provides information on day-to-day change of blood glucose levels and help achieving treatments targets without increasing the risk of hypoglycaemia.

Evidence Acquisition: The two major sources of data acquisition included medical literature and personal clinical experience of the author.

Conclusions: Glucose monitoring systems could be extended to current clinical care of type 2 diabetic patients especially for motivating them to change their lifestyle and to accept earlier insulin treatments in case of “oral antidiabetic drug secondary failure” and further for choosing the most appropriate insulin regimen in order to improve glycaemic control.

Short term retrospective CGM use may be beneficial in certain clinical situations such as to detect nocturnal hypoglycaemia, to assist in the management of hypoglycaemic unawareness and when significant therapeutic changes are performed.

### **COMPARISON OF THE DATA FROM CONTINUOUS GLUCOSE MONITORING AND CONTROL ASSESSMENT PARAMETERS IN PATIENTS WITH TYPE 1 AND TYPE 2 DIABETES**

**Tzvetelina Totomirova, Ivona Daskalova, Vesela Mihneva**

Aim: Continuous Glucose Monitoring (CGM) is used to adjust therapy in diabetic patients on intensified insulin treatment regimen. Additionally, CGM helps to evaluate glucose control during observed days. The aim of our study is to compare the results from CGM and control assessment parameters in patients with diabetes.

Material and methods: We studied 106 patients (60 men,

46 women; mean age 58.23±10.81 years) with type 2 diabetes (31 - on oral therapy; 33 - on premixed insulin; 21 - on multiple insulin injections) and with type 1 diabetes (21). CGM was performed for seven days by using iProTM. Glycated hemoglobin (HbA1c) was measured. CGM-results were assessed in accordance of control parameters.

Results: In type 2 diabetes, HbA1c shows a good positive correlation ( $r=0.44-0.68$ ) with mean blood glucose level, standard deviation, number of high excursions, AUC above the limits and percent of time above the limit, while there is a good negative correlation to percent of time within the limits ( $r=-0.65; -0.67; -0.52$ ). There are no significant differences in type 2 groups. No such correlations are found in type 1 group ( $r=-0.1-0.07$ ). Only in oral treated patients there is correlation between HbA1c and percent of time below the limit ( $r=-0.42$ )

Conclusion: Correlation between results derived from CGM and disease control parameters depend on type of diabetes. In patients with type 1 diabetes CGM should not be used as control assessment tool, while in patients with type 2, glucose monitoring could present overall disease control, not depending on treatment regimen.

### **DIETARY INTAKE AND NUTRITIONAL HABITS AMONG ALBANIAN SPECIAL OPERATION FORCES**

**Berdo Elva, Kukeli Edlira, Dervishi Genc**

Introduction: Special Operation Forces regularly engage in physically demanding combat operation and field training exercises, resulting in high energy expenditure which increased energy requirements. Success requires the mustering of all strength and endurance both physical and mental. Appropriate nutritional habits and interventions under the most rigorous conditions, can enhance performance and preserve health.

Objective: To access and evaluate nutritional habits and dietary intake among Special Armed Forces.

Material and Method: A cross-sectional study conducted through a self-administrated questionnaire was used to collect data from a sample of 100 Special Operation Forces in the period of time October – December 2015.

Results: The median age was 21-22 years (at a range of 18-27 years).The majority of SOF reported taking meals regularly (92%) with 64% eating 5 times per day and 36 eating at least 3 times per day. SOF eat a nutritionally balanced breakfast and lunch at the unit. 4% of them don't eat regularly the dinner. 36% smoke cigarettes and few

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subjects drink alcohol. 73% are aware of the concept of nutritionally balanced food but only 13% apply this concept when selected food from a menu. 37% consume at least once a week fast foods. 54 % know foods richer in protein, 48% vitamin, 38% carbohydrates, 47% saturated fat, 21 %

unsaturated fat, 32% fiber.

Conclusion: Insufficient nutritional knowledge often leads to wrong food choices having not a maximal nutritional efficiency.

## OP session 5 – Oncology and dermatology

### DOES WNT SUPPRESSOR, AXIN-2, PROMOTE COLON ADENOCARCINOMA ONCOGENIC ACTIVITY?

**Georgios Veloudis, Stavros Gourgiotis, Christos Liatsos, Dimitrios Keramidaris, Evangelos Falidas, Constantinos Villias**

**Aim:** The Axin-2 protein plays an important role in the regulation of the stability of the Wnt signaling pathway. Although initially described as a tumor suppressor, recent findings support the presence of a pro-tumorigenic role. The aim of this study was to investigate the association of Axin-2 mRNA and protein expression with clinicopathological parameters and survival in colorectal cancer (CRC) patients.

**Material - Methods:** Fifty seven patients, who were diagnosed with adenocarcinoma of the colon and rectum and underwent surgical resection, were included in this study. Expression of Axin-2 was investigated using quantitative PCR and immunohistochemical staining.

**Results:** In most cases, Axin-2 immunolocalization was detectable in the cytoplasm as opposed to only one case where it was shown to be expressed in the nucleus.

The positive expression rates of Axin-2 mRNA and protein were 51% and 33%, respectively. Statistical analysis showed no association between Axin-2 mRNA/protein expression and patients' clinicopathological parameters and survival.

**Conclusions:** In the present study Axin-2 mRNA and protein expression failed to provide with significant prognostic information in CRC patients.

These findings may reflect the complex tumorigenic role of this marker in CRC.

### ROSAI-DORFMAN DISEASE

**Vîrlan Cristina-Georgiana, Ghiațău Anca, Șotcan Mihai, Chirita Doru, Dănăilă Eduard**

**Introduction:** Histiocytosis defines a series of diseases of the reticulo-endothelial system - cells with the origin in promonocytes which the mononuclear phagocytic system. The proliferation of Langerhans cells (which have the role of defense in the skin) means histiocytosis. The symptoms are variable depending on the affected organs- the osteo-articular system is affected in 80% of cases, skin, lymphatic system are a frequent target. There are cases of localized histiocytosis (just skin/mono or poliostotic lesions) or an extensive form with visceral implication with or without organ dysfunction. The positive diagnosis is made on biopsy of the skin lesions or curettage of the bone lesions.

**Material and method:** We present the case of a young man -27 years who was admitted on Dermatology for a series of subcutaneous, erythematous skin nodules on the torso.

**Results:** A skin biopsy was performed by surgically removing a cutaneous flap which histologically and immunohistochemically resembled Rosai Dorfman disease. We continued investigating the systemic implication by performing a cerebral and thoraco-abdomino- pelvic tomography which identified numerous peripheral and hepatic hilar lymphadenopathy thus contouring the diagnosis of multisystem histiocytosis.

**Conclusion:** Multisystem histiocytosis without lung, lymphatic system, cerebral parenchyma, liver involvement has low mortality and a good prognosis but left untreated can lead to disease extension. With parenteral treatment with Vinblastine and SoluMedrol the evolution was favorable – the skin lesions and lymphadenopathy disappeared.

## MANAGEMENT OF SURRENAL METASTASES BY STEREOTACTIC ABLATIVE BODYRADIOTHERAPY (SABR)

**Beyzadeoglu Murat, Gamsiz Hakan, Sager Omer, Demiral Selcuk, Dincoglan Ferrat, Uysal Bora**

**OBJECTIVE:** Surrenal metastases constitute a frequent distant metastasis site for lung cancer. Stereotactic Ablative Body Radiotherapy (SABR) emerged as a viable therapeutic option in the treatment of surrenal metastases to replace adrenalectomy, however, there is paucity of data regarding its utility for this indication. In this aspect, we evaluated the use of SABR in the radiodebulking management of surrenal metastases from non-small cell lung cancer (NSCLC) and report our single center experience in this study.

**MATERIAL AND METHOD:** Fifteen NSCLC patients (9 male, 6 female) with 17 surrenal metastases referred to Department of Radiation Oncology, Gulhane Military Medical Academy were treated using Active Breathing Control 4D-SABR. 10 Gy per fraction dose in 3 fractions was delivered to a total dose of 30 Gy in 3 consecutive days for all patients. The mean adrenal gland Gross Tumor Volume (GTV) was 28.4 cc (range: 6.6-101.5 cc) and mean adrenal gland Planning Target Volume (PTV) was 57.4 cc (range: 16.5-143.8 cc).

**RESULTS:** At a median follow-up time of 16 months, local control was 86.7% and overall survival was 33.3%. Median disease-free survival was 10 months. Treatment response according to RECIST (Response Evaluation Criteria in Solid Tumors) was noted as complete response in 3 patients (20%), partial response in 5 patients (33.3%), stable disease in 5 patients (33.3%), and progressive disease in 2 patients (13.3%). Patients experienced minimal grade 1 nausea (n=7) and grade 1 fatigue (n=12). There were no cases of grade 4-5 (life threatening or fatal) acute or late toxicity.

**CONCLUSION:** SABR offers a safe and efficacious noninvasive management strategy for surrenal metastases from NSCLC by providing excellent local control with negligible treatment related toxicity replacing the burdensome surgical adrenalectomy.

## PROSTATE CARCINOMA - CLINICAL AND HISTOPATHOLOGICAL COMPARISONS

**Drandaska Ivanka**

Prostate cancer is the fourth most common neoplastic disease among men in Bulgaria. The incidence of prostate

cancer increases rapidly in recent years.

Currently the prostate cancer is the most commonly diagnosed malignant tumor in men in many countries and it is the second after the lung cancer as a disease that leads to death.

Retrospectively / 2012-2014 / are studied 115 cases of prostate cancer in men diagnosed in MMA-Sofia. All cases of the prostate cancer are established on histological biopsies / tru-cut biopsies or prostatectomie/.

Prostate cancer was histological defined and staging through G and the Gleason grading system. Immunohistochemie was used in cases with ambiguous histology and data on suspected carcinoma. We analyzed age, anatomical location, differentiation and staging of prostate cancer. We compared the histological findings from both tru-cut biopsy and prostatectomy.

Today the main efforts of scientists and clinicians are focused on early diagnosis of prostate cancer and adequate treatment in order to preserve its radicalism and quality of life of patients.

## ACUTE ERYTHROID LEUKEMIA OR MDS

**Taulla Eriselda, Perolla Adela, Asqeri Tajar**

**OBJECTIVE:** how to differentiate an AEL from MDS. AEL is a rare type of acute leukemia, it constitutes 5 % of all cases.

**CASE REPORT:** A 74 year old man was hospitalized with a two weeks history of severe weakness, anorexia, weight loss. He suffered of diabetes mellitus type II insulindependent, and HTA. The physical examination showed cutaneous and conjunctival pallor, large ecchymosis in the low extremities and hepatosplenomegaly.

CBC showed: pancytopenia and macrocytosis, neutrophils 60%, normoblasts 4:100 and reticulocyte count 3%. Serum B12 - 1225pg/ml and folates - 21ng/ml. DTC negative, ITC negative, LDH 1660 U/L, total bilirubin 1.1 mg/dl, total proteins 5.6 g/dl, glucose 388 mg/dl, and other parameters within the normal range.

The bone marrow aspiration revealed: mieloblasts 6%, promyelocytes 1%, myelocytes 6%, metamyelocytes 6%, bands 5%, neutrophils 4%, proerythroblasts 4%, basophilic normoblasts 4%, polychromatophilic normoblasts 4%, promegaloblasts 7%, basophilic megaloblasts 10%, polychromatophilic megaloblasts 36%, and orthochromatic megaloblasts 7%.

The rate myeloid/erythroid = 1/3, showing the predomination of the erythroid line which constitute 65%

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of all cells. The proportion of proerythroblasts and basophilic erythroblasts was 38% of all erythroblastic cells. The proportion of megaloblastic forms was 80% of all erythroblasts. PAS staining of bone marrow smears showed typical cytoplasmatic positivity of pathologic erythroblasts: granular in more immature cells and diffuse in more mature ones, confirming the diagnosis of erythroleukemia.

We treat him with Cytarabine 100 mg/m<sup>2</sup> every 12h day 1-7. The patient had an extremely aggressive clinical deterioration and he died ten days after admission.

CONCLUSION: the diagnosis was Acute Erythroid Leukemia. The % of myeloblasts in bone marrow was >20% of non-erythroid cells

## DERMATOLOGICAL QUALITY OF LIFE IN VITILIGO PATIENTS

**Sinani Ardiana, Roshi Enver, Lico Rovena, Osmenllari Artan**

Introduction: Vitiligo is an acquired dermatological pigmentation disorders of the skin. It causes loss of pigment on effected areas of the skin or mucosae and is characterised by milk white, nonscaley lesions with distinct margins.

Objective: Aim of this research study about Vitiligo is to investigate the impact of vitiligo on the life quality of affected patients.

Results: 1758 individuals who come in Military Hospital Tirane, Albania in Dermatolgy Service in period October 2014 - March 2015 was examined having or not vitiligo. 39 cases with Vitiligo were diagnose through the physical standard examination. In these 39 patients diagnosis with Vitiligo were applied DLQI questionnaire:

From 39 patient taken in consideration in this research study 22 (56.4%) were females and 17 (43.6%) were males, it was noticed that gender was influential in the degree of concern that brings Vitiligo ( $p=0.01$ ), and in the degree of embarrassed and anxiety due to this skin disease ( $p=0.01$ ), where females were proven to be the most sensitive category. Resulted that age group was determinant in the skin disease (vitiligo) impact on social activities ( $p=0.007$ ), in the skin disease impact for the selection of clothes ( $p=0.007$ ), in problems with relatives as the result of skin disease states ( $p=0.007$ ) and in problems level caused from the skin disease treatment ( $p=0.000$ ). Categories which are more sensitive from skin disease (vitiligo) are the age groups 15-24 and 25-34, where subjects which belong to these age groups categories represent the highest

percentage of the persons who have concerns as the result of the skin disaese states. Residence feature is determinant for the concerns level as the result of skin disease states ( $p=0.01$ ), skin disease impact level on social activities ( $p=0.026$ ), sexual difficulties level as the result of skin disease states ( $p=0.0047$ ).

Conclusion: Vitiligo is not life-threatening skin diseases but have a significant impact on the quality of life of patients and cause considerable psychological distress.

## PIGMENTATION DISORDERS, DISEASES WITH A NEGATIVE IMPACT ON THE SOCIAL LIFE OF INDIVIDUALS AFFECTED

**Sinani Ardiana, Lico Rovena, Hoti Brunilda**

Introduction: Peutz-Jeghers syndrome is a rare inherited disease characterized by the presence of 1. gastrointestinal polyps which have a very high risk of becoming malignant. 2. the presence of the macula, pigmented, mainly around the area of the mouth, lips, eyes, in the mucosa of the lips, mouth, hands, feet.

Clinical case: patient aged 24 years presented to the dermatologist doctor complained about the presence of dark brown spots around the mouth, which according to her, had been added since childhood, the patient will marry and seek to remove these stains by her face, she did not refer any other problem or concern, despite the fact that her sister had such problems too.

From differential diagnosis of pigmentation disorders and clear clinical appearance of these characteristic spots around the mouth, thought for a lentiginous, from which, with the above features were consistent with Peutz-jeghers syndrome.

The patient was hospitalized in the dermatology clinic, where she was subjected to laboratory examination of the blood count and biochemical balance that resulted normal.

On fibro gastroscopic examination, saw numerous polyps in the stomach (hamartomatous polips). Final diagnosis Peutz-jeghers syndrome.

Discussion: More and more are added attention and noted

that the skin is an early tumoral markers to diagnosis of malignant internal diseases. Changes in the skin may be the first signs of an internal problem, including malignant diseases. Cutaneous markers are divided into two groups. Paraneoplastic syndrome that occurs as a result of substance that produces underlying cancer.

Genetically determined syndrome with cutaneous component (genodermatoses) that predispose risk to develop the cancer. Example as Gardner syndrome, Gorlin syndrome, neurofibromatosis, Peutz-Jeghers Syndrome, etc., the truth is that never be neglected cutaneous signs of systemic disease and are the first dermatologist who make their assessment and helping to establish the diagnosis. Were small brown spots that helped in establishing a diagnosis of a rare inherited syndrome.

### **CHRONIC URTICARIA PATIENTS REFERRED TO A TERTIARY CARE CENTER**

**Kostic Kristina, Storebra Tanja, Zecevic Rados, Kandolf Sekulovic Lidija**

**BACKGROUND:** Chronic idiopathic urticaria (CIU) is a common disease, demoralizing for patients and in its severe form, can be a therapeutic challenge to the treating physician. Chronic idiopathic urticaria (CIU) encompasses at least two subgroups. One of these is chronic autoimmune urticaria (CAU), due to autoantibodies against either the high-affinity IgE receptor FcεR1 or, less commonly, IgE. The autologous serum skin test (ASST) is a routine diagnostic test for differentiating these two subgroups.

**OBJECTIVE:** to compare two groups of patients with urticaria: those with chronic idiopathic urticaria (CIU) and those with probable chronic autoimmune urticaria (CAU).

**METHODS:** A total of 105 chronic urticaria in patients treated from 2009-2013, were identified from our hospital database. Patients were classified in two groups depending on ASST result: group of patients with positive ASST (CAU

group) and those with negative ASST (CIU group). Demographic data (sex, age) and data about the duration of disease, presence of angioedema, associated diseases and treatment were collected and analyzed in these two groups.

**RESULTS:** ASST was performed in 85 patients (81%). ASST was positive in 29 patients (28%) - CAU group. In 56 patients ASST was negative (CIU group). The group of patients with positive ASST had prolonged duration of urticaria, more frequent presence of angioedema and associated thyroid disease. Significant number of patients with positive ASST (CAU group) was treated with cyclosporine A with good clinical response.

**CONCLUSION:** ASST is a routine clinical test considered a screening test for chronic autoimmune urticaria (CAU). Patients with chronic autoimmune urticaria have a more severe form of disease with increased need for immunotherapy for disease control.

### **SUCCESSFUL TREATMENT OF GIANT BASAL CELL CARCINOMA WITH TOPICAL IMIQUIMOD 5% CREAM**

**Dinic Miroslav, Kostic Kristina**

**AIM:** the use of the topical imiquimod 5% cream offers a noninvasive, nonsurgical, and an effective option for the treatment of primary small (5 cm) BCC with imiquimod are rare.

**MATERIALS AND METHODS:** we present our experience in the treatment of giant sBCC (6x5 cm<sup>2</sup>) on the forehead of 97 years-old woman who refused surgical treatment, with imiquimod 5% cream, 5 days/week for 8 weeks, followed by 3 days/week application for the next 4 weeks.

**RESULTS:** tumor was cured with clinical evidence, leaving vitiligo-like scar.

**CONCLUSION:** Imiquimod 5% cream, a topical immune response modifier, is safe and effective modality for treatment of giant sBCC when surgical excision is not the option.

## **OP session 5 – Pneumology**

### **THE EXPERIENCE OF DEPARTMENT OF PNEUMOLOGY SUUMC IN ULTRASOUND GUIDED**

### **TRANSBRONCHIAL PUNCTION (EBUS - TBNA)**

**Stefanescu Ioana Ruxandra, Firoiu Elvis Florian, Oprea**

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**Ioana, Vasilescu Florentina, Chim Aneta Serbescu**

**Introduction:** Endobronchial ultrasound (EBUS) is a minimally invasive but highly effective procedure used to diagnose lung cancer and other diseases causing enlarged lymph nodes in the chest. Although the method appeared in the late 90s, emerged in Romania for several years, initially in Iasi, after that in Cluj-Napoca. The Military Hospital is the first hospital in Bucharest that brought this technique in December 2015.

**Materials and methods:** We conducted a descriptive observational study in the Department of Pneumology of SUUMC. 11 patients were investigated between December 2015 - March 2016 by EBUS-TBNA, with moderate sedation (Midazolam and Propofol).

**Results:** Most of the patients were imagistic diagnosed with pulmonary tumors and mediastinal lymph nodes. All patients with diagnostic imaging of lung tumors were confirmed by EBUS-TBNA both cytology and histopathology (cell block). The patients with suspicion of Sarcoidosis where not confirmed.

**Conclusions:** EBUS-TBNA is a minimally invasive method, with small risk, highly effective in the diagnosis and staging of lung cancer. This method could replace in some cases mediastinoscopy as a method of diagnosis of lung cancer, especially in patients with severe comorbidities. The method is not very effective in the histopathological diagnosis of sarcoidosis.

**SOLITARY PULMONARY NODULE - A DIAGNOSTIC CHALLENGE****Jascu Ionut, Stefanescu Ioana, Ionita Catalin, Firoiu Elvis, Popovici Claudia, Andras Gabriela**

**Introduction.** A solitary pulmonary nodule (SPN) is an imagistic entity (radiological or tomographic), that has long challenged the clinician. A SPN is defined as a single pulmonary opacity, of 3 cm diameter or less, surrounded by normal lung tissue, that is not associated with adenopathy or atelectasis. The frequency with which SPN is identified on chest radiography is on the order of 1 to 2 per thousand chest radiographs. The diagnostic and the management of SPN are not yet very well standardized. A significant percentage of SPN are malignant.

**Material and methods.** In the Pulmonology Department of

the "Dr. Carol Davila" Emergency Military Hospital Bucharest we investigated in 2015 a total of 30 patients with SPN, discovered during routine imaging evaluations. For all patients was applied a rigorous diagnostic management, including noninvasive (tomography) and low invasive (bronchoscopy) procedures and those with suspected malignancy were referred to the Thoracic Surgery Department. We conducted a thorough retrospective analysis of cases investigated, assessing the role of the clinician in diagnosing approach of SPN.

**Results.** Of all cases 30% had imagistic malignancy features and lung cancer was confirmed in about 20% of the cases we investigated.

**Conclusions.** The first objective of SPN management is identifying the nature of benign or malignant by noninvasive methods, which will guide the subsequent conduct of diagnosis and treatment, and the ultimate goal is to ensure an early and complete surgical treatment of lung cancer while avoiding thoracotomy in patients with benign nodules.

**THE PREVALENCE OF BRONCHIECTASIS IN YOUNG TURKISH MALE PATIENTS ALONG WITH CLINICAL AND RADIOLOGIC FEATURES****Ozkara Bikemgul, Okur Aktas Gokcan**

**OBJECTIVE:** The purpose of this study was to determine prevalence of bronchiectasis and highlight clinical significance with extension and severity on high-resolution computed tomography (HRCT) in young male patients.

**MATERIAL AND METHOD:** A medical chart review showed sixty-one male patients diagnosed with bronchiectasis among 6829 patients during a period between September 2014-April 2015. Retrospectively interpreted chest x-ray and HRCT images of 61 patients were recorded. Bronchiectasis features on HRCT images were classified according to localization, extension, and severity. Average clinical history, and previous identified etiology were recorded with laboratory test results.

**RESULTS:** The average age was 21. Lower lobe involvement, mainly left lower lobe, was found the most favored localization [65%, n: 40]. Multilobar involvement was the most common finding. Moderate bronchial dilatation (varicose bronchiectasis) was found higher than mild dilatation. The most common additional finding was alveolar infiltration [34.4%, n: 21]. There was a weak correlation found between mediastinal lymphadenopathy and ground glass density ( $r=0.269$ ,  $p=0.036$ ). Similarly,

decreased attenuation (air-trapping) and ground glass density ( $r=0.357$ ,  $p=0.007$ ) was shown weak correlation. Neutrophil cell and WBC increase was the most common finding at biochemical analyses (respectively, 19.7%,  $n: 12$ , 16.4%,  $n: 10$ ).

**CONCLUSION:** Bronchiectasis is still considered an under and misdiagnosed condition. To determinate the extension and severity of lung damage can help to proper management in young patients. Isolated bronchiectasis cases can be treated by surgical resection of affected lobe. Radiologic interpretation of findings on HRCT is crucial and may help to clinicians in determining treatment and follow-up plan.

### **PHYSICAL EFFORT IMPACT ON RESPIRATORY PARAMETERS OF ALBANIAN SPECIAL OPERATION FORCES**

**Muhameti Rushan, Kukeli Edlira, Berdo Elva, Gjovreku Eva, Alizoti Xhemil**

**Introduction:** Medical periodic controls of Albanian Special Operation Forces play a main role for respiratory parameters evaluation. Physical efforts are of a dynamic and static nature and require the special care for respiratory function assessment of ASOF.

**Objective:** Identification of links between static and dynamic respiratory parameters for determining of effective paramilitary contingents that would compete in Special Operation Forces.

**Material and Method:** The analytic study was performed with two contingents of Albanian Special Operation Forces. The individuals underwent measurements anthropometric and respiratory evidence testing. Analysis of data was conducted according to T student test.

**Results:** In this study were taken two groups, the trained and untrained group, and effective of Special Operation Forces. Total of individuals is 30 respectively 25 individuals for each group. Age of individuals is 18 -24 years. Each group underwent anthropometric measurements (there were taken in consideration average values and deviation standard for each parameter) and evidence of spirometry. For each individual was performed the measurement of CV, VEMS and TIFNO.

**Conclusion:** Static respiratory parameters (Vital Capacity) and dynamic respiratory parameters (VEMS) are significant indicators in physical effort evaluation of Albanian Special Operation Forces. Respiratory parameters are important

indicators to assess functional respiratory performance. Respiratory functional changes should be followed in dynamic during physical training of Albanian Special Operation Forces.

### **INFECTION BY LEGIONELLA PNEUMOPHILA IN A MALE PATIENT AS LOBULAR PNEUMONIA AND ACUTE RENAL FAILURE**

**Sfikas Georgios, Psallas Michail, Koumaras Charalambos, Roukas Ioannis, Doumaki Eleni, Giourtzis Theodoros, Kartas Anastasios, Minasidis Ilias, Tapazidis Vasileios**

**Purpose:** We present the rare case of a patient with lobular pneumonia and oliguric acute renal failure due to infection by Legionella Pneumophila.

**Materials and methods:** We present the case of a 52-year old male who was admitted to our department because of fever (39 C) during the previous ten days with malaise, arthralgias-myalgias, hemoptysis, vomiting and oliguria. He had no significant medical record. He was a heavy smoker and alcohol user and he used to work as cloth manufacturer in air-conditioned environment. The laboratory tests revealed leukocytosis with neutrophilia, hyponatremia, elevated liver enzymes and impaired renal function. The chest X-ray showed an infection of the lower lobe of the left lung, which was confirmed by a thorax CT scan.

**Results:** The patient underwent haemodialysis during the first two days of hospitalization and treated with moxifloxacin and intravenous hydration. He presented a rapid improvement in his clinical condition and laboratory findings. The blood and urine samples revealed antibodies to Legionella Pneumophila, indicative of a recent infection.

**Conclusion:** Infection by Legionella Pneumophila may present as a severe polyorganic disease and therefore, the diagnosis requires the combination of medical history and laboratory findings with high clinical suspicion.

### **CLINICAL AND PATHOLOGICAL FEATURES IN MALIGNANT PLEURAL EFFUSIONS IN ALBANIAN PATIENTS**

**HILA Elona, XHEMALIAJ Daniela**

**Objective:** An overview of malignant pleural effusions in hospitalized patients, in Respiratory Diseases Hospital

Tirane. The role of cytological examination of MPE, in further management of these patients'. Clinic correlation and main symptoms of malignant pleural effusions among Albanian patients.

Methods: a retrospective study for the period of time from January 2012 till December 2013.

We have examined all clinical files, of patients with pleural effusion. Used methods are: Pearson Chi-Square test, Bivariate correlation, and Likelihood Ratio. Consensus was taken from all the patients before doing the procedure of thoracentesis. Total patient number 1291.

Results: malignant pleural effusions contains 10 % of all pleural effusions, (n=129). The rest was of inflammatory origin (Tb, pneumonia, pulmonary embolism, RA, etc.) (n=1162). Male to female ratio is: 52% male and 48% female. Age range was (18-91), with mean age is 63.2 years old with SD 15.1. Position: 53% of MPE were in the right lung, 38% in the left lung and only 9% were bilateral. Smoking history in only 46% of them. Personal history of neoplastic disease: 3 %, but in malignant pleural effusion was found in 37% of cases. Pleural effusion as first sign was found in 27% of patients. Familiar history of neoplastic

disease: 14%. Other systematic diseases: High blood pressure 37%, Diabetes mellitus 3.4%, other diseases 8.6%. Main clinical symptoms were: hemoptysis 27% (n=348), cough 46 % (n=593), dyspnea 45% (n=590), and chest pain 22% (n=284). Hospitalization days: average is 9 days, and day range was (1-31) with SD 5.4. Main medical treatment: ceftriaxone 41% and broad spectrum antibiotics. Cytological pleural fluid examination was performed in all cases. Biopsy was performed in 48% of cases. Positive results of pleural biopsy in 97% of cases. Main histological types: Adenocarcinoma of lung (35%) mostly in Men, Ductal carcinoma of breast (18%), follow by Adenocarcinoma of lung (10%) mostly in women. Performance status of all cases: 60.2% improved, 37.2% idem, 2.3% dead in hospital.

Conclusions: In developing countries like ours, where investigations tools and health care facilities are inadequate, pleural fluid analysis and cytology should be performed as first-line investigation in all pleural effusion cases. It is a convenient, cost-effective and safe investigation. In combination with pleural biopsy can enhance its usefulness in diagnosing pleural malignant effusions.

## OP session 6 – Cardiology

### CORONARY EMERGENCIES IN THE MILITARY ENVIRONMENT THERAPEUTIC AND DIAGNOSTIC PECULIARITIES

Florea Mihail

OBJECTIVE: highlighting of the increasing incidence of the acute coronary syndromes in young and younger military groups and the peculiarities of cardiovascular risk factors with major impact on this kind of pathology, and pointing the steps and key objectives in diagnosis and efficient and modern treatment, emphasizing on the need of the interventional treatment.

MATERIAL AND METHOD: clinical and statistical analysis of all cases of the acute coronary syndromes encountered in military population in the last 10 years within the competence area of Military Hospital Cluj-Napoca and the presentation of the peculiarities of therapeutic solution regardless of the initial hospitalization site.

CONCLUSION: in our evidence acute coronary syndromes were represented both by unstable angina and acute

myocardial infarction without ST segment elevation, which was usually complicated. Emergency coronary angiography was the key element in diagnosis and was most often followed by percutaneous coronary angioplasty, with or without stent implantation.

### SERUM BIOMARKERS IN EVALUATION OF CARDIOVASCULAR DISEASES

Costea Florea, Teusdea CB, Toma M, Costea Jaqueline Roberta, Arsene Anca

Biomarkers represent indicators of biological process that can be measured and evaluated for therapeutic interventions. The categories of serum biomarkers used in cardiovascular diseases are: inflammatory syndrome markers (CRP, hs-CRP), markers for plaque instability (MPO, MPMs), cardiac ischemia and necrosis markers (troponine I and T, CK-MB, myoglobine), and also markers for cardiac failure (proBNP, NT proBNP). In this paper we analyze the

role of these markers in evaluation of cardiac pathologies in the Emergency Department.

### **PREDICTORS OF SUDDEN CARDIAC DEATH**

**Djuric Predrag, Jovic Zoran, Spasic Marijan, Mladenovic Zorica, Stajic Zoran, Gudelj Ognjen, Matunovic Radomir, Djuric Ivica**

**INTRODUCTION.** Sudden cardiac death (SCD) is defined as the unexpected natural death from a cardiac cause within a short period of time from the onset of symptoms in a prior apparently healthy person. Previously asymptomatic patients are particularly jeopardised by acute coronary thrombosis due to a lack of conditioning. The most important risk factors for SCD are coronary artery disease (CAD), previous myocardial infarction, reduced left ventricular ejection fraction (LVEF), heart failure, previous sudden cardiac arrest (SCA) episode, prior ventricular tachycardia (VT), ventricular fibrillation (VF), hypertrophic cardiomyopathy, long QT syndrome, Brugada Syndrome.

**MATERIALS & METHODS.** In Military Medical Academy from 2013 year we have implanted 12 ICDs and 15 CRT Ds (cardiac resynchronization therapy with defibrillator). ICD therapy consists of pacing, cardioversion and defibrillation, and was indicated in patients who were survivors of SCA due to ventricular fibrillation or hemodynamically unstable sustained VT after excluded any reversible disorder. CRT D therapy was indicated in patients in NYHA III-IV class, who were symptomatic despite optimal medical treatment, with reduced LVEF <35% and QRS prolongation > 130 ms.

**RESULTS.** All the procedures were performed without complications. Prevention and treatment of SCA also include medical therapy, lifestyle modification, catheter ablation which can definitely isolate arrhythmogenic focus.

**CONCLUSION.** There are numerous environmental, lifestyle, clinical and hereditary factors that can trigger SCA. Early diagnosis and appropriate treatment, especially with ICD is the most effective in preventing SCD. Introducing of new screening method for the detection of patients at increased risk of SCD is of crucial importance.

### **ACUTE PULMONARY EMBOLISM IN A PATIENT UNDER TREATMENT WITH ANTICOAGULANT AGENTS: A RARE CASE PRESENTATION**

**Sfikas Georgios, Pehlivanidis Anthimos, Kartas Anastasios,**

**Pasatas Ioannis, Kotsakis Dionysios, Iosifidis Georgios, Psallas Michail, Iosifidis Michail**

**Purpose:** We present the case of a male patient who was admitted to our hospital with acute pulmonary embolism while on cumarinic oral anticoagulants and an INR value equal to 2.7.

**Materials and methods:** A 71-year-old male was transferred to the ER department due to gradually deteriorating dyspnea since three days, with no fever and a history of chronic obstructive pulmonary disease and chronic atrial fibrillation. The clinical examination revealed tachypnea (22 breaths/min), tachycardia and anasarca with dilated jugular veins. The ECG showed atrial flutter (180 beats/min), while laboratory evaluation showed renal dysfunction, an INR value of 2.7 due to treatment with cumarinic oral anticoagulants and a high value of D-dimers. The echodiagram revealed severe right heart failure with dilated right cardiac cavities and pulmonary hypertension (90 mmHg). The clinical suspicion of multiple pulmonary embolisms was confirmed with CT angiography of the thorax and ventilation-perfusion scan. Ultrasonography of the lower extremities revealed the presence of multiple thrombi (deep vein thrombosis).

**Results:** The patient was treated with low molecular weight heparin, oral anticoagulants, diuretics, amiodarone and intravenous hydration with improvement of his clinical and laboratory status. A filter was inserted in the inferior vena cava to prevent future incidents of embolism. The thrombophilia tests were negative.

**Results:** Pulmonary embolism in a patient theoretically sufficiently treated with anticoagulants may evade diagnosis and further treatment is a matter of debate with very few literature references.

### **ORAL CONTRACEPTIVES AND VENOUS THROMBOEMBOLISM RISK - A SAFETY UPDATE AND ALGORITHM PROPOSAL**

**Aurelian-Emil Ranetti, Anca-Pati Cucu**

**Introduction:** The daily combined oral contraceptive (COC) remains the most commonly used nonbarrier method of reversible contraception. Due to its non-contraceptive effects it is also indicated in several reproductive tract/hormonal disorders. Active women of fertile age need an efficient risk-free method of contraception and treatment. Venous thromboembolism (VTE) induced by COC risk was first described in the 60s, having an increasing

incidence in the past years.

**Objectives:** To prevent severe consequences of COC induced thrombosis

**Material and method:** All formulations more or less induce a prothrombotic phenotype with increased levels of coagulation activation markers, reduced levels of natural anticoagulants, and an acquired resistance to APC. The risk of VTE associated with hereditary thrombophilias is further increased with COC use.

**Results:** Current data shows strong epidemiological evidence that use of second generation COCs increased the risk of VTE approximately 2-fold as compared with non-users, whereas third-generation pills were associated with a 4-fold increase. Progestogen only pill is associated with no or only a marginally increased risk of VTE

**Conclusion:** About half of women use COCs correctly and consistently, still 37% of women reported that they discontinued their COC because of side effects. Based on current guidelines we propose an algorithm for the optimal choice of oral contraception, suitable for active women of reproductive age and extremely useful especially during deployment.

### **RELATIONSHIP OF CYSTATIN C WITH CORONARY ARTERY DISEASE AND ITS SEVERITY**

**Doganer Y. Cetin, Aydogan Umit, Aydogdu Aydogan, Aparci Mustafa, Akbulut Halil, Nerkiz Polat, Turker Turker, Cayci Tuncer, Barcin Cem, Saglam Kenan**

**OBJECTIVE:** Cystatin C, which is an endogenous marker for renal function, is reported to be a novel marker for

coronary atherosclerosis. In this study, we aimed to evaluate its role in determining the presence and also the severity of coronary atherosclerosis in patients with coronary artery disease (CAD).

**MATERIAL AND METHOD:** Eighty-eight patients who underwent elective coronary angiography were enrolled in the study. Patients with heart failure, renal failure, diabetes, and thyroid disease were excluded from the study. The study population was divided into three groups: individuals with normal coronary arteries, patients with critical CAD, and patients with noncritical CAD. We also analyzed the relationship of Cystatin C levels with the presence and the severity of CAD and the number of vessels involved.

**RESULTS:** The mean age of the study group was 51.73±9.21 years, and the majority were men (n= 71, 80.7%). Cystatin C levels were significantly lower in patients with CAD (1334.86±93.45 vs. 836.49±411.29, P <0.001). It was significantly lower in patients with critical CAD compared with those with noncritical CAD and normal individuals (656.60±346.35, 1016.38±396.54, and 1334.86±393.45, P < 0.001, respectively). Serum levels of Cystatin C according to the numbers of coronary vessels such as none, single-vessel, two-vessel, three-vessel, and four-vessel disease were as follows: 1334.86±393.45, 801.67±418.70, 993.90±457.34, 744.09±354.53, and 682.30±294.43, respectively (p<0.001).

**CONCLUSION:** Lower cystatin C levels may be associated with increased severity of CAD in clinically stable patients, whereas higher levels may indicate the presence of any vulnerable plaque. It may also guide the diagnostic and therapeutic options for the clinical scene on the presentation.

## **OP session 6 – Best papers presentation**

### **SIGNIFICANT REDUCTION IN THE PREVALENCE OF HELICOBACTER PYLORI INFECTION IN ALBANIAN CHILDREN**

**Begaj Bajram, Resuli Bashkim, Hoxha Liri**

**Introduction:** In developing countries, Helicobacter pylori

infection is very common and begins in the very early childhood.

**Objective:** To determine the prevalence of H pylori infection in Albanian children aged 8-10 years comparing with the data of the study in 1994 and to identify factors associated with H pylori infection.

**Methods:** The prevalence of H pylori infection was studied in 308 asymptomatic children between of 8 and 10 years from mixed urban and rural areas. Of two different districts of Albania. H pylori status was evaluated by stool antigen test (SAT).

Urea-breath test were used in 1994 study. Demographic information, socio-economic feature, and living and hygiene condition, such as type of the house, number of person/children living in the house, practices related to water use and toilet facility were evaluated by a detailed questionnaire completed by the teachers with the cooperation of parent of each children.

**Results:** The overall prevalence of H pylori infection was 58%. Compared to the data of the 1994 study, there were a significant drop to 33%. There were no significant difference between males and female in both studies. The children who grew up in villages had a higher prevalence than those grew up in the city ( $p < 0.001$ ). There were no significant difference in H pylori infection prevalence between the three socio-economic classes. The prevalence were inversely associated with clean water index, crowding index and toilet facility,  $p < 0.001$  respectively.

**Conclusions:** This study confirms the nearly two-fold reduction in the prevalence of H pylori infection in Albanian children 8-10 years of age between 1994 and 2014, consequence of improvement in standard of living and hygiene practices. The childhood is a period of major risk for acquisition of H pylori.

### **A COMPARATIVE ANALYSIS OF THE CONTEMPORARY BLAST, GUNSHOT AND CONVENTIONAL TRAUMA**

**Popivanov G, Mutafchiyski V, Kjossev K, Petrov, N, Chipeva S, Ivanov P, Petrov H, Penchev D**

**Introduction:** The unceasing terror directed toward civilian people significantly has challenge the current health care system. Several authors have warned against the insufficient preparedness of the civilian health care system

to face the consequences of the contemporary terrorism. The aim of the present study is to analyze and compare these three trauma types in order to facilitate the optimal health care response.

**Material and methods:** Prospectively collected cohorts with 73 cases blast and 81 gunshot trauma cases were compared with a retrospective cohort with 416 conventional injuries.

**Results:** The mean ISS was 20, 13 and 11 in blast, gunshot and conventional trauma. ISS > 17 was noted in 51%, 27% and 13%, respectively. The rate of involved regions were following – head (31%, 5% and 11%), face (18%, 3%, 18%), neck (11%, 6%, 0%), chest (38%, 28%, 18%), abdominal (21%, 32%, 4%) and extremities (69%, 53%, 87%). The need for ICU treatment and 48 hour mortality rate were 44%, 20%, 13% and 10%, 4% and 4%, respectively. Missed injuries were noted in 3% in the blast group versus zero in the other two groups.

**Conclusion:** Blast and gunshot traumas are associated with significantly higher frequency of chest and abdominal involvement. Penetrating thoracoabdominal injuries and limb vessels injuries are more frequent in gunshot trauma. The rate of head and neck injuries, burns, multiple body regions involvement, limb amputations, the need for CT, DCS and ICU treatment, 48 hour mortality and missed injuries are higher in blast trauma.

### **TRANSCRANIAL DOPPLER ULTRASOUND IS IDEAL FOR THE IMMEDIATE EVALUATION OF PATIENTS WITH TRAUMATIC BRAIN INJURY AND PUPIL DILATATION**

**Karellas Ioannis, Stouraitis Georgios, Sourlas Sotirios, Arsenogloy Athanasios, Tsakalakis Christos, Plakas Sotirios, Liapis Georgios**

**Purpose:** Pupillary size and light reactivity are constantly examined in ICU in patients in danger of developing cerebral edema. Pupil dilatation (mydriasis) in these patients is alarming and requires immediate evaluation. Transcranial Doppler Ultrasound (TCD) is a practical, bedside examination that directly provides information about cerebral blood flow and intracranial pressure. This study is aiming to demonstrate the effectiveness of TCD in the evaluation of the patient with severe traumatic brain injury (TBI) that abruptly develops pupil dilatation.

**Materials and Methods.** 14 TBI patients with GCS < 8, were sedated, intubated and mechanically ventilated. All patients were hemodynamically stable, blood pressure was

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invasively monitored and their pupils were examined in 15 minutes intervals. When pupil dilatation was observed, aggressive therapy was initiated and TCD and brain CT was held.

Results: In 8 patients TCD revealed compromised cerebral blood flow indicating severe brain edema which was also demonstrated in brain CT. Intracranial catheters were applied in all these patients for continuous ICP monitoring and decompressive craniectomy was performed in 5. In one patient TCD revealed cerebral circulatory arrest and CT scan revealed findings suggesting cerebral herniation. In the patients that TCD and brain CT was normal, pupil dilatation was attributed to nonconvulsive epileptic activity in 2 and to medications in 3.

Conclusion: Pupil dilatation in TBI patients requires immediate evaluation. TCD needs training, practical skills and cannot be used for continuous monitoring. Nevertheless, it is the examination of choice since it is reliable, affordable, and readily accessible and gives direct information about cerebral blood flow, guiding to the appropriate therapy.

## **EMERGENCY MANAGEMENT OF THE SEVERE BURNED PATIENT**

**Teusdea CB, Salceanu M**

The burn patients, especially the severe ones and the cases with multiple victims (like the recent and dramatic "Colectiv" nightclub fire), represent a real emotional and professional challenge for all emergency team members. Also the initial management (both prehospital and in the emergency department) of burned patients has a critical impact in terms of morbidity and mortality. This calls for better understanding and implementation of emergency treatment algorithm for severe burned patient.

Burns treatment should be initiated by the first responders at the site of the accident and it continues throughout prehospital care as well as during transport to the burns centre or to the closest emergency department.

In order to do that it is mandatory to follow a number of steps: rescuer safety, primary and secondary survey and simultaneous treatment, including analgesia and burn wound management, assessment of burn severity (based on burned surface area, depth of the burn, burned body site, inhalation injury, additional trauma and patient history) and transfer to specialized burns treatment facility.

The main goal of this algorithm is to help physicians in the

initial management of burn victims until they reach a specialized burns center.

## **IMPLANTABLE CARDIOVERTER DEFIBRILLATOR AND CATHETER ABLATION AS A GOLD STANDARD FOR TREATING PATIENT WITH SUSTAINED VENTRICULAR TACHYCARDIA**

**Djuric Predrag, Spasic Marijan, Gudelj Ognjen, Mladenovic Zorica, Jovic Zoran, Stajic Zoran, Matunovic Radomir**

INTRODUCTION. Ventricular tachycardia (VT) in clinical practice, according to duration, can be classified as: non sustained (0-30 seconds) and sustained (>30 seconds), which can be potentially fatal. Myocardial infarction in numerous of cases can be complicated by forming of scar, which can represent potentially dangerous arrhythmogenic focus. Despite appropriate medical therapy for the management of VT, incidence of sudden cardiac death (SCD) is still unacceptable high. Implantation of implantable cardioverter defibrillator (ICD) is indicated for prevention of SCD, while catheter ablation can definitely isolate arrhythmogenic focus.

CASE REPORT. We have presented a case 78-years old male with post infarct dilated cardiomyopathy and sustained ventricular tachycardia, and previously implanted VVIR pace maker. Four years ago he had inferoposterior myocardial infarction. Coronary angiography revealed occluded right coronary artery (RCA) with heterocollateral from left anterior descending artery (LAD). A few months after ICD implantation as primary prevention strategy, he was admitted to hospital due to fast ventricular tachycardia and lost of consciousness. Electrophysiology study was performed and catheter ablation of arrhythmogenic focus in scar-related part of inferior myocardium was successfully done.

CONCLUSION. Implantable cardioverter defibrillator and catheter ablation as compatible procedures are gold standard for treating patient with scar-related heart disease presenting with VT.

## **TRANSLATIONAL STUDY OF COMPOSITE EYE AND PERIORBITAL ALLOTRANSPLANTATION FLAP: FROM RAT TO CADAVER MODEL**

**Zor Fatih, Kulahci Yalcin, Bozkurt Mehmet, Siemionow Maria**

**OBJECTIVE:** Vascularized Composite Allotransplantation (VCA) is a novel alternative for reconstruction of severe periorbital defects with functional recovery, which can offer a new hope for restoring vision to these patients. The aim of this study is to describe a composite tissue allotransplantation model of eyeball and periorbital tissues on rats and fresh cadavers.

**MATERIAL AND METHOD:** In the rat model, we harvested a composite tissue flap composed of eyeball, optic nerve, periorbital fat, extraocular muscles and periorbital skin (Figure 1a, b). Vasculature of the demonstrated flap with angiography (Figure 1c). We performed heterotopic composite eyeball and periorbital transplantation between rats. We also performed a nerve coaptation between optic nerve of the donor and great auricular nerve of the recipient. As a continuation of the study, we performed a cadaver study. Borders of the composite eyeball and periorbital allotransplantation flap were infraorbital rim at inferior, nasal dorsum at medial, eyebrow at superior and lateral orbital rim at lateral (Figure 2a, b, c). The perfusion of the flap was confirmed with SPY Elite System.

**RESULTS:** Rat model showed that the eyeball and periorbital soft tissues were all viable and there were 35 % volumetric decrease in the eyeball (Figure 1d). In fresh cadaver study indocyanin injection identified perfusion zones and visualized arterial inflow and perfusion (Figure 2d).

**CONCLUSION:** Our rat and cadaver model showed that composite eye transplantation is technically possible, as perfusion of the rat and human flap was confirmed. We think that these studies are cornerstones of the future composite eyeball transplantation.

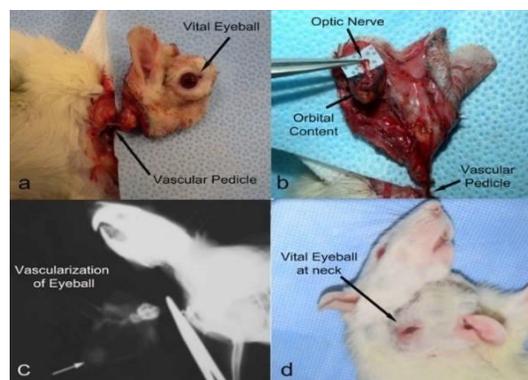


Figure-1: Composite eyeball transplantation in rat. (a) composite eyeball is harvested on vascular pedicle, (b) inner surface of flap showing the optic nerve, (c) angiography of the flap, (d) Vital eyeball on neck of the recipient rat after transplantation

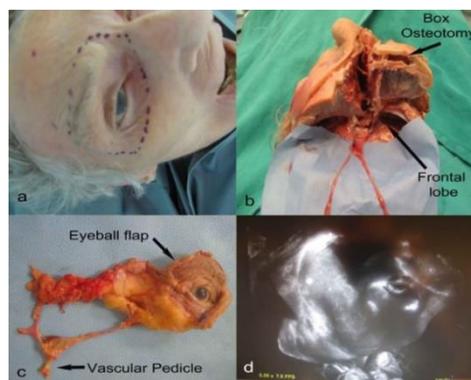


Figure-2: Composite eyeball transplantation in cadaver. (a) outline of the flap, (b) harvested flap after frontal craniotomy and box osteotomy, (c) appearance of the flap after harvest (d) SPY image of the flap showing perfusion of the indocyanine green injection.

## OP session 6 – Varia

### SHOULD SURGICAL MANAGEMENT OF EPILEPSY BE GIVEN MORE PRIORITY IN THE YOUNG ADULT PATIENTS?

Simsek Hakan, Zorlu Emre, Kendirli M.Tansel, Bakal Omer, Duz Bulent

**OBJECTIVE:** Epilepsy is featured by unprovoked and recurrent seizures that cause loss of working ability; so three cases are presented to discuss surgical timing in

epilepsy of young patients.

**MATERIAL AND METHODS:** A 21-year-old young man in active military service presented with status epilepticus. After controlling his seizure with benzodiazepines, magnetic resonance (MR) images were obtained. A left mesial temporal hyperintensity and edema was detected. He had seizures for a year but did not have MR imaging study. He was operated and oligodendroglioma of the temporal lobe was diagnosed. Following surgery, he was seizure-free. Another 32-year-old man with intractable

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seizures despite multiple antiepileptic medications was evaluated with cerebral MR imaging study that did not reveal any lesion. EEG was also non-specific. We placed a vagal nerve stimulator on the left side and seizures were shorter and frequency decreased more than sixty percent in his sixth-month follow-up. A 38-year-old woman presented with mesial temporal sclerosis and a meningioma lying over the right Sylvian fissure and impaired EEG pointing the whole right temporal lobe underwent surgical removal of the tumor. We reserved mesial temporal lobectomy for later and she became seizure-free with one antiepileptic drug.

**DISCUSSION AND CONCLUSION:** Surgical intervention is considered as the last alternative if all other treatment methods have failed. In fact, surgery should be among the first options considered if early trials with anticonvulsant medications are ineffective. Thus active military service capacity of some of the young patients can be preserved.

## **CLINICAL PREDICTORS OF WOUND HEALING**

### **Mutluoglu Mesut**

**OBJECTIVE:** To determine the clinical predictors of wound healing.

**MATERIAL AND METHODS:** We performed a literature search using Pubmed, Embase and Google Scholar to identify studies related with wound healing. We used the following key words: “absolute change in area”, “percentage change area”, “healing rate”, and “area-ratio”.

**RESULTS:** The majority of studies were performed on either neuropathic diabetic foot ulcers (NDFU) or venous stasis ulcers (VSU). The association of wound size, wound duration and wound grade on healing were extensively studied. Additionally, several other surrogate endpoints for the treatment of NDFUs and VSUs were reported. Among these, percent change in wound area over a 4-week period was determined to be a robust predictor of complete healing at 12-week in both wound groups. In patients with a NDFU Patients with a reduction in ulcer area greater than 53% had a 12-week healing rate of 58%, whereas those with reduction in ulcer area less than 53% had a healing rate of only 9% ( $P<0.001$ ). In VSUs using a percent change in area of 28.79 at four weeks as a cut point, complete healing of the primary ulcer by 24 weeks could be predicted with a sensitivity of 0.67, a specificity of 0.69, a positive predictive value of 0.80, and a negative predictive value of 0.52.

**CONCLUSION:** Among several surrogate endpoints for predicting eventual healing of wounds, percent change in

wound area over a 4-week period seems to be the most reliable predictor of eventual healing.

## **CBRN DECONTAMINATION UNIT OF TURKISH MILITARY MEDICAL ACADEMY AS A ROLE MODEL FOR BALKAN COUNTRIES**

### **Kenar Levent, Ortatatli Mesut**

**OBJECTIVE:** The threat from unconventional warfare agents including chemical, biological, radiological and nuclear (CBRN) biological agents has recently been considered as both military and civilian issue. Decontamination which is one of the important steps in the first-aid and treatment of contaminated CBRN casualties is such a neutralization process for removal of CBRN agents to facilitate the further medical care.

**MATERIAL AND METHOD:** A main military hospital like Gulhane Military Medical Academy (GMMA), the top-level military medical organization of our country must possess the ability to immediately decontamination and treat CBRN so called Weapons of Mass Destruction (WMD) casualties. Therefore, GMMA decided to establish a decontamination site in a proper structure where the CBRN victims could be extensively taken under care prior receiving to the hospital interior. This site has its own specialized air-conditioning and waste disposal system.

**RESULTS:** GMMA Hospital Decontamination Center architecturally is integrated with Emergency Unit owing a lounge and recording section resembling hot zone, undressing and leaching station, and contamination control and dressing sections in order (Figure). A total of 420 ambulatory and 60 unconscious injured victims are able to be thoroughly decontaminated within an hour before dispatch to the concerned clinics.

**CONCLUSION:** It is obvious that all hospitals existing in both civilian and military health system should be prepared to keep CBRN casualties and contamination out of hospital building by an effective decontamination flowchart similar to GMMA decontamination site as a role model which will be explained in this presentation in details.

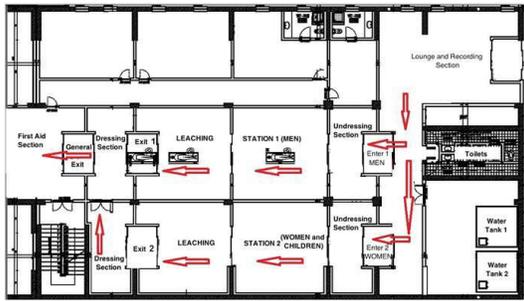


Figure-1: Architectural plan of GMMA Hospital Decontamination Centre.

### A CASE OF BRUCELLA MELITENSIS INFECTION - CLINICAL COURSE AND EPIDEMIOLOGICAL CHARACTERISTICS

Popivanov Ivan, Doychinova Tzetzta Md, Terzieva Kalina, Gancheva Galya, Shalamanov Dimitar

**Background:** The epidemic process of Brucellosis in Bulgaria after 1950 has been characterized with only sporadic cases of the disease, usually with 1-2 cases yearly. In two long periods (1973-1984 and 1986-1992) were not even registered any cases. In 2005-2008, in Southeastern Bulgaria (Haskovo Province) emerged group cases among humans – a total of 71 confirmed cases. In 2015 occurred 33 cases in Southwestern Bulgaria (Kytustendil Province) and for the first time two cases in Northern Bulgaria (Pleven Province).

**Objectives:** Clinical features, laboratory diagnosis, clinical course and epidemiological survey of patient, treated for Brucellosis in Clinic for Infectious disease, Medical University – Pleven, Bulgaria are presented. Discussion of the main challenges of epidemiological control of Brucellosis at this stage in Bulgaria.

**Materials and methods:** Diagnosis, clinical features and treatment of case of human brucellosis in Pleven region in 2015 are presented by using clinical, microbiological and laboratory methods. Data from the epidemiological survey of patient are presented and special features of the disease in this stage using methods of epidemiological analysis are discussed.

**Results and discussion:** A case of a 24-year-old male, admitted to hospital with nonspecific symptoms of general weakness, headache and low-grade fever. The diagnosis was confirmed by National Center of Infectious and Parasitic Diseases, Sofia by *Brucella* Capt test titer 1/5,120. Etiological treatment with Amikacin was carried out. The

outcome of the disease was favorable. Goat cheese was established as the probable vehicle of infection. An upward trend in incidence rate was outlined with dissemination in new regions in the country.

**Conclusion:** For Bulgaria Brucellosis is re-emerging infectious disease. Bulgarian military physicians are inexperienced in early recognition and diagnosis of the disease. Thus and the possibility of disguised beginning with nonspecific symptoms, can lead to delays in diagnosis, therapy and epidemic measures. These are preconditions for protracted clinical course, long-term treatment and temporary or permanent loss of personnel (military or civilian) for the military institution. Furthermore, for military medicine the disease is a matter of interest because the causative agent is in the list of potential BW agents (Category B).

### CHRONIC RENAL SEQUELAE OF HEMORRHAGIC FEVER WITH RENAL SYNDROME IN SERBIA

Obrencevic Katarina, Petrovic Marijana, Jovanovic Dragan, Maksic Djoko, Vavic Neven, Radojevic Milorad, Ignjatovic Ljiljana

**INTRODUCTION/OBJECTIVE:** The Hantaviruses cause hemorrhagic fever with renal syndrome (HFRS) which is characterized by fever, hemorrhage and acute renal failure. The long-term prognosis of HFRS has been considered favorable. There are, however, some reports about subsequent chronic renal failure after previous Hantavirus infection.

**MATERIALS AND METHODS:** 135 patients with HFRS have been treated in our unit during the period from 1989 to 2007. Diagnosis was confirmed by serologic tests. The aim of our study was to investigate long-term renal sequelae in HFRS patients and its association with clinical severity of the acute phase of the disease.

**RESULTS:** The three serotypes of Hantaviruses were serologically confirmed: Hantaan in 48%, Belgrade in 33% and Puumala in 19%. Half of our patients had long convalescent phase - over 3 months. After the convalescent phase we noted chronic renal failure (CRF) in 11 patients (8.15%) who had severe form of the disease. The cause of the disease in 5 patients was Belgrade, and in 6 Hantaan virus. In 4 patients infected with Belgrade we noted progression to terminal renal failure, in 2 of them kidney transplantation has been done, another two are on chronic dialysis program. Another 4 patients with CRF (1 infected with Belgrade and 3 with Hantaan) are not on chronic

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dialysis yet, and the last 3 were lost for follow up.  
CONCLUSION: HFRR can cause chronic renal dysfunction in patients who had severe form of illness, particularly in those infected with Belgrade and Hantaan viruses.

### **ACUTE PYELONEPHRITIS WITH ASSOCIATED LEUKOPENIA: A CASE REPORT**

**Pehlivanidis Anthimos, Sfikas Georgios, Konstantinou Vasileios, Psochias Polykarpos, Tzakri Dimitra, Kartas Anastasios, Karapiperis Dimitrios, Tapazidis Vasileios**

**Purpose:** We present the rare case of a patient with acute pyelonephritis and leucopenia. Acute pyelonephritis is an infection of the upper urinary tract, which usually requires hospitalization. Classical clinical and laboratory findings of the disease include high fever, chills, nausea, tenderness on renal palpation and leukocytosis. Without early initiation of treatment it can lead to renal abscess, sepsis or chronic nephritis.

**Materials and methods:** We report a case of a 54-year old immunocompetent female who was hospitalized for uncomplicated acute pyelonephritis, accompanied by leukopenia. The symptoms of the patient in the emergency department were high fever, vomiting and left flank pain. She did not take any medication before admission. White blood cells were 3,820/ $\mu$ lt on admission and fell down to 2,410/ $\mu$ lt, during the third day of hospitalization. Urine cultures revealed E.coli infection. There was no clinical evidence of sepsis during the course of hospitalization.

**Results:** Cefuroxime and amikacin were administered to the patient with resolution of symptoms within 48 hours. The number of white blood cells was restored to normal levels one week later.

**Conclusion:** Acute pyelonephritis without complicated sepsis is rarely presented with leukopenia and it may be a misleading factor concerning the diagnosis. The most likely explanation is bone marrow suppression due to infection.

### **A WOMAN WITH SYSTEMIC AMYLOIDOSIS PRESENTED WITH ENLARGED TONGUE AND PLAQUES ON SKIN**

**Marineli Filitsa, Brouziotis Athanasios, Xatzidakis Ioannis, Gongaki Stavroula, Evagelia Zarogianni, Mostratou Eleni, Symeonidis Nikolaos**

**Purpose:** A case of systemic amyloidosis presented with enlarged tongue and skin lesions from 5 years.

**Materials and methods:** A 71 year old female, was admitted because of dyspnea on exertion.

**Results:** On admission patient had enlarged tongue and waxy, rough plaques on hands and legs. An electrocardiogram showed low-voltage QRS complexes and chest radiographques i bilateral pleural infusions. Laboratory exams showed creatinine 1.6 mg/dl, elevated free lambda light chain levels (284 mg/l), b2 microglobulin 3.14 mg/l. 24h urine protein was negative. Urine immunofixation demonstrated monoclonal free lambda chain. The echocardiogram showed left ventricular hypertrophy, normal left systolic function and granular speckling of the ventricular wall, findings suggestive of infiltrative cardiomyopathy. A bone marrow biopsy was positive for plasma-cell myeloma. Abdominal fat-pad biopsy and tongue biopsy with Congo red staining revealed amyloid. Patient referred to hematologic clinic for further management.

**Conclusion:** Patients with amyloidosis are usually presented with cardiac and renal failure. AL amyloidosis (also called primary amyloidosis), is associated with organ damage, cardiac involvement presenting as restrictive cardiomyopathy, rapidly progressive heart failure and renal involvement (46%), with renal failure requiring dialysis in less than 5%. AL amyloidosis is always the result of a clonal plasma-cell neoplasm. This patient had involvement of soft tissue (tongue enlargement and skin lesions) which is rare (3%) and because of its atypical presentation, diagnosis of amyloidosis is generally made late in the disease process. Congo red staining of biopsies is necessary, as there is an apple-green birefringence under polarized light that is characteristic of amyloid.

### **DERMATOMYOSITIS IN A FEMALE PATIET WHO UNDERWENT GASTRIC PARTITION FOR TREATMENT OF OBESITY**

**Sfikas Georgios, Pehlivanidis Anthimos, Gatsiou Marina, Katsimardou Alexandra, Kostopoulos Georgios, Zisopoulos Dimitrios, Iosifidis Michail**

**Purpose:** We present the case of a female patient who was admitted to our hospital with dermatomyositis after a gastric partition for treatment of obesity.

**Materials and methods:** A 48-year-old female was transferred to our clinic due to walking deterioration and a laboratory evaluation which showed normochromic,

normocytic anemia and elevated inflammation markers. The patient had a history of hypertension and diabetes mellitus. The neurological/neurophysiologic evaluation revealed lower limb polyneuropathy with bilateral peroneal nerve involvement. Extensive radiology studies were conducted, including brain – thorax – abdominal CT scan, brain MRI – thoracic–lumbar spine MRI, gastroscopy, colonoscopy and a complete immunologic profile, all without abnormal findings. Skin and muscle biopsy revealed dermatomyositis related findings.

Results: The patient was treated with azathioprine, corticosteroids and intensive kinesiotherapy with improvement of her clinical and laboratory status.

Conclusions: Dermatomyositis is an autoimmune disease, which has been associated with many causal factors. This case is interesting regarding its rare initiating cause and its non typical clinical and laboratory status.

## POSTER PRESENTATIONS

### PREVALENCE OF SMOKING IN ALBANIA

**Tafa Holta, Hafizi Hasan, Bardhi Donika, Habazaj Altin, Duraku Kujtime**

**Introduction:** Tobacco is a leading disease risk factor. Understanding national trends in prevalence and consumption is critical for prioritizing action and evaluating tobacco control progress. Smoking prevalence in Albania remains high. According to WHO we rank 13th among European countries, and the smoking daily prevalence is 24%. During the last decade female smoking rate is increased with 4 %. Burden of Obstructive Lung Disease (BOLD) study, the first study of its kind ever-implemented in Albania, assessed smoking prevalence alongside COPD prevalence.

**Methods:** A nation wide representative sample was drawn using a stratified, multi-stage randomized procedure. It included 2400 non-institutionalized individuals divided into 2 major age group categories: 20-39 and  $\geq 40$ -80 years old, each of them including 600 men and 600 women.

Regarding smoking habits, the individuals were interviewed according to BOLD Smoking Questionnaire.

**Results:** The prevalence of current smoking for  $\geq 40$ -80 years old age group was 21.6% in total, with a noticeable prevalence of smoking in males as compared to females: 35.8% versus 7.3%, respectively. The prevalence of current smoking for 20-39 years old age group was 35.1% in total; 50.5% for men and 20.3% for women, thus exhibiting a narrower male to female distribution pattern.

**Conclusion:** This study shows that the prevalence of smoking in Albania is high with a predominant male smoking rate. In younger age groups it is observed a statistically significant increased percentage of smoking among women. Higher smoking rate in young generations needs to be addressed more comprehensively.

### NONOPERATIVE MANAGEMENT OF BLUNT SPLENIC INJURY

**Asqeri Tajar, Ceka Sotir**

**Introduction:** The spleen is one of the most injured organ in blunt abdominal trauma. Nonoperative management of blunt splenic trauma is the preferred option in hemodynamically stable patients, especially in children. In this study we intend to identify predictors for the successful nonoperative management of patients with blunt splenic trauma.

**Methods:** We conducted a retrospective review of patients with isolated blunt splenic injury, nonoperative managed. They were admitted in Military Hospital, Tirana within the period

2011- 2015. We analysed sex and age, mechanism of blunt injury, hemodynamic status, spleen injury grade in ultrasonography and computed tomography, presence and extent of extra-abdominal injury, blood analysis, hospital stay.

**Results:** A total of 77 patients with splenic trauma within the period 2011- 2015 were admitted, of whom 53 patient underwent splenectomy. 24 patients were nonoperative managed and they had all blunt mechanism of injury. Penetrating injuries to the spleen are most managed operatively, often because of concerns about associated intraperitoneal injuries. Analysis identified stable blood pressure during admission and observation, minimal and no-increased in time hemoperitoneum, insignificant drops of red blood cells and hematocrit within 3-4 hours after admission, grade I-II splenic injuries, and limited extra-abdominal injuries as predictors for the success of nonoperative management.

**Conclusions:** With improvement of intensive care, interventional radiology and trauma protocols, it is reported that blunt splenic injuries can now be managed

conservatively with success. Computed tomography with intravenous contrast remains the gold standard in a stable patient.

## PREVALENCE OF HELICOBACTER PYLORI INFECTION

**Begaj Bajram, Cuko Liri, Resuli Bashkim, Saraci Sonja**

**Introduction:** Helicobacter pylori infection is the most common bacterial infection in human beings. Probably 50 % of the earth's population in all age groups is infected with this infection. The infection is received at an earlier age and occurs more frequently in developing nations. The majority of cases are acquired in childhood. Prevalence is depending on socioeconomic status and living conditions in childhood. Other factors include age, housing density, race, overcrowding, sharing a bed, and lack of running water.

**Objective:** The aim of this study is to show the prevalence of Helicobacter pylori in Albanian children and to compare that with the prevalence funded 20 years ago.

**Material and Methods:** Children at age between 8-10 from several schools in Tirana city and villages (Kavaja, Ndroq, Gose, Golem, Zall-Herr) participated in the study. The total number of children was 308 from which 43% were males and 53% females. Demographic data were the same with those made 20 years ago. Confirmation of helicobacter pylori infection was made by using tests that provide direct evidence of active H. pylori infection. While 20 years ago was used the urea breath test, in this study was used the monoclonal stool antigen test with the same sensibility and specificity.

**Results:** Actual prevalence of helicobacter pylori infection in children between ages 8-10 is 43 %. After 20 years the prevalence of helicobacter pylori infection is more than two times less.

**Conclusions:** Descent percentage of helicobacter pylori infection from 91 % to 43 %, more than two times, is related with improvement of socioeconomic status of Albanian families and living conditions. One other reason is related to up-to-date treatment of infected persons.

## NURSING CARE IN GASTRIC CANCER

**Begaj Bajram, Misho Valbona, Kolleshi Manjola, Cakoni Suzana**

**Introduction:** Incidence of Gastric cancer has been decline

recently in developed country. This disease is more common in men than women and mortality is very high. In all over the world the nursing care is very important for getting a good quality of medical care. Patients with gastric cancer disease need very high capable nurse personnel and nursing care is very crucial.

**Objective:** The aim of this study is to provide epidemiological, clinical and endoscopically data for the patient with gastric cancer. Risk factor are related with incidence and prevalence of this disease. To evaluate the nursing care in those patients.

**Methods:** There is a retrospective study. There were included in this study 70 patients with gastric cancer disease. Those patients have been admitted in military Hospital from 2007-2010. Data were collected from chart of the patients. A questionnaire was made to provide information about socioeconomic data, risk factors, clinic of the disease and endoscopic exam. Nursing care was evaluated by using data for history of the patient's disease and nursing examination.

**Results:** Data collected by the study shows that 70 % of the patients are men and 30 % are women. Rate between men and women 2.33:1. Risk factor are heredity, gender, age and H.pylori infection. Mean age of the patient was 65 years old (50-70). This disease is more common on men than in women. 7 patient or 10 % of them are without metastases and 63 patient or 90 % with metastases. The diagnosis of the patient's disease was made to late in advance stage with metastasis.

**Conclusions:** Nursing profession and nursing care is big challenge for 21 century. In patients with gastric cancer disease nursing care is very important and is related with better care for the patient. Data collected from history of the patients and nursing exam should be as a guide for the nursing care.

## INTENSIVE CARE UNIT-ACQUIRED URINARY TRACT INFECTION, DURING 2014-2015

**Beqaj Akela, Hodaj Age, Dushaj Dritan**

**Introduction:** Urinary Tract Infection is the most common hospital-acquired infection. About 80% of nosocomial UTIs are related to urethral catheterization and are acquired after 48-72 hours of hospital admission.

**Objective:** Identification of microorganisms isolated, causing a nosocomial urinary tract infection and evaluation of antibiotic resistance of these cultures, in Intensive Care

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Unit, at the University Trauma Hospital, during 2014-2015.

Methods: Laboratory methods used, are: Cultures of urine samples on blood-agar, Mac Conkey and Sabouraud dextrose agar, Myller-Hinton agar, Biochemical test (with Entero-Pluri Test and TSI), Oxidase-test, antibiotics susceptibilities by Kirby-Bauer disc diffusion method.

Results: From a total of 375 samples, 90 (24%) isolates were positive cultures, out of this: 15 (16%) isolates of E.Coli; 9 (10%) isolates of Enterobacter spp.; 5 (5.5%) of isolates Proteus Mirabilis; 4 (4.4%) of isolates K.pneumoniae; 11 (12%) of isolates is Acinetobacter calcoaceticus; 10 (11%) of isolates is Enterococcus faecalis; 10 (11%) of isolates is P.aeruginosa; 5 (5.5%) of isolates is S.aureus; 21 (23.3%) of isolates is Candida albicans. Male: 70 (77%), female 20 (22.2%).

Conclusion: Patients with asymptomatic bacteriuria can generally be treated initially with catheter removal or catheter exchange, and do not necessarily need antimicrobial therapy. Symptomatic patients should receive antibiotic therapy. Resistance of urinary pathogens to common antibiotics is currently a topic of concern.

### **THE PREVALENCE OF ALCOHOLIC INTOXICATION AT "TRAUMA UNIVERSITY HOSPITAL OF TIRANA"**

**Berdo Elva, Kukeli Edlira, Muhameti Rushan, Fazlil Valbona**

Introduction: Acute Alcohol intoxication is commonly encountered in Emergency Medicine. Excessive alcohol consumption (regular or binge drinking) produces physical and physiological alterations. The severity and clinic data vary widely depending upon the individual tolerance and amount of alcohol used. Complications may include respiratory arrest, coma and death.

Objective: The aim is to estimate the prevalence of acute alcohol intoxication at Emergency Department of "Trauma University Hospital"

Method: A cross-sectional study, data of which were collected from a retrospective review of hospital medical records. The cases are patients presented to the Emergency Department of "Trauma University Hospital", with acute alcohol intoxications, during the period of time January 2015 -December 2015.

Results: A total of 501 patients with alcohol intoxications treated to Emergency Department in one year period. 407(81%) were male, 94 (19%) were female. Significantly there were more males than females. The median age was

35-36 years (range= 15 to 79 years). 2.6% of the patients were intoxicated both from narcotics and alcohol. Most of the intoxication in the age group 15-30 years old happened during the weekends, fundamentally at night, while in the > 30 years, the weekly distribution is more homogeneous and there is a bigger number in the afternoons.

Conclusion: It's alarming the increasing number of alcohol intoxicated patients in the young age. This is a major reason why early and intensive prevention strategies are required.

### **GENERALISED GRANULOMA ANNULARE AS THE FIRST MANIFESTATION OF DIABETES MELLITUS**

**Dajci Violeta, Sinani Ardiana, Osmenllari Artan, Qalliu Tushe**

Introduction: GA is a dermatitis that occurs with papular elements like a ring, with elevated borders and boundaries clearly with healthy skin. Elements appear mainly in the extremities (the dorsum of them), and can be isolated and small alone, or generalized. Pathology is asymptomatic and is associated with the pathology of other systemic disease.

Material and methods: The patient, women 53 years old presented with papular elements at her lower extremities, which cover almost all the surface of the dorsum pedis, the lesions were smaller, circular with the raised borders. History shfqajes a year. Case paekzaminuar and untreated. 2. D. V 57 year old. Patients underwent cutaneous biopsy, which confirmed the clinical diagnosis of Granuloma Annulare. Glucose hemoglobin was almost at twice the rate. Blood and chemical examinations other in normal limits.

Conclusions: Generalized Granuloma Annulare, at this case was the first sign of diabetes mellitus type II, as in the cases presented. The patient did not know that suffer from diabetes mellitus type II. She underwent therapy with insulin under control of endocrinologist and got local treatment with cortisone-based ointment. A month after the start of treatment of diabetes, the lesions in the skin were improved significantly.

### **AGE-HISTOPATHOLOGY RELATED PATTERNS OF PRIMARY CENTRAL NERVOUS SYSTEM (CNS) IN ALBANIA**

**Djamandi Pavllo, Brace Gramoz, Kaloshi Gentian, Basha Entela, Duraku Kujtime**

**Introduction:** Central nervous system tumors are a heterogeneous group of neoplasms that include all forms of primary and secondary neoplasms developed within the cranial and vertebral cavity. In 0-84 years of age, the proportion of CNS tumors is around 8.2-8. % per 100 000

**Methods:** Retrospective, observational study.

**Results:** A total of 1883 of malignant, benign and uncertain behavior brain tumors were registered from 1993-2013, 997 (49%) were interviewed.

Examining trends in high grade glioma incidence versus low-grade glioma were observed an increased incidence and convergence in the age group 15-44 years, while seen a “dramatic” divergence in the incidence of high grade tumors (increase) and low grade glioma (decrease) in the age groups above 45 years old. Although various factors may be implicated in some epidemiological studies but no factor risk was identify with absolute impact in these data.

**Conclusion:** Age remains the main factor in determining the incidence and prognosis of CNS tumors. The incidence of tumors seems to appear in a symbiotic relationship with the patient's age. This due to the fact that different tumors have a higher incidence in certain age groups.

## EVALUATION OF ENVIRONMENTAL RISK FACTORS IN BRAIN TUMORS

**Djamandi Pavlo, Brace Gramoz, Kaloshi Gentian, Basha Entela, Kopani Valbona**

**Introduction:** Different occupations and exposure to certain substances are continuously charged as risks for brain tumors. Lower incidence of brain tumors makes it difficult to resolve the debate on the role of environmental triggers in their development

**Methods:** Retrospective observational study We used OR – exposure odds ratios and IC -95% confidence interval to determine if risk factors are considered with an increased risk for developing tumors brains,

**Results:** Among the environmental factors we could not find a link between the effects of domestic, electromagnetic field, but managed to confirm that residential exposure may be an important factor in inducing tumors especially in the age of childhood.

Our results showed that the risk occupations such as agricultural pesticides or other chemicals have a relatively increased risk for brain tumors, we have failed to confirm the use of mobile as risk factors.

	cases		Group Control		OR	95%IC
	N=59	%	N=41	%		
Army Force	0	0	2		5	not evaluated not evaluated
Jurist/ manager	4	6	6		15	0.88 0.28-2.8
Risks Professions	11	18	3		7	2.08 0.69-6.29
Tecnician	15	27	11		24	1.84 0.47-2.79
Saler	10	16	6		15	1.36 0.42-4.96
Unqualified workers	19	33	13		33	1.79 0.29-5.75

	cases		control group		OR	95%IC
	N=67	%	N=78	%		
Use of phone						
0 hour	0	0	2		2	
<4h/year	2	3	6		8	0.64 0.21-1.9
4-36h/year	18	30	12		14	1.1 0.31-3.2
>36h/year	47	67	58		76	0.33 0.18-2.3

**Conclusion:** The role of exposure to radiation, chemicals, radiofrequency is unclear, althout this is limited by the number of patients included in our study.

## INCIDENCE PATTERNS OF PRIMARY CENTRAL NERVOUS SYSTEM TUMORS (CNS) IN ALBANIA

**Djamandi Pavlo, Brace Gramoz, Kaloshi Gentian, Basha Entela, Duraku Kujtime**

**Introduction:** Central nervous system tumors are a heterogeneous group of neoplasms that include all forms of primary and secondary neoplasms developed within the cranial and vertebral cavity.

**Methods:** Retrospective, observational study

**Results:** A total of 1883 cases with CNS tumors were registered during 1993 - 2013, of these 977 cases (49 %) were evaluated and interviewed during the period 2010 - 2013. The following table (see tab 1) shows increasing incidence of CNS tumors during years. Interpretation of this increase is complicated greatly from two peaks, in 1995-1996 and 2001-2002, the period corresponding to the addition of diagnostic procedures (CT scanner) or improving their (the introduction of MRI). Age and gender are important risk factors in development of brain tumors, from 55- 80 years old the incidence is higher (see tab 3), and we determined the exclusive predominance of women in meningioma and a predominance of males in glioma (see tab 2).

**Conclusion:** The impact of improved diagnostic methods was seen particularly in the growth of incidence over the years. Age and gender are important risk factors in development of various brain tumors. Environmental and medical factors can be implicated in some studies, but we not noticed any factor risk with impact absolute.

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## **MEDICAL RISK FACTORS IN THE DEVELOPMENT OF BRAIN TUMORS**

**Djamandi Pavllo, Kaloshi Gentian, Basha Entela, Duraku Kujtime**

Introduction: Several diseases and medical treatments are discussed as risk factors for the development of brain tumors, including infections, allergy, alterations of immune system, cranial trauma, hormonal factors, epilepsy, cancer family history... etc.

Results: A total 1883 patients with brain tumors are registered from 1993 -2013, 977 (49%) of them were interviewed to review the analysis of risk factors, during the period December 2010-December 2013. We've failed to find a potential correlation between infections and brain tumors, only 2 cases was speculated or rather a coexistence between JC virus and cerebral tumors. Regarding allergies by comparing the data of 176 patients with glioma, 134 with meningioma and 53 subjects of control, we confirmed that subjects with whatever allergies story (eczema, asthma, etc.) have less risk to be affected by glioma (OR = 0.6 , 96%, 0.5-0.8), but no change for meningioma. We found in our study not a significant correlation between trauma and brain tumor, while family history was useful in detecting tumors with secondary or metastatic nature, this occurred in 84 patients in our study. Hormonal factors increase the risk for glioma in female, and we determine that the data between epilepsy and tumors are problematic

Conclusion: The role of medical factors in development of brain tumors is important for some of them, especially hormonal factors, cranial trauma, family history and is without effect especially in allergy, epilepsy, infections.

## **BUCCO-DENTAL CONSEQUENCES DUE TO HYPOPHOSPHATEMIC RICKETS CAUSED BY CHROMOSOMAL X DISORDER**

**Gjovreku Eva, Ivalle Bruno, Qamurani Sofika, Berdo Elva, Nikollari Luan**

Introduction: Hypophosphatemic rickets caused by chromosomal X disorder is a hereditary disease which appear in a person from 20000 persons.

Objective: Recognition of dental signs by dentist staff and the effective treatment of this pathology.

Material and Methods: It is a descriptive study based in our experience in Dentistry Department of "Trauma University

Hospital" Tirana.

Results: In our experience was treated a case (30years male) with above disorder. If the disease not treated in the effective way during the growth age of children seriously will impact in mineralization of dentin and will cause spontaneous pulpal necrosis as in temporary and permanent teeth. On the other hand we have indicated that a effective medical treatment in early age of combination of vitamin D hydroxyl shape and phosphorus limited consequences and disturbances of this disease. In each therapeutic medical situation effective medical reinforced bucco-dental treatment is recommended. The data clinic is always discoverable by imaging and histological examinations.

Conclusion: It's always necessary that dental staff to cooperate with specialist physician during the medication of this patients in a way that interventions (medical treatments, orthodontic, paradental, implants) do not have bones consequences.

## **PTERIGIUM SURGERY WITH CONJUCTIVAL AUTOGRAFT**

**Kambo Blerina, Halili Ismail**

Objective: We intend to demonstrate the effectiveness and results of conjunctival autograft in Pterigium Surgery.

Methods: 44 patients were operated in Military Hospital and Laser Eye Clinic in Tirana with conjunctival autograft within the period 2014-2015. 20 of patients had bilateral primary pterigium. 11 of patients had recurrent pterigium. 13 patients had primary unilateral pterigium. Graft margins were secured to the recipient site.

Results: In 17 cases were used vicryl 10.0, in 15 patients were used neylon 10.0 and in 12 patients were used vicryl 9.0 sutures. There was no significant difference between women and men concerning the recurrence of the disease. After surgery we had no more recurrence. The average age in the group was 42.6 years old. In our study- period we did not identify any significant differences in application of sutures 10.0 neylon, 10.0 vicryl or 9.0 vicryl. There weren't differences between use of autograft in primary and recurrent pterygium. The visual quality was improved after pterigium surgery in 24 patients and without changes in 20.

Conclusions: Conjunctival autograft surgery appears to be an effective surgical technique in preventing pterygium recurrence and it can also help in improving the best corrected visual acuity.

## **PRESEPTAL CELLULITIS FROM THE FLEGMONA OF THE LACRIMAL SACCUS**

**Kasa Katerina, Qalliu Tushe**

Introduction: Preseptal cellulitis is an infection of the subcutaneous tissues anterior to the orbital septum. It must be differentiated from the orbital cellulitis, in which it might evolve. This is an emergency diagnosis.

Case Report: The case presents a 32-year-old woman, which has presented symptoms that persisted from 3 days. Her right eye presented painless periorbital oedema, erythema and hyperemia, crusts nasally in inferior eyelid. Visual acuity, pupillary reaction and ocular motility were unimpaired.

Swelling of the eyelid and adjacent preseptal soft tissues in contrast to the orbital cellulitis, without proptosis and chemosis. Differential diagnosis was made with orbital cellulitis and preseptal cellulitis. From anamnesis the initial localization of the infection seemed that came from the obstruction of the lacrimal sacculus. Axial CT crani confirmed the diagnosis: It showed irregular formation (38 x 40 mm) directed to the medial part of the eye. An obliteration of the right frontal sinuses. Blood tests showed leucocytosis. Stage by Chandler: Preseptal cellulitis. The therapy given were: topical oil antibiotics, intravenous cephalosporines, gentamycin, and metronidazole. After 5 days the patient underwent the intervention of dacrycistectomy to drain the flegmona.

Conclusion: Periorbital cellulitis, which frequently derives from the spread of the severe infection of the adjacent lacrimal sacculus, is an emergency ocular diagnosis, which needs immediate medical and surgical therapy. The differential diagnosis is made first with orbital cellulitis, is made easier combining anamnesis with the CT crani examination.

## **MEDICAL TREATMENT OF THE ACUTE ABDOMINAL PAIN IN EMERGENCY DEPARTMENT OF "TRAUMA UNIVERSITY HOSPITAL"**

**Kukeli Edlira, Begaj Bajram, Hodaj Vrenos, Koceku Gerta, Berdo Elva, Fazlli Valbona**

Introduction: In Emergency Department frequent cases were presented with strong abdominal pain. Normally acute abdominal pain caused from intra-abdominal pathology therefore the medical treatment and management should be performed at appropriate level. The patients with

abdominal colic needed immediately surgical intervention depending on diagnosis.

Objective: To present our experience in diagnosing and medical management of acute abdominal pain in Emergency Department of "Trauma University Hospital".

Method and Material: The cross-sectional study was conducted in Emergency Department of Trauma University Hospital during the period of time 2014-2015. There were treated 1788 cases based (medical records, performed examinations and consultations with specialized physicians).

Results: Age of cases were 17-83 years. There were treated 540 (30%) colonopathy spastic 610 (34%) enterovirus, 390 (22%) cholecystitis acute, 15 (1%) pancreatitis acute, 233 (13%) appendicitis acute. 27% of the identified cases were sent for immediately surgical intervention in "Mother Theresa" University Hospital Center.

Conclusion: The medical treatment of abdominal colic should take into consideration, the patient anamnesis, clinical data, lab examinations, imaging examinations and the service cost. Medical Staffs of mixed emergencies must perform an effective medical treatment of abdominal colic.

## **THE PREVALENCE OF HELICOBACTER PYLORI IN PATIENTS WITH GERD**

**Luka Merita, Begaj Bajram**

Introduction: Gastro-esophageal reflux is a normal physiologic reflux experienced intermittently by most people, particularly after eating. Gastro-esophageal reflux disease occurs when the amount of gastric juice that refluxes into the esophagus that exceeds the normal limit, causing symptoms with or without associated esophageal mucosal injury. There are several independent factors that have an interesting role in causing GERD symptoms but also erosive esophagitis. One of them is the role of helicobacter pylori in GERD patients which is still very controversial. Still many studies suggest that there is an elevated incidence of reflux in ulcerous patients after H. pylori eradication and other studies suggest that this infection improves the efficacy of antisecretory treatment in healing esophagitis and maintenance of remission.

Objectives: To determine the prevalence of helicobacter pylori (H. pylori) infection in patients with gastroesophageal reflux disease (GERD) 2: to study the percentage of helicobacter pylori-positive in GERD patients according to different grades of esophagitis.

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Material and methods: A total of 80 patients who presented at the department of Gastro-Enterology at the Military Hospital of Tirana with symptoms of GERD where included and interviewed according to validated GERD questionnaire. It included questions regarding GERD symptoms mostly heartburn and acid regurgitation. Every subject underwent an upper endoscopy for the evaluation of erosive esophagitis and in each case we made a classification of erosive esophagitis based on Los Angeles Classification.

Also H. pylori infection in GERD patients was determined by using an H. Pylori antigen stool test. Subsequently, the percentage of H. Pylori infection was analyzed in the different grades of esophagitis, according to the Los Angeles Classification.

Results: In this study we determine that the prevalence of the helicobacter pylori in GERD patients is 40% (32/80). The prevalence of H.Pylori in patients with esophagitis grade A is 58% (10/17), in patients with esophagitis grade B is 27% (6/22), in patients with esophagitis grade C is 22% (4/18) and in patients without esophagitis the prevalence of helicobacter pylori was 52% (12/23).

Conclusions: The prevalence of helicobacter pylori in GERD patients included in this study is 40% and its absence is associated with more severe grades of the disease. These results indicate that H. Pylori plays a protective role against GERD.

## **HIATAL HERNIA AND GASTRO-ESOPHAGEAL REFLUKS DISEASE**

**Luka Merita, Begaj Bajram, Cakoni Suzana**

Introduction. Patients with substantial Hiatal Hernia (HH), regardless of whether or not they had a hypotensive low esophageal sphincter, have been shown to incur an increase number of acid reflux episodes.

Objective: The aim of the present study was to examine the prevalence of Gastro Esophageal Reflux Disease (GERD) in the patients with HH and the presumed role of HH in the severity of esophageal mucosal breaks.

Methods. The 480 patients with HH, 264 (55.1%) male and 216 (44.9%) female with an average age of 42±38 years, were drawn from 1439 consecutive persons referred for upper endoscopy due to heartburn and reflux symptoms. Esophageal mucosal lesions of 271 (56.4%) patients with GERD and HH, assessed by Los Angeles classification, were compared to the group of the patients (188) with GERD without HH.

Conclusions. The GERD was present in the 56.6% of the patients with HH. On the other hand, HH plays an important role in the severity of esophageal mucosal injure.

## **ENDOBRONCHIAL TUBERCULOSIS**

**Muhameti Rushan, Alizoti Xhemil, Argjiri Dhimitraq, Ibro Mustafa**

Introduction: Endobronchial tuberculosis (EBTB) is defined as tubercular infection of the tracheobronchial tree with microbial and histopathological evidence

Objective: To present our experience related with medical treatment of endobronchial tuberculosis in Trauma University Hospital.

Material and Method: The descriptive study was conducted during the period of time 2011-2013.

Results: It is seen in 10-40% of patients with active pulmonary tuberculosis. More than 90% of the patients with EBTB have some degree of bronchial stenosis. 10 to 20 percent have normal chest radiograph. Therefore a clear chest radiograph does not exclude the diagnosis of EBTB. Bronchoscopic sample has been the key to the diagnosis peoducing more than 90% yield on smera as well as on culture Bronchoscopy and computed tomography (CT) are the methods of choice for accurate diagnosis of bronchial involvement and assessment for the surgical intervention. Characteristic HRCT findings of EBTB are asymmetric centrilobular nodules and branching lines (tree-in-bud appearance). Early supervised antituberculosis therapy results in minimal structural and functional residual. Corticosteroid therapy may not influence the outcome of endobronchial turbeculosis.

Conclusion: Early diagnosis and medical treatment before the development of fibrosis is important to prevent complications of endobronchial turbeculosis, such as bronchostenosis.

## **ENDOBRONCHIAL TREATMENT OF BENIGN AND MALIGNANT PATHOLOGIES OF THE RESPIRATORY TRACT BY INTERVENTIONAL BRONCHOSCOPY**

**Muhameti Rushan, Kukeli Edlira, Ibro Mustafa, Alizoti Xhemil**

Introduction: The patients with bronchial tract pathologies underwent procedures of the endobronchial treatment

Objective: Assessment of the endoscopic procedures role in the patient's life saving, life expectancy and quality of his life.

Material and Method: The retrospective study was performed for patients treated at the "Trauma University Hospital" and "Ikeda" Clinic. Target group: There were selected 48 patients with bronchial tract pathologies.

Results: All the patients who were submitted to the above mentioned procedures that have not been any contingent for postoperative or intraoperative major complications. Patients with benign pathology including ages of 13-70 years have won full rehabilitation, quality of life and have a completely normal life. The patients with malignant pathology which included age 31-72 years have received lifetime, better quality of life, thanks to the combination of endobronchial resections chemotherapy and radiotherapy.

Conclusion: Interventional bronchoscopy is the greatest guarantee for the patient, due to major complications which might happen. For benign pathologies the patients get complete rehabilitation, while for those malignant the patient gets the quality of life. An important point is not only the experience of interventionist physician but also the anesthetist doctor who may apply intravenous or endotracheal anesthesia.

### **DYNAMIC STABILITY OF THE KNEE AFTER DAMAGE ON THE CRUCIAT ANTERIOR LIGAMENT**

**Saraci Manushaqe, Stanaj Luljeta, Duraku Kujtime, Lico Rovena**

Introduction: Recovery of dynamic stability of the knee is not only a necessity but also an emergency for patients who suffer damage on the cruciat anterior ligament (LCA) especially to return to different activities from before the injury as amateur sports activities, competitive or even your career or normal social life.

Objective: To highlight the importance of rehabilitation on the dynamic stability of the knee during or after the intervention on LCA on patients with moderate sportive activities.

Material and method: The study includes January 2014-April 2015 period. They were rehabilitated according to (Post-Operator Recostruction Protocoll Wrightington Hospital) with the Hop-Test method which consists on: Jumping forward with one leg. Time of jump for 6 meters, successive jumps, Diagonal jump. The patients which studies were conducted on have been a subject to

Arthroscopy for the LCA reconstruction not longer than 4 weeks after the injury. Fourth month results of the rehabilitation were compared with those of the fifth month

Studies were conducted on 87 patients of 18-40 years old. Average age of  $26 \pm 3$  years old. Average weight of  $65 \pm 5$  kg, M/F Ratio 63 males injured in football, 24 women (11 injured in basketball and 13 in volleyball)

Results: Hop-Test was used for the assessment of motor control of patients. To perform this test theres required a high level of dynamic stability of the knee which is represented by LSI (Limb Symetry Index), Jump distance with one leg for 88.23% of the patients resulted with  $LSI > 85\%$

Distance of three successive jumps for 94.11% of the patients resulted with  $LSI > 85\%$ , Distance of diagonal jump for 94.11% of the patients resulted with  $LSI > 85\%$ , Time of jump in a 6 meter distance for 94.11% of the patients resulted with  $LSI < 85\%$ .

Conclusions: 94.11% of patients with  $LSI > 85\%$  rehabilitated by this method have returned to their activities by the end of the fourth month.

### **HALLUX VALGUS, EVALUATION OF RESULTS ACHIEVED BY TREATMENT WITH SCARF OSTEOTOMY**

**Ruci Julian, Duni Artid, Shehu Kreshnik, Sejati Erion, Murati Lorenc**

Introduction: Hallux valgus is one of the most common pathologies of the foot, mainly occurs on women. This pathology is characterized with the medial deviation of the first metatarsal bone and lateral deviation of proximal phalange of the big toe. Objective: The purpose of this study is to define an efficient surgical method for the treatment of Hallux Valgus. Also, the review of the patient treatment result that went under surgery between the periods 2009-2015 with the osteotomy based on the Scarf method, compared with the results of other surgical methods of the Orthopedic Trauma services.

This is a transversal (kors-seksional) study on which 106 patients with the hallux valgus diagnose were taken in condiseration. From the total no. patients 91, 85.8% of them were female and 14.2% male. The average age of the participants was 49.2.

Results: Scarf Oteotomy resulted an efficient operating technique for the treatment of Hallux Valgus, mainly on moderate to severe forms. This tecnique is followed with the improvement of the angles HVA and IMA, respectively

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with 18.27° and 5.8°.

Conclusion: The results clearly show that the Scarf operating technique is superior in comparison with all the others operating techniques that have been taking in consideration during this study. This based on the better improvement of two parameters after the surgery: HVA angle and IMA angle.

## **TREATMENT OF IDIOPATHIC SCOLIOSIS WITH CORSET CHENEAU TYPE**

**Ruci Julian, Duni Artid, Shehu Kreshnik, Sejati Erion, Murati Lorenc**

Introduction: Idiopathic scoliosis are a developmental deformity of the vertebral column, which influences the form and function of young individuals. Corsets and physiotherapy are conservative treatment methods of the column deformation, in light and moderated cases.

Objective: To present our experience in thoraco-thoraco scoliosis, lumbar and lumbar rigid, based on the use of Chaneau corset type. Studies have shown that keeping correctly the corsets has influenced on the natural progression of Scoliosis and possibly up to the elimination of surgical intervention.

Material & Methods: Our 100 patients are treated by our team, consisted of doctors, physiotherapist and ortoprothesist technicians for the preparation of orthotics. The duration of treatment, is dated from 2010 to 2014. In this group there are included only the patients who after being diagnosed, have agreed to be treated and to partially use the data related to them for study reasons.

Results: Improvement, a decrease of Cobb angle of 6 degrees or more. Stabilised, not more than 5 degrees Progression or improvement. Progressed with the Cobb angle lower than 50 degrees. Progressed with Cobb angle of more than 50 degrees, being considered promising candidates for surgery. Besides this classification, the particulars in relation to sex, age, angle and duration of treatment were taken into consideration in each case treated.

Conclusion: Cheneau corset treatment and physiotherapy of idiopathic scoliosis is successful in 45 percent of the cases. The results of this paper prove its role in limiting the incidence of surgical but natural progression in improving diagnosis.

## **XANTHOGRANULOMA JUVENILE A RARE TYPE OF NON-LANGERHANS CELL HISTOCYTOSIS IN 5 MONTH OLD BABY**

**Sinani Ardiana, Vasha Dorela, Lico Rovena, Nikollari Edlira**

Introduction: Juvenile xanthogranuloma is a type of non - Langerhans cell histiocytosis. It is usually benign and self-limiting. It occurs most often in the skin of the head, neck, and trunk but can also occur in the arms, legs, feet, and buttocks. Skin lesions of Juvenile xanthogranuloma are presents predominantly in infants and in young children, more often in males but 10% of cases are adults. However, most cases of childhood juvenile xanthogranuloma are self-limited and resolve without treatment but in adults tends to be more complicated and often are not resolve without treatment.

Case Report: 5-month-old child's parents came to the dermatology service, worried about their child. They had noticed two skin elements, one on the scalp and the other in left armpit of child. During objective examination of skin were seen two lesion, with yellowish appearance, in 0.5 cm diameter. This skin lesions were increased in size for two months, the child seemed healthy and the parents did not refer further concerns for their child. Clinical diagnosis of these lesions coincide with granulomatous formations similar to Juvenile Xanthogranuloma. Parents refused to make a cutaneous biopsy and the child was kept under surveillance every three months.

Discussion: Juvenile xanthogranuloma in most cases of childhood is a rare self-limited disease and the correct diagnosis is based in a cutaneous biopsy. The lesions are made of collections of histiocytes. Most of the nodules are 0.5-1 cm in diameter but giant nodules may be as large as 2 cm. They may be on any site of the body, but more frequently appear on the trunk and upper extremities. Occasionally they also appear in the eye or internal organs. There is no treatment for juvenile xanthogranulomas, they are harmless growths and disappear eventually over 2 to 3 years, usually without scarring. If they are giant nodules a surgical treatment may be done.

## **HEALTH ASSESSMENT AND KNOWLEDGE OF MILITARY EFFECTIVES**

**Vasha Dorela, Beja Ergina, Reso Elton, Asqeri Denisa**

Objective: The primary health care in the Albania Armed Forces provides: primary prevention and health promotion;

risk factor detection for different disease; disease management, support for self-help and self care; surveillance/reporting. The aim is to evaluate the health assessment and health knowledge of the effectives.

Method: This is a cross-sectional study conducted through the interviews of a 5 scale questionnaire made to the effectives of the Support Command that were presented to the medical center of the command for any medical visit for a 2 months period. Data like how easily they can assess and understand the health information, were collected from the interviews and has been processed by the SPSS program.

Results: The study shows that most of the effectives interviewed find it almost easily to almost difficult to assess health information, to understand it and follow the different instructions for preventing diseases or for their treatment.

Conclusions: There is a need for availability and implementation of health programs related to the most common diseases and more promoting seminars with the effectives.

### **RISK FACTORS FOR THE APPEARANCE OF DIABETES, HBP, IN THE ARMED FORCES**

**Vasha Dorela, Reso Elton, Beja Ergina, Asqeri Denisa**

Objective: Obesity, family predisposition, smoking, life-style are some risk factors for many highly prevalent and potentially fatal chronic diseases, including diabetes, cardiovascular diseases, etc. The aim of this study is to evaluate some of the risk factors that influence in the appearance of these diseases in the ranks of the Armed Forces.

Method: This is a cross-sectional study conducted through the interviews made to the ranks of the Land Forces Command that were presented to the medical center of the command for any medical visit for a 2 months period. Data like blood pressure, glicemia, BMI, and questions around medical history, family predisposition, feeding habits, etc were collected from the interviews and has been processed by the SPSS program.

Results: The study shows that overweight and obesity is more common in the elderly males, due to increased total calories intake and decreased physical activity. Obesity and family predisposition for diabetes shows important factors for the appearance of type 2 diabetes. Smoking, family predisposition and changes in diet shows potentially risk factors for High Blood Pressure.

Conclusions: The ageing population, increased total calories intake and decreased physical activity, smoking, family predisposition, and obesity are some of the factors that influence in the appearance of diabetes, HBP and many other diseases.

### **TRAUMATIC TREATMENT OF TEMPORARY TEETH**

**Xhafaj Alba, Eni, Kociaj Ani**

Introduction: Little kids tooth damage may cause serious and long life consequences. This damage can lead to, discoloration, malformation, or lose of teeth. Most damages of the first teeth happen during the age of 1 ½ and 2 ½. The structures included in fractures are as following: Enamel, Dentina, or pulp.

Objective: The aim is to determine pathological consequences of traumatized teeth.

The teeth are at the risk of the pulpes necrosis. They suffer from lack of collateral blood. The thin band of tissue vascular nervo, may get apart even by tiny strokes. The most risky damage of the permanent teeth is their effect on the nonerupted under development teeth. If this damage happens during development period of the permanent tooth, it causes hypoplazi e enamelit or hypocalcification.

Conclusion: Teeth fractures: the treatment of these fractures depends on the eventual fracture level. The best prognosis is when it has happened at the 2/3 of the root. Most of these teeth keep their vitality and the moving is minimal. They are clinicly obvious as the tooth is sensitive when it bites. The tooth treatment should be out of the occlusion. Hard moving is a usual reaction of the tooth to the traumas. As a treatment it is advisable that the kid does not chew with those teeth for about a month.

### **MEDICAL CONTRIBUTION OF ALBANIAN ARMED FORCES AT MULTINATIONAL MISSIONS**

**Zeka Valbona, Kopani Valbona**

Introduction: In context of security environment transformation Albanian Armed Forces are engaged intensively at NATO's operations for providing of stability and peace by integrated strategic orientation. Participation

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in NATO's operations requires training improvement for continuity of medical personal in prevention of conflicts crisis management, peace support operations and humanitarian assistance.

Objective: Predeployment medical assessment of operational medical capacities of Albanian Armed Forces in multinational missions.

Method: The descriptive study was conducted during the period of time 2010-2015. The data were taken in retrospective way from medical documentation in Military Hospital related with participation in ISAF operation in Afganistan.

Results: There are 1070 (medical personnel) underwent the periodic medical assessment. Resulted 930 mission capable and 180 mission unable (80 AgHbS positive and 60 with visual difficulties.)

Conclusion: The medical personnel participating of Albanian Armed Forces should be demonstrated improving of operational medical capacities comparable with members of the alliance in multinational missions.

## **ANALYSIS OF TRENDS FOR CHANGE OF MEDICAL PERSONNEL IN BULGARIA FOR THE PERIOD 2010 - 2014 YEAR**

**A. Aleksandrov, A. Petkov, I. Aleksieva**

Introduction: The observed quantitative and structural changes of the medical personnel in the last 20-25 were the subject of this study. These changes relate mainly to the reduction of the staff, which is a constant trend expressed in varying degrees for the different medical specialties. They can lead to serious problems in the health care system of the country in the medium term and therefore they were of interest to explore.

Material and Methods: An essential part of the analysis was the availability of a medical staff in 25 medical specialties. The study covers the period 2010 - 2014 year. The total number of doctors and dentists was investigated for the period 1990 – 2014. Statistical data for the periods of the study was used and processed. We analysed the change of medical personnel in different specialty and general changes and new trends in the availability of doctors in Bulgaria.

Results and discussion: Statistical surveys showed that the widespread opinion that doctors and dentists in the last 25 years have decreased is not true. There is some increase in the absolute number and the physicians and dentists.

Conclusions:

1. The number of doctors for the period 1990 - 2014 has not changed significantly - 28 497 doctors in 1990 and 28842 doctors in 2014. / 1.21% increase /
2. Dentists have increased in the same period from 6109 to 7013 / 14.80% /
3. The study of the change in the number of doctors in the last five years in different specialties shows different situation for each specialty.

## **CONDUCTING PSYCHOLOGICAL ASSESSMENT TO PATIENTS AT CLINIC OF NEUROLOGICAL DISEASES - MMA**

**Krasen Daskalov, Krasimir Genov, Mirena Georgieva, Maria Dimitrova, Igljka Parashkevova**

The paper presents psychological work done by specialists of Center for Mental Health and Prevention at the Clinic of Neurological Diseases of Military Medical Academy in Sofia. It discusses the types of tests and assessment on request by the physicians to support the process of diagnostics and providing psychological assistance to patients.

260 patients passed psychological assessment at the Clinic of Neurological Diseases for the last year. In 121 cases are tested cognitive skills, in 102 cases are tested personality potential, 37 cases are combined cognitive and personality testing. The cognitive psychological research is required for memory disorders, vascular dementia, Alzheimer's and Parkinson's disease. It is performed with neuropsychological battery including a measurement of concentration and stability of attention, memory, thinking, abstract thinking, constructive praxis, reasoning ability.

The assessment of personality parameters includes measuring the level of anxiety, self-esteem, self-protective mechanisms, adaptive abilities and coping strategies, patterns of behavior and involvement in social interactions. It clarifies the attitude of the patient about the illness process and support the development of coping strategies. Explore anxiety-depressive symptoms, presence of stressors affecting the optimal personality functioning, not worked traumas and conflicts that exacerbate the process of illness. For the assessment of personality were used personality questionnaires as MMPI, test of T. Leary, depression scale of Zung, projective methods.

In conclusion, psychological assessment of personality not inferior to the number of cognitive assessment associated

with specific neurological symptoms. The need of measuring the personal abilities and emotional state is directly responsible to the diversity of symptoms cared for at the department of neurology of MMA. The growing need for psychological interventions in neurological practice shows systematic approach to medical care for patients according to their individual needs and personality traits that directly affect the illness process.

### **CARDIAC OXIDATIVE STRESS AFTER ACUTE POISONING BY ORGANOPHOSPHOROUS COMPOUNDS**

**D. Dimov, K. Kanev, I. Samnaliev**

**INTRODUCTION:** The main mechanism of action of the organophosphorus compounds, including nerve agents (Tabun, Sarin, Soman, and VX), is irreversible inhibition of acetylcholine esterase (AChE), resulting in accumulation of toxic levels of acetylcholine (ACh) at the synaptic junctions. However, our previous studies showed that organophosphorus compounds might have toxicological effects on the body by non-cholinergic mechanism.

**AIM:** The objective of the study was to analyze nitrotyrosine production as a marker oxidative stress in heart after acute Tabun poisoning.

**MATERIALS and METHODS:** We investigated by immunohistochemistry the expression of 3-nitrotyrosine, a marker of NO-induced oxidative stress, in three different groups of animals: (i) treated by 0.5 LD50 Tabun; (ii) vehicle and (iii) atropine and specific re-activator applied immediately after Tabun.

**RESULTS:** Heart nitrotyrosine expression 24 h after Tabun treatment was dramatically increased in comparison with its levels without treatment. More than 70% of cardiac cells were positive with a high intensity. After application of atropine and AChE re-activator, we observed decrease in nitrotyrosine levels of about 10% compared to Tabun treatment, but still far from the normal levels in non-treated heart

**CONCLUSION:** Our study evidently demonstrated that nerve agent Tabun triggers oxidative-nitrosative stress in heart and these cellular effects should be protected by an additional anti-oxidant therapy, since atropine and AChE re-activator are not efficient in this manner.

### **MORPHOLOGICAL ASPECTS OF LUNG INJURIES CAUSED BY FIREARMS WEAPONS IN EXPERIMENT**

**Drandarska I., S. Nikolov, V. Mutafchiiski**

The aim of this study is to examine the morphological features of lung injuries associated with experimental gunshot. We analyzed the lung injuries caused by firearms weapons with or without silencers in experiment with pigs.

A detailed description is given of changes in the lungs of experimental animals with various types of weapons. Histological tissue changes were diagnosed and compared in intensity depending on various factors of the shot.

The scientific research is conducted in accordance with the principles of ICLAS/FELASA and the respective Bulgarian legislation acts regarding the humane attitude and welfare of the experimental animals.

### **PATHOHISTOLOGICAL INJURIES IN ABDOMINAL CAVITY CAUSED BY FIREARMS WEAPONS IN EXPERIMENT**

**Drandarska I., S. Nikolov, V. Mutafchiiski**

The aim of this study is to examine the macro and microscopical features in abdominal cavity associated with experimental gunshot wounds in pigs. We used the firearms weapons with or without silencers. The severity of injuries depends on many factors: bullet factors, firearms weapons factors and tissue factors.

We put all the changes occurring in the abdominal cavity due to the use of both types of weapon with and without the silencer. Histological we studied tissue materials from affected organs to clarify the degree of damage in different types of weapons.

The scientific research is conducted in accordance with the principles of ICLAS/FELASA and the respective Bulgarian legislation acts regarding the humane attitude and welfare of the experimental animals.

### **CHALLENGES WITHIN THE CASUALTY DECONTAMINATION AFTER CHEMICAL EMERGENCIES**

**Galabova A., Dimov D., Kanev K**

**INTRODUCTION:** Industrial accidents or chemical terrorist

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attacks may lead to contamination of environment and people. The decontamination procedures are an integral part of the countermeasures against intoxications by reducing contamination, elimination and spread of the harmful effects. In order to be effective, the evidence based research is of a vital importance.

The AIM of the present material is to outline the challenges, which should develop additional awareness during the planning process for chemical emergencies.

**MATERIALS AND METHODS:** Survey of the open literature on the current status and trends of the problem.

**RESULTS:** In chemical emergencies the timely reaction is of a vital importance, but the arrival and depolymet of the emergency teams may be of a great delay. Decontamination, triage, administration of antidotes and life saving medicines are supposed to happen in limited time conditions. In serious circumstances, as mass poisoning cases, it is expected that casualties will use their own methods to reach medical facilities, thus spreading the contamination. It is accepted widely decontamination to be performed on site, but in this case medical personnel in hospitals will be of a great risk. Within hospitals patient flow should be controlled and decontamination plan should be tailored before entering the emergency medical departments.

**CONCLUSION:** The readiness for mass casualty chemical emergencies is a responsibility for the medical and non medical personnel. Ensuring that hospital have the resources and are trained is essential.

### **CURRENT SOCIOMEDICAL PROBLEMS OF THE DEPARTMENT OF EMERGENCY CARE OF MILITARY MEDICAL ACADEMY - SOFIA**

**Grigorov Nedyalko, Manoilova Yuliya, Popivanov Ivan, Nedelcheva Svetla**

**Object:** To specify the most important current sociomedical problems of the Department of emergency care in Military Medical Academy - Sofia determined via an analysis of three-month (October, November, December 2015) experience. To create an algorithm of engagement of the Social Services for more effective care.

**Materials and Methods:** We have used retrospective and statistical analysis. We have discussed the working methods of the Emergency department with homeless patients, aggressive patients, victims of violence, and patients without health insurance, the evaluation of their condition

with different methods and a general check-up of these patients.

**Results:**

1. 1516 patients have been treated over a period of three months in the Emergency department. Almost every sixth patient is without health-insurance.
2. 39 784 patients have been treated over a period of one year (01.01.2015 – 31.12.2015) in the Emergency department. 742 (1.87 %) of them are victims of criminal acts (except for crashes), 15 % - suicide attempts, 10 % - homicide attempts, 10 % - accidents at work, 30 % - victims of domestic violence, 30 % - victims of robbery, 5 % - victims of sexual violence.

**Conclusions:**

1. The victims of domestic violence after hospital discharge should be placed in special centers by the Social Services.
2. If NHIF (National Health Insurance Fund) allocates more money to the ambulatory treatment, fewer patients will visit the Emergency department on the occasion of non-emergency conditions and routine check-up.
3. In the Emergency department often arrive aggressive patients who endanger the security of the medical workers.
4. We need to achieve a better coordination with caseworkers. There should be a non-stop telephone contact with the Social Services in purpose to find lodgings for the homeless patients without health problems.
5. The involvement of schools and media in health education will lead to early detection and treatment of the emergency cases as well as to their prevention.
6. If NHIF starts paying implants for emergency operations, all patients in the Emergency department will be able to receive advanced treatment.

### **BIODOSIMETRY IN THE HUMAN LYMPHOCYTES AFTER IN VITRO IRRADIATION**

**M. Hristozova, D. Denkova, V. Rangelov, R. Popov**

**INTRODUCTION:** The cytogenetic method is used for assessing the radiation damage and to support triage, medical treatment decisions, and prognosis of radiation casualties. Its advantage is that it is relatively cheap method and easy to perform. Required laboratory backup along with time delay to acquire the first results of cytogenetic assessment make these methods unsuitable for military field conditions. These problems have been overcome with the new biodosimetric methods by including protein

marker or serum protein analyses. Nevertheless, these assays are being developed and have not yet been tested in a real triage situation. Therefore, cytogenetic methods still remain a standard of biodosimetry.

**PURPOSE:** The aim of this study is to evaluate these parameters in human blood lymphocytes after in vitro irradiation and to assess its contribution to biodosimetry. The in vitro cytokinesis-block micronucleus (CBMN) assay is a cytogenetic method based on the assessment of micronuclei in nucleated cells that have completed only one nuclear division.

**CONCLUSION:** Our results suggest that micronuclei measured in binucleated cells are the best biomarker of ionising radiation evaluated by CBMN cytome assay and assessment of other parameters is possible but their use is limited due to insignificant differences and overlapping of the 95% confidence intervals between neighbouring doses. Values of micronuclei measured in binucleated cells were used to construct in vitro linear-quadratic dose-response calibration curve.

### **EFFECT OF IONIZING RADIATION ON MAMMALIAN CELL CULTURES**

**M. Hristozova, V. Rangelov, D. Denkova, P. Petrunov**

**Introduction:** At the cellular level, ionizing radiation distort growth, division of cells, the structure of the nucleus, induced chromosomal aberrations, fragmentation and other. These disorders lead to cytolysis and cell death. Tracking radiation damage at the cellular level using biological markers representing quantitative changes that occur in biological systems under the radiation effect. Damage to the cell directly depends on the dose of ionizing radiation - in small doses amendments may have reversible character. At the high doses cell death occurs.

The aim of the study was to follow radiation effect (Co-60) on mammals' cell cultures taking into consideration the overall impact of the gamma radiation on the cell. In the resulting survival curves was monitored dose-effect as in the tumor and in normal cell lines.

Used four cell lines: MDCK (kidney calf - epithelial cells), FI (normal human amniotic tissue), A-549 (carcinoma of human lung), P (human embryonic lung).

Irradiation of samples was conducted in Gamma irradiation with 4 source cobalt (Co-60) to ensure homogeneity of the irradiated area. The dose rate is 22 sGy/min. Used a wide range of radiation doses from 1 to 17.5 Gy.

Observe for morphological characteristics of the cells, the degree of growth or degeneration, the condition of the monolayer and change of medium.

Determine the percent of cells viability and preparing survival curves.

**Conclusion:** Death rates of irradiated cell lines is a function of dose, and has an exponential dependence. This pattern was not demonstrated in all our attempts, which may be due to: asynchrony of the population, the presence of hypothermia, altered permeability of the cell membranes.

### **THE "GOLDEN HOUR" OF EMERGENCY TOXICOLOGY**

**Kanev Kamen, Paskalev Kuzman, Neykova - Vasileva Ludmila**

The pattern of intoxications in humans in the modern world is changing with the development of pharmacy, chemistry and others branches of industry and agriculture.

This necessitated the development of new antidotes and treatments for the cases of poisoning. This requires the development of new antidotes and therapeutic regimens for the treatment of poisoning.

The **PURPOSE** of this work is to analyze the most important factors for rescue activities, limiting the harmful effects of toxic substance within the "golden hour".

**MATERIALS AND METHODS:** The current therapeutic regimen for the treatment of poisoning are logically analyzed.

**RESULTS:** The optimal treatment of a poisoning depends on the availability of antidotes administered on time in sufficient quantity based on the "benefit / risk" principle in the light of good medical practice. In case of accidents, toxicological emergency assistance increases its efficiency with the use of modern formulations.

**CONCLUSION:** Therefore, the adherence to the timeframe of the "golden hour" is a concept that should be guiding for the therapeutic behavior of the medical staff in emergency toxicological assistance.

This concept ensures a successful outcome by the inclusion of all the suitable methods and ignoring unacceptable for each particular case.

### **ACTINOMYCOSIS: A RARE CAUSE OF LARGE BOWEL OBSTRUCTION**

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**Kirien Kjossev, Evgeni Belokonski, Petko Dimov, Georgi Popivanov**

**Aim:** Abdominal actinomycosis is a chronic suppurative infection, accounting only 20% of cases caused by *Actinomyces* species. Recent investigation finds 481 reported cases with abdominal wall and abdominal viscera involvement. The condition has been shown to mimic appendiceal tumor and abdominopelvic actinomycosis is associated with abdominal surgery and intestinal perforation or occlusion. Bowel obstruction due to actinomycosis is very rare, and few cases have been reported.

**Method:** We report two cases of large bowel actinomycosis leading to obstruction and preoperatively misdiagnosed as neoplastic disease. The first patient with pelvic form probably caused by a long-standing intrauterine device presented with signs of obstruction and colonoscopic data for malignant sigmoid occlusion. In second case ileocecal form of the disease is presented with CT signs of obstructed and perforated neoplastic disease of the right colon.

**Results:** Both cases were treated with wide surgical excision and long-standing administration of antibiotics without local recurrence at follow up.

**Conclusion:** Even though abdominal actinomycosis is very rare, it should be included in a list of differential diagnoses in large bowel obstruction. Accurate preoperative diagnosis and efficacy of antibiotic treatment may spare the patient from unnecessary surgery.

### **MEANING OF DELAYED FLAP COVERAGE OF OPEN EXTREMITY FRACTURES AFTER PREVIOUS VACUUM-ASSISTED CLOSURE (VAC) THERAPY**

**Dimitar Kostov, Nedelcho Tzachev**

**AIM:** Dispute remains regarding timing in the management of complex traumatic lower extremity defects. Some originators recommend a definitive bony and soft tissue reconstruction within a critical period of 72 h, yet in many patients this may be impossible due to concomitant injuries or delayed referral. However, little data are available on the results of delayed flap reconstruction of complex traumatic extremity defects, especially using new technologies of wound coverage such as vacuum-assisted closure VAC therapy which may reduce the disadvantages of conventional open wound therapy prior to a subsequent flap reconstruction.

**MATERIAL AND METHODS:** We retrospectively analysed

the soft tissue reconstructions in 52 open extremity fractures during a 6-year period (between 2008 and 2014) with special regard to complications, overall flap loss and wound infection.

**RESULTS:** A total of 38 male and 14 female patients with 38 open fractures of the lower and 14 of the upper extremity were included. All patients had been referred from a trauma centre at a mean interval of 25 days (range 5-86days) after the trauma event with temporary VAC of their wounds after initial fracture fixation and initial debridement of necrotic tissue. Flap reconstruction was thus only possible later than 72 h and definitive wound closure was achieved at a mean time of 28 days (range 5-98 days).

**CONCLUSION:** According to this study, the flap reconstructions performed beyond the frequently quoted critical interval yielded similar results to those of immediate reconstruction within the first 3 days, as reported in the literature.

This strategy is in accordance with the principles of 'Damage Control Orthopaedics (DCO)' and may reduce the importance of emergency reconstructions, especially in poly-traumatised patients.

### **EVOLUTION OF PSYCHIATRIC SYNDROMS DURING PARTICIPATION IN MILITARY ACTIONS**

**Iliya Marinov, Silviya Dimitrova**

**Aim:** The object of this publication is to explore the development of scientific concepts of psychiatric syndromes during military actions from the American Civil War to modern operations other than war.

**Material and methods:** Based on the review of various literatures (theoretical and applied research) we look at the evolution of the concepts associated with stress reactions and disorders in participation in military actions.

**Results:** At the beginning of the studies of this issue the focus was primarily on physical and physiological symptoms as a response to an unpleasant influence of the combat stressors. With the development of psychology and psychiatric sciences, mainly psychological and psychiatric effects from the impact of the battle stressors are examined.

The survey results show that the concepts of war related psychiatric syndromes vary in historical aspects depending on the development of science and the assumed concepts at that stage.

Concussions: Publication of the findings of numerous research projects, articles, reports and monographs of clinicians, psychiatrists and psychologists, as well as the research of military doctors who participated in the conduct of military actions, have contributed to the formation and determination of the diagnostic criteria of mental disorders (battle stress, gross stress reaction, battle fatigue, post traumatic stress disorder, etc.) as distinct diagnostic units that are included in the DSM of the American psychiatric association and subsequently in the ICD (International Classification of Diseases).

### **CLOZAPINE INTOXICATION - CASE REPORT**

**Neykova-Vasileva Lyudmila, Kanev Kamen, Traykova Vera**

**INTRODUCTION:** Clozapine (Leponex) is an atypical antipsychotic medicine. Induced for treatment of schizophrenic patients, resistant to standard antipsychotics. Despite its limited application it could lead to heavy intoxications.

**AIM:** The objective of the material is to make a logical analysis of the therapeutic algorithm for the treatment of such poisoning.

**METHOD AND MATERIAL:** We introduce severe intoxication with Clozapine, in '60 in female patient with a primary diagnosis: paranoid schizophrenia. The toxic-chemical analysis proved lethal concentration of Clozapine in her blood.

**DISCUSSION:** Detoxifying measures aim to limit the harmful effects of xenobiotic on the patient. The depurative complex therapy applied by us, according to the standard of "Clinical Toxicology" and according to modern international standards - of charcoal hemoperfusion (twice) and lipid therapy (twice), under constant laboratory control, master end the life-threatening intoxication. The patient was discharged without current acute toxic problem, but with exacerbation of her mental illness.

**CONCLUSION:** Clinging strictly to the procedures in "medical standard" in cases of severe and deteriorating intoxications may be ineffective. This requires the implementation of new modern depurative methods taking in account the nature of the toxic products and good the medical practice.

### **COMBINED TRAUMA – RECTAL LESIONS DUE TO OPEN PELVIC FRACTURES. TREATMENT STRATEGIES**

**Teodosiev I, Popivanov G, Mutafchiiski V, Kjossev K**

**Aim:** Open pelvic fractures combined with recto-sigmoid lesions are associated with high morbidity and mortality. Treatment needs the involvement of a multidisciplinary team. This report presents our experience in the treatment of this kind of traumatism.

**Methods:** We present four cases with combined trauma due to different causes (two gunshot injuries, one road accident and one Crush injury). The common features are combined trauma - open pelvic fracture and lesion of the recto-sigmoid.

**Results:** All patients were males with mean age of 36 years. Median ISS was assessed as 35(20-55). The four patients passed through prolonged but successful curative period. There was no mortality in this short series. Loop colostomy and VAC wound therapy as a part of the treatment strategy are procedures defined as "golden standard" and resulted in remarkable efficiency and reduced rates of morbidity and mortality.

**Conclusions:** Open pelvic fractures combined with recto-sigmoid lesions present a challenge for managing and treatment with successful results. Multidisciplinary team has to be involved in the patients care. According to our initial experience and literature data early fecal diversion with loop colostomy and VAC wound therapy are given as procedures of choice leading to good result.

### **CLINICAL CASE OF COMBINED HAMARTOMA OF THE RETINA AND RPE IN YOUNG ADULT**

**Vidinova Christina, Voinov Latcezar**

**Purpose:** The aim of our study is to report a clinical case of a young adult shown with the picture of combined hamartoma of the RPE and discuss the diagnostic strategies and follow up.

**Material and methods:** We report a case of a 26 year old adult who complained of progressive loss of vision of one eye in a period of one year. She was accepted in the ward and underwent a complete ophthalmologic examinations including OCT (RTVue OPTOVUE), fluorescein angiography and fundus autofluorescence.

**Results:** Ophthalmoscopically we found a partly pigmented, slightly elevated, peripapillary lesion with strong distortion

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of the retinal blood vessels. Fluorescein- angiography showed early filling of the dilated, large caliber, anomalous retinal vessels, which in the periphery made a specific network of vessels with immense glial proliferation and leakage of dye in the mid and late phases of the study. The OCT showed generalized edema in the retina and peripapillary zone and autofluorescence was typical for RPE proliferations.

Conclusion: Combined hamartomas of the retina and RPE (CHRPE) are rare occasions, usually congenital. What is interesting in our case is that it occurred in a later age of 26 years. The proper diagnosis of such cases is important because this benign lesion may be confused with more threatening conditions such as malignant melanoma or retinoblastoma. An appropriate diagnosis through clinical appearance and fluorescein angiography is imperative to prevent unnecessary enucleation.

## **TELEMEDICINE - OPPORTUNITIES FOR SERVICING OF MISSIONS**

**Georgi Yanchev, Rumen Popov, Ventzislav Mutafchyski, Virsaviya Vaseva**

The project to build a "Telemedicine" in Bulgaria is very old. The new things in it were driven by the need to cover different parts of the world in need of medical advice from qualified professionals. That will provide a connection between points, so that it can exchange information in electronic form (graphic, imaging, multimedia, internet, text, etc.).

Nothing is as important as the health care relationship between patient and doctor. Preservation and care are sometimes defined as the heart of medicine.

Today, telemedicine programs are focused on accessing inaccessible areas, field areas and missions where there is little or no specialists. "Telemedicine" has the potential to access necessary health services and medical expertise especially in the above mentioned areas.

Doctors practicing telemedicine using two core technologies:

1. live interactive (interactive live)
2. store-and-forward.

Specialists also communicate with the patient, using e-mail and the Web. The link "Telemedicine" is based on the deployment of Eutelsat satellites validated with telemedicine applications. The number of network interfaces can be expanded as necessary and standard

interface can be modified. Thanks to these and other features of the system parameter and optimized real-time satellite monitoring and control, medical specialists- users can be confident that here is high quality servicing (maintenance), speed and reliability of information.

Feedback is very relevant to the use of each of these technologies. Between seeing patients live and interactive service conformity diagnosis is about 80%. This is the same percentage as if two specialists see the same patient in a medical room. This percentage increases to 90% if the specialists put different diagnoses rather than a single diagnosis.

## **BREAST RECONSTRUCTION AFTER MASTECTOMY**

**Yolanda Zayakova, Ivailo Vajarov, Nikolai Pashaliev, Anton Stanev**

Aim: We present our surgical experience and analyze the results as well as the appropriateness of the applied techniques for breast reconstruction.

Material – Method: During the period between 2010-2015, we performed 39 reconstructive breast surgeries. The surgical technique involve 16 one stage and 23 delayed procedures.

The treatments included the use of expanders, implants and pedicled flaps.

Results: The mean follow – up is 24 months. Few complications were observed: seroma (n=2); necrosis of the skin (n=2), infection (1).

Conclusions: Based on our clinical data we can conclude that each of the used reconstructive techniques can lead to a good aesthetic outcome as long as the type of mastectomy and the individual anatomical features are taken into account.

## **SURGERY OF SCALP DEFECTS BASED ON LOCAL FLAPS AND EXPANSION**

**Yolanda Zayakova, Ivailo Vajarov, Nikolai Pashaliev, Anton Stanev**

**Aim:** The purpose of this article is to present the use of local flaps and tissue expansion for covering simple and composite head defects.

**Material – Method:** Over the last five years we treated 25 patients aged 35-78, with scalp defects caused by burn, basal cell carcinoma, melanoma, and trauma. The wound size varied from 5x7 cm to 25x14cm. The surgeries were either one stage or two-stage depending on the need for tissue expansion. In the cases of composite defects we applied titanium mesh plate, while the simple ones required only flap coverage.

**Results:** The results were favorable with all patients. The flaps survived entirely and the recovery was comparatively quick.

**Conclusions:** The described techniques of surgical reconstruction are recommended for treating large scalp defects which may be either simple or composite. The methods provide healthy, stable, hair-bearing tissue and good aesthetic result.

## **ARMED FORCES IN MENTAL HEALTH MANAGEMENT OF TRAUMATIZED COMMUNITIES**

**Andreadaki Evangelia**

**Purpose:** The aim of this paper is to provide with rough outline for managing psychological trauma in afflicted civil communities from the military point of view.

**Material and Methods:** An extensive literature review was conducted using the Medline database with the help of PubMed interface. The key words used for this purpose were: “mental trauma”, “army”, “community”, “recovery”. Abstracts for conferences and papers written in a language other than English were excluded. A total of thirty six eligible articles were identified.

**Results:** Massive traumas are so disruptive that the forces of disintegration may overwhelm society’s restorative capacity transposing in the individual with display of a gamut of pathogenic mental manifestations. Military personnel, either as traumatized community members themselves either as response and mitigation forces, pose a key pillar in the healing process. Establishing a sense of security, deconditioning fear, catalyzing social solidarity, elaborating screening and outreach intervention programs, constructing a spectrum of specialized modalities and stratified therapeutic initiatives for psychiatric sequelae are only fragments of their integrated involvement after a calamity has taken place. The cadre of specialized mental

health team approach emerges as a focal point to elicit a proactive seamless readiness-rehabilitation plan for all stakeholders.

**Conclusions:** In the therapeutic milieu after a massive trauma, no evidence based directives exist, only compilation of broad range norms to facilitate military actors involved, alleviate massive suffering. Army corps can undisputable undertake the ombudsmen role in reinstating sustainability, enhance psychological and physical societal serenity and provide with collaborative civil-army recovery matrices.

## **EVALUATING QUALITY OF LIFE AND JOB STRAIN IN HELLENIC AIR FORCE NURSE CORPS UNDER THE RESTRAINTS OF CAPITAL CONTROL ENFORCEMENT**

**Andreadaki Evangelia**

**Purpose:** The aim of this study is to assess Quality of Life (QOL), Occupational Stress (OS) and their association with organizational and financial variables in Hellenic Air Force (HAF) Nursing Personnel, in the unprecedented context of economic recession and capital control imposition.

**Material and Methods:** A total of 89 HAF Nurses participated in the study. The survey included the Greek versions of WHO QOL Questionnaire (WHOQOL-BREF) and Effort-Reward Imbalance (ERI) Questionnaire. *Ceteris paribus*, results were paired with the outcomes of a base line study conducted two years earlier, in the same population sample. Statistical analysis was performed using SPSS v.18.0.

**Results:** Degradation in psychological health, albeit the promotion of perceived job security, is documented. Health status remained highly sufficient, although one out of four participants face obstructive musculoskeletal problems or mood disorders. Receiving financial aid by a third party, shouldering bank loans, confronting health deficits and having offsprings independently predicted elevated OS along with impaired QOL attributes.

**Conclusions:** In face of the challenges posed by the current adverse socioeconomic framework, HAF Nurse Corps designate as a bastion against an imminent health crisis, serving their duty in high morale while providing first-line quality care for the armed forces and their beneficiaries. Policy makers and military leaders should take initiatives to engage in a transformational, more rewarding institutional climate as well as devise countermeasures to mitigate the escalation of nursing shortage. Evincing a more person focused leadership can reinforce resilience in military staff

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and leverage strong esprit de corps to full potential.

### **FEELINGS OF ANXIETY AND STRESS: WHICH IS THE RELATIONSHIP TO TIME?**

**Athanasiadou Foteini, Papastamatelou Julie, Unger Alexander, Giotakos Orestis**

**Aim:** We tested the relationship between the dimensions of the Zimbardo Time Perspective Inventory (ZTPI- Zimbardo & Boyd, 1999) and anxiety disorder / perceived stress, while also taking into account the Deviation of the Balanced Time Perspective (DBTP).

**Methods:** In study 1 clinicians of the Mental Health Centre of the Armed Forces Athens diagnosed anxiety in a number of male participants of the overall sample (n= 204). In addition, participants completed a validated Greek translation of the ZTPI. In study 2 a sample of students (n= 71) of Panteion University Athens completed the Greek translation of the ZTPI (Anagnostopoulos&Griva, 2012) and the Greek version (Andreou, Alexopoulos, Lionis, Varvogli, Gnardellis, Chrousos, &Darviri, 2011) of the Perceived Stress Scale (PSS 14-item scale; Cohen, Kamarck, &Mermelstein, 1983). We hypothesized that the Past Negative, the Present Fatalistic and the Future ZTPI dimensions would be significantly associated with anxiety disorder and perceived stress.

**Results:** Study 1: Independent samples t-tests showed that Future orientation was related to non-anxiety disorder ( $t(202) = 2.07, p = .040$ ). The DBTP was higher in persons with an anxiety disorder ( $t(202) = 2.46, p = 0.15$ ). This result was confirmed by a binary logistical regression. Study 2: Independent samples t-tests revealed that the Past Negative ( $t(69) = -4.68, p < .00$ ) and the Present Fatalistic ( $t(69) = -3.38, p = .001$ ) orientations correlated with high-perceived stress. Pearson's correlations and a linear regression confirmed the results. Furthermore, high-perceived stress was associated with a higher DBTP ( $t(69) = -2.37, p = .021$ ). A linear regression confirmed this result.

**Conclusions:** The negative correlation between Future time perspective and anxiety could be attributed to the positive bias displayed by the items of the ZTPI Future scale. Further investigation is needed in this respect. In addition, the non-significant relationship between Past Negative and anxiety, as well as between Present Fatalistic and anxiety could be a result of the measurement tool we have used to assess anxiety. The high predictability of DBTP on anxiety and perceived level of stress can inform therapeutic interventions which have the aim of altering problematic

time perspectives.

### **RELATIONSHIP OF STRESS, CANNABIS USE AND FIRST PSYCHOTIC EPISODE**

**Selakovic Mirjana, Kakavos Vasilis, Athanasiadou Foteini, Mitropoulos Georgios, Dikeos Dimitris, Giotakos Orestis**

**Aim:** To check if the interaction between cannabis use and stress induced by recruitment to the army is related to the emergence of first psychotic episode (FPE), we compared data on cannabis use between two groups of male patients, with FPE, a group of newly recruited soldiers (N=20) vs. a group of patients from public hospitals (N=20). All patients were of the same age (18-29 y.o.).

**Methods:** Cannabis use and its age of onset were assessed by taking of personal history. The use was considered as heavy frequent/when it occurred more than 50 times a year. Two groups were considered based on onset before or after 18 y.o.

Current status clinical examination provided information on basic clinical characteristics of psychotic episode including presence of any delusions, bizarre delusions, agitation/aggression, withdrawal, suicidal ideation. Statistical analysis was based on chi-square tests; significance was set at 0.05.

**Results:** 9/20 newly recruited patients with FPE reported cannabis use (which for 6 was heavy/frequent) vs. 13/20 general hospital patients with FPE (which for all was heavy/frequent). The difference between the two groups was statistically significant ( $p=0,025$ ) regarding use being more often heavy/ frequent among general hospital patients.

Delusions ( $p=0,025$ ) and suicidal ideation ( $p=0,035$ ) were more frequent among recruits than among general hospital patients. Agitation/aggression was associated with a history of cannabis use ( $p=0,018$ ). Bizarre delusions seemed also to be more frequent among cannabis users (they were reported 5/22 cannabis users vs. 1/18 non-users), but the difference was not statistically significant ( $p=0,130$ ).

**Conclusions:** Cannabis use frequency does not differ between general hospital patients with FPE and army recruits with FPE; there is an indication that it is more frequent and heavy among the former. Our hypothesis, that the interaction of being recruited to the army and cannabis use has a more negative impact on the onset of FPE than each one by itself is not supported. Stresses due to recruitment and cannabis use do not seem to interact in producing a stronger negative impact on the onset of FPE

than the impact that each condition has by itself.

Delusion and suicidal ideation are more frequent in the group of recruits vs. general hospital FPE patients, probably because of the inability of recruits to adapt quickly to a stress life situation, such as the service in army. Suicidal ideation is more frequent among army recruits who were substance users.

Cannabis use seems to influence the kind and frequency of FPE symptoms.

### **SOCIOECONOMIC FACTORS AND RELATED PARAMETERS IN HELLENIC ARMY STAFF**

**Athanasiadou Fotini, Voucliaris Nectarios, Shmanthrakhs Dimitrios, Stasini Aikaterini, Stavridou Androniki, Giotakos Orestis**

**Introduction:** Studies show that socio-economic factors such as economic recession, declining wages, debt or disruption of family life, which found in conditions of economic recession, seems to be related to the emergence of psychopathology (Economou et al., 2012).

**Aim:** The present study was designed to investigate the related parameters between socioeconomic factors and psychopathology occurrence in soldiers and military officers.

**Material and Method:** The study was conducted in the Military Hospital for Special Diseases 414 (SNEN). The survey included 663 army soldiers and officers, who visited the outpatient psychiatry and psychiatric clinic of 414 SNEN, 94.5% men and 5.5% women, with a higher percentage in the ages 18-44 years, during January and September 2015. The 633 participants were assessed through a completion of the Pre-Assessment Critical Indices Screening Questionnaire, PA-CISQ (Triantafylou & Giotakos), after having been informed that their participation was voluntary and anonymous.

**Results:** After analyzing the variance in terms of monthly income, revealed that low income affects significantly the appearance of disorder schizophrenic spectrum, panic disorder, agoraphobia symptoms, generalized anxiety disorder, obsessive compulsive disorder, social phobia, suicidal ideation, the hypomanic symptoms, depressive disorder, the enactment, substance use, physical problems and eating disorders ( $p < .001$ ), while it seems not to affect the appearance of alcoholism. The Pearson correlation analysis revealed a high degree of positive correlation between stress and life events with the index depression

and low positive correlation with outstanding loans and debts

**Conclusions:** It appears that confidence in a supportive context (family, friends, colleagues, health services) has a positive effect in reducing incidence of all psychopathological behaviors. It has been observed that there is a direct proportional relationship between stress and depression, so every time there is an increase between stress and debts, respectively increases depression. The linear regression analysis revealed that the loan default and life events are powerful predictors of developing depression and anxiety. They provide 32% of the variability of the total score.

### **SUTTON NEVUS: A RARE LESION MIMICKING MELANOMA OR LYMPHOMA**

**Avraam Konstantinos, Zacharis Evangelos, Almpanis Zannis, Chaleplidis Nikolaos, Tsantopoulos Margaritis**

**Aim:** To report a case of a Sutton nevus (also known as "Leukoderma acquisitum centrifugum," "Perinevoid vitiligo," and "Halo nevus") and to emphasize the importance of its correct diagnosis.

**Material/Methods:** A 27 years-old female patient with a disease-free medical history underwent a biopsy of the back skin in order to excise a round-shaped brownish mass 0.4 cm in the anatomic area for the past ten years. The surgical specimen was fixed in formalin, the samples were embedded in paraffin blocks and histologic sections were taken and stain with hematoxylin-eosin.

**Results:** Histopathologic examination revealed a nevus composed of residual melanocytes with heavy infiltration by lymphocytes and histiocytes that destroy pigment containing cells. Fibrosis did not observed.

These findings suggested the diagnosis of a Sutton nevus.

**Conclusion:** Sutton nevus represents an unusual benign type of nevus surrounded by zone of hypopigmented skin usually located at the back or less common at the head due to regression caused by cell mediated immunity, or less commonly humoral immunity or granulomatous inflammation. It is an uncommon lesion concerning 1% of population before adulthood with no racial or gender predilection and may be associated to Turner syndrome. Pathologists should be diagnose this entity with great caution and try not to misdiagnose it with lymphoma or melanoma.

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## **LANGERHANS CELL HISTIOCYTOSIS: AN UNUSUAL AND RARE PRESENTATION OF ORAL MANIFESTATIONS (2 CASE REPORTS)**

**Bompou Panagiota, Simopoulou Vicky, Tselkas Orestis**

Introduction: Langerhans cell histiocytosis (LCH) is an uncommon disease due to the abnormal proliferation of immature dendritic cells (histiocytes). The pathogenesis is yet unknown, although trauma, viral or toxic agents have been implicated. Manifestation of the disease in the oral mucosa and mandible is extremely rare, diagnosed by its specific macroscopic and microscopic appearance: rapidly increasing lesions with hard limits.

Aim: To emphasize the importance of accurate diagnosis of LCH in the further treatment of these patients. To present two extremely unusual occurrences of LCH in the oral cavity of two adult patients who were admitted to the Maxillofacial Surgical Department of the Military Hospital of Athens.

Materials and methodology: Two patients presented to the Maxillofacial Clinic with pain in the left mandible and teeth mobility in the area. Clinical examination was inconclusive. Appropriate investigations were carried out with full blood count, radiological imaging biopsy and histological analysis.

Results: LCH was diagnosed in both patients and was managed successfully with surgical removal. Through the examinations, lesions in the lungs were identified in the chest radiographs in both patients, a life-threatening situation that was immediately referred to the respiratory physician.

Conclusions: The diagnosis of Langerhans cells histiocytosis is performed by a combination of clinical and histopathological examinations. The presentation of the disease exclusively in the oral cavity is a unique and relatively recently localized entity with unclear etiology, pathogenesis and treatment. The importance of differential diagnosis and thorough examination can lead not only to the diagnosis of LCH, but also to other unknown life-threatening situations.

## **THE PREVALENCE OF KNEE OSTEOARTHRITIS IN 100 ATHLETICALLY ACTIVE MILITARY PERSONNEL (AGE 35-55)**

**Paxinos Odysseas, Karavasili Alexandra, Delimpasis Georgios, Stathi Afroditi**

Aim: To sonographically investigate the prevalence of knee

osteoarthritis in a group of athletically active male military personnel.

Material – Method: A group of 100 athletically active Greek military personnel 35 to 55 years old (mean age 49.60 SD± 5.9) were examined with ultrasound for knee OA and they were administered the Knee Injury and Osteoarthritis Outcome Score (KOOS) questionnaire.

Results: The prevalence of OA in this group was 33%. Femoral cartilage thickness and altered knee biomechanics were not related with the prevalence of OA ( $p=0.740$ ). Only Pain Score was increased in the self-administered KOOS questionnaire without any significant relation to the sonographic findings.

Conclusions: Diagnostic ultrasound is a valuable tool in detecting early knee OA lesions even before they get really symptomatic.

## **PHYSIOTHERAPY CENTRE IN A GREEK ARMY MARINE CORPS' BRIGADE**

**Pippas Christos, Arvanitakis Chrysostomos, Kolokotronis Vasileios, Basagiannis Christos, Zigras Filippos, Giannoglou Dimitrios**

Aim: Assessment of a pilot physiotherapy centre in a Greek Marine Corps military unit.

Material – Methods:

- 1) Operating period: Two (2) months (9/7/2015-11/9/2015)
- 2) Material: Treatment table, electrotherapy equipment, taping equipment, elastic bandages, massage oil, cold therapy packs, treatment gel
- 3) Treatment methods: Massage, kinesiotherapy, functional restoration, ballistic/continuous/hold-relax stretching, sport rehabilitation, electrotherapy, cryotherapy, mobilization and manipulation of central and peripheral joints, traction, friction technique, ischemic pressure.

Results: Overall, fifty-five patients were treated (one citizen, forty soldiers, ten NCOs and four officers). Three of them were not subjected to therapy while twenty-two were referred to the hospital.

Sessions were held in the physiotherapy centre of 32 Marine Corps Brigade of Volos and patients had either musculoskeletal or neurological problems.

Injuries Cases	Shoulder	Elbow	Cervical	Lumbar	Hip	Tibia	Knee	Ankle
	5	2	6	11	2	1	25	3

The outcome was very positive, as all of the patients were

relieved from at least one of their symptoms. Some of the benefits of the treatment were: functional recovery, range of motion improvement, pain reduction or deletion, reduction of muscle spasm.

Conclusions: Our results indicate that physiotherapy centers in large military units are useful as they prove to be an effective and reliable solution for musculoskeletal and neurological injuries' restoration, and help to save money and time.

### **NONSYSTEMIC AND SYSTEMIC VASCULITIC NEUROPATHY: A CLINICOPATHOLOGICAL STUDY OF 72 CASES**

**Bougea A, Giatas K, Gerakoulis E Papadimas P, Papadopoulos K, Anagnostou E, Kararizou E**

Aim: Vasculitis of the peripheral nervous system (PNS) occurs rarely either in the context of systemic vasculitis or isolated (non-systemic vasculitic neuropathy - NSVN). This is the first large prospective study which aims to investigate the clinical, and pathological features of both systemic and non-systemic vasculitic neuropathy in order to establish the clinical manifestations and to promote the earlier diagnosis of the syndrome.

Material – Method: Biopsies were selected from over 855 sural nerve biopsies performed at the Section of Neuropathology, Neurological Clinic of Athens University Hospital between 1985 and 2005 and were followed up until 2014. The diagnosis of vasculitis was based on established clinicopathological criteria. Complete laboratory, clinical, electrophysiological, and pathological studies were performed in all cases.

Results: Nerve biopsies of 22 (2.5 %) patients were diagnosed as NSVN. Systemic vasculitis (5.8%) included: 15 rheumatoid arthritis, 9 Churg-Strauss syndrome, 7 cryoglobulinemic vasculitis, 7 Systemic lupus erythematosus, 5 Sjogren disease, 3 polyarteritis nodosa, 2 Behcet's disease, 1 Crest Ankylosing spondylitis. The pathological features were vasculitis and predominant axonal degeneration with a varying pattern of myelinated fiber loss. The vasculitic changes were found mainly in small epineural blood vessels. Mononeuritis multiplex and distal symmetrical sensorimotor neuropathy were equally frequent.

Conclusions: Although less common than systemic vasculitis NSVN should be suspected in a case of unexplained polyneuropathy without evidence of systemic involvement. Clinical and neurophysiological studies are essential for the

detection of nerve involvement, but the specific diagnosis of NSVN may be missed unless a biopsy is performed.

### **THE IMPACT OF PROSTATE CANCER ON THE PATIENT'S QUALITY OF LIFE. A HOLISTIC APPRAISAL OF DATA EXTRACTED FROM A TERTIARY CENTER**

**Malioris Ap, Gkekas Ch., Kalyvas Vas., Papathanasiou Mich**

Aim: The physical consequences of prostate cancer are adequately studied and published. It is a simple task of observing and reporting the symptoms. Our purpose is to study beyond the symptom itself and assess the impact of the disease in general.

Materials and methods: We used the Esper's questionnaire validated and translated into Greek. It consists of five block of questions which holistically assess the physical, psychological and social implications of prostate cancer. The questionnaire was addressed to a total of 120 patients. 70 patients were allocated in the radical prostatectomy group, 30 patients were in the active surveillance group and 20 in the radiotherapy group.

Results: The answers were cross-checked. 83% of the patients in the radical prostatectomy group could live up to their family role spending the least time bed rested. On the other hand, those in the radiotherapy group objectively experienced much less support from friends with 50% of them reporting a "weak" support and the rest 50% "no support at all". This can barely compare to the 88.6% of those in the radical prostatectomy group feeling "enough" or even "very much" supported. The overall 6.7% of the 120 patients who reported "a little" or "not at all" in the family support question were all married.

Conclusion: Our conclusions implicate that even in patients physically suitable for a specific treatment there are additional variables that need to be addressed. The most impaired patients were those on radiotherapy tending to be the least physically active, the most pessimistic and the least satisfied to the treatment. This is to an extent objectively perceived as such due to the physical botherness that radiotherapy induces.

### **POTABA INDUCED DRESS SYNDROME. A RARE MEDICAL ENTITY IN THE UROLOGICAL PRACTICE**

**Kalyvas Vas, Gkekas Ch., Malioris Ap., Papathanasiou Mich.**

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Aim: DRESS SYNDROME (DRUG INDUCED EOSINOPHILIA WITH SYSTEMIC SYMPTOMS) is a rare drug induced hypersensitivity reaction initially linked to antiepileptic drugs, sulfonamides and antibiotics. So far only six cases have been reported linking POTABA to DRESS. We present a case of a 45 year old man with Dress aiming to add to the growing body of evidence related to the disease.

Materials and methods: A 45 year old male suffering from Peyronie's disease was prescribed POTABA 9 gr/day. His disease appeared to be of early stage with fluctuating shaft angulation, pain and no calcifications. After 8 weeks off administration he developed fever and a generalized, itching, morbilliform rash which gradually went diffuse with signs of jaundice.

Results: The patient admitted to the ER and examination revealed a diffuse erythema covering the trunk, upper and lower extremities equaling to more than 50% of BSA, peripheral eosinophilia, jaundice and liver injury (10 fold increase of liver enzymes). Serologic examination for Hep A, B, C viruses, CMV and EBV was negative. The patient's past history was unremarkable and a diagnosis of drug induced hypersensitivity reaction with solitary visceral involvement was established in the absence of other pathology. 9 weeks after discontinuation of POTABA he completely recovered.

Conclusion: POTABA induced DRESS syndrome is a drug related complication which is not due to a direct cytotoxic effect of the drug, which is known to happen occasionally, but an antigenic property of the PABA moiety of the drug which triggers a systemic autoimmune response. This response could involve several solid organ and has up to 5 - 10% mortality.

### **SUBINGUINAL VARICOCELECTOMY WITH THE USE OF INTRAOPERATIVE MINI DOPPLER. A RELIABLE ALTERNATIVE TO MICROSURGERY**

**Gkekas Ch., Malioris Ap., Kalyvas Vas., Papathanasiou Mich.**

Aim: The gold standard for the operative treatment of varicocele is the microsurgical subinguinalvaricocelectomy which spares the testicular artery and lymph vessels. Nevertheless it requires a surgical microscope which is not always available. We present a feasible alternative with the use of a mini Doppler stylus device overcoming the drawback of increased cost.

Materials and methods: Between January and December 2014, 20 patients underwent subinguinalvaricocelectomy with the use of a 12MHz mini Doppler (HadecoMinidop).

The spermatic cord was exposed through a 1.5-2cm subinguinal incision and the pampiniform plexus degloved from its fascial layer. With the use of the mini Doppler the testicular artery was initially recognized and spared. The small venous branches of the pampiniform plexus were individually ligated and after every step the testicular artery was checked for pulsation with the mini Doppler. In 9 patients local instillations of papaverine were additionally applied. By combining the use of mini Doppler to the classic Marmarvaricocelectomy we enjoyed the confidence and safety that only microsurgery can offer. Upon completion of the operation the testicular artery was finally checked along with the ipsilateral testis for pulsations.

Results: Mean operative time was 48min+ 8 mins. No major perioperative complications occurred. The follow up period is 12 months and we had no long term complications, namely testicular atrophy. We had 2 cases of persistent – recurrent varicocele at 12 months and 1 case of hydrocele.

Conclusion: The intraoperative use of mini Doppler offers a significant advantage during subinguinalvaricocelectomy and equals in terms of safety the liability of microsurgery. It is a reasonable alternative in cases where the operative microscope is not available.

### **BRUCELLA SPECIES MISIDENTIFIED AS BERGEYELLA ZOOHELICUM**

**Karapsias Stergios, Sgourou Agathi**

Aim: To report misidentification of Brucella species as Bergeyella zoohelicum by a common bacterial identification system.

Material and Methods: In 2013, three patients with symptoms of brucellosis (fatigue, fever >39°C, painful joints of hands, knees and spine) were admitted to pathological wards of 251 General Air Force Hospital, Athens, Greece. Three sets of blood culture samples were taken from each patient. All blood samples turned out to be positive within 48 hours of incubation (Bactec, Becton Dickinson) and then were inoculated onto Petri dishes. Microbe colonies were observed only onto blood and chocolate agar dishes. Gram stain, oxidase testing, brucella agglutinating methods and biochemical identification of bacterial strains followed.

Results: All isolates were oxidase-positive Gram negative bacteria and revealed positive reactions when tested with brucella agglutinating sera (Remel), both M (Brucella melitensis, title: 1/1280) and A (Brucella abortus, title: 1/40). Wright serum tests were positive in all three patients (positive titles: 1/640 up to 1/5120). Yet, all strains were

biochemically identified as *Bergeyella zoohelcum* (MicroScan WalkAway, Siemens). Diagnosis of brucellosis (*Brucella melitensis*) was established upon clinical evidence and laboratory results, without taking into account *Bergeyella zoohelcum* identification. Patients were treated with brucellosis antibiotic therapy (rifampicin, tetracycline, gentamycin). Six months later, they fully recovered from illness.

Conclusions: *Brucella* species may be misidentified as *Bergeyella zoohelcum* using MicroScan WalkAway. Thus, diagnosis of brucellosis should be based upon clinical evidence and basic laboratory results such as Wright test, positive blood cultures and evaluation of colonies (Gram stain, oxidase test, brucella agglutinating sera).

### INCIDENCE OF MULTIDRUG - RESISTANT *RALSTONIA PICKETTII*

#### Karapsias Stergios, Sgourou Agathi

Aim: To observe the occurrence of *Ralstonia pickettii*, a non-fermenting opportunistic Gram negative bacterium, from clinical samples.

Material and Methods: *R. pickettii* had been investigated at 251 General Air Force Hospital, Athens, Greece for three years (2012-2014). All strains, detected among specimens of hospitalized patients, were registered. Biochemical identification and susceptibility testing of isolates followed (MicroScan WalkAway, Siemens).

Results: Three *R. pickettii* stains were isolated from blood cultures within a three-month period (March to May, 2013). *R. pickettii* antibiotic susceptibility proved to be almost the same in all strains (Table1).

Table 1. Antibiotic susceptibility of *R. pickettii* strains.

Antibiotic agent	Strain 1	Strain 2	Strain 3	Susceptibility
Amikacin	R	R	R	100% R
Aztreonam	R	R	R	100% R
Ceftazidime	R	R	R	100% R
Ciprofloxacin	S	S	S	100% S
Colistin	R	R	R	100% R
Gentamycin	R	R	R	100% R
Imipenem	I	I	I	0% S
Levofloxacin	S	S	S	100% S
Meropenem	I	R	I	0% S
Piperacillin/ tazobactam	S	S	S	100% S
Ticarcillin	R	R	R	100% R
Tigecycline	S	S	S	100% S
Trimethoprim/ Sulfamethoxazole	S	S	S	100% S

S=Sensitive, I=Intermediate, R=Resistant.

Conclusions: Multidrug-resistance, including aminoglycosides, aztreonam, carbapenems and colistin, rises as a problem in therapeutics of *R. pickettii*. Thus, *R. pickettii* should be treated on the basis of susceptibility testing.

### A META-ANALYSIS OF STAPHYLOCOCCUS RESISTANCE CONCERNING METHICILLIN, ERYTHROMYCIN AND CLINDAMYCIN

#### Karapsias Stergios, Sgourou Agathi

Aim: To evaluate the epidemiological profile of staphylococcal infections concerning methicillin, erythromycin and clindamycin resistance during a 13-year period.

Material and Methods: The study comprised all *Staphylococcus* strains derived among the inpatients of 251 General Air Force Hospital in Athens, Greece, from January 1995 to December 2007. *Staphylococcus aureus* and Coagulase Negative *Staphylococci* (CoNS) had been isolated from all clinical specimens. Oxacillin was used to confirm methicillin-resistance, which represents resistance against  $\beta$ -lactamic agents. Statistical process of data was executed using  $\chi^2$  criterion.

Results: A sum of 2570 strains was registered during 13 years. The majority of 1688 strains were identified as CoNS (65.68%) while the remainder of 882 strains was defined as *S. aureus* (34.32%). Mean annual resistance-percentages of *S. aureus* concerning methicillin, erythromycin and clindamycin were calculated as 37.15% (C.I. 95%, 30.65% - 43.65%, Methicillin Resistant *S. aureus*, MRSA), 36.15% (C.I. 95%, 30.57% - 41.74%) and 30.85% (C.I. 95%, 23.92% - 37.78%), respectively. CoNS mean annual resistance-percentages concerning methicillin, erythromycin and clindamycin were estimated as 65.69% (C.I. 95%, 61.20% - 70.18%, Methicillin Resistance CoNS, MR-CoNS), 72.62% (C.I. 95%, 67.16% - 78.07%) and 61.23% (C.I. 95%, 55.52% - 66.95%), respectively. Methicillin, erythromycin and clindamycin staphylococcal resistances were proved to be statistically associated with CoNS ( $p < 0.001$ ).

Conclusions: The study confirms recent reports suggesting CoNS to be a genetical tank responsible for the enrichment of *S. aureus* with pathogenetic abilities such as antibiotic resistance. Thus, *S. aureus* and CoNS may share parallel evolutionary pathways by exchanging resistance genes concerning  $\beta$ -lactamic agents (*mecA*), macrolides and lincosamides (*iMLSb*).

## MRSA RESISTANCE CONCERNING VANCOMYCIN, TEICOPLANIN, DAPTOMYCIN AND LINEZOLID

Karapsias Stergios, Sgourou Agathi

**Aim:** To report methicillin-resistant *Staphylococcus aureus* (MRSA) resistance against vancomycin, teicoplanin, daptomycin and linezolid.

**Material and Methods:** The study took place at 251 General Air Force Hospital in Athens, Greece, where MRSA strains were registered within a three-year period (2011-2013). All clinical specimens had been under investigation. MRSA isolates were certified via biochemical identification and susceptibility testing (MicroScan WalkAway, Siemens). Statistical process of data was executed using  $\chi^2$  criterion.

**Results:** A sum of 82 MRSA strains was isolated. Resistance levels of MRSA against selected antibiotics were estimated as: 0% teicoplanin, 0% vancomycin (7.32% intermediate), 0% daptomycin (8.54% intermediate) and 3.66% linezolid. MRSA susceptibility phenotypes are exhibited in Table 1.

Table 1. MRSA susceptibility phenotypes.

Vancomycin MIC ( $\mu\text{g/ml}$ )	Teicoplanin MIC ( $\mu\text{g/ml}$ )	Daptomycin MIC ( $\mu\text{g/ml}$ )	Linezolid MIC ( $\mu\text{g/ml}$ )	Sum of strains (%)
<1 S	$\leq 1$ S	$\leq 1$ S	$\leq 2$ S	34 (41.46)
<1 S	$\leq 1$ S	4 I	>4 R	1 (1.22)
2 S	$\leq 1$ S	$\leq 1$ S	$\leq 2$ S	37 (45.12)
2 S	$\leq 1$ S	4 I	$\leq 2$ S	3 (3.66)
2 S	$\leq 1$ S	4 I	>4 R	1 (1.22)
4 I	$\leq 1$ S	$\leq 1$ S	4 S	4 (4.88)
4 I	2 S	4 I	4 S	1 (1.22)
4 I	2 S	4 I	>4 R	1 (1.22)
S=Sensitive, I=Intermediate, R=Resistant.				82 (100)

**Conclusions:** Half MRSA strains (41/82) presented elevated MIC levels concerning vancomycin (2  $\mu\text{g/ml}$ ). No resistance to teicoplanin was revealed. Linezolid-resistance proved to be statistically associated with daptomycin-intermediate resistance ( $p < 0.001$ ).

## PERIOPERATIVE HEALTH PROFESSIONALS' ATTITUDE TOWARDS MANAGEMENT IN OPERATING ROOM

Konstantinia Karathanasi, Panagiotis Prezerakos, Maria Malliarou, Ioannis Koutelekos, Paulos Sarafis

**Aim:** The aim of this study is to investigate perioperative health professionals' attitude towards surgical suite management.

**Material – Method:** The study was conducted on a convenience sample of health professionals working in OR environment. For the collection of data an anonymous self-

completed questionnaire was developed in order to collect information about current operating room management as well as opinions and expectations about OR Management. Statistical analysis was carried out with SPSS 20 statistical package.

**Results:** 1615 questionnaires were issued, of which 982 were completed (r.r. = 60.8%) from 40 hospitals with minimum of 5 operating rooms (September-November 2014). 69.8% of the respondents believed that a master in management is an essential qualification for the OR Manager since 72% of his/her most important responsibilities is improving the quality of care. 78.4% also believed that OR Manager should have an authority over the perioperative healthcare professionals in order to successfully run the OR. Over 4/5 of the sample agreed that an OR Manager would definitely positively contribute to better organization (92.5%), efficacy (90.2%), functioning (85.4%) and also in better collaboration between OR staff (88.4%). There was also a different approach between doctors and nurses about who should be responsible for the daily management while there was a positive correlation of OR Manager increased perception score to the reduced rating of the OR functioning ( $b = -0.05$ ,  $p = 0.003$ ).

**Conclusions:** Successful management of the OR requires an OR Manager in an organizational structure, with effective and important role. The specialty or profession is of secondary importance.

## EFFICACY AND SAFETY OF TOCILIZUMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS

Panagopoulos Panagiotis, Katsifis Gkikas

**Purpose:** Tocilizumab (TCZ), a humanized monoclonal antibody against the interleukin-6 receptor (IL-6R), has been approved for the treatment of rheumatoid arthritis (RA). The aim of this study was to evaluate the safety and efficacy of intravenous tocilizumab in every day clinical practice.

**Methods:** Patients were prospectively monitored for disease activity, physical function and adverse events (AEs). ACR 20, 50 and 70 responses, Disease Activity Score 28 (DAS28) and physical function (Health Assessment Questionnaire, HAQ) were evaluated at 24 months. Safety was assessed at each scheduled visit day.

**Results:** Twenty-three (26) patients with active RA received

TCZ 8 mg/kg every 4 weeks. Baseline characteristics were: age: 56.5±2.4 years, disease duration: 14.2±2.1 years, HAQ: 1.8±0.1, DAS28: 6.1±0.5, CRP: 17.5±6.0, swollen joints: 12.1±2.4 and tender joints: 10.4±1.8. About 63% of patients had received biologic drug(s) prior to TCZ. Methotrexate (MTX) and corticosteroids were used concomitantly in 85.0% and 70.0% of patients, respectively. At 12 months ACR 20, ACR 50 and ACR 70 responses were 64%, 28% and 20%, respectively. 18% of the patients achieved DAS 28-defined remission (DAS28 < 2.6) and 65% clinically meaningful HAQ responses (reduction of ≥ 0.3 units). Tocilizumab was generally safe and well tolerated. The most common adverse events were infections of the respiratory and urogenital tract.

Conclusion: Tocilizumab induced clinically relevant improvement in disease activity and physical function and had acceptable safety over 24 months in patients with an inadequate response to DMARDs and/or anti-TNF $\alpha$  therapy. Treatment with tocilizumab is an effective option in clinical practice.

### THE CURRENT TRENDS IN OPHTHALMIC OPERATIONS - A 2015 REVIEW

**Klados Nektarios, Kourkoutas Dimitrios, Georgiou Iordanis, Xanthopoulou Paraskevi, Tsartsara Aikaterini, Lygeros Michail-Nikolaos**

Aim: The purpose of this study was to observe trends in ophthalmic operations performed during the period of January to December 2015.

Material-Methods: Our Clinic's special database was analysed.

Results: The vast majority of ophthalmic operations were phacoemulsification with PC-IOL implantation. Oculoplastic surgeries were the next most common group followed by glaucoma operations.

Conclusion: Phacoemulsification remains the most common ophthalmic operation in our Clinic.

### EPIDEMIOLOGY OF AMETROPIA OF GREEK ARMY RECRUITS

**Klados Nektarios, Kourkoutas Dimitrios, Georgiou Iordanis, Xanthopoulou Paraskevi, Lygeros Michail-Nikolaos**

Aim: To determine the prevalence of low and mid-level refractive errors in Greek military conscripts with perfect vision.

Material - Methods: A retrospective review of ophthalmic examinations for entry to the military service was performed. The health examination data of the candidates that are saved in the Informatics Research Office of 401 General Army Hospital of Athens was used. The data of the candidates examined between 1 January 2015 and 31 December 2015 were evaluated. The total number of candidates was 2467. The ametropic recruits with perfect vision were 1572.

Results: The retrospective epidemiological evaluation revealed that myopia or myopic astigmatism lower than 4.50 DSE was the most frequent refractive error counted participants (71%). Ametropia between 4.50 and 8.00 DSE was the next most common diagnosis counted 396 participants (25%) whereas ametropia 8.00-12.00 DSE counted 64 participants (4%).

Conclusion: The vast majority of ametropic recruits with perfect vision are simple myopes or myopic astigmats.

### ULTRASTRUCTURAL ALTERNATIONS IN THE FEMORAL NERVE IN WISTAR RATS AFTER ALENDRONATE ADMINISTRATION PER OS

**Kymioni Vasiliki-Maria, Gogadis Aristeidis, Dietrich Eva-Maria, Papamitsoy Theodora, Sioga Antonia, Koimitzis Georgios, Neloum Esthelle**

PURPOSE: The femoral nerve inflammation is frequently associated with an underlying malignancy or infections. Bisphosphonate (BP) uptake has been recently identified as a new etiology for the syndrome. The mechanism that lies behind this neuropathy and the involvement of BPs has not been elucidated, yet. We hypothesize that BPs, taken per os, are capable of producing degenerative changes to the femoral nerve.

MATERIALS: 15 female Wistar rats, 12-month old, weighing approximately 500 gr., were used in the experiment.

METHOD: The animals were randomly allocated into two groups: Group A, the experimental group that consisted of 10 animals that were given Alendronate per os and Group B, the control group that also consisted of 5 animals, which were given normal saline. The duration was 13 weeks. The samples were observed under a Transmission Electron Microscope.

RESULTS: Degenerative changes were defined as:

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vacuolization of the myelin sheath, detachment of the axon, local thickening and/or disruption of the myelin sheath. Local myelin thickening and detachment of the axon was found in both groups. Restricted areas of disorganization of myelin with tendency to protrude in the inner layers were also noticed. Curves of sheath were also formed. Myelin also invade in the axons.

**CONCLUSIONS:** Possible pathophysiological mechanisms causatively related to the histological alterations are: 1. alterations to the blood vessels of the nerve, 2. toxicity effects on Schwann and neuronal cells, or 3. changes to the innate or acquired immunity. The last may, probably, result from the presence of microbial films that cause cytokine production. The hypothesis provides scientific evidence for the presence of degenerative changes after BPs administration and helps in understanding of possible pathophysiological mechanisms.

### **ANXIETY OF GREEK ARMED FORCES RETIRED PERSONNEL. A RESEARCH STUDY**

**Maria Malliarou, Kypraiou, Pavlos Sarafis, Evaggelia Kotrotsiou**

**Aim:** Retirement is a turning point in human life, a loss with practical and symbolic dimensions. The aim of this study was to identify anxiety levels of Greek Armed Forces retired personnel.

**Material – Method:** Participants were 507 retired Greek Armed forces personnel (93.7% males and 5.3% females). Anxiety symptomatology was measured using Trait Anxiety Inventory while a section with demographics was also included. The State-Trait Anxiety Inventory (STAI) consists of 40 self-report items pertaining to anxiety affect and distinguishes between a person's state and trait anxiety levels. The A-Trait and A-State scales comprise 20 items each, scored on a 4-point Likert-type response scale. Scores range from 20 to 80, with higher scores suggesting greater levels of anxiety. Low scores suggest mild anxiety, median scores suggest moderate anxiety, while high scores suggest severe anxiety.

**Results:** Male 94.6%, Female 5.4% with an average retirement age of 49.1 years old. Retirement led the 81.3% of respondents to a significant loss of family income which affected their quality of life of 79.3% of those. Retirement decision caused by unfriendly or stressful working environment associated with significantly more symptoms of anxiety. Career satisfaction, satisfactory lifestyle change and keeping fit are connected to lower scores on the scale

of anxiety. Inclusion of new activities, support from the family environment and good physical and mental health were related to less both temporary and permanent stress. Systematic alcohol consumption, obesity and health problems were associated with more anxiety symptoms.

**Conclusions:** The stressful working conditions, family problems, diseases, high body mass index (BMI), frequent alcohol consumption, smoking and dissatisfaction related to lifestyle changes have statistically significant effect on symptoms of anxiety. Military retirees can benefit with higher retirement satisfaction and better adjustment to civilian life if a retirement planning took place.

### **DEPRESSION AND QUALITY OF LIFE OF GREEK ARMED FORCES RETIRED PERSONNEL**

**Maria Malliarou, Kypraiou, Sophia Zyga, Maria Tsironi, Pavlos Sarafis**

**Aim:** The aim of this study was to measure quality of life of Greek Armed Forces retired personnel.

**Material – Method:** Participants were 507 retired Greek Armed forces personnel (93.7% males and 5.3% females). Sf-12 questionnaire was used to measure quality of life, CES-D scale was used to measure depressive symptomatology, while a section with demographics was also included. Sf-12 questionnaire uses just 12 questions that are summarized into two summary scores, the Mental Component Summary (MCS) and Physical Component Summary (PCS) scales. The two scores range between 0 and 100, with increasing values equating to better health. Participant with total score of 16 or higher in CES –D scale is considered depressed.

**Results:** Male 94.6%, Female 5.4% with an average retirement age of 49.1 years old. Half of the participants who smoked maintained smoking habit while 77.8% of participants who consumed alcohol regularly maintained habit after retirement. 64.0% of participants maintained at a same level using health services after retirement. 38.6% of veterans did nothing to prepare for retirement. Retirement led the 81.3% of respondents to a significant loss of family income which affected their quality of life of 79.3% of those. Means scores for the PCS and MCS scales have been found to be 54.43 (SD=7.35) and 50.50 (SD=9.54). Mean value of CES – D was found to be 8.54 (SD=9.09). There was a significant negative correlation between CES – D and quality of life dimensions. After multivariate linear regression analysis, having as dependent depression scores of participants and as independent

demographic and working factors and the scores on dimensions of quality of life it was found that stressful working conditions as a reason for retirement, veteran's satisfaction by their lifestyle change and PCS and MCS scales were found to be independently associated with depression scores.

Conclusions: Better physical and mental health and supportive family environment can be associated with better quality of life and lower levels of depression.

### **GREEK MILITARY REGISTERED NURSES' CULTURAL COMPETENCE**

**Aikaterini Oikonomou, Stella Nika, Maria Malliarou**

Aim: The purpose of this study is to investigate the cultural competence of the military nursing personnel in Greece.

Material-method: The study is a descriptive cross-sectional study with synchronical design. The sample of the study consisted of 127 military registered nurses (RR: 98%) who completed an anonymous questionnaire. The tool used in the study was «Transcultural Self-Efficacy Tool (TSET)» of Marianne R. Jeffreys (2006) and it validated in Greek culture by Sarafis et al. Transcultural Self-Efficacy Tool (TSET) was designed as a diagnostic tool to measure and evaluate nurses' transcultural self-efficacy perceptions for performing general transcultural nursing skills among diverse client populations. The statistical analysis was processed through the Statistical Package of Social Sciences, SPSS 17.0.

Results: Reliability analysis of cultural knowledge, understanding, skills/competences was found measuring Cronbach's  $\alpha > 0.98$ . 81.1% of military nurses were female and the 43.3% of the sample was 41-50 years old. 14.2% had participated in postgraduate programs of abroad and 18.1% had worked abroad. 32.3% of military RN's possess a Master degree. 7.1% reported "every day" contact with patients of different culture, while the 66.1% reported "sometimes per year". Those who had studied and worked abroad showed greater levels of cultural knowledge and skills respectively, while officer nurses who had been trained in transcultural nursing showed greater levels of understanding the need for taking in mind different cultural aspects in care. Those, who seem to be culturally sensitive and consider cultural competence important, seem to have more cultural skills.

Conclusions: Improving military nurses' cultural competence could improve quality of health care and patient's satisfaction and contribute to positive health

outcomes.

### **PROS AND CONS OF USING DRG'S TO CUT HOSPITAL COSTS**

**Maria Malliarou, Eirini Tzourtzoukli, Konstantinia Karathanasi, Panagiotis Prezerakos**

Aim: A modern compensation mechanism and control of hospital costs, last decades used in modern health systems with individual variations, is the funding under similar diagnostic groups (Diagnosis Related Groups, DRGs). The aim of this study was to show pros and cons of using DRGs in the process of trying to cut hospital costs.

Material – Method: Literature review was conducted on Pubmed Google Scholar and for articles (10 years old) about the theme using as key words: nursing, DRG's, cost.

Results: Diagnosis Related Groups (DRG) is a system classifying in-hospital patient cases into categories with similar resource use. The grouping is based on diagnoses, procedures performed, age, sex and status at discharge. In European countries using DRG's it is believed that DRGs have helped with homogenizing care procedures and have improved inpatient care organization however it is challenging to integrate in the payment system an implicit set of clinical guidelines defining how to treat a homogeneous group of patients. There is evidence that the cost containment pressure created by the introduction of DRG-based payment in USA could have an adverse impact on patient outcomes in terms of readmission and mortality rates. Different patient groups can also experience various impacts, depending on the price incentives provided by different DRGs.

Conclusions: DRGs tend to promote cost transparency, and make it easier to determine which patients are likely to use more or less healthcare resources; however the pressure for cost-containment created by the DRG-based payment system can also adversely affect care quality. The pressure for efficiency introduced by DRG-based payment systems might help to improve organization of care, accelerate the adoption of technology, and hence improve quality or if not Particular attention is paid to ensure that high-severity groups are adequately accounted for in the DRG system, quality of care will be affected for these patients.

### **THE ROLE OF OXIDATIVE STRESS ON AMYLOID-LIKE PROTEIN FORMATION AND AORTIC VALVE**

## CALCIFICATION

Mamarelis Ioannis, Koutoulakis Emmanouil, Kotoulas Christophoros, Mamareli Vasiliki, Dritsa Vasiliki, Anastassopoulou Jane

**Background:** Calcification of aortic valve is a common abnormality leading to heart valve replacement, but the mechanism of calcium salts and fibril formation is not clear. The purpose of the present research is to investigate the mechanism and the role of amyloid-like protein formation on aortic valve calcification and stenosis during oxidative stress.

**Methodology:** Fourier Transform Infrared (FT-IR) spectroscopy and Scanning Electron Microscopy (SEM) were used to study the molecular structure of 54 calcified aortic valves from patients of 38-83 years old, presented with severe aortic stenosis and underwent aortic valve replacement under cardiopulmonary bypass.

**Results:** The high intensity bands of FT-IR in the region 3000-2800  $\text{cm}^{-1}$ , arising from the stretching vibration bands of  $\nu\text{CH}_3$  and  $\nu\text{CH}_2$  groups of membranes' lipids and phospholipids are related with increasing of lipophilic environment due to amyloid-like protein formation. From the shifts to lower frequencies of the characteristic absorption bands of Amide I and Amide II, it is resulting that the proteins do change their secondary structure from  $\alpha$ -helix to  $\beta$ -parallel and  $\beta$ -antiparallel sheets confirming the amyloid formation. SEM was used to evaluate the morphology and architecture of the sample surfaces. The formation of low biological hydroxyapatite ( $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$ ) and  $\text{CaHPO}_4$  was supported by XRD analysis.

**Conclusion:** The data showed that oxidative stress is one of the pathways of amyloid-like protein formation leading to aortic valve calcification mainly on the disulfide (S-S) cross-linking or branched sites of proteins. Moreover, SEM-EDAX and XRD data show substitution of  $\text{Ca}^{2+}$ -cations by  $\text{Mg}^{2+}$ -cations is leading to amorphous hydroxyapatite formation, preventing, thus, the aortic valve stenosis. It also suggests that treatment with magnesium salts maybe could avoid the calcification of aortic valves.

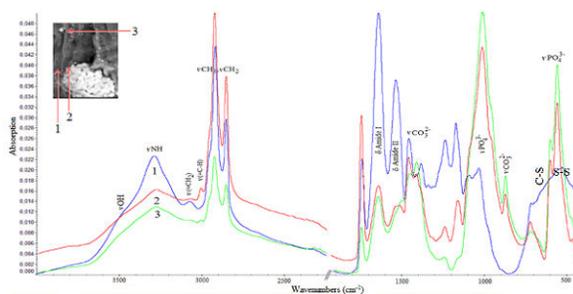


Figure 3. Representative Fourier transform infrared spectra of an aortic valve taken from the spots. 1, organic phase, 2 interface between organic and mineral phase and 3 individual mineral deposit.

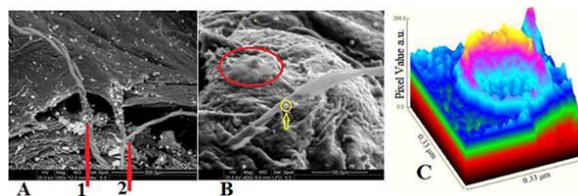


Figure 2. Scanning electron microscope images of morphology and architecture of calcified aortic valve. A; general morphology with minerals and fibrils. The arrows 1 and 2 show the fibril and protein branch-polymerization, respectively. (Scale 300  $\mu\text{m}$ , M200x); B; Clear view of misfolding proteins and aggregates. The red circle outlines the membrane inflammation. (Scale 100  $\mu\text{m}$ , M400x); C; Imaj analysis of an aggregate (yellow circle in B), showing the barrel configuration

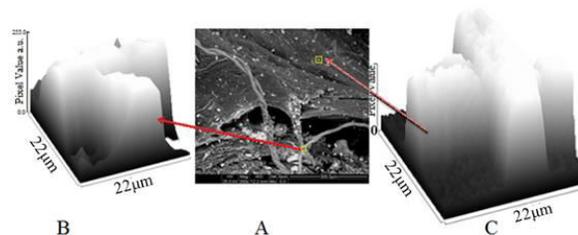


Figure 3. A; Scanning electron microscope morphology of calcified aortic valve. B; Imaj analysis of branched proteins and C; Imaj analysis of cross-linked proteins

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STUDY FOR THE PREVENTION OF CARDIOVASCULAR

## DISEASES IN THE STAFF OF HELLENIC NAVY

**Mastrokostopoulos Antonios, Roumpi Aikaterini, Bounas Pavlos, Sampani Anthi, Rigas Grigorios, Tsoukalos Grigorios, Kapiri Elpiniki, Emmanouil Georgios, Lampadakis Ioannis, Panagiotakos Demosthenes, Toutouzias Konstantinos, Kasotakis Emmanouil, Katsimagklis Georgios**

**Aim:** To reduce the burden of cardiovascular disease in the staff of Hellenic Navy, to identify new prognostic factors for cardiovascular diseases, to improve the quality of life in the staff of Hellenic Navy.

**Materials – Methods:** Our study population consists of all the naval personnel enlisted from 2015. After completing a consent form the subjects are evaluated in our Hospital and the following tests are performed:

1. Clinical examination
2. Questionnaire concerning medical history
3. Questionnaire for dietary habits
4. Zung DRS and STAI Questionnaire
5. IPAQ questionnaire for physical activity
6. Blood sample for testing
7. Carotid IMT
8. Carotid Microwave Radiometry (MR)

It is an ongoing study. We will every year enroll the new enlisted personnel, and we will have a re-evaluation every 5 years for a period of 15 years.

**Results:** We are still processing our data and we are willing to publish our data during the congress.

**Conclusions:** It is the first study in the Hellenic Navy that addresses this topic and the first with the collaboration of the 1st Department of Cardiology Athens Medical School and the Dept of Nutrition and Dietetics Harokopio University.

## CHANGE MANAGEMENT

**Matthaios Marios-Thomas**

**Aim:** Become familiar with some managerial theories, that may be useful to adapt smoothly to upcoming changes.

**Material – Methods:** Scientific literature. Content analysis.

**Results:** Those theories provide unique ways to understand and approach the implementation of innovations.

**Conclusions:** Any medical manager should be ready to deal

with the upcoming changes and be able to communicate them with the other personnel.

Change can be an opportunity for some or a threat and loss for others. The last decade and especially through the financial crisis we can hardly identify an agency or an organization that has not been in the urgent need for major changes (quality improvements). Technological and medical advancements, new laws and obligations, the changing needs of patients, further reducing of government expenses and also the human inner need for change and evolution push or pull health organizations and people to change and modify practices continually.

The concept of managing the change is to:

- Understand the culture of an organization.
- Identify the kind of changes.
- Create a vision and set new goals.
- Develop strategy and tactics.
- Communicate the change.
- Inspire and motivate.
- Coach and mentor.
- Stakeholder Analysis.
- Decision making.
- Risk management.
- Complete and anchor the change.
- Feedback and evaluate.
- Study why most attempts to change fail and what should be avoided.

Change Management is a dynamic, complex and challenging process and a 'one-size-fits-all' approach is probably ineffective. Each change event is different and also every organization has its own structure, culture and needs. Despite the diversity of approaches there are some common factors for delivering effective change. A structured approach to manage change (John Kotter's, McKinsey's and Lewin's models) may help us to understand why, when and how we will manage to change.

## “DEPRESSION AND FATIGUE IN MULTIPLE SCLEROSIS (MS)”

**Papadopoulou Athina, Efstathiou Vasiliki, Papadopoulou Athanasia, Gerasimoy Charilaos, Christos Christodoulou**

**AIM:** The literature review of depression and fatigue on patients with multiple sclerosis and the relationship between them.

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**MATERIAL AND METHODS:** The search was performed in electronic databases (Medline, Scopus, PsycINFO) using the keywords: multiple sclerosis, depression, fatigue.

**RESULTS:** Multiple sclerosis (MS) is a chronic inflammatory disease of the central nervous system, causing disability and other problems. It affects approximately 2.5 million people worldwide and is the most common cause of neurological disability in young and middle-aged people. Research has shown that almost one in two patients with multiple sclerosis will face depression in their lifetime. Psychological and psychiatric effects of the disease worsen the physical symptoms such as fatigue. Although fatigue is a very common symptom in patients with MS, its causes and mechanisms are poorly understood. Both depression and sleep problems of MS patients may worsen fatigue. Depression can also manifest with fatigue symptoms and thus many symptoms can be confused. Although fatigue can be attributed to depression and vice versa, their relationship has not been clarified completely. Several studies indicate the existence of fatigue on MS patients without depression or disability (EDSS), stressing the need to consider fatigue as a distinct MS symptom that is not explained by depression. However, when both are present, depression treatment appears to reduce fatigue.

**CONCLUSIONS:** Since both depression and fatigue coexist so often with MS, it is essential to further investigate their relationship in order to provide the appropriate treatment and help patients with MS to improve their quality of life.

### **“STRESS, COMBAT STRESS, PTSD: PREVENTION STRATEGIES IN THE MILITARY”**

**Papadopoulou Athina, Efstathiou Vasiliki, Gerasimoy Charilaos, Xygki Ioanna, Kalliora Maria, Efstathiou Elpida, Gaitanou Konstantina**

**AIM:** The literature review of the prevention strategies for stress, battle stress and PTSD in the Armed Forces.

**MATERIAL AND METHODS:** The search was performed in electronic databases (Medline, Scopus, PsycINFO) using the keywords: stress, combat stress, prevention strategies, PTSD, military.

**RESULTS:** Relevant research has shown that the stressors associated with the military environment and the military missions are many, thus often leading the Armed Forces staff to face extreme stress and disorders associated with it. The preventive strategies that have been implemented are based on personnel information, "psycho-education", cognitive restructuring, addressing the symptoms and

preventing possible relapses. Specifically, the primary prevention of Battle stress and traumatic disorder appears to include a careful selection of personnel, awareness programs as well as "psychoeducation" of those who will potentially be exposed to traumatic events. Secondary prevention includes psychological techniques such as Psychological Debriefing, immediately following a traumatic event.

Stress management is applied at three levels:

1st Level → self-help measures, help from friends and executives who belong to the same unit and are aware of the working and living conditions of the staff.

2nd Level → crisis management groups consisted of mental health professionals and military executives.

3rd Level → psychotherapy techniques implemented by psychologists and psychiatrists.

**CONCLUSIONS:** Stress and related disorders is a field that has concerned the Armed Forces for many years. The implementation of primary and secondary prevention as well as of relevant research studies is necessary in order to design effective prevention and treatment programs.

### **“SUICIDE PREVENTION STRATEGIES IN THE MILITARY”**

**Papadopoulou Athina, Efstathiou Vasiliki, Gerasimoy Harilaos, Kalliora Maria, Xygki Ioanna, Efstathiou Elpida, Gaitanou Konstantina**

**AIM:** The literature review of the suicide prevention strategies in the military.

**MATERIAL AND METHODS:** The search was performed in electronic databases (Medline, Scopus, PsycINFO), using the keywords: suicide prevention/preventive strategies, military.

**RESULTS:** Integrated interventions for suicide prevention aim at addressing the risk factors and strengthening the protective ones. The fact that the Armed Forces are a highly organized structure, with special bonds between their members, constitutes an important advantage in suicide prevention. A key component of prevention programs is to enhance knowledge and awareness of the Armed Forces staff regarding suicide (warning signs, myths and facts), suicide risk factors (e.g. substance abuse and mental health problems), as well as the appropriate actions in response to at-risk individuals before the intervention of a mental health professional. Moreover, determining a number of the Armed Forces staff as «Gatekeepers» (in each unit) and

their further – graded – education about suicide in order to serve as sources of prevention, has proved to be an effective prevention strategy, as it enhances the early identification of individuals at risk and thus their early treatment. Meanwhile, the prevention programs aim to reduce the stigma of mental illness, provide information about available mental health services and remove barriers to seeking treatment. It is necessary that access to high-risk means for suicide (eg firearms) should be controlled, especially for individuals who suffer from high psychosocial stress.

**CONCLUSIONS:** A key factor of anthropocentric approach of the armed forces should be the development of structures and programs to prevent suicides.

### **ABBERANT RIGHT SUBCLAVIAN ARTERY WITH UNUSUAL LATE ONSET PRESENTATION: REPORT OF TWO CASES**

**George Sotiropoulos, Maria Chounti, Ioanna Barbalia, Sotirios Moraitis, Panagiotis Hountis**

**Purpose:** Aberrant right subclavian arteries (ARSA) are congenital vascular anomalies that usually do not cause any symptoms. When symptomatic they are considered as a rare cause of dysphagia. This presentation is known as dysphagia lusoria and was first described by Kommerell. They are diagnosed by barium swallow or contrast-enhanced computed tomography, although it may be an incidental finding.

**Material and Methods:** We present here a late onset symptomatic finding of two patients with ARSA. Both patients were presented with chest pain without dysphagia and dysphagia mainly for liquids respectively, which are both considered as non-typical presentations of the anomaly. Dysphagia becoming worse with liquids may indicate a motility problem but not dysphagia lusoria.

**Results:** Motility studies such as barium swallow and manometry were performed as the patients were managed conservatively but they failed to attend for follow up. On the other hand, symptoms persisted for about a year which is typical in such cases. In both patients conservative management was selected with lifestyle changes and dietary modifications.

**Conclusions:** Management varies from life modifications to surgical intervention. In our cases both patients were considered as atypical late onset symptomatic presentation because of the presence of aberrant right subclavian artery with main symptom chest pain without dysphagia. Due to

age and medical comorbidities both patients were managed conservatively.

### **HYBRID SOLUTION FOR VISCERAL ISLAND ANEURYSM AFTER THORACOABDOMINAL AORTIC ANEURYSM REPAIR**

**George Sotiropoulos, Maria Chounti, Ioanna Barbalia, Sotirios Moraitis, Panagiotis Hountis**

**PURPOSE:** Repair of a visceral artery island aneurysm after thoracoabdominal aortic aneurysm surgery poses significant technical challenges. We report a case with a visceral island aneurysm who had a one-stage repair using a hybrid approach.

**METHODS:** A 63 years old Caucasian male presented with severe continuous back pain. He underwent replacement of the entire aorta in stages over a 16-year period.

The celiac, superior mesenteric and right renal arteries were reimplanted in the thoracoabdominal graft. The left renal artery was reimplanted in the thoracoabdominal graft via an 8 mm Dacron graft. Serial CT angiograms demonstrated a progressive dilatation of the visceral island from 3.4 cm to 7 cm.

Via a midline abdominal incision, the celiac, superior mesenteric, right and left iliac arteries were exposed. After heparin was given, the 14 mm limb of a 14x8 mm bifurcated Dacron graft was anastomosed to the right common iliac artery. One limb of the 14x8 Dacron graft was anastomosed to the superior mesenteric artery and the other limb was anastomosed to the celiac artery in an end to side fashion.

Subsequently, a stent graft was deployed across the anastomosis between the thoracoabdominal graft and the graft to the visceral island, avoiding the origin of the graft to the left renal artery, via the left common iliac artery.

**RESULTS:** A completion aortogram showed complete exclusion of the aneurysm and excellent perfusion of the celiac, SMA and left renal arteries. The patient was discharged on the 8th postoperative day.

**CONCLUSIONS:** Hybrid techniques may facilitate repair of visceral island aneurysms after thoracoabdominal aortic aneurysm repair, by avoiding aortic cross-clamping and reentering the thoracoabdominal cavity.

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## **POSTOPERATIVE NEUROLOGIC COMPLICATIONS AFTER DESCENDING AND THORACOABDOMINAL AORTIC ANEURYSM REPAIR**

**George Sotiropoulos, Maria Chounti, Ioanna Barbalia, Sotirios Moraitis, Konstadinos Plestis, Panagiotis Hountis**

**PURPOSE:** Surgical repair of descending and thoracoabdominal aortic aneurysms started in the early 1950s, and have been traditionally associated with high mortality rate and a significant risk of paraplegia and multiple organ complications.

The aim of our study is to analyse postoperative neurologic complications on patients operated for Descending and Thoracoabdominal aortic aneurysms.

**MATERIALS AND METHODS:** We reviewed 94 consecutive cases of descending and thoracoabdominal aortic aneurysm repairs to determine the impact of modern adjuncts on postoperative neurologic deficit and mortality. Between December 1999 and March 2005, 24/94 (26%) patients were operated on for thoracoabdominal aortic aneurysm type I, seven (7%) for type II, 25/94 (27%) for type III or type IV, and 38/94 (40%) for descending thoracic aneurysms.

**RESULTS:** Twenty (21%) of the patients required hypothermic circulatory arrest for conduction of the operation. The postoperative rate of paraplegia was 3% (3/94). One patient developed temporary paraparesis. Overall operative mortality was 10% (9/94). This included 12/94 (13%) patients who underwent surgery emergently for ruptured or contained rupture of aortic aneurysm.

**CONCLUSION:** Surgical repair of descending and thoracoabdominal aortic aneurysms require a systematic approach to prevent devastating complications especially ischemic spinal cord injury. Newer operative strategies are key factors for spinal cord protection during these operations. Use of perioperative cerebrospinal fluid drainage, distal aortic perfusion and permissive hypothermia result in a low incidence of spinal cord injury and a low operative mortality.

## **SOMATOSENSORY EVOKED POTENTIAL MONITORING IN ANEURYSM REPAIR**

**George Sotiropoulos, Maria Chounti, Ioanna Barbalia, Sotirios Moraitis, Konstadinos Plestis, Panagiotis Hountis**

**PURPOSE:** Descending thoracic (DTA) and thoracoabdominal aortic aneurysm (TAAA) repair have

been complicated by paraplegia. In this study we compared postoperative neurologic complications in patients with DTAs and TAAAs operated with and without the use of continuous SSEP monitoring.

**MATERIALS AND METHODS:** Between June 1999 and November 2007, 165 patients underwent descending (n = 51) and TAAA (n = 114) aneurysm repair. SSEP monitoring was used in 74 patients (group A), while 91 patients did not have any spinal cord monitoring (group B). The median age was 64±14 years in group A and 63±13 in group B. In group A, 28 patients (37.8%) had type I or II aneurysms. In group B, 31 patients (34%) had type I or II TAAA. All patients had distal aortic perfusion, cerebrospinal fluid drainage, and mild hypothermia (32 -34 °C). Deep hypothermic circulatory arrest (DHCA) was used in 25 patients (33.7%) in group A, and in 17 patients (18.6%) in group B. In group A, 17 patients (22%) required reimplantation of intercostals arteries based on intraoperative SSEP changes, while in group B 40 patients (43.9%) had reimplantation of intercostals arteries.

**RESULTS:** In hospital mortality was 6.7% (n=5) in group A, and 6.5% (n=6) in group B (p>0.05). One patient (1.3%) sustained immediate and one (1.3%) delayed paraplegia in group A. In group B, 2 patients (2.1%) developed immediate and 2 (2.1%) delayed paraplegia. All patients had normal SSEPs at the completion, but one patient developed immediate paraplegia.

**CONCLUSIONS:** SSEP monitoring appears to be a reliable method of ruling out spinal cord ischemia injury during thoracic aortic aneurysm repair. In our study it lead to a significant decrease in the number of patients that required intercostal artery reimplantation.

## **THE IMPORTANCE OF EARLY DETECTION AND TREATMENT OF BURNOUT SYNDROME IN HELLENIC MILITARY POPULATION**

**STAVRIDOU A., ATHANASIADOU F., STASINI A., ZACHARIADIS A., SERAFEIM T., TSAMADOU H., GIOTAKOS O.**

**Aim:** The present study was designed to investigate the incidence of burnout syndrome among executives of the Greek army, in relation to their position of responsibility and expertise.

**Material – Method:** The survey was conducted at the Military Psychiatric Clinic (414 SNEN ), in Mental Health Joint Centre of Armed Forces, at 401 General Military Hospital but also in camps throughout Greece (11th

Infantry Regiment, 95th Military Hospital). The period of investigation was the second half of 2015. The 152 participants were assessed through the completion of the questionnaire of burnout of Maslach (MBI) and Readjustment Scale of Holmes and Rahe, after having been informed that their participation was voluntary and anonymous.

Results: About 40 % of participants have a sense of reduced personal achievements, 18 % high depersonalization prices while not experienced high emotional exhaustion prices. The high management position, the vast work experience and limited presence of traumatic events favor the emergence of personal achievements feeling.

Conclusions: Recognition of the value of each tier of government, to develop prevention skills of burnout and the strengthening of the role of psychological support of personnel of the Armed Forces could prevent a widespread occurrence of burnout in the near future.

### **A RARE CASE OF UNDIAGNOSED FAMILIAL DIGITAL CLUBBING IN A MILITARY CAMP AND THE ROLE OF THE GP ARMY DOCTOR**

**Tsilogianni Zoi, Grapatsas Konstantinos, Tsantilas Apostolos**

Purpose: To present the rare case of undiagnosed hereditary digital clubbing and explain this clinical sign.

Material and methods: A 35-year old professional soldier presented in military camp's clinic with a common cold. During the clinical examination digital clubbing was observed in both hands and feet, for which the patient had no knowledge or symptoms and led us to more thorough examination and questions about his medical and family history.

Results: Digital clubbing is characterized by round enlargement of fingers' distal phalanx. The most common ways of recognizing this sign are measurement of Lovibond angle and index of nail curvature; also Schamroth's sign is observed. Digital clubbing is a sign of underlying disease; it is mainly asymptomatic and can be bilateral or not. The differential diagnosis includes mainly pulmonary (chronic lung infections, malignancy and chronic interstitial lung diseases), but also other conditions (cyanotic congenital heart disease, infective endocarditis, cirrhosis of the liver, and inflammatory bowel disease); rarely is due to idiopathic-primary cause. Our patient had no medical history that could explain this clinical sign and all his recent medical exams were at normal rates. However he informed

us of the same sign at the family history with his father having the same type of fingers.

Conclusion: Digital clubbing is an important sign concerning multiple serious medical conditions. Idiopathic cause is rare. The doctor in primary medical care should recognize this clinical sign and proceed to more thorough examination of the patient.

### **ACL RUPTURE**

**Violakis-Georgiladakis Emmanouil, Panagoulis Evangelos, Loukovitis Eleftherios, Xenakis Andreas**

Definition. The ruptures of the anterior cruciate are constantly increasing due to the high population participation in sports. Usually the rupture occurs after internal rotation and anterior displacement of the tibia.

Genetics. Researches associate rupture of the anterior cruciate ligament with genetic factors. More specifically, the genes expressing metalloproteinases show greater correlation with the risk of injury and rupture.

Epidemiology. Women predominate in number about four to eight times compared to men. The incidence of injuries of the anterior cruciate ligament is greater in people who participate in sports.

Presentation. Typical symptoms that the patient feels after injury of the anterior cruciate ligament is:

- a) Pain and swelling, which occur immediately after injury
- b) Stiffness of the knee, difficulty of effecting movements due to swelling
- c) Difficulty in walking
- d) Feeling of instability in the joint.

Diagnosis. For the diagnosis there are many clinical tests with the most important the Lachman test and the anterior drawer test. The MRI shows accurately the rupture of the ligament amounts up to 95 % which are then confirmed arthroscopically.

Treatment. It can be divided into conservative and surgical. Techniques applied are either the traditional open surgery or arthroscope. The rupture of the anterior cruciate ligament can't be restored by stapling back the ligaments. It is replaced with a piece of other grafts. Usually ligament graft is harvested from the patellar ligament.

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**"THE ASSOCIATION OF DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS OF PROFESSIONAL MILITARY PERSONNEL WITH THE ONSET OF DEPRESSIVE SYMPTOMS IN GREEK ARMY"**

**Vlazakis Alexandros, Athanasiadou Foteini, Siagkri Vasiliki, Giotakos Orestis**

**Aim:** The aim of the present study was to examine the association of socio-demographic data, financial data, major life events and self-perceived social support with the onset of depressive symptoms in professional military personnel of the Greek Army.

**Material – Method:** This is a quantitative relational study of secondary analysis.

As data collection instrument, a structured self-supplemented questionnaire of 56 questions was used, with an average completion time of six minutes. The questionnaire included questions on socio-demographic characteristics of participants and a custom selection of items from already used valid scales.

The analysis initially included the analysis of demographic characteristics and the examination of the internal consistency of the scales used. Then a series of stepwise analyses using the method of multivariate regression in SPSS v.22 were conducted.

**Results:**

As far as the demographic and socioeconomic characteristics are concerned,

1. The gender ( $b = 0.13$ ,  $t = 2.87$   $p < 0,004$ ,  $DR2 = 0.04$ ), as the women consistently showed higher levels of depressive symptoms,
2. The life events ( $b = 0.23$ ,  $t = 5.11$   $p < 0,001$ ,  $DR2 = 0.07$ ),
3. The inability of loan repayment ( $b = 0.22$ ,  $t = 4.77$   $p < 0,001$ ,  $DR2 = 0.06$ ) and
4. Social support ( $b = -0.21$ ,  $t = -4.75$ ,  $p < 0.001$ ,  $DR2 = 0.04$ ) significantly predicted depression ( $F(4.403) = 27.35$ ,  $p < 0.001$ ).

With regard to life events:

- 1) Problems with the supervisor ( $b = 0.24$ ,  $t = 5.12$   $p < 0,001$ ,  $DR2 = 0.07$ ),
- 2) Extreme changes in the working tasks ( $b = 0.19$ ,  $t = 4.10$   $p < 0,001$ ,  $DR2 = 0.04$ ),
- 3) Non-affordable mortgage or loan ( $b = 0.13$ ,  $t = 2.71$   $p < 0,007$ ,  $DR2 = 0.02$ ),
- 4) Divorce ( $b = 0.13$ ,  $t = 2.81$ ,  $p < 0,005$ ,  $DR2 = 0.02$ ) and
- 5) The death of close friend / th ( $b = 0.10$ ,  $t = 2.16$ ,  $p$

$< 0.03$ ,  $DR2 = 0.01$ ) predicted significantly depression.

**Conclusions:** The results of this study highlighted the relationship of gender, loan repayment and significant loss events in the personal life and problems in working life of the professionals of the Greek Army with the onset of depressive symptoms and the role of social support as a protective factor with a negative correlation with the occurrence of depressive symptomatology. The need to emphasize, in the primary prevention of depressive symptoms through regular health examinations, providing further facilities and welfare measures in the permanent military personnel and the expansion of the network and of the provided psychosocial care services to members of the Armed Forces is also highlighted.

**LUTEMBACHER SYNDROME IN A PATIENT WITH RHEUMATIC MULTIVALVULOPATHY AFTER PERCUTANEOUS MITRAL BALLOON VALVULOPLASTY**

**Votsis Stefanos, Nikolaidou Chrysovalantou, Hadjimiltiades Stavros, Karamitsos Theodoros, Culum Gordana, Karvounis Haralampos**

**PURPOSE:** To report a rare clinical case of Lutembacher syndrome, which was developed in a patient with rheumatic multivalvulopathy who underwent percutaneous mitral balloon valvuloplasty with a rapidly deteriorating aortic valve stenosis also present.

**MATERIAL AND METHODS:** We present the case of a 67-year-old patient with rheumatic multivalvulopathy (moderate aortic stenosis and severe mitral stenosis) who, after being initially deferred for radical surgical treatment, underwent percutaneous mitral balloon valvuloplasty with an initial satisfactory operational, clinical and haemodynamic result. After the lapse of a 3-year period, the patient was diagnosed with Lutembacher syndrome, the cause of which was the deterioration of the aortic valve stenosis (from moderate to severe), which consequently not only prevented the progressive closure of the iatrogenic atrial shunt of the aforementioned percutaneous mitral balloon valvuloplasty, but actually caused its anatomical and haemodynamic deterioration, resulting also in newly diagnosed severe tricuspid regurgitation, mild right-ventricle failure and initial-stage pulmonary hypertension due to volume overload.

**RESULTS:** After a thorough imaging investigation to establish the cause and the anatomical and haemodynamic parameters of the current Lutembacher syndrome presentation (including TEE, cardiac catheterization and

cardiac MRI), the patient finally underwent a) surgical replacement of the mitral valve b) surgical replacement of the aortic valve c) surgical repair of the tricuspid valve and d) surgical closure of the atrial septal defect, with satisfactory operational and clinical result.

**CONCLUSIONS:** Lutembacher syndrome is sometimes iatrogenic after atrial septum puncture, and can be caused in cases of aortic valve stenosis deterioration, even if the initial mitral valve stenosis is ameliorated.

### **“BODY IMAGE IN WOMEN WITH BREAST CANCER”**

**Xygi Ioanna, Kalliora Maria, Papadopoyloy Athina**

**Aim:** A literature review surveying the alterations in women's body image due to the development of breast cancer.

**Material – Methods:** Relevant papers published from 2006 to 2014 were traced in electronic databases using the keywords: breast cancer, body image, body change stress, quality of life.

**Results:** Meta-analysis of the available literature suggests that approximately half of breast cancer patients experienced two or more body image problems some of the time, due to their exposure to marked changes in their physical appearance. A high investment in appearance, as well as the body image before the development of the disease, could function as vulnerability factors. The latter is a part of personality that is not easily modified after it has become established, not even by treatment for breast cancer. Negative body image of breast cancer patients has been also associated with the type of surgical treatment a patient receives. As a consequence, changes in body image can lead to a maladaptive coping of the illness, which can impede the treatment of breast cancer.

**Conclusions:** Health care professionals that work with cancer patients should carefully consider body image issues during the course of the disease and discuss surgical options with patients. Providers are urged to help women redefine beauty, sexuality and femininity in a way that does not automatically exclude any woman who has suffered from this debilitating illness.

### **HYPER-IgG4 SYNDROME (IgG4-RELATED DISEASE-IgG4 RD) IN A PATIENT WITH SUBMANDIBULAR GLAND ENLARGEMENT**

**Filio Marineli, Ioannis Lianos, Ioannis Xatzidakis, Stavroula Gongaki, Konstantinos Kounouklas, Eustathios Koutsostathis, Basilios Fasias, Evagelia Zarogianni, Petros Savourdos, Eirini Theodoropoulou, Eirini Zarvou, Dimitra Stathi, Panagiotis Petrikkos, Eleni Mostratou, Nikolaos Symeonidis**

**Purpose:** Presentation of an IgG4-related disease case with left submandibular gland enlargement.

**Materials and Methods:** A 51 year old woman was referred to our Department from the ENT Division for investigation of a left submandibular gland enlargement started 6 months previously. An operation for (R) submandibular gland excision was performed 7 months previously. Results came up negative for malignancy and showed reactive etiology. Her past medical history included chronic rhinosinusitis and asthma. Physical exam revealed eyelids edema, painless jugular lymph node enlargement and a significant left submandibular lymph node enlargement with a diameter >2cm. Differential included lithiasis of salivary gland, salivary gland infection, Sjogren syndrome, sarcoidosis, salivary gland neoplasm, metastatic disease, Wegener disease, and IgG4-related disease.

**Results:** Lab tests revealed elevation of LFTs and elevated IgG4. Department was suspicious for a case of IgG4-related disease. Paraffin block from the ENT division was obtained and sent for immunohistochemistry stain. Results came positive for IgG4 infiltration with a percentage of >50%. A PPD test was performed (negative), and patient started on 0.6 mg/kg dose of prednisone with significant clinical improvement. Patient is asymptomatic on a dose of 2.5 mg prednisone.

**Conclusion:** IgG4-related disease is a rare disease which must be included in the differential in cases of unexplained lymph node enlargement. IgG4 levels should be included in the lab work. Prednisone is treatment of choice. Duration and dose of treatment is under further discussion. More studies are needed.

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## **PITUITARY APOPLEXY MIMICKING STROKE WITH OCULOMOTOR NERVE PARESIS**

**Filio Marineli, Ioannis Lianos, Ioannis Xatzidakis, Stavroula Gongaki, Konstantinos Kounouklas, Basilios Fasias, Evagelia Zarogianni, Eirini Zervou, Eleni Mostratou, Nikolaos Symeonidis**

**Purpose:** Presentation of a patient with pituitary apoplexy, with clinical findings mimicking stroke.

**Materials and methods:** A 69-old man was admitted for headache from seven days, with fatigue and low blood pressure, accompanied by right eye ptosis, unsteadiness and dysarthria. Personal history: glaucoma, psoriasis, alcohol abuse. Physical exam revealed skin hyperpigmentation and slight right eyelid ptosis. Differential diagnosis included glaucoma, stroke, temporal arteriitis, and adrenal insufficiency. Laboratory tests included cortisol levels, urine cortisol, aldosterone and corticotropin (ACTH).

**Results:** Computed tomography was performed twice upon admission 2 days later and came up negative. Magnetic resonance imaging (MRI) revealed pituitary enlargement. MRI of sella turcica revealed findings consistent with recent bleeding of pituitary gland. Laboratory exams showed low levels of cortisol and ACTH, hyponatremia (Na 123 mEq/l) and elevated CRP: 47 mg/dl. Acute phase proteins were elevated. Patient started on hydrocortisone, with a significant neurologic improvement and discharged asymptomatic. He was advised to follow neurosurgical and endocrinological consultations.

**Conclusion:** Sudden hemorrhage into the pituitary gland is called pituitary apoplexy which is very serious and it often occurs into a pituitary adenoma. It can result in sudden, severe headache, diplopia due to pressure on the oculomotor nerve and hypopituitarism. Cortisol deficiency is the most serious complication, because it can cause life-threatening hypotension. Hydrocortisone is the medicine of choice. MRI may confirm clinical suspicion where as CT scan can miss diagnosis.

## **ASSOCIATION OF PRE-OPERATIVE NEUTROPHIL-TO-LYMPHOCYTE RATIO WITH PATHOLOGICAL CHARACTERISTICS OF PAPILLARY THYROID CARCINOMA**

**K. Manatakis, Nikolaos Stamos, Dimitrios Balalis, Sotirios Gantzoulas, Vassilios Berdelis, Konstantinos Damalas, Georgios Bouboulis, Dimitrios P. Korkolis, Nikolaos Kouris, Georgios Plataniotis, Emmanouil Gontikakis**

**Purpose:** Neutrophil-to-lymphocyte ratio (NLR) has been used as a surrogate systemic inflammatory marker in a variety of tumors. Although thyroid cancer has a well-established connection with chronic inflammation, application of NLR in the pre- and postoperative evaluation of patients is limited and controversial. Our study aimed to identify potential associations of NLR with pathological characteristics of papillary thyroid carcinomas.

**Materials and Methods:** All cases of papillary thyroid carcinomas between January 2006 and December 2015 were retrospectively analyzed and pathology reports were reviewed for tumor size, multifocality, lymphovascular and capsular invasion. NLR was calculated as the absolute neutrophil count divided by the absolute lymphocyte count, based on the preoperative complete blood count.

**Results:** In total, 72 patients (21 men, 51 women) with papillary thyroid carcinomas were identified, with a mean age of 55 years. Mean tumor size was  $1.16 \pm 1.13$  cm, multifocality was observed in 27/72 cases (37.5%) and capsular/vascular invasion in 12/72 cases (16.7%). NLR was significantly higher in larger carcinomas (>3cm) compared to microcarcinomas (3.08 vs 2.13,  $p=0.002$ ), but did not reach statistical significance compared to carcinomas of 1-3 cm (3.08 vs 2.38,  $p>0.05$ ). NLR in multifocal carcinomas was higher compared to unifocal lesions, but the difference was not statistically significant (2.47 vs 2.17,  $p=0.10$ ). On the contrary, invasive carcinomas showed significantly higher NLR than non-invasive neoplasms (2.80 vs 2.18,  $p=0.02$ ).

**Conclusion:** High baseline NLR in patients with papillary thyroid cancer has been associated in the past with older age at presentation, larger tumor size and poorer prognosis. We observed a tendency towards higher NLR in more aggressive carcinomas, which reached statistical significance in tumors larger than 3cm and capsular/vascular invasion. As inflammatory marker, NLR is inexpensive and readily available and warrants further study in larger trials.

### **CASE REPORT: SURVIVAL IN SEVERE LACTIC ACIDOSIS IN ACUTE ORAL ANTI-DIABETIC COMPOUNDS POISONING**

**Ardeleanu Dida, Serban Cristina**

**Objective:** Metformin is an oral anti-diabetic drug chosen for the treatment of type 2 diabetes. The correct management of diagnosis and intensive care measures led to the survival of the patient with severe complications in acute poisoning with oral anti-diabetic compounds. The most common symptoms following overdose appear to include vomiting, diarrhea, abdominal pain, tachycardia, drowsiness. The major potentially life-threatening complication of biguanide overdose is lactic acidosis, which is due to lactate accumulation. Secondary to lactic acidosis, the patient may experience changes in the central nervous system, cardiovascular collapse, renal failure, and death.

**Materials & methods:** We describe: woman 60 year old, overweight, and transferred in our department 12 hours after a voluntary acute poisoning with metformin (avandamet). On admittance: drowsiness, tachypnea, tachyarrhythmia, vomiting, abdominal pain, arterial hypotension, severe lactic acidosis and acute respiratory failure. The treatment was complex: supportive, concomitant with hemodialysis sessions.

**Results:** Treatment of metformin overdose is generally supportive as is no specific antidote. Lactic acidosis is initially treated with sodium bicarbonate, but severe lactic acidosis has not responded to sodium bicarbonate and was established hemodialysis. The clinical evolution of patient was favorable.

**Conclusion:** The toxicity of oral antidiabetic agents differs widely in clinical manifestations, severity, and treatment. Acute oral anti-diabetic compounds poisoning has sometimes a severe clinic evolution with severe lactic acidosis and respiratory disease. The primary goals of therapy are restoration of acid-base status and removal of metformin, using hemodialysis and bicarbonate therapy. The intensive care measures can change the vital prognosis of the patient.

### **CASE REPORT: THE SEVERE EVOLUTION IN ACUTE COPPER SULPHATE POISONING**

**Ardeleanu Dida, Serban Cristina**

**Objective:** Copper sulphate is commonly known as "Blue Vitriol" or "Blue Stone". It is used chiefly for agricultural

purposes as a pesticide and in leather industry. It is consumed mainly with suicidal intentions. Accidental poisonings have been reported. The clinical course of the copper sulphate intoxicated patient is often complex involving intravascular hemolysis, jaundice and renal failure. The treatment is mainly supportive. In severe cases methemoglobinemia needs treatment. Mortality is quite high in severe cases. The copper-albumin complex represents the toxicological active portion of the serum copper.

**Materials & methods:** We describe here a fatal case of copper sulphate poisoning: a 24-year-old man who was admitted to the toxicology emergency department after accidental ingestion of blue vitriol sprinkled in garden used. Tox reveals elevated copper in blood and urine. Malaise, Reed coma, cyanosis, hemolytic anemia. During hospitalization: methemoglobin values begin to rise; acute renal failure, jaundice, hepatic cytolysis syndrome, vomiting, diarrhoea, hypotension. The treatment was supportive and methylene in symptomatic methemoglobinemia; hemodialysis.

**Results:** 12 days after admission the clinic parameters register a permanent instability and subsequently an irresuscitable cardiac arrest is installed followed by the decease of the patient.

**Conclusions:** Copper sulphate poisoning is associated with high mortality in severe cases due to methemoglobinemia, hepatotoxicity and renal failure. Mainstay of treatment is supportive, including careful fluid therapy and methylene in symptomatic methemoglobinemia. Chelation therapy though tried in many cases, their benefits are not established in controlled trials. The role of dialysis is limited to the management of associated renal failure.

### **PSYCHOLOGICAL AND PSYCHIATRIC ASPECTS OF STRESS MANAGEMENT IN THE MILITARY ORGANIZATIONS**

**Guiță-Alexandru Iuliana, Bulacu Ion**

The events at the beginning of the XXI century are generating major changes in the geopolitical and security environment. By their geostrategic position, the countries of Southeast Europe must sustain their role of a balancing factor of stability and security in the region.

Military organizations have had to quickly adapt and to face new geostrategic contexts, with major technological changes as well as an increase in interconnection between civilians and military world. From the psychological point of

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view, this permanent effort of adaptation can produce an accumulation of tension, feelings of inadequacy and discomfort and could traumatically affect physical and mental health and generate psychological vulnerability. When stress factors exposure exceeds individual's ability to keep control, there appears a brain sensitivisation to specific neural networks. Human body's response to stress may generate pathological emotional or psychological reactions (irritability, disbelief, sadness, anxiety, apathy etc.), or somatic reactions (palpitations, insomnia, fatigue, headache etc.).

Stress pathological effects' managements could include both elements of psychological counseling and psychotherapy (with a broad recommendation for the use of cognitive-behavioral therapy in treating stress-related symptoms) and appropriate psychopharmacological interventions. A special consideration should be given to preventing stress consequences, which would mean much lower costs than treating them as job-related diseases.

In conclusion, to improve the satisfaction level of the military and to ameliorate occupational health, great importance should be given to continue psychological assistance and, where is needed, to early diagnosis and treatment of psychiatric disorders occurring as a consequence of chronic exposure to stress.

### **BIOCAVENGER ENZYMES AS NEW STRATEGY FOR MILITARY PROTECTION AGAINST CHEMICAL WEAPON NERVE AGENTS EXPOSURE**

**Poștoarcă G. Angela, HINESCU G. Lavinia, Drăghici Constantin, Cosmescu Cristiana, Tudosie Mihail-Silviu, Ionescu Mihaela**

Introduction: An efficient therapeutic strategy to combat against accidental or intentional exposure to organophosphate (OP) or other chemical warfare nerve agent is of high demand both in civilian and military sectors. Last decade experimental studies have defined two enzyme (butyrylcholinesterase - BuChE and paraoxonase - PON1) that can be used as bioscavenger of OP molecule.

Materials/Methods: Anion exchange chromatography (Q-Sepharose Fast Flow) was used in order to develop methods of purifying enzymes. The enzymatic fractions collection was carried out in an integrated Gradifrac Pharmacia Biotech. Continuous monitoring of parameters: flow (3-5mL/min), NaCl concentration in the elution buffer (Tris-HCl, pH 8.5), time of fraction collection (1.5min/fraction), absorbance (280nm), allowed the

process optimization. The ability to reactivate acetylcholinesterase and butyrylcholinesterase was tested by in vitro/ex vivo experiments on whole blood samples inhibited to 95% with Ethyl Paraoxon.

Results: From the three collected fractions, FI1 has had the best specific enzymatic activity - 0.82U/mg and total protein concentration - 0.94 mg/mL. The combination of the purified fraction with oxime (OX 1, OX 2) led to a reactivation of acetylcholinesterase up to 40-48% compared to 60-69% for butyrylcholinesterase. Measurement of AChE and BuChE activity variation is considered as a biomarker of exposure, effect or susceptibility to OP intoxication of soldiers in neurotoxicology.

Conclusions: Due to the small volume of plasma processed through the Q Sepharose FF column, fractions with low specific activity were obtained. However, the yield of cholinesterase reactivation creates the foundation to obtain an enzyme pharmaceutical product usable subsequently for in vivo experiments.

### **3D CONFORMAL RADIOTHERAPY TREATMENT IMPLEMENTATION IN CENTRAL MILITARY EMERGENCY UNIVERSITY HOSPITAL" DR. CAROL DAVILA" BUCHAREST (SUUMC)**

**S. Vlad, G. Balasa, M. Matei, M. Dumitrache, A. Tănase**

INTRODUCTION: Radiation therapy efficiency and making it safe require substantial capital investment in equipment and room arranging, but also require substantial investment in human resources. New advanced technology have made possible implementation of 3D conformal radiotherapy.

3D conformal term is used to describe the development of radiation therapy treatment planning, based on the data acquisition of 3D images obtained from computed tomography dedicated to radiotherapy, in order to treat the clinical target volume and avoid the possible organs at risk.

MATERIALS AND METHODS: Transition to 3D conformal radiotherapeutic treatments require complex resources in terms of technology, equipment, medical staff and skills. To enable a modern radiotherapeutic treatment for various oncological diseases, Department of Radiotherapy from SUUMC was equipped with a medical accelerator model UNIQUE Power Varian, a CT Simulator and a HDR brachytherapy unit.

CONCLUSIONS: With our modern radiotherapy equipments,

during 2015, we have doubled our capacity, offering 3D radiotherapy treatment to approximately 1000 patients, with various cancer diseases like cervix, breast, lung, prostate and bone cancer. In near future we plan to implement advanced treatment techniques, mainly used for convex or concave planning target volume, located near organs at risk, like spinal cord, optic nerves, rectum, etc.

### **SYRIAN WAR SHRAPNEL INJURY: CUBITAL NERVE DEFECT GRAFTING DURING HUMANITARIAN SURGICAL MISSION. CLINICAL CASE PRESENTATION.**

**Argentina Vidrascu**

Introduction: Acute and chronic war wounded Syrian refugees from Zaatari camp and the Syrian battlefields are directly admitted in Amman Al Maqqased Charity Hospital every day.

Among patients treated by the author during November 2015 Humanitarian Mission was a left cubital nerve defect due to a bomb explosion injury.

Aim of presentation: Background and aim of this clinical case presentation is to reveal the importance of early nerve injury diagnosis and surgical treatment in war wounded patients.

Methods: The author treated patients in Amman Charity Hospital were among different plastic surgery cases where limb nerve injuries which nerve grafting indication. The presented case was treated with autologous sural nerve graft.

Cubital nerve was found being disrupted on 10 cm length at the medial 1/3 of the forearm. After debridement and neurolysis due to myeline degenerative process, the gap real size was 14 cm long.

The autogenous sural nerve grafting was decided to be done.

The right 18 cm long Sural nerve graft was harvested and and a cable graft designed to bridge the gap.

The microsurgical sutures were done at the both nerve ends to achieve nerve connections with separate nonabsorbable 7-0 sutures

Results: were evaluated at 3 months after the surgery and revealed detectable nerve conductivity at the Electromiography test.

In conclusion, in cases with delayed nerve repaired surgical treatment in war wounded patients, the vascularised nerve graft can be a better solution for nerve defect surgical

treatment.

### **PREVALENCE OF OBSTRUCTIVE SLEEP APNEA IN THE ROMANIAN MILITARY POPULATION**

**Ciumașu-Rîmbu Mălina, Lovin Sanziana**

Sleep apnea syndrome is common in the Romanian civilian population, but little is known about it in members of the military. Obstructive sleep apnea (OSA) constitutes a potentially serious condition for military members, since excessive daytime sleepiness can impair performance, cognition, interfere with mental clarity and alertness, increase accidents in dangerous environments, such as during a deployment or while working with firearms. Long-term effects of OSA include associations with increased mortality and medical disorders like cardiovascular disease, obesity and diabetes. The objectives of this study were to describe the prevalence of obstructive sleep apnea in a sample of ministry of defence (MoD) employed personnel referred for occupational medicine routine evaluation and identify relationships between demographic characteristics, comorbid diagnoses, and OSA. Material and methods: We performed a retrospective analysis on the data from one year occupational medicine referred cohort (4444 MoD employees with 83.23% military employees). Results :We have found a small percentage (0.42%) of OSA, twice higher in the military employees compared with the civilian ones, with most patients having severe OSA (68.42%) and a significant statistical relationship between obesity, glycemic and hepatic impairment, dyslipidemia and cardiovascular disease. Conclusion: The small percentage of the found OSA it's just the tip of the iceberg since 9.5% percent of the same cohort are obese. We need further detailed screening studies on the obese MoD population and on larger numbers of employees to confirm and/or evaluate the prevalence of OSA in the Romanian military population.

### **RISK FACTORS AND PROGNOSIS IN ENDOMETRIAL CARCINOMA**

**Bodac Aniela**

Introduction: Endometrial carcinoma is the most common gynecologic malignancy in the developed countries and

occurs mainly in the menopausal women (1). There are two types of endometrial cancer: Type I is mostly seen in younger women, estrogen-dependent and has better prognosis. Meanwhile, type II has a higher prevalence in menopausal women and it is diagnosed in advanced stages, with worse prognosis than type I carcinoma (2).

**Material and Methods:** We developed a retrospective study that included 40 women between 50-65 years old, admitted in our service from January to April with endometrial carcinoma. We applied to our study patients a questionnaire that included weight, number of births, miscarriages, family history, undergoing treatments, other related diseases, and the age the menopause occurred. Also, we collected the histopathology results in order to see the adverse prognostic factors such as FIGO staging, histological type, myometrium invasion, lymphovascular invasion and tumor expression for ER (estrogen receptor) and PR (progesterone receptor).

**Results:** In our study group the most prevalent endometrial carcinoma was type II. The most important risk factor for our patients was obesity, followed by hormonal therapy and late menopause.

**Conclusions:** As reaching menopause all women should be informed about the risks and symptoms of endometrial carcinoma in order to diagnose it in early stages. Also, women with high risk of developing this malignancy should be offered screening, tissue sampling of the endometrium.

### **VOLUMINOUS ADRENAL CYST - MINIMALLY INVASIVE SURGICAL TREATMENT. CASE REPORT**

**R. Nica, C. Muşat, F. Vasilescu, C. Pleşa, A. Mihai, D. Alexe, C. Cîrlan, F. Săvulescu**

**Introduction:** The adrenal tumor formations are often discovered by chance during a review of imaging (abdominal ultrasound, computed tomography, magnetic resonance), for a problem that is not related to the adrenal gland, they do not usually show any signs or symptoms specific to an adrenal gland pathology.

**Case presentation:** The patient is hospitalized accusing mild abdominal pain, which started about 2 months before hospitalization, without no other signs or symptoms. The usual blood tests were normal. Abdominal ultrasound revealed a cystic tumor formation relatively large, about 8-10 cm with a possible liver etymology. CT examination could not exactly determine the origin of the tumor, describing it interhepatorenal. Due to the acute stage of patient pain, surgery is to be laparoscopic. Surgery is

completed with abdominal cystic tumor ablation.

**Results:** The patient's postoperative evolution was favorable, with a completely remittance of the painful symptoms. Postoperative histopathologic exam establishes the diagnosis of adrenal endothelial benign cyst.

**Conclusions:** Laparoscopic surgery is useful for diagnosis in patients presenting atypical abdominal pain growing in intensity, especially when imaging tests cannot provide accurate data on the present pathology. Minimally invasive surgery is the current "gold standard" of the adrenal tumor excision.

### **IXODES RICINUS – VECTORS FOR TICK BORNE ENCEPHALITIS VIRUS IN ROMANIA**

**Ionescu E. Lucia, Dumitrescu V. Gabriela, Popescu M. Diana, Necşulescu Marius, Ordeanu Viorel, Bicheru N. Simona, Vladimirescu Alexandru**

*Ixodes ricinus* is the most widespread tick in Romania and is the vector for many important pathogens for humans and domestic animals. In 1999 in Romania was reported an outbreak caused by tick borne encephalitis virus (TBEv). TBEv is a flavivirus transmitted to humans by the bite of infected tick or by the ingestion of unpasteurized milk from the animal host.

We tested *Ixodes ricinus*, collected from some localities from Transylvania for the presence of TBE virus.

Pools of adult ticks were tested using RT-PCR with specific primers for 3'UnTranslated Region (UTR) of the RNA genome.

We have determined the presence of TBEv in the *Ixodes ricinus* pools, mostly collected from Sibiu County, the positive results have demonstrated that *Ixodes ricinus* is implicated in the TBE virus transmission in Romania.

*The research is part of the project TickItqPCR, funded by MEN-UEFISCDI PN II "Partnerships in priority areas" program, Grant No. 295/2014.*

### **MALDI TOF MASS SPECTROMETRY USED FOR RAPID IDENTIFICATION OF SPORULATED BIOLOGICAL AGENTS**

**Simona Nicoleta Bicheru, Diana Mihaela Popescu, Lucia Elena Ionescu, Gabriela Victoria Dumitrescu, V. Ordeanu, A. Vladimirescu, M. Necşulescu**

Using MALDI TOF system (Matrix - Assisted Laser Desorption/Ionization Time - of - Flight Mass Spectrometry) for identification and characterization of pathogen germs, it is a fast and safe method, which measures molecular fingerprint unique to each microorganism by mass spectrometry. Bacteria are biological agents that can be easily multiplied, stored and conditioned like weapons and disseminated.

The cultures of *Bacillus cereus* were seeded via loop prick on the simple agar and blood agar, in Petri plates in order to obtain isolated colonies. Bacterial colonies obtained were processed for 16S ribosomal proteins extraction, by the "Microorganisms Profiling" extraction trifluoro acetic acid (TFA 80%) procedure and analyzed with Microflex® LT 20 equipment. The method is used for extraction of ribosomal proteins in vegetative form of bacteria, but lends itself particularly well for biological material sporulated.

Spectra analysis of the genus *Bacillus cereus* biological agents representing the polypeptide fragments of the 16S ribosome revealed a mass range between 800 and 12000 Daltons. The values of characteristic peaks strain of *Bacillus cereus* strain IC 11549 are in the range of 2500-11250 Daltons. The characteristic peak "protein species signature" of the species *Bacillus cereus* is set in the range of 7080 Daltons. All mass spectra obtained were identified as belonging to the tested bacterial species, with results which were confirmed by classical bacteriological techniques.

The Microflex LT 20 system allows quick and accurate identification of biological agents therefore being an important confirmation/validation mean for other microbiological diagnostic methods.

## **PERIPHERAL ARTERIAL DISEASE (PAD) AND TYPE 2 DIABETES MELLITUS (T2DM) PATIENTS – RAPID GUIDE CONSIDERING DIAGNOSIS AND TREATMENT**

**Ciprian Constantin, Ovidiu Cotea, Catalina Popa**

**Introduction:** The assessment of PAD at T2DM patients is a must have of screening and treatment of this patient category. Methods of diagnostic and evolution of these methods imply a rapid and preclinical diagnostic in our days.

**Objectives:** To evaluate the value of old and new methods dedicated to diagnosis PAD at T2DM patients. A real good review will serve for residents as a valuable tool to create an image about the place and role of actual tools to diagnose and evaluate the treatment of PAD.

**Materials and methods:** Articles were selected using next key words: T2DM, PAD, tools and PAD, drugs and PAD, diagnostic of PAD. International guidelines and multicenter studies were main sources of this algorithm.

**Results:** The actual data suggest that is simple to evaluate and to predict the role of a diagnostic of PAD in the future evolution for a patient with T2DM. For this patient will be necessary to use a class of medication or an intervention for prevent amputation of inferior limbs. The control of risk factors that could contribute at PAD evolution will better controlled and better treated if actual tools will diagnostic at a preclinical stage this complication/comorbidity of T2DM patients. The role for a cardiovascular risk score (dyslipidemia, high blood pressure etc) could be evaluated here. Results from major clinical trials are presented.

**Conclusion:** The key contribution of this paper is an actual update of literature for a new or experimented medical doctor in a better understanding of PAD at T2DM patients.

## **ULTRASOUND POWER DOPPLER IN CLINICAL REMISSION IN PATIENTS WITH RHEUMATOID ARTHRITIS**

**Daniela Anghel, Mihai Lucian Ciobica, Nicolae Cristian Anghel, Ciprian Viorel Jurcut, Adrian Anghel, Ancuta Coca**

**Background:** The goals of treatment for patients with rheumatoid arthritis are remission or decreased disease activity, stopping the rate of joint damage. The subclinical synovitis is associated, despite clinical remission, with progression of structural damage. Imaging technique such ultrasound is capable to provide a more accurate measure of disease activity.

**Objectives:** To assessed in patients with rheumatoid arthritis in clinical remission the presence of subclinical synovitis by ultrasound.

**Methods:** The study included 58 patients with RA (ACR/EULAR 2010 criteria) in clinical remission. Medium age is 45 (range 30-59) years. The patients was in clinical remission (DAS<2.6); 81% are female; 65% are positive for rheumatoid factor and 85% for ACCP (anticitrullinate peptide antibody). PDUS examination was performed using Esaote US machine equipped with linear probes (5-12MHZ). PDUS (power Doppler ultrasound signal) investigated metacarpophalangeal and proximal interphalangeal joints and wrist symmetrical. PDUS used 4 grade (semi quantitative score) from grade 0 to 3. PDUS was performed at baseline and after 6 months to beginning of treatment. Furthermore, DAS 28 and laboratory data (ESR, CRP) were

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obtained at baseline and after 6 months to beginning treatment and clinical remission.

Results: All patients were in clinical remission after 6 months of treatment. PDUS were used as a measure of active disease. Synovitis grade 0 has been found in 29 patients (remission) PDUS grade 1 has been found in 10 patients, PDUS grade 2 in 9 patients and no PD grade 3 has been found after 6 months. PDUS was more frequently observed in the wrists (45%), MCP 2 (26%), PIP 3 (9%).

Conclusion: The results of study confirm that clinical remission doesn't reflect an absence of synovial inflammation. PDUS is useful in assessing of patients considered to be in remission. PDUS detected subclinical synovitis in the small joints of hands.

The other parameters don't show an evident association with the presence or absence of PDUS.

### **COMPLEX RECONSTRUCTION FOR A THORACIC PARIETAL METASTASIS WITH PERICARDIAL INVASION – CASE PRESENTATION**

**Adrian Ciuche, Claudiu Nistor, Dragos Marin, Daniel Pantile, Laura-Mariana Constantin, Roxana Brîncoveanu**

Introduction. The authors present the case of a 61 y.o. male with a left pneumonectomy, performed 2 years ago for left lung cancer, followed by chemotherapy and radiotherapy, admitted with an anterior thoracic wall metastasis invading the overlying skin and the pericardium.

Material and method. The surgical technique is being detailed – surgical resection of C2, C3, and C4 anterolateral rib arches, en-bloc with adjacent structures (skin and pericardium). After removal, a complex reconstruction of the thoracic wall has been performed (using a musculocutaneous flap including the latissimus dorsi muscle and the overlying skin with the preservation of the thoracodorsal vascular pedicle), as well as a pericardial reconstruction (with Mersilene® mesh).

Results. With favorable surgical outcome, several aspects are being detailed: postoperative respiratory function, aesthetic and socio-professional reintegration.

Conclusion. When dealing with thoracic wall metastasis invading surrounding anatomical structures, their complete resection requires complex reconstruction. In this case is being performed a musculocutaneous flap transposition preserving the vascular pedicle and pericardial reconstruction.

### **TRANEXAMIC ACID IN MAJOR TRAUMA AT HIGH RISK OF BLEEDING**

**Dijmarescu Alisa-Elena**

OBJECTIVE: Tranexamic acid is an antifibrinolytic drug that was shown to increase survival in severely injured trauma patients who have or are at risk for severe hemorrhage.

Our objective in this paper was to perform a systematic review to evaluate the effectiveness and safety of tranexamic acid in reducing bleeding in trauma.

MATERIALS AND METHODS: We included 15 studies, case reports and review articles. Literature was searched in Pubmed, Cochrane, SciELO between 2013-2016.

RESULTS: This systematic review showed that the administration of tranexamic acid significantly reduced the risk of death due to bleeding by up to 25-30%, also reduced the need for blood transfusion, without apparent serious adverse effects, such as increased risk of deep vein thrombosis and pulmonary embolisms.

The protocols for the management of bleeding consider TXA may be administered to patients with traumatic injuries, who are hemorrhaging or at risk for hemorrhage. TXA is contraindicated in patients who have an isolated traumatic brain injury. Administration of tranexamic acid, ideally within 3 hours, can reduce mortality, regardless of baseline risk. The initial bolus dose of TXA is 1 g I.V infused over 10 minutes, followed by an infusion of 1 g over 8 hours.

After the CRASH-2 trial, TXA was endorsed by the World Health Organization in March 2011 as an essential medicine with sufficient evidence to support use in adult patients with trauma and significant risk of hemorrhage. The military are using tranexamic acid to treat combat casualties.

CONCLUSION: The tranexamic acid should be administered early as possible to the trauma patient who is bleeding or at risk of significant hemorrhage.

### **ATYPICAL AORTIC COARCTATION – A RARE CASE PRESENTATION**

**Ancuta Coca, Lucian Mihai Ciobica, Daniela Anghel, Ioana Raduta, Cristina Trofin, Silviu Marcel Stanciu**

Coarctation of the aorta (CoA) is a congenital cardiac malformation with a reduced life expectancy for patients who have not undergone correction. Survival in case of

elderly is rare meanwhile the mean survival rate is around 35 years. A typical CoA is a rare condition which affects 0.5 % to 2 % of the individuals with CoA.

We describe the case of a woman, firstly diagnosed with an atypical coarctation of aorta. A 25-year-old man presented to our department with chest discomfort, increasing fatigue, and exertional dyspnea. On physical examination, he was identified a grade 2/6 systolic murmur in the apex and left second intercostals space and the femoral pulse delay was palpable bilaterally. The systolic pressure gradient between upper and lower extremities is 25 mmHg. Aortic coarctation was suspected, and a further investigation was performed. The electrocardiogram (EKG) revealed left ventricular hypertrophy, while the transthoracic echocardiography (TTE) showed wall-motion abnormalities, a bicuspid aortic valve and the left ventricular ejection fraction was 40 %. The continuous wave Doppler revealed a peak flow velocity of -3.33 m/sec in the descending aorta and the peak pressure gradient was estimated at 44.3 mmHg. The patient then underwent a transesophageal echocardiogram (TEE) that confirmed the results. A thoracic CT scan was proposed and it showed a severe coarctation of aortic arch, between the left common carotid artery and the left subclavian artery, with an axial diameter of 12 mm and a post-stenotic dilatation of 29 mm.

Considering the severe coarctation, the patient has an obvious indication for cardiovascular surgery, which is one of the most challenging conditions for surgeons and inclusive for the patient.

### COMPLICATIONS OF PRIMARY ANGIOPLASTY IN PATIENTS WITH STEMI

**Alice Munteanu, Silviu Dumitrescu, Liviu Chiriac, Daniel Nita, Razvan Rosulescu, Nicoleta Avram, Irina Florescu, Cristina Calcan**

The major limitations of balloon angioplasty have been represented by the acute obstruction and restenosis of blood vessels. Early studies of intracoronary stents have shown that these devices are very effective in treating or preventing acute blood vessel obstruction, thus avoiding emergency surgical bypass interventions. Two randomized trials – the Benestend and STRESS (Stent Restenosis Study) have shown that stenting lesions de novo on native coronary have reduced angiographic restenosis by about 30% compared to conventional balloon angioplasty. Implanting stents leads to a luminal diameter larger than

balloon angioplasty, both right after the surgery and in the follow up, thus to a lower restenosis rate.

Indications for interventional myocardial revascularization are: STEMI, NON-STEMI, stable angina, angina equivalent – dyspnea, arrhythmias, syncope, asymptomatic patients or moderately symptomatic with a medium-large surface of viable myocardia, or moderately-severe myocardial ischemia on noninvasive tests, angiographic – hemodynamically significant lesions on myocardia arteries which irrigate a viable myocardia and have a diameter higher than 1.5 mm.

Relative contraindications for interventional myocardial revascularization are: relevant comorbidities, small diameter coronaries or venous grafts with diffuse stenosis, LAD stenosis in a patient with CABG recommendation (surgery remains the preferred therapy method for such cases), PCI unsuitable coronary anatomy.

Contraindications for interventional myocardial revascularization are: patients with contraindications for antiplatelet or anticoagulant therapy, coronary lesions which prevent fully inflating the balloon and properly implanting the stent.

Vasile Candea Emergency Clinical Centre for Cardiovascular Diseases is part of the national program RO-STEMI for 5 years. During this period 3453 patients were admitted with STEMI. 2952 patients received primary PCI.

The results regarding procedures performed were: 14.5% were not admitted to angiography, 4.4% received only PCI without stent, 52.6% of patients received one stent, 21.5% 2 stents, 6.4% 3 stents and 0.6% 5 stents. The vessel responsible for STMI was in 57% of cases LAD, in 30.2% was RCA, in 11% was CXA and in 1.7% was not specified. The rate of early complications after angiography was 9.3%: 3.5% of patients suffered acute stent thrombosis, 3.2% of patients had pseudoaneurysm, 1.7% of patients had procedural failure and 0.9% had coronary dissection. At discharge 71.5% of patients had not had symptoms of heart failure. 25% of patients showed signs of left heart failure and 3.5% of patient admitted in programme died.

### THE TAMING OF THE FIRE BY SURGEONS: A HISTORY OF THE CAUTERY

**A. Popentiu, D. Moga, I. Barb, C. G. Smarandache, V. Marcu, A. Sabau, D. Sabau**

Since the dawn of human history, the fire was present among us. The healers, and especially the surgeons, used it

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as a very important tool in their practice. From the raw flame, the fire evolved into the modern surgical devices that use the latest in space-age technology.

A brief history of the electrosurgical equipment and accessories, together with some basic notions about the physics aspects involved is presented in our work. The evolution of equipment and the latest advances in this field are also highlighted.

## **MANAGEMENT OF STROKES IN YOUNG ADULTS AND MILITARY ACTIVITY**

**Emilia Furdu Lungut, Carmen Adella Sirbu, Cristina Florentina Plesa, Iustinian Porfir Furdu**

Stroke is not an uncommon event in young adults (ages 30 to 45 years) accounting for an estimated 3 percent of cerebral infarctions in many series.

We are followed many cases of young military adults, in stress conditions, privating to sleep, period of adaptation to particularly conditions (missions of NATO).

Nevertheless most of the strokes could be accounted for by three categories, more or less equal in size: atherosclerotic thrombotic infarction (usually with a recognized risk factor) cardiogenic embolism (particularly in the post association with rheumatic heart disease, bacterial and verrucous endocarditis, paradoxical embolism through patent foramen ovale and prosthetic heart valves; and one of several nonatherosclerotic vasculopathies (arterial trauma dissection of the carotid artery moyamoya, lupus erythematosus drug induces vasculitis).

In conclusion: it's possible that young adults, with possibly risk factors and that are in particular condition can have stroke more or less serious.

## **INTRACARDIAC EXTENSION OF INTRAVENOUS LEIOMYOMATOSIS**

**Ioana Alina Raduta, Lucian Mihai Ciobica, Daniela Anghel, Silviu Marcel Stanciu, Gabriel Stoicescu, Adrian Anghel, Lutuc Raluca, Ancuta Coca**

Intravenous leiomyomatosis (IVL) is a rare histologically benign tumor that is biologically malignant. Less than 200 IVL cases of which 113 were involving the heart, have been reported.

This case presents a rare leiomyoma in the inferior vena cava (IVC). A 66-old woman with a history of hypertension and an episode of pulmonary thromboembolism was admitted to our department because of an acute dyspnea and enlargement of the abdomen. The laboratory data showed normal tumoral markers (CA 125, AFP, CEA, CA19-9). The transthoracic echocardiography (TTE) revealed a large aortic stenosis and a mass of moderate echogenicity inside the right atrium (RA). The transesophageal echocardiography (TEE) revealed an elongated multilobular mass inside the RA in the bicaval 110° view. A pelvic-abdominal CT scan showed us a voluminous abdominal pelvic tumor, a tumoral mass in the IVC which expands to RA and 1 lesion expanded into the right pulmonary artery. Spiral CT scanning with multiplanar reformation (MPR) is in work.

The patient underwent surgical excision of the tumor (9 kg), and shortly thereafter a hysterectomy and salpingo-oophorectomy. The histological examination showed a benign leiomyomas arising from the tunica media of the intramyocardial vessels. IVL extension to inferior vena cava and to the heart is one of the most challenging conditions for surgical treatment.

The patient has to be subjected to an excision of the IVC tumor/thromb or a placement of an IVC filter.

## **DEFINING FACTORS THAT CONTRIBUTE TO WEAKENED DETERMINATION FOR QUITTING SMOKING**

**Bucan Vesna, Tepsic Ostojic Vesna, Anastasovska Zorica, Zivic Bratislav**

**BACKGROUND:** Clinical research has proven that only 1-2% of those dependent on nicotine have the required determination to arbitrarily quit smoking. Earlier studies of addictions in our country showed that the lack of information and attitude both contribute to this prevalent addiction.

**OBJECTIVE:** Aside from noting sociodemographic aspects, the intent is to document and assess smoking dynamics, nicotine dependence level, corresponding compulsion, overall awareness and the level of commitment to quit smoking.

**METHODS:** A specifically adapted questionnaire was used with 254 participant smokers that are also employees serving in military medical clinic.

**RESULTS:** Out of all the respondents, 65.8% is in their prime

years of professional service; 62.25% has secondary education; 67.3% have family members that smoke; 95.3% have friends that smoke. On dependence, 28.2% have high, while 61% have low dependence on nicotine. Furthermore, 58.3% is aware of accompanying health consequences; 89.9% believes their smoker appearance is not socially attractive. On quitting, 60.6% of respondents tried quitting; 63.4% is actively considering quitting; 35.8% believes that they could quit at any moment. Lastly, 50% never accepted any related help or advice.

**CONCLUSION:** Based on our findings, low nicotine dependence level here indicates that persistence in smoking can be contributed to habits and other sociocultural factors. Additionally, high percentage of respondents believed that they could quit smoking at any moment and without any professional help. This highlights a substantial lack of critical thinking as well as misapprehension about commitment and determination levels that are needed in the process of addiction withdrawal.

## **WAR WOUNDS OF THE HAND SURGICAL TREATMENT - OUR EXPERIENCE**

**Kozarski Jefta, Djordjevic Boban, Milicevic Sasa**

The significance of war injuries of the hand is the direct consequence of the incidence of these wounds and the resulting disability. According to the World War II data, the incidence of hand injuries is approximately 7% of all war injuries. Inadequate management and surgical treatment produce severe disability. High speed projectiles (above 600 m/s) cause extensive tissue defects on their course through the tissue. Around 50% of these wounds are associated with tissue defect. War wounds caused by explosive devices are almost always associated with the defect of tissue, tendons, nerves, bone and joint injuries, with irregular „pockets” filled with secondary bone projectiles. These injuries are most commonly multilocular and associated with blast injury, but can also be penetrating.

This paper aims at presenting surgical management of war injuries of the hand according to the principles of war surgery and to establish the place of plastic surgery in the management of war injuries of the hand.

**Methods:** Management of the wounds with tissue defects was done in accordance with the principles of war surgery doctrine. Since the wounds had been primarily contaminated with polymorphic bacteria, all the patients received antitetanus and antibacterial treatment. Surgical

treatment of war wounds of the hand involve:

1. Primary surgical management. Primary surgical management of the injured hand is performed within 24 hours of wounding using «economical debridement» of devitalized tissue in accordance with war surgery principles all the way to clinically vital tissue. Dislocated osseous fragments are repositioned and periosteal fragments are removed. After debridement, the hand is immobilized in plaster of Paris in neutral position. In accordance with war surgery doctrine, osteosynthesis of the phalanges and metacarpal bones is not allowed, but we used Kurschner wires in some cases for internal immobilization.
2. Additional surgical management (if required). Subsequent tissue necrosis, after primary management of the wound, caused by pathophysiological mechanisms of wounding and found on «second look».
3. Delayed wound closure. For wound closure we used partial thickness skin grafts as primary or final reconstruction procedure. Different flap types were used: local skin flap, fasciocutaneous, fascial, muscle flap, arterial, reverse, regional, direct distant or free microvascular flaps.
4. Secondary reconstructive procedures on damaged deep structures. Reconstruction of deep hand structures with complex tissue defects (tendons, nerves, bones, joints) was performed two months or later after wound closure. For injured tendon reconstruction we commonly used tendon grafts, and for injured nerves additional neuroraphy was done or we used nerve grafts. For injured bones we used bone grafts and for joints we utilized capsulotomy or arthrodesis.

**Results:** At the Clinic for Plastic Surgery and Burns, Military Medical Academy, 37.6% of the wounded had war wounds with tissue defects caused by firearms. War wounds caused by explosion were recorded in 55.2%, while in 7.1% some thermal agent was the cause. More than half of the wounds treated at the Military Medical Academy were associated with defects of various tissues. War wounds with tissue defects were most common on the extremities (72.3%; upper, 35.8%), while in 16.6% the hand was affected. Phalanx injuries were detected in 12.44%, while metacarpal bones were injured in 10.97%. Direct suture was used to close soft tissue defects in 12.68% and skin grafts were used as either temporary or definitive reconstructive procedure in 40.86%. We made use of various flaps: local – cutaneous (fasciocutaneous, fascial, arterial, and reverse) in 9.89%, regional in 16.78%, distant direct in 9.89% or free microvascular ones in 2.37% of the wounded. Finger amputations or surgical management of the explosion-caused hand amputation were performed in 7.52% (5). Reconstructive surgical procedures on deeper

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structures in the treatment of war wounds with complex tissue defects (tendons, bones, joints) were performed two months after the treatment of soft tissue defects. Tendon graft was most commonly used in the reconstruction of injured tendons; additional neurotomy or nerve graft was used in nerve reconstruction, while bone structures were reconstructed with skin grafts. Transpositional tendoplastics was utilized after tendon, bone and nerve reconstructions in order to improve hand function. Various prosthetic devices were used for amputated hands.

Conclusion: War wounds of the upper arm and the hand with tissue defects make up more than one third of all war wounds. Due to highly specialized anatomic structure characterized by a high ratio of skin surface and the volume of deeper tissue structures and complex functional mechanisms it possesses, the hand is an organ the injury of which requires specific diagnostic and surgical measures of several tissue structures (tendon, nerve, bone, joint). Since war injuries of the hand are mostly complex and associated with tissue defects and always cause a degree of permanent disability, it is essential that a surgeon has good command of the reconstruction methods in wound closure in the reparatory phase, as well as of appropriate atraumatic technique in the reconstruction of tendons, nerves, bones in the reconstruction phase. Plastic and reconstruction surgery has a very prominent role in the surgical management of war wounds of the hand, during primary and primary delayed surgical treatment, in wound closure later on, and in the phase of reconstruction of deep tissue defects.

## **MICROSURGERY IN HEAD AND NECK RECONSTRUCTION**

**Kozarski Jefta, Milicevic Sasa, Djordjevic Boban**

The head and neck region's defects presents a great challenge for reconstructive surgeons. We report our experience in the treatment of 54 patients with head and neck free flap reconstruction (15 tumor resection, 2 with burns, one with postburned neck's contracture, and 36 wounded patients).

We applied six fibular, four scapular, three radial forearm, one dorsalis pedis and one latissimus dorsi free flaps. Fibular and radial forearm flaps were used for reconstruction of the mandibular bone, while scapular, dorsalis pedis and latissimus dorsi flaps were used for filling the defects of the mouth floor, orbital or maxillary region. We used scapular free flaps for covering the burn of the

face, scapular and parascapular flaps for the covering of the neck and exposed mandibular bone and preexpanded scapular and parascapular flap for correction of the neck's postburn contracture.

We treated extensive wartime tissue defects of the lower third of the face with composite free flaps: seven scapular, nine radial forearm and twenty fibular flaps. Length of the mandibular defects varied from 5-16 cm. The bones were fixed by wire, miniplates or external fixation. The skin parts of the flaps were used in reconstruction of lower lip, chin and/or cheek, respectively. Vascular pedicles of the flaps were microsutured to either the superior thyroid, facial or external maxillary and carotid vessels.

Our experience and results in microvascular reconstruction in the head and neck region support the use of this reconstructive method in peace-time pathology and in treatment of war wounds with complex tissue defect.

## **VACUUM-ASSISTED COMPRESSION THERAPY SETTINGS FOR APPLICATION IN PLASTIC SURGERY**

**Milicevic Sasa, Stepic Nenad, Kozarski Jefta, Djordjevic Boban**

OBJECTIVE: Nowadays vacuum-assisted compression therapy plays an important role in plastic surgery, especially for preparing good basis for covering skin defects.

MATERIALS & METHODS: During the last four years, we treated 30 patients with different etiology skin defects, using different vacuum-assisted compression therapy settings. Depending on the location and depth of the wound, the presence of an infectious agent in the wound and the general condition of the body, vacuum-assisted compression therapy was administered at once or more times before skin transplantation.

RESULTS: The whole settings was corrected due to the granulation response. In 10 patients we were used vacuum-assisted compression therapy in intermittent mode and pressure of 125 mm Hg, in the next 10 patients we used it in continuous mode and in the rest of patients we used it in both intermittent and continuous mode. The healing time was significantly lower in the last mode.

CONCLUSION: Vacuum-assisted compression therapy plays an important role in the formation of granulation tissue, but using combination of intermittent and continuous mode gives better results than any single mode.

## **INCIDENCE OF PAPILLARY MICROCARCINOMA OF THYROID GLAND IN PATIENTS WITH SURGICALLY TREATED GRAVES' DISEASE – AN INSTITUTIONAL EXPERIENCE**

**Kovacevic Bozidar, Ignjatovic Mile, Petrovic Milan, Karajovic Jelena, Kuzmic Jankovic Snezana, Cerovic Snezana**

Papillary carcinoma (PC) is the most common malignant tumor of thyroid gland with the constant increase of incidence in different parts of the world. In total number of diagnosed PC an important part belongs to its histological variant – papillary microcarcinoma (PMC). Papillary microcarcinoma is a tumor measuring less than 10 mm and usually represents an incidental finding at surgically removed thyroid glands for benign diseases including all types of hyperfunctional conditions. Association between thyroid carcinoma and Graves' disease is controversial with significant difference in reported incidence from 0.5% - 32%. The aim of our analysis is to determine the frequency of PMC in surgically treated patients with Graves' disease. Seven hundred eighty four thyroidectomies were performed in two years period at Military Medical Academy. PC is detected in 357 patients from which 157 are PMC (44.6%). We analyzed an incidence of PMC in 109 surgically treated patients with Graves' disease and we detected microcarcinoma in 20/109 cases (18.34%) and 20/157 (12.73%) from total number of diagnosed PMC. Thyroid carcinomas in Graves' disease are not rare and most of them are papillary microcarcinomas. Our results show high prevalence of PMC (18.34%) at surgically treated patients with Graves' disease which represents one of the highest prevalences in incidentally discovered carcinomas in this pathological condition.

## **RECANALIZATION RATE AND CLINICAL OUTCOMES AFTER THROMBOLYSIS IN PATIENTS WITH OCCLUSION OF MAJOR CEREBRAL ARTERIES IN STROKE UNIT, MMA**

**Pasovski Viktor, Grunauer Marija, Veljancic Dragana, Krsmanovic Zeljko, Labovic Boban, Lepic Toplica, Raicevic Ranko**

**INTRODUCTION:** Intravenous administration of recombinant tissue plasminogen activator is still the most common therapy for the treatment of acute ischemic stroke (AIS) but recanalization rate of large cerebral arteries

occlusion largely does not lead to the desired therapeutic outcome.

**OBJECTIVE:** Evaluation of results of intravenous thrombolysis in the patients with large vessel occlusion (anterior and posterior circulation stroke) comparing to those without it.

**METHODS:** From February 2013 until January 2016, we analyzed 71 patients treated with thrombolytic therapy at MMA in retrospective study design. We divided patient in two groups, those with occlusion of anterior and posterior circulation present in major arterial branches (ACI, ACM (M1), AV (V4) and a. Basilaris) confirmed with CTA, with the other group of thrombolysed patients.

**RESULTS:** We compared average age of the patients as well as percentage of males and females and average door-to-needle time was estimated in minutes in both groups. Level of neurological dysfunction was being established with NIHSS score before and 24 hours after the applied thrombolytic therapy and thrombolytic effect of rtPA was being estimated by CTA that had been done before and 24 hours after the treatment, with estimation of success of recanalization. The frequency of cardioembolic stroke, atherosclerosis of large blood vessels as well as the existence of small blood vessels disease are shown as percentage in overall etiology of AIS. Patients with mRS 0-2 presented the group with favourable treatment results and patients with mRS 3-6 the group with unfavourable results. Complications of applied thrombolytic therapy – haemorrhagic transformation, symptomatic ICH and system haemorrhage are presented in percentage (final results of the study are in the final stage of statistical data processing).

**CONCLUSION:** Our results suggest limited recanalization potential of IVT in acute large vessel occlusive strokes and imposes the need for introduction of endovascular treatment in routine practice whose effectiveness is confirmed by recent published studies.

## **THE CORRELATION BETWEEN TICK BITES AND ECOLOGICAL INDEX OF LYME DISEASE RISK IN BELGRADE PARKS**

**Krstic Milena, Lazic Srdjan, Stajkovic Novica, Djordjevic Milutin, Radakovic Sonja, Jadranin Zeljko, Mladenovic Jovan**

**OBJECTIVE:** The goal of this paper was to determine the value of ecological index on green areas in 9 parks in Belgrade and establish the correlation of this index with tick

bites in humans.

**MATERIALS & METHODS:** Ticks were collected monthly by using the flag hour's method and the infection rate was determined by dark field microscopy. Point values were assigned to certain parameters and ecological index was evaluated for each habitat. The data on tick bites from the surveyed habitats were obtained from the Protocol of patients bitten by ticks of the Institute of epidemiology, Military Medical Academy (Belgrade).

**RESULTS:** In Belgrade parks high potential risk of *Borrelia burgdorferi* transmission on average was determined, while the actual risk on most of habitats was categorised as the limited risk. Statistically, in terms of actual risk values, the 2 habitats, Hajd Park and Topčider, were significantly different.

## **RESEARCH OF MORPHOLOGICAL AND HISTOCHEMICAL CHARACTERISTICS OF FAMILIAL ADENOMATOUS POLYPOSIS**

**Cvetkovic Marija, Jovanovic Jelena, Veselinovic Marija**

**INTRODUCTION:** FAP is a hereditary gastrointestinal polyposis, complicated by malignant alteration in 100% cases. It is greatful for studying histogenesis of colorectal cancer, which there exist in thousands.

**AIM:** Project's aim is studying gradual carcinogenesis where are included lots of adenomatous.

**MATERIAL AND METHODS:** Operating material, total colectomy, is surgically removed because of 100% malignant alteration of adenomatous. After tissue treatment, material is processed and colored by classical HE method, histochemical PAS method and combined HID-AB, pH= 2,5 method. Histological and mucinous-histochemical characteristics of 20 adenomatous are studied.

**RESULTS:** In surroundings of the present colorectal mucinous adenocarcinoma are found mucinous secretion villous adenomatous, that affirms the hypothesis of histogenesis mucinous adenocarcinoma from villous adenomatous.

**CONCLUSION:** The conclusion is that malignant potential of removed adenomatous which were around cancer, is influenced by the number of adenomatous, their histological type, as well the level of dysplasia.

## **A RARE TUMOUR IN ANORECTAL REGION: PRIMARY**

## **ANORECTAL MALIGNANT MELANOMA**

**Akgun Veysel, Ozen Alptug, Hamcan Salih, Battal Bilal**

**OBJECTIVE:** Primary anorectal malignant melanoma (AMM) is very rare when compared with the adenocarcinoma of this region. It has imaging clues that can be important in treatment planning. The aim of this report is to represent magnetic resonance imaging (MRI) findings of a case with primary AMM.

**MATERIAL AND METHOD:** A 64-year-old male consulted to our service complaining for rectal bleeding lasting for 3 months. A pigmented tumour visualized in rectum during colonoscopy, biopsy was taken and the pathologic diagnosis was malignant melanoma. Pelvic MRI and PET-CT were scheduled to demonstrate the extent of the tumour.

**RESULTS:** A mass lesion, which was hyperintense in T1A and hypointense in T2A relatively to muscular tissue, involving a 10 cm segment of rectum was revealed. Adipose tissues between the mass and prostate and seminal vesicles were obscured. 8 lymph nodes were detected within mesorectal adipose tissue.

**CONCLUSION:** Primary AMM is seen in less than 4% of all anorectal cancers. It is more aggressive and seen more commonly in males. In contrast to adenocarcinoma, AMM is hyperintense in T1A and hypointense in T2A due to its melanin content. MRI imaging can be very useful for differential diagnosis of AMM from other malignant tumours due to distinct signalization specialties.

## **BILATERAL KÖHLER DISEASE**

**Balyemez Ugurcan, Verim Samet, Inan Kemal, Ors Fatih**

**OBJECTIVE:** Köhler's disease is the self limiting avascular necrosis of navicular bone. The disease typically affects boys, but girls could also be affected. It's commonly seen at 4-5 years of age and is usually unilateral. The last ossifying tarsal bone is navicular bone and it could be compressed by already ossified talus and cuneiform bones. The compression causes an obstruction in navicular's blood supply. Thus, avascular necrosis occurs. We aimed to present a patient with bilateral avascular necrosis of navicular bones.

**MATERIAL AND METHODS:** 5-year old male patient, presented with pain in his both ankles. Patient was examined by bilateral anteroposterior and lateral ankle radiographs.

**RESULTS:** His physical examination revealed pes planus

deformity and bilateral anteroposterior and lateral ankle radiographs were obtained which revealed bilateral significant volume loss, sclerosis and deformation of navicular bone and diagnosed as Köhler's disease.

**CONCLUSION:** Köhler disease is the avascular necrosis of navicular bone, affecting typically boys at 4-5 years of age. Although Köhler's disease is a self limiting entity, early diagnosis and treatment of the patient is important in limiting the symptomatic period of disease. It could be diagnosed in early stages by plain radiographs and must be in differential diagnosis in patients with supporting symptoms. Moreover, disease could rarely occur bilaterally as in our case.

#### **INVASIVE DUCTAL CARCINOMA DERIVED FROM POSTOPERATIVE PARENCHYMAL DISTORTION AREA**

**Balyemez Ugurcan, Hamcan Salih, Uğurel M. Sahin, Tasar Mustafa**

**OBJECTIVE:** In mammographic examinations architectural distortion areas are classified into two groups according to the presence of a mass density at the center of distortion. Lesions with mass density are called "white star", and others are called "black star". Generally, black star areas are used to define benign entities such as radial scars or postoperative parenchymal changes. We aimed to present the follow up mammographies of an invasive ductal carcinoma case derived from postoperative parenchymal distortion area.

**MATERIAL AND METHOD:** A 45-year old woman with a history of excisional biopsy from breast and a positive family history in her mother examined with mammography, ultrasonography and excisional biopsy.

**RESULTS:** Pleomorphic microcalcifications were detected in screening mammography. Radioguided occult lesion localization (ROLL) was performed with mammography since sonographic examination revealed negative in microcalcification area. Excisional biopsy revealed as "fibrocystic changes". Following that, follow up mammographies were reported as postoperative parenchymal distortion (black star) at the biopsy area for 4 years. The last mammography of the patient showed an increase in density and size of the black star area. Although

there is fat necrosis type coarse calcifications, the increase in size and density were considered to be suspicious and a second excisional biopsy was performed. The pathological result of the biopsy revealed invasive ductal carcinoma.

**CONCLUSION:** Parenchymal distortion areas on mammograms are associated with benign entities such as radial scars, complex sclerosing lesions, postoperative changes or malignancies. Benign parenchymal distortions particularly postoperative parenchymal distortions as in our case, don't have a central density, seen as a radiolucent distortion area and named "black star". A decrease in density and size of the area is expected in postoperative parenchymal distortions. If an increase is detected in these parameters, radiologist should suspect of malignancy and perform a biopsy.

#### **A RARE ANOMALY: DIVERTICULA IN THE RIGHT VENTRICLE**

**Balyemez Ugurcan, Hamcan Salih, Ors Fatih, Bozlar Ugur**

**OBJECTIVE:** Right ventricular diverticules are extremely rare and generally associated with congenital anomalies. Aneurysms or pseudoaneurysms are in the differential diagnosis of the diverticules. Ventricular diverticules are differentiated from these entities by narrow neck and synchronized contraction with ventricle. We aimed to present CT findings of a case with right ventricular diverticula and concomitant pericarditis.

**MATERIAL AND METHOD:** A 22-year old male patient with a history of pericarditis and presented with chest pain. He was examined by cardiac CT angiography study with 320-slice CT.

**RESULTS:** Pericardial effusion measuring 9mm, pericardial thickening and pericardial contrast enhancing were detected. In addition to these findings, a 8x12mm sized diverticule was seen on apical section of the right ventricular wall.

**CONCLUSION:** Ventricular diverticules and particularly right ventricular diverticules are extremely rare anomalies. Cardiac CT is a useful method in detecting ventricular diverticules since it enables multiplanar and functional imaging.

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## **ACTIVE BREATHING CONTROL (ABC) FOR RESPIRATORY MOTION MANAGEMENT IN RADIOTHERAPY OF THORACOABDOMINAL TUMORS**

**Beyzadeoglu Murat, Sager Omer, Gamsiz Hakan, Dincoglan Ferrat, Uysal Bora, Demiral Selcuk, Elcim Yelda, Gundem Esin, Onal Elif, Ekmen Ayca, Askin Semiha, Taspinar Kadir, Dirican Bahar**

**OBJECTIVE:** Respiratory motion management in radiotherapy has gained utmost importance recently with tremendous recent progress in imaging technology and treatment delivery techniques. Active Breathing Control (ABC) system offers a viable strategy for motion management in radiotherapy of thoracoabdominal tumors. Herein, we aim to review the rationale, indications, and potential advantages of ABC system which is the primary method of managing respiratory motion in our department.

**MATERIAL AND METHOD:** ABC system has been developed for facilitating reproducible breath-holding for respiratory motion management. Moderate-deep inspiration breath-holding with the ABC system has widespread utilization for management of thoracoabdominal tumors. An education session is typically performed for patients appropriate for 4-D radiotherapeutic management. After acquisition of treatment planning images at the breath-holding phase, treatment planning is done and patients undergo 4-D treatment at moderate-deep inspiration breath-holding. Image guidance is typically used in conjunction with 4-D radiotherapy to achieve excellent treatment precision.

**RESULTS:** Practical applications of 4-D radiotherapy using the ABC system includes treatment of left-sided breast cancers, locally advanced lung cancers, early stage non-small cell lung cancers, pulmonary oligometastases, adrenal metastases, liver metastases, and locally recurrent pancreatic cancers. Primary benefits of using ABC system include minimization of breathing-induced motion thereby allowing the use of reduced internal margins, elimination of image artifacts, and minimizing heart exposure during irradiation of left-sided breast cancers.

**CONCLUSION:** Improved accuracy and precision with the ABC system may possibly translate into enhanced treatment efficacy and normal tissue sparing with great potential for optimizing the therapeutic ratio in radiotherapy of thoraco-abdominal tumors.

## **RUPTURE OF HYDATIDIC CYST OF LIVER AND LUNG IN CHILDREN**

**Caliskan Bahadir, Altan Bilal, Bulut E. Burak, Demirbag Suzi, Surer Ilhami**

**Introduction:** Hydatid cyst disease is a parasitic infection commonly caused by *Echinococcus granulosus*. In hydatid cysts of the liver and lung, spontaneous or traumatic perforation can occur. Perforation may arise next to the bile ducts, bronchus, neighboring organs, or directly into the abdominal cavity. Treatment of ruptured hydatid cyst requires emergency surgical intervention.

**Case Report:** The children's presenting complaints were abdominal pain, nausea, skin eruptions, vomiting, coughing and urticaria. Diagnosis was achieved through physical examination, blood tests, lung graphy, USG, and CT. All patients underwent surgery after presentation. Two cysts were located in the liver, and one was in the lung. Treatment involved cystectomy and drainage. The abdomen of two patients was washed with 3% NaCl, and the cyst pouch was irrigated with hypertonic saline (20%) followed by isotonic saline.

**Discussion:** Perforation of the hydatid cyst in the peritoneal cavity is a very rare event, even in areas where the disease is endemic. The cyst may be ruptured after a trauma, or spontaneously as a result of increased intracystic pressure. Ultrasonography and CT are the main diagnostic methods. Emergency surgery is the main treatment for intraperitoneal and intrabronchial rupture of hydatid cysts, and medical treatment should be given postoperatively.

## **SURGICAL EXCISION OF TAILGUT CSYT IN A CHILD DIAGNOSED WITH MAGNETIC RESONANCE**

**Caliskan Bahadir, Bulut E. Burak, Bayir Y. Burak, Guven Ahmet, Demirbag Suzi**

**Introduction:** The Tailgut cyst (cystic hamartoma) is rare congenital anomalies that are believed to arise from the embryonic hindgut. The most important complications of these cysts are infection with secondary fistulization and malignant degeneration. MRI has evolved to be the investigation of choice for the evaluation of presacral tumors as it can provide excellent anatomic detail and soft tissue contrast

**Case Report:** 5 year old girl presented with abdominal pain. Clinical examination revealed no significant abnormalities. During laboratory and radiologic investigation a retrorectal cystic mass nearly 2 cm and an urolithiazis nearly 7 mm in the right kidney were found incidentally by abdominal US. Digital rectal examination revealed a soft cystic lesion on

the right side of retrorectal area. Serum alphafetoprotein and beta hCG were normal. MRI lumbo-sacral spine showed well defined multicystic lesion nearly 2 cm which is brightly hypertense on T2W1 and hypotense on T1W1 posterior to sacrum and coccyx with no evidence of connection to the thecal sac. Complete excision of the cyst was done. Histopathology report shows cyst wall partially lined with stratified squamous epithelium and cyst wall shows spaces lined by cuboidal epithelium and nerve bundles with no evidence of malignancy suggestive of tailgut cyst.

Discussion: Tailgut cysts are rare congenital anomalies derived from the remnants of the embryonic hindgut. MRI is a non-invasive useful imaging investigation with high diagnostic accuracy when a retrorectal cyst is suspected. Complete surgical excision is the treatment of choice as this provides a definite diagnosis and prevents possible complications such as infection, fistula formation and malignant degeneration.

#### **VAGINAL ATRESIA, UTERUS DIDELPHYS AND HEMATOMETRACOLPOS: A RARE CAUSE OF COLIC ABDOMINAL PAIN IN A TEENAGE**

**Caliskan Bahadır, Fidanci Ulas, Bulut E. Burak, Bayir Y. Burak, Guven Ahmet, Demirbag Suzi**

INTRODUCTION: Hypoparathyroidism, deafness and renal dysplasia (HDR) syndrome is an autosomal dominant genetic disorder characterized by hypoparathyroidism, sensori-neural deafness and renal dysplasia. Rarely, genital neoplasms, hematocolpos, hematometrocolpos, and renal anomalies are reported in association with didelphys uterus.

CASE REPORT: A 13-year-old girl was admitted to our clinic with a complaint of severe abdominal pain in the right lower quadrant of the abdomen for a duration of 2 days. Physical examination revealed a suprapubic mass in the abdomen. A gynecologic examination revealed vaginal atresia. The patient has the diagnosis of HDR syndrome and she has right atrophic kidney, left cohen operated kidney, deafness and low IQ levels. The Abdominal US examination showed a cystic lesion in the adnexial region and absence of the right kidney. An MRI revealed a uterine didelphys, bicollis, and lower atresia of duplicated hemivaginas. There was a collection of fluid that exhibited a high signal intensity on T1 and a low signal intensity on T2 sequences, both in the uterus, and in the atretic vagina referred to as hematometrocolpos.

Ultrasound-guided hematometrocolpos aspiration was performed. One week later Hysterectomy and bilateral salphingectomy was performed because of the family's preference. The girl was discharged uneventfully on post operative day 5.

DISCUSSION: Complex congenital anomalies of the female reproductive tract are uncommon and occur most commonly as a result of Mullerian dysregulation during embryogenesis. Rarely, genital neoplasms and endometriosis are reported in association with cases of didelphys uterus. Detailed examination of urogenital system is important. The definitive treatment depends on the complexity of anomaly.

#### **A RARE CARDIAC PATHOLOGY, ACQUIRED SINUS VALSALVA ANEURYSM AND RUPTURE: 320 DETECTOR ROW CT FINDINGS**

**Celikkanat Serhat, Hamcan Salih, Bozlar Ugur, Tasar Mustafa**

OBJECTIVE: Sinus valsalva aneurysm (SVA) was first discovered in 1835 by Hope in an autopsy examination and it was first described in 1840 by John Thurnam. This rare pathology is usually congenital. The pathophysiology of this disorder is thinning and separation between aortic media layer and annulus fibrosus that leads pathologic dilatation. Spontaneous rupture is usually occur in 3rd and 4th decades of life. If it is not operated in emergency conditions it may be fatal. We aimed to present imaging findings of a rare 52-year-old male with acquired SVA rupture.

MATERIAL AND METHOD: Coronary angiography was made due to sudden onset of chest pain.

RESULTS: Right coronary sinus was enlarged than the other sinuses. An 8 mm defect in the anteroinferior side of the right SV that was fistulized to right ventricle was determined.

CONCLUSION: Incidence of this rare disorder is 0.14-0.23%. Syphilis, bacterial endocarditis, trauma, atherosclerosis, media necrosis and previous operations are the acquired reasons of this commonly seen as congenital pathology. In our case SVA and rupture of it that are based on

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atherosclerotic disease were present. SVA ruptures are commonly develop in right coronary sinus and drain into the right ventricle. More rarely thrive in the non-coronary sinus and can be drained into the right atrium. Whether it fistulizes to pericardium severe cardiac tamponade may be thrive. 320 detector row CT is not only the choice of modality to diagnose this entity but also the other cardiac abnormalities.

### **A RARE IMITATOR OF MALIGNANCY, ISOLATED HEPATIC TUBERCULOSIS: MRI FINDINGS**

**Celikkanat Serhat, Akgun Veysel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Hepatic tuberculosis (TB) can be seen in secondary to miliary TB and its incidence is 50-80% in disseminated TB cases. But, isolated hepatic TB is a very rare entity and less than 100 cases were reported in literature. In this article, we aimed to present an isolated hepatic TB that mimics liver malignancy.

**MATERIAL AND METHOD:** A 21-year-old male patient with high fever was referred to Radiology Department for abdominal ultrasound (US). Multiple hypoechoic lesions were determined in liver and for further evaluation dynamic liver magnetic resonance imaging (MRI) was performed.

**RESULTS:** Hepatomegaly and multiple T1 hypointense and T2 hyperintense lesions 0.5-1.5 cm in size were determined. These lesions were enhancing peripherally on post-contrast images.

**CONCLUSION:** There are 5 types of liver tuberculosis: miliary TB, pulmonary TB with hepatic involvement, focal tuberculoma or abscess, primary hepatic TB and TB cholangitis. Isolated hepatic TB is the rarest one among these subtypes (1%). Hepatic TB can mimic primary hepatocellular carcinoma, cholangiocarcinoma, liver abscess and metastasis. Therefore, the diagnosis of isolated hepatic TB can be challenging. In cases with multiple focal hepatic lesions that are unexplained even though it is rare but hepatic TB should be kept in mind. Definitive diagnosis can be made by demonstrating caseous granuloma histopathologically.

### **A RARE MALIGNANCY IMITATOR: PSEUDOMALIGN MYOSITIS OSSIFICANS**

**Celikkanat Serhat, Akgun Veysel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Myositis ossificans (MO) is a benign pathology that is characterized by heterotopic ossification within muscles. In this article, we aimed to present magnetic resonance (MR) features of a case with MO and prostate cancer.

**MATERIAL AND METHOD:** An 83-year-old patient with pathologically proven prostate cancer had received radiotherapy and chemotherapy previously. Due to elevated prostate specific antigen (PSA) values, 99mTc-Methyl diphosphonate bone scintigraphy and dynamic prostate MRI were performed.

**RESULTS:** There were T2 hyperintense areas adjacent to pubic rami and callus formation in both pubic rami that were not calcified yet. In scintigraphy examination these areas showed mild uptake values suggestive of osteoblastic metastasis of prostate cancer. Nevertheless, another suspicious lesions with low signal intensity on T2 sequence were detected within the insertion of adductor and gracilis muscles.

**CONCLUSION:** MO is commonly seen in young and after trauma. There are four types of MO: myositis ossificans circumscripta, MO associated with neurologic disorders, fibrodysplasia ossificans progressiva and pseudomalign myositis ossificans (PMO). PMO is rarely seen and often not associated with trauma. PMO has various imaging features related to its clinical grade. Especially early and mid-term PMO can mimic metastatic lesions in patients with known malignancy and making the diagnosis difficult.

### **A RARE PELVIC MALIGNANT TUMOR, AGGRESSIVE ANGIOMYXOMA: 320 SLICE CT FINDINGS**

**Celikkanat Serhat, Akgun Veysel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Aggressive angiomyxoma (AAM) is a rare mesenchymal neoplasm that originates from pelvic and perineal soft tissues. It was first described by Steeper and Rosai in 1983 in the literature. This extremely rare entity is most commonly seen in female adults, shows aggressive behaviour and invades adjacent structures. In this poster, we aimed to present CT findings of a 41-year-old female with AAM.

**MATERIAL AND METHOD:** A 41-year-old female patient was admitted to Gynecology Department with abdominal pain. Ultrasound examination (US) was performed and a pelvic

mass was determined. For further evaluation the patient was referred to Radiology Department for the CT scan.

**RESULTS:** A homogenous enhancing mass that occupies right obturator region was seen in the CT images. The mass was 11x5x6 cm in size, invading adjacent structures and displacing uterus and urinary bladder to left.

**CONCLUSION:** AAM has homogenous structure appears as hypodense according to muscle tissue in non-contrast-enhanced CT images and usually invades surrounding structures. It shows diffuse and homogenous contrast enhancement. In magnetic resonance imaging (MRI), it shows low signal intensity in T1 and high signal intensity in T2 sequences. Its radiological diagnosis may be challenging therefore it is important to understand the clinical features of AAM. In cases with pelvic malignancies that has aggressive behaviour this rare malignancy should be considered.

### **EPIPERICARDIAL FAT NECROSIS, A RARE PATHOLOGY THAT MIMICKS PULMONARY EMBOLISM: 320 SLICE CT ANGIOGRAPHY FINDINGS**

**Celikkanat Serhat, Hamcan Salih, Bozlar Ugur, Tasar Mustafa**

**OBJECTIVE:** Epipericardial fat necrosis is a rare pathology among the causes of chest pain. The major symptom of this entity is an acute pleuritic chest pain like a stabbing wound and it may mimic pulmonary embolism. Epipericardial fat necrosis is mostly located on the left side of cardiophrenic angle. We aimed to present CT angiography (CTA) findings of an epipericardial fat necrosis.

**MATERIAL AND METHOD:** A 22-year-old male patient was admitted to Emergency Department with a pleuritic chest pain. There was no history of trauma to explain the chest pain. Due to a suspicion of pulmonary embolism, the patient was referred to the Radiology Department for computed tomography angiography (CTA) imaging of pulmonary arteries. Follow up imaging is done a month later.

**RESULTS:** There was a mass in fat attenuation localized in the right side of anterior mediastinum adjacent to the right side of pericardium and pleura. The lesion was encapsulated, 3x2 cm in size and contained dense

strandings which suggests inflammatory processes. A minimal pleural effusion was also detected in the right lung.

**CONCLUSION:** The majority of the cases have prior dyslipidemia or obesity. This rare pathology is usually detected incidentally and it may be misdiagnosed by emergency staff and/or overlooked by radiologists. Epipericardial fat necrosis should be kept in mind alongside with the other possible anterior mediastinal pathologies that cause chest pain. Multislice CT imaging is helpful to diagnose not only epipericardial fat necrosis but also other wide range of pathologies that occupy anterior mediastinum.

### **TWO CASES OF A RARE RENAL ANOMALY: SEGMENTAL MULTICYSTIC DYSPLASTIC KIDNEY: MRI FINDINGS**

**Celikkanat Serhat, Akgun Veyssel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Multicystic dysplastic kidney (MCDK) is a rare renal anomaly that is composed of multiple cysts separated by dysplastic renal parenchyma. The incidence of this entity that impairs renal function is 1:4300. Segmental MCDK is a rare form of this disorder and can be seen in 4% of all children with MCDK. Less than 50 cases were reported in pertinent literature. In this article, we aimed to present imaging findings of this rare entity.

**MATERIAL AND METHOD:** A 3-year-old male with recurrent fever and elevated acute phase reactants and a 39-year-old male with elevated urea and creatinine values were evaluated by abdominal ultrasound (US) and magnetic resonance imaging (MRI).

**RESULTS:** In the first case lobulated multiple cystic lesion with thin septations in the upper pole of right kidney was depicted. Mild enhancement was determined in these septations in post-contrast images. In the second case, multiple cysts separated by thin septations in the upper pole of right kidney was determined.

**CONCLUSION:** Segmental MCDK is usually unilateral and effects upper pole of kidney. Frequent and recurrent urinary infection, abdominal mass and renal function impairment may be seen in effected patients. This rare entity is common in pediatric group. Radiologic features of Segmental MCDK are: Multiple cysts, thin septations, segmental involvement, lack of renal function in this region and normal parenchyma in the rest of kidney.

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## **A RARE AUDITOR NEUROPATHY, ISOLATED COCHLEAR NERVE ABSCENCE: 3T MRI FINDINGS**

**Celilov Ramil, Verim Samet, Battal Bilal, Akgun Veysel**

**OBJECTIVE:** Cochlear nerve growth retardation or developmental absence is a condition that goes along with congenital hearing loss. The incidence of congenital hearing loss is reported about 1-3: 1000. Therefore, the existence of cochlear spiral ganglion cells and nerves to transmit signals to the brain have to be determined before cochlear implanting procedure. Also MRI for posterior fossa has significant role for preoperative detection of cochlear nerve aplasia, hypoplasia or agenesis. On this article we present magnetic resonance (MR) images of an 11-year-old pediatric patient with auditory neuropathy.

**MATERIAL AND METHOD:** Male pediatric patient with left hearing loss, was referred to our clinic for posterior fossa MR imaging.

**RESULTS:** On posterior fossa MR images, while intracanalicular and cisternal segments of 7th cranial nerve were found to be normal, the left cochlear nerve was not observed in at all. Left cochlear aperture was small and narrow. Middle and upper rotations of cochlea have dysplastic appearance.

**CONCLUSION:** Cochlear nerve absence can be isolated or associated with the undevelopment of cochlear structures. CT can show the absence of the bone channel at the cochlear turn and MRI helps to detect the absence of cochlear nerve. Auditor nerve absence is seen in 1% of cases with developmental deafness. This pathology is diagnosed by the absence of auditor nerve in internal auditor channel. Transverse size of the inner ear and size of the vestibulocochlear nerve thickness is essential for surgical applications.

## **A RARE INTRACRANIAL PATHOLOGY, RUPTURED DERMOID CYST: MRI FINDINGS**

**Celilov Ramil, Celikkanat Serhat, Hamcan Salih, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Intracranial dermoid cyst (IDC) is one of the rare developmental ectodermal cysts and can display the characteristic features. 0.5% of all primary intracranial tumors are IDC's. This pathology may not be symptomatic over years and can be detected incidentally. These cysts can cause complications if they rupture into subarachnoid or intraventricular spaces. We aimed to report MRI findings

of a case with a rupture of an IDC.

**MATERIAL AND METHOD:** Because of the 3 months ongoing story of night shift a 27-year-old patient has been referred to our clinic to be evaluated by computed tomography (CT). After detection of multifocal intracerebral lesions with fat densities, MRI was performed.

**RESULTS:** Cystic soft tissue mass was seen in the anterior cranial fossa, mostly consisting of fat tissue, about 60x35x48 mm in size. Multifocal fat tissue formations secondary to rupture of a dermoid tumor were observed on both sides of cerebral hemispheres, also in the Sylvian fissure and the basal cisterns.

**CONCLUSION:** Such as other epidermoid cysts the IDC's are surrounded by mature squamous epithelium. They are usually located in the midline. Usually seen in the younger people and showing demographic peak in the second and third decades. Cyst rupture usually cause seizures, although it may cause deadly chemical meningitis, coma, cerebral vasospasm and infarction. Depending on the fat content IDC's have hyperintense signal on T1-weighted images and mixed signal intensity on T2-weighted MRI images. While rupturing into the subarachnoid space and ventricular system, hyperintense lesions of fat-fluid level may be seen.

## **CALVARIAL OSSIFIED FIBROMA IN AN ATYPIC APPEARANCE: CT AND MRI FINDINGS**

**Celilov Ramil, Verim Samet, Battal Bilal, Akgun Veysel**

**OBJECTIVE:** Fibroosseous lesions of the skull and facial bones are usually slow-growing and benign tumors but despite to these lesions can be clinically more aggressive. These lesions are locally destructive and can cause deformities in bones. It was reported in the literature that recurrent lesions can grow into sarcomas. We aimed to present 27-year-old male patient's computed tomography (CT) and magnetic resonance (MR) images of calvarial fibroosseous lesions, which shows different characteristics beyond usual findings.

**MATERIAL AND METHOD:** A 24-year-old male patient with headaches for 2 months and falling of the left eyelid was admitted to the neurosurgery department and for further evaluation patient was referred to our clinic for CT and MRI.

**RESULTS:** On CT a soft tissue density lesion in the left frontal bone was determined. The lesion was 32x24x28 mm in size and caused expansion and cortical erosion of frontal bone. As a differential diagnosis primarily an epidermoid cyst was thought. On MRI, lesion has high signal intensity

both on T1 and T2 weighted images. Differential diagnosis included hemorrhagic containing bone cysts, intraosseous epidermoid lesions and also frontal sinus mucocele. Intraoperative and postoperative histopathological examinations result as “fibroosseous lesion” (ossifying fibroma).

**CONCLUSION:** Benign, unilocular or multilocular fibroosseous lesions shows slow growth and complete surgical excision is sufficient to prevent recurrence. In rare cases, it can cause tumors to grow faster and reach cosmetic and functional problems. Due to the wide spectrum of imaging features of these lesions diagnosing by CT and MRI can be quite challenging for the radiologist.

### **DISASTER MEDICINE EDUCATION IN MEDICAL FACULTIES IN TURKEY**

**Demirtas Unal, Yildiran Nuri, Ozturk Gultekin, Unlu Caglar**

**OBJECTIVE:** Disaster medicine has been defined as “the science for analysis and development of the methodology requested to handle situations where available resources are insufficient in relation to the immediate need of medical care”. Any doctor, nurse and ambulance crew can be involved in a major accident or disaster at any time. Therefore, it is self-evident that basic knowledge in disaster medicine should be included in their undergraduate curriculum. It is important for creating awareness in terms of disaster medicine education to the medical faculty student during their education. The aim of this study to investigate disaster medicine lessons delivered in medical faculties in Turkey.

**METHOD:** Academic program of medical faculty of 58 state and 25 private universities have been examined and tried to determine the name and period of lessons about disaster medicine.

**RESULTS:** When academic program of medical faculties analyzed, lessons about disaster medicine have been identified in 29 of the 58 state universities (44.8%) and five of 25 private universities (20%). 70% of the disaster medicine education (24 medical faculties) is situated in the 3rd grade academic program. The titles of the lessons are Disaster Medicine, Disaster Management, Disaster Health Services and Disaster Culture. Disaster Culture lessons have been continued during two academic term in only one medical faculty.

**CONCLUSIONS:** Disaster medicine education is very important in terms of creating awareness for doctors. We evaluated that these lessons should be compulsory lessons

in all medical faculties and common education content should be determined.

### **CASE OF AN ABDUCTOR POLLICIS MUSCLE: MULTIPLE TENDONS**

**Develi Sedat, Yildirim Ahmet**

**OBJECTIVE:** This study aims to discuss anatomic variations of supernumerary tendons of an abductor pollicis muscle.

**MATERIAL AND METHOD:** During routine dissection of a 73-year-old male cadaver for gross anatomy education, a variant abductor pollicis longus (APL) muscle was encountered on the right side. In this variant muscle, belly of the muscle was divided into four tendons and tendons were attached to os trapezium and 1st metacarpal. The muscle was innervated by a branch of posterior interosseous nerve. In normal anatomy, APL originates from middle third of the posterior surface of the antebrachium and inserts on the base of the 1st metacarpal. The main action of the muscle is to abduct the thumb at the carpometacarpal joint and to assist rotation of the thumb. Therefore this muscle is of importance in performing skills with the hands.

**RESULTS:** Due to abnormal attachment sites, supernumerary tendons may alter biomechanics of the thumb. Unbalanced contraction force may alter abduction the thumb. Also, supernumerary tendons may cause impingement in first extensor compartment which APL and extensor pollicis brevis pass through. Inflammation of tendons within this compartment may cause de Quervain tenosynovitis. On the other hand, surgeons should be aware of supernumerary tendons in surgical procedures of wrist. These accessory tendons may be useful as tendon grafts in tendon reconstructions.

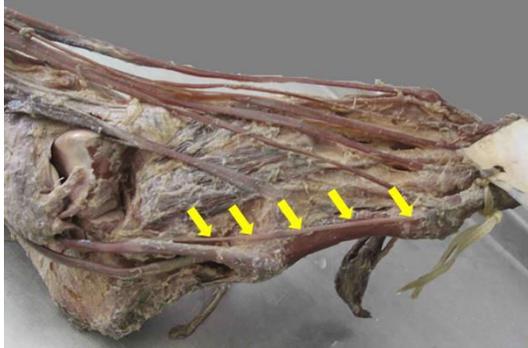
**CONCLUSION:** Clinicians and surgeons should be aware of anatomic variations of APL. Because existence of accessory tendons of APL may cause de Quervain’s syndrome or supernumerary tendons may be used as tendon grafts.

### **FIBULARIS BREVIS MUSCLE: CASE REPORT OF VARIANT INSERTION**

**Develi Sedat, Yalcin Bulent**

**OBJECTIVE:** This study aims to discuss abnormal insertion of a fibularis brevis muscle.

**MATERIAL AND METHOD:** During routine dissection of a male cadaver for gross anatomy education (unknown age), a variant insertion of fibularis brevis muscle (FB) was encountered on the right side. In this case, belly of the muscle was originating from distal lateral side of fibula, as usual. Its main tendon was inserting on the basis of fifth metatarsal bone. But from the upper side of the main tendon, a tendinous slip was originating. This accessory tendinous slip was inserting on the caput of the fifth metatarsal bone.



**RESULTS:** Accessory tendinous slips may alter biomechanics and stability of the joints. Abnormal attachment sites may affect the balanced distribution of the strength of the muscle. Also, accessory tendons may cause unexpected impingement or avulsion fractures at unexpected locations. Inflammation of these tendons may also cause tenosynovitis. Variant insertions of FB should be kept in mind by surgeons, in terms of surgical procedures of foot. These accessory tendons may be useful as tendon grafts in tendon reconstructions.

**CONCLUSION:** These accessory tendons may be used in tendon or peroneal retinaculum repair. The knowledge of these variations will help physicians in evaluating clinical conditions which will provide more accurate diagnosis and better image interpretation.

### DOES THE TRAIT ANXIETY AFFECT THE DENTAL FEAR IN PRIMARY CARE PATIENTS?

**Doganer Y. Cetin, Aydogan Umit, Yesil Hande U., Rohrer James E., Williams Mark D., Agerter David C.**

**OBJECTIVE:** The aims of the present study were to evaluate possible associations between trait anxiety, dental fear and the predictors of these interactions including demographic characteristics and dental history of patients applied to dental care center.

**MATERIAL AND METHOD:** A sample of 607 enrollees responded to Turkish version of Modified Dental Fear Survey (MDFS), the State-Trait Anxiety Inventory (STAI-T) and a questionnaire regarding previous dental experience. Multiple logistic regression analysis was used to identify the association between dental fear and the independent variables including trait anxiety, age groups, education level, dental visit frequency, experience and the source of dental knowledge.

**RESULTS:** Table 1 demonstrates the demographic characteristics of the participant patients. There was a trend for increasing in trait anxiety scores with greater levels of dental fear in medium level of dental fear group (odds ratio; OR=1.055, 95% CI [1.025-1.086]; p<0.001) and in high level of dental fear group (OR=1.090, 95%CI [1.057-1.124]; p<0.001). Comparing to low level of dental fear group; participants of medium dental fear level intended more likely go to the dentist when they have a complaint instead of regularly going (OR=3.177, 95%CI [1.304-7.741]; p=0.011). Participants of high dental fear level tended to be less likely to have experienced no problem (OR=0.476, 95%CI [0.284-0.795]; p=0.005) than the low level of dental fear group (Table 2)(Table 3).

**CONCLUSION:** We strongly indicate that higher dental fear scores have a predisposition of having high trait anxiety scores. Unpleasant dental experiences increased the risk for high dental fear levels. Avoiding regular visits, patients with dental fear tended only visited dentists due to necessities.

**Table 1.** Descriptive features of the participants (n=607)

	Frequency (n)	Percent (%)
Age groups		
<20 years	121	19.9
20-25 years	454	74.8
>25 years	32	5.3
Gender (male)		
	588	96.9
Education levels		
<12 years	263	43.3
≥12 years	344	56.7
Dental visit frequency		
Never	104	17.1
Having a complaint	467	76.9
Regularly	36	5.9
Experienced a problem?*		
No	358	71.2
Yes	145	28.8
The source of dental knowledge		
Parents	138	22.7
Dentist	294	48.4
TV-internet	175	28.8

\*: n=503 (patients who never have a dental visit were excluded).

**Table 2.** Dental fear and trait anxiety comparison in terms of independent variables (n=607)

	MDFS total score mean/median (sd)	P*	STAI-T Anxiety mean/median (sd)	P*
<b>Age groups</b>				
<20 years	25.02/22 (9.52)	0.547	40.37/40 (7.57)	0.017
20-25 years	25.56/22 (10.94)		42.35/43 (8.55)	
>25 years	27.81/25 (12.80)		43.91/44.5 (6.51)	
<b>Education levels</b>				
<12 years	26.61/23 (11.24)	0.056	44.36/46 (8.46)	<0.001
≥12 years	24.78/22 (10.36)		40.27/40 (7.74)	
<b>Dental visit frequency</b>				
Never	26.23/22.5 (11.78)		44.73/46 (8.05)	
Having a complaint	25.64/22 (10.50)	0.080	41.43/41 (8.18)	0.001
Regularly	22.75/18.5 (11.22)		42.22/42.5 (9.25)	
<b>Experienced a problem? **</b>				
No	24.22/21 (9.87)	<0.001	40.94/41 (8.18)	0.032
Yes	28.45/26 (11.61)		42.83/42 (8.31)	
<b>The source of dental knowledge</b>				
Parents	23.34/21.5 (8.21)		41.33/41 (8.77)	
Dentist	25.65/22 (11.10)	0.040	42.15/42 (8.28)	0.470
TV-internet	27.21/24 (11.72)		42.42/42 (7.97)	

\* Dichotomized groups were analyzed with Mann-Whitney U test, trichotomized groups were analyzed with Kruskal-Wallis test

\*\* n=503 (patients who never have a dental visit were excluded)

# Gender differences were not shown regarding majority of participants (96.9%) were composed by males

MDFS: Modified Dental Fear Survey, STAI-T: State-Trait Anxiety Inventory - (Trait)

**Table 3.** Multivariate logistic regression analysis of MDFS [Medium (36.6%, n=184) or High dental fears (32.8%, n=165) vs Low dental fear (30.6%, n=154)]

			OR (95% CI)	P
<b>Medium</b>				
Trait anxiety	STAI-T		1.055 (1.025-1.086)	< 0.001
	<20 years		1.100 (0.376-3.217)	0.862
Age groups	20-25 years		1.039 (0.386-2.796)	0.939
	>25 years		Reference	.
Education	<12 years		0.810 (0.506-1.298)	0.381
	≥12 years		Reference	.
Dental visit frequency	Having a complaint		3.177 (1.304-7.741)	0.011
	Regularly		Reference	.
Experienced a problem?	No		1.110 (0.655-1.881)	0.698
	Yes		Reference	.
The source of dental knowledge	Parents		1.114 (0.617-2.010)	0.720
	Dentists		1.191 (0.694-2.044)	0.526
	TV-internet		Reference	.

<b>High</b>				
Trait anxiety	STAI-T		1.090 (1.057-1.124)	< 0.001
	<20 years		1.184 (0.395-3.550)	0.763
Age groups	20-25 years		0.970 (0.355-2.647)	0.952
	>25 years		Reference	.
Education	<12 years		0.990 (0.605-1.620)	0.968
	≥12 years		Reference	.
Dental visit frequency	Having a complaint		2.035 (0.855-4.843)	0.108
	Regularly		Reference	.
Experienced a problem?	No		0.476 (0.284-0.795)	0.005
	Yes		Reference	.
The source of dental knowledge	Parents		0.539 (0.286-1.014)	0.055
	Dentists		0.839 (0.484-1.455)	0.533
	TV-internet		Reference	.

\*n=503 (patients who never have a dental visit were excluded in multivariate logistic regression analysis)

### THE EFFECTS OF ULTRASOUND THERAPY ON WOUND HEALING PROCESS AFTER EXPERIMENTAL N. ISCHIADICUS LESIONS IN RATS

Gezer Ayhan Hilal, Aktas Mustafa, Yildiz Funda

**OBJECTIVE:** To assess the effects of ultrasound therapy on nerve healing process after experimental N. ischiadicus lesions in rats.

**MATERIAL AND METHOD:** The material of this study comprised of 30 female Wistor albino rats divided in two groups as the study and control groups. Crush lesions were inflicted on the ischiadicus nerves through a predefined surgical procedure. In the experimental group, ultrasound therapy was applied on the nerves at a dose of 1/10.3 MHz and 0.1w/cm<sup>2</sup> for 5 minutes every 48 hours on the defective nerve portion, for two weeks. The control group was managed with only the traditional methods. Physiologic capacity changes were measured every 48 hours by comparing step length and finger space in each group. For this purpose, corridors of walking were laid onto white paper 10 x15cm in size. Glycerin and methylene blue dye were put under the feet of the rats and then the marches of rats were selected as target. The footprints of all rats were taken as an endpoint of study. The dimensions of the right foot of the rats were measured. Seven rats were sacrificed post-operatively on the 8th and 15th days in both groups. Histopathologic and macroscopic samples were studied.

**RESULTS:** The number of Schwann cells and mononuclear cells were significantly increased in the study group. The findings of this study implicate that ultrasound therapy

positively influences and accelerates the nerve healing process.

**CONCLUSION:** Ultrasound therapy can be a positive contribution to healing in frequently encountered N. ischiadicus lesions.

### **A LEFT VENTRICULAR DIVERTICULUM WITH MITRAL SUBVALVULAR LOCATION: CT ANGIOGRAPHIC FINDINGS**

**Hamcan Salih, Abduramani Asaf, Bozlar Ugur, Mustafa Tasar**

**OBJECTIVE:** Congenital ventricular diverticulae are rare, left located outpouching ventricular anomalies. They are divided into: 1. fibrous type: non-contractile and generally originating from the left ventricular base. 2. muscular type: Contractile and generally originating from the apicoposterior and inferior left ventricular wall. This report is aimed to present the CT angiographic findings of the coincidentally found congenital left ventricular diverticulum with mitral subvalvular location.

**MATERIAL AND METHOD:** A 39-year-old male presented with exertional dyspnea. A prospective ECG-triggered cardiac CT angiography study was done with a 320-detector CT with injection of 80 cc contrast for 5cc/sec.



Left ventricular diverticulum in the sagittal oblique MPR images (arrow)



Transverse oblique MPR images of left ventricular diverticulum (arrow)

**RESULTS:** In CTA evaluation, a 5x6 mm diverticulum was observed just beneath the posterior valve of the mitral valve and elongating into the atrioventricular sulcus. Differentiation of fibrous and muscular diverticulae can be made by CT and MRI. The contracting diverticulae are known as muscular diverticulae and vice versa for fibrous diverticulae. As evaluated retrospectively with the diastolic images, its location was compatible with a fibrous diverticulum.

**CONCLUSION:** Cardiac CT angiography is a successful imaging method in diagnosing the rare anomalies such as ventricular diverticulae and studying their detailed morphology.

### **ENDOVASCULAR EMBOLIZATION OF A GIANT HEMATOMA IN BLADDER DUE TO HEMORRHAGIC CYSTITIS BECAUSE OF CHEMOTHERAPY SIDE EFFECTS: CASE REPORT**

**Hamcan Salih, Arik Seref Barbaros, Karaman Bulent, Tasar Mustafa**

**PURPOSE:** Hemorrhagic cystitis may develop as a complication of high-dose chemotherapy and hematopoietic stem cell transplantation. In this paper, we aimed to present endovascular embolization of a giant hematoma in bladder due to hemorrhagic cystitis, which cause severe hemodynamic instability that occurred after a chemotherapy cycle.

**MATERIALS and METHODS:** CT images and ultrasonography showed a giant hematoma in bladder of a 13-year-old girl with hematuria after bone marrow transplantation (BMT). As there was no active bleeding focus in scintigraphy, possibility of intermittent bleeding was raised and the patient was referred to interventional radiology department for diagnosis and treatment.

**RESULTS:** When vesical arteries were studied superselectively, pseudoaneurysms and extravasations from distal branches were observed. Spherical embolization particles (Bead Block 300-500  $\mu$ m and 500-700  $\mu$ m Terumo) were injected superselectively to active bleeding distal branches in four sessions, one week apart. In control angiograms, pseudoaneurysms and extravasations were not observed.

**CONCLUSION:** Although there are widely accepted international guidelines for the diagnosis and management

of some common complications related to high dose chemotherapy, which cause significant morbidity and mortality, there are no such standards for definition, severity, classification and optimum therapy of hemorrhagic cystitis. DSA is beneficial in the diagnosis and management of patients with severe hemorrhage and resistance to medical therapy and are preferable to surgical approaches, which cause high mortality and morbidity and cause permanent anatomic changes and genitourinary system malfunctions.

### **CAN THE ZIKA VIRUS BE CONSIDERED AS A MEDICAL THREAT?**

**Karaardic Levent, Demirtas Unal, Ozturk Gultekin**

**OBJECTIVE:** The Zika virus was first isolated from a monkey in Uganda in 1947 through a monitoring network of sylvatic yellow fever. The first documented Zika outbreak occurred in the Pacific islands. Since 2003 cases and outbreaks of the disease have been reported from the Western Pacific, Americas and Africa. Cases have been reported in 27 different countries and territories including European countries in 2016. The aim of this study is to evaluate the Zika virus disease in the context of medical threat for military personnel, troop and humanitarian relief operations.

**METHOD:** We reviewed World Health Organization reports and briefs on Zika virus disease and evaluated this situation in the context of medical threat.

**RESULTS:** The incubation period is not clear. The symptoms are fever, skin rashes, conjunctivitis, muscle and joint pain, malaise and headache. These symptoms are usually mild and last for 2-7 days. The relationship between Zika virus and birth malformations and neurological syndromes has not been established yet. There is no specific treatment or vaccine available. The best prevention from Zika is preventing mosquito bites. Prevention and control relies on reducing mosquitos through source reduction and reducing contact between mosquitos and people.

**CONCLUSIONS:** Due to its potential effect on fetuses, especially female military personnel who plan to conceive should be careful in military operations and humanitarian relief operations in endemic countries. These outbreaks could affect the health services support and cause inefficiency and interruption of services. Also Zika virus could cause outbreaks in camps of refugees where socio-economic and environmental conditions are less favorable.

### **INCIDENTALLY DETECTED TRANSIENT INTUSSUSCEPTION IN A NAVY PILOT: CASE REPORT**

**Karademir Ibrahim, Cakmak Tolga, Akin Ahmet, Metin Suleyman**

**OBJECTIVE:** Transient (non-obstructing) intussusception, a process in which a segment of intestine invaginates into the adjoining intestinal lumen with no bowel obstruction, is most frequently detected incidentally. We present the case of 29 year-old asymptomatic male navy helicopter pilot with transient intussusception who visited our center for aircrew periodical medical examination.

**MATERIAL AND METHOD:** The standard examination consists of physical exam, chest x-ray, ECG, transthoracic echocardiography, pulmonary function test, and abdominal sonography and biochemical tests.

**RESULTS:** All work-up were within normal limits except abdominal sonography. A pseudokidney image was seen at subgastric area on duodenal-jejunal junction. This image was confirmed with CT scan which revealed a 13 cm long intussusception. The characteristic presentation suggesting intussusception including cyclic abdominal pain, palpable mass, and jelly stool was absent. There was not any lead-point detected. Due to the risk of fatally complications, an intussusception with this length of size should be taken seriously. The pilot was referred to Gulhane Military Medical Academy for further examination. The following day, a second abdominal sonography conducted at the academy showed that the intussusception was spontaneously resolved. The pilot was assessed as fit to fly.

**CONCLUSION:** It cannot be foreseen whether the intussusception is temporary or will progress to a serious condition. This case would have needed an immediate operation, if he had atypical US findings or clinical deterioration with persistent intussusception. If not treated early, it may become a medical emergency during flight operations and can challenge the flight safety by causing a partial or total incapacitation.

### **BRAF MUTATION, WHICH WAS CONVERTED FROM NEGATIVE TO POSITIVE IN THE COURSE OF MALIGNANT MELANOMA**

**Nuri Karadurmuş, İbrahim Demirci, Birol Yıldız, Şükrü Özaydın, Mustafa Öztürk**

**Introduction:** Malignant melanoma is the 6th most common type of cancer in adults and BRAF protein is the

key component of RAS-RAF pathway, which is associated with normal cell proliferation and survival. BRAF V600E mutation is found between 40-45% of the patients with metastatic malignant melanoma and is very important on determining the therapeutic agent and prognosis.

**Case:** 38-year-old female patient was admitted to hospital in 2012 for an atypical nevi located on her right knee, and nodular-type malignant melanoma was diagnosed by biopsy. Breslow thickness was 1.2 mm. Sentinel lymph node involvement was found positive in dissection and no other pathological lymph node or focus detected in the body. Because of the node involvement, adjuvant interferon therapy administered to the patient who was negative for BRAF mutation. Patient, who did not come to follow-up visits regularly, admitted to hospital in February 2015 for the palpable swelling in the right breast and dyspnea. In the examinations, a 4 cm hemorrhagic mass with well-defined borders in her right breast, widespread metastatic lesions in bilateral lungs and liver, and pancytopenia were detected. Diagnostic biopsy was performed from the mass in her right breast and histologic analysis was consistent with malignant melanoma metastasis. But this time, BRAF mutation was detected positive and bone marrow biopsy and histologic analysis also revealed malignant melanoma infiltration. Vemurafenib treatment was started and the patient's hemogram returned to normal at the end of the first month, and partial response was obtained at the sixth month.

**Conclusion:** While the patients with early stage malignant melanoma can be followed without any treatment, metastatic disease might be extremely aggressive and mortal. Although the PDR-1 inhibitors is widely available and have highly successful outcomes, especially BRAF V600 mutation positive patients, BRAF inhibitors constitute the first step of treatment. In literature, it is shown that the BRAF mutation - negative cases can be detected as BRAF positive at 2nd analysis at a rate of 7-11%, and from another aspect, as seen in our case, the early stage BRAF-negative melanomas can be converted to BRAF-positive at advanced stages.

## **EFFICACY OF PAZOPANIB THERAPY IN TREATMENT RESISTANT SOFT TISSUE SARCOMA: THREE CASES**

**Nuri Karadurmuş, B. Bahadır Başgöz, Birol Yıldız, Şükrü Özaydın, Mustafa Öztürk**

**INTRODUCTION:** Soft tissue sarcomas are the fourth most common malignant and aggressive tumors seen in

childhood and young adolescents after lymphoma, central nervous system tumors and neuroblastoma. In our study, we presented efficacy of Pazopanib treatment in three patients resistant to multidrug chemotherapy.

**CASE -1:** 21 years old female patient with diagnosis of clear cell sarcoma originated from left kidney received vincristine, doxorubicin, cyclophosphamide alternating with ifosfamide ,etoposide (VAC/IE alternating) as first line chemotherapy and received gemcitabine and taxotere combination as second line chemotherapy. Despite this therapy disseminated disease findings was continuing in the lungs, liver and the peritoneum. Ifosfamide, carboplatin and etoposide (ICE) regimen administered as third line chemotherapy and minimal response obtained after third course of chemotherapy but disease progressed in follow-up. After Pazopanib administration, pneumothorax occurred due to therapy but also partial response obtained. Currently, treatment with 800 mg/day dose is continued.

**CASE-2:** 57 years old female patient with paraspinal mass received ifosfamide, mesna, Adriamycin as first line chemotherapy after resection surgery. Patient received gemcitabine and taxotere combination as second line chemotherapy due to disseminated bone metastases and oral etoposide administered as third line chemotherapy due to progression of disease. In follow, pazopanib therapy was started to the patient who can not tolerate oral etoposide therapy and well tolerated except mild fatigue side effect. PET-CT scan performed in third month revealed findings in accordance with stable/minimal response in disease.

**CASE-3:** 40 years old male patient with diagnosis of soft tissue sarcoma in periprostatic localization received three courses of ifosfamide, mesna, Adriamycin as neoadjuvant chemotherapy and three courses as adjuvant chemotherapy after surgery. Patient received gemcitabine and taxotere combination as second line chemotherapy due to lung metastases and received ICE as third line chemotherapy. During all this therapy period, patient received two times palliative radiotherapy for painful bone metastases. Pazopanib administered as fourth line chemotherapy with 800 mg/day dose and minimal response obtained. Currently, treatment is continued with same dose.

**CONCLUSION:** In recent years, clinical usage of pazopanib, which is one of the targeted treatments with inhibitory effect on the VEGF receptors, is increased. Pazopanib is well tolerated, safe agent with minimal side effects and could be an alternative therapy for patients with multidrug chemotherapy resistant soft tissue sarcoma.

### **GASTRIC CANCER AND PRIMARY HYPERPARATHYROIDISM: HYPERCALCEMIA AND WIDESPREAD BONE LESIONS**

**Karadurmuş Nuri, Yıldız Birol, Özaydın Şükrü, Öztürk  
Mustafa, Demirci İbrahim**

Introduction: Paraneoplastic syndromes are commonly encountered particularly in the lung cancers, whereas it can be seen in gastric and pancreatic cancers. While hypercalcemia is one of the most common paraneoplastic syndromes, each hypercalcemia associated with malignancy may not be a paraneoplastic syndrome.

Case: 35 years old female patient was admitted to hospital in February 2015 to investigate the cause of the weight loss and anemia. At first a mass detected at the lesser curvature of the stomach, and by further investigations gastric adenocarcinoma was diagnosed. In staging examinations, common area of lytic lesions in rib and vertebral bone tissues were observed. The patient's serum calcium level was 15.4 mg/dL and she was evaluated as stage 4 gastric cancer with bone metastases. No pathological findings revealed in the ECG of the patient who had a history of cardiac arrest during delivery and resuscitation by CPR. Although the serum magnesium and phosphorus levels were normal, serum PTH level was measured because of the prolonged constipation and abdominal pain complaints, and it was found as > 300 ng/ml. Parathyroid gland adenoma of 1.3 cm in diameter was detected in the scintigraphic examinations and primary hyperparathyroidism diagnosis was made; and depending on the diagnosis, bone findings were thought to be associated with hyperparathyroidism, instead of bone metastasis of gastric cancer. The patient underwent gastrectomy and adjuvant chemotherapy protocol including cisplatin and capecitabine was administered. The serum calcium and PTH levels of the patient who remain to receive adjuvant chemotherapy decreased to normal levels, bone lesions remained stable and gastrointestinal symptoms were resolved completely.

Discussion: Hypercalcemia is an electrolyte imbalance that can cause serious and life-threatening cardiac side effects. Treatment of patients with malignant hypercalcemia should be made without delay while the researching the etiology and determining the goal of treatment on the other hand.

### **PNEUMOTHORAX CASE OCCURED DUE TO PAZOPANIB TREATMENT OF A PATIENT WITH REFRACTORY SOFT TISSUE SARCOMA**

**Nuri Karadurmuş, Kuthan Kavaklı, Birol Yıldız, Şükrü  
Özaydın, Mustafa Öztürk, İbrahim Demirci**

Introduction: Sarcomas can originate from bone or soft tissues. In the treatment of soft tissue sarcomas, especially in the cases refractory to the multi-line chemotherapy, good response rates can be achieved with targeted therapies. In this case report, we present a young patient who had pneumothorax during pazopanib treatment.

Case: 21-year-old female was admitted to hospital in July 2012, for abdominal pain and shortness of breath. She underwent an operation because of a mass surrounding her right kidney and malignant mesenchymal tumor (renal clear cell sarcoma) diagnosed by pathology. Following the diagnosis an alternating VAC-IE chemotherapy was given. Following 6th cure chemotherapy, liver metastases were detected and 6 cycles of gemcitabine and taxotere treatments were given to the patient. Due to the continuing progression of symptoms despite the treatment, 6 cycles of ICE chemotherapy (Ifosfamide, Mesna, Carboplatin, and Etoposide) were administered to the patient. This protocol also couldn't help to stop progression of peritoneal involvement and liver metastases. Indication approval received and Pazopanib treatment of 800 mg/day was initiated. Except grade 1 fatigue, pazopanib treatment was well tolerated by the patient. In the 3rd month of the treatment the patient complained of chest pain and dyspnea. On the chest X-ray, partial pneumothorax and cavitation was detected in the left lung, and she was treated with VATS resection by chest tube. In the literature, the risk of pneumothorax associated with pazopanib use was found as 3%, and in some case reports about soft tissue sarcomas, it was found to be up to 14%. The development of necrosis, cavitation and therapeutic erosion secondary to pazopanib therapy were considered as possible mechanisms of the pneumothorax. She has been discharged from the hospital and still under treatment of pazopanib as outpatient, and partial response has been observed her follow-up visits.

Conclusion: Pazopanib, in general, is a well tolerated therapeutic agent by patients. Although secondary pneumothorax in metastatic lung lesions are extremely rare, it should be kept in mind that with the increasing use of targeted-therapies, side effects such as pneumothorax can be encountered and they can interfere with the progression of the primary clinical disease.

### **SKIN TUMOR MIMICKING THE SKIN INVOLVEMENT OF MANTLE CELL LYMPHOMA; PILOMATRICOMA**

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**Nuri Karadurmuş, Birol Yıldız, Şükrü Özaydın, Mustafa Öztürk, İbrahim Demirci**

Introduction: Mantle cell lymphoma is a heterogeneous disease ranging from indolent form to leukemia like aggressive form. In this case report, we present a benign skin tumor that mimics skin involvement in a patient who is taking bendamustine treatment for relapsed and refractory disease.

Case: The 58-year-old male patient was diagnosed as mantle cell lymphoma with the enlargement of cervical lymph nodes at first, in 2011. He was evaluated as Stage 4 disease because of extensive supra- and infra-diaphragmatic lymph node involvement and bone marrow metastases detected on PET-CT scans. 3 cycles of R-CHOP and 3 cycles of R-DHAP alternating regimen high-dose chemotherapy and autologous stem cell transplantation was performed. In the inspections performed at the 6th month following the transplantation, left cervical painless lymphadenopathy found in the left cervical region, and by excisional biopsy of the node, mantle cell lymphoma recurrence was diagnosed although he had achieved a complete response before transplantation. Following the diagnosis, R-Bendamustine salvage chemotherapy given and extremely well tolerated by the patient and very good partial response was achieved at the end of 4th cure. At the beginning of the 5th cure, a lesion was observed on left side of the nose, raised from the hyperemic ground and about 2 cm in diameter. Dermatology consultation and biopsy was performed and benign pilomatricoma was reported by pathology. In the literature review, some studies were found, referring that Pilomatricomas could be detected more frequently in acute leukemias with APC gene mutations and in aggressive lymphomas expressing Beta catenin gene. The patient is still under treatment and has lymphadenopathies of his primary disease, and his skin findings are followed periodically.

Discussion: Mantle cell lymphoma, which can be quite aggressive, is a disease that can be treated by autologous stem cell transplantation and for the refractory cases, by allogeneic stem cell transplantation. Both the clinical course and the treatment process is similar to leukemias rather than lymphomas, and also can present with cutaneous involvement like acute leukemias. As seen in our case applied with leukemia cutis like skin lesions, all the concomitant atypical skin lesions should be evaluated with diagnostic biopsy. Even if they are histologically benign, these findings may have the risk of malignant transformation in time.

## **ANALYSIS OF THE HEALTH CARE NEEDS WHICH PERCEIVED BUT UNMET AMONG RECRUITS: A STUDY IN A TRAINING CENTER IN ANKARA**

**Kir Tayfun, Fedai Turan, Turk Yusuf Ziya**

Objective: While some of health care needs are perceived and demanded, important part of them are not demanded or not perceived even as needs. One of most important aims of health policies and plans is to make unperceived needs be perceived ones. One of good way to reach this aim is carrying out screening programs. In this study, we aimed finding out perceived and real health care needs of soldiers evaluating determined health problems of recruits during first medical examinations by military physicians while joining in a Training Center.

Material and Methods: This is a descriptive study. Without sampling all recruits, who trained at a Recruit Training Center for Armored Forces in Ankara, were included into the study. Recruiting System of Turkish Armed Forces delivers recruited soldiers randomly to training centers for basic military training, using computer program. So, our findings may reflect unmet needs of all recruits who delivered to armored forces.

So, we carried out the study among recruits of a Training Center as a convenient population. All recruits' first medical examination records in the year of 2014 were included to the study.

Results: Number of recruits assigned to Recruit Training Center for Armored Forces, Ankara was 16,825. After first medical examinations of the recruits, 3,227 transferred to military hospital and 814 transferred to psychological adviser office of the Center. By psychologist, 457 of 814 recruits sent to military hospital for psychiatrist consultation.

Conclusion: These are early results of the study. After we completed the evaluation of records (including hospital records of recruits who transferred hospital), determination of real and perceived health needs ensure four benefits for us: To ensure having information on family physicians' examinations during recruiting, to determine the needs for health problems which may affect military manpower in the future, to plan health facilities and personnel, and to make more effective the health evaluation procedures.

## **ARTERIAL BLOOD SUPPLY OF THE PANCREAS: AN ANATOMICAL AND SURGICAL STUDY**

**Kocabiyik Necdet, Ozsoy Sait, Baykal Baris, Zeybek Nazif, Yazar Fatih, Karapirli Mustafa, Korkusuz İrfan**

There is a controversy in the literature regarding definition or interpretation of pancreatic arteries. This study is planned to study the results of studies, which were previously performed by analyzing wide radiological series, on cadavers.

All of the important pancreaticoduodenal arterial, venous and nervous arches are localized between the fusion fascies of Treitz and pancreatic parenchyma. The arterial supply of the head and collum of pancreas is from anterior, intermediate, posterior pancreaticoduodenal and prepancreatic arterial arches. Since the head and collum of the pancreas are reported in the literature to be supplied from minor resources in addition to pancreaticoduodenal arterial arches and there is still controversy among the authors, there is still a need for detailed examination of the vessels of the pancreas in anatomical and surgical aspects.

This study is performed on 60 formalin-fixed pancreas and surrounding tissues. Superior pancreaticoduodenal artery arising from gastroduodenal artery, inferior pancreaticoduodenal artery arising from superior mesenteric artery and dorsal pancreatic artery, splenic artery and their branches are tracked and measurements regarding pancreas morphology are performed. Variational situations observed other than classical arterial supply or coming from a different source are recorded. Acquired results are compared to the results in the literature.

This study may yield a new perspective to the arguments on the blood supply of the pancreas; acquired results may reveal the variational differences in the arteries that directly supply the pancreas and these data may contribute to surgery during pancreatic resections.

**ANALYSIS OF MALE PATIENTS WHOSE GAMETE CELLS HAVE BEEN CRYOPRESERVED FOR FERTILITY PRESERVATION IN THE ASSISTED REPRODUCTIVE TECHNIQUES (ART) CENTER OF GULHANE MILITARY MEDICAL ACADEMY**

**Korkmaz Cem, Baykal Baris, Muslu Bal Esin, Seferbay Senem**

**OBJECTIVE:** This study aims to analyse the properties of male patients, whose gamete cells have been cryopreserved in the ART Center of Gulhane Military Medical Academy.

**MATERIAL AND METHOD:** Gamete cell cryopreservation is being performed for male patients, who are indicated to undergo chemotherapy and radiotherapy because of various cancer diseases in the ART Center of Gulhane Military Medical Academy for almost 15 years. One of the side effects of chemotherapy and radiotherapy performed for the treatment of cancer diseases especially like genital tumors, leukemia and lymphoma is the disruption of spermatogenesis in the patients and as a result of this: azoospermy. This negative effect can be short term or permanent depending on the effectiveness and duration of the therapy and agents used for the therapy. For this reason, in order to preserve the fertility of the patients who would undergo cancer treatment, Polge et al. have suggested cryopreservation and performed it by using glycerol in 1949. The first live birth after cryopreservation of sperm sample with glycerol and storage in liquid nitrogen, has been reported in 1964. Recently, this method is being widely used to preserve fertility as a precaution before cancer treatments. Sperm cells given by the patients are being mixed with cryoprotectants in the laboratory and frozen and stored in liquid nitrogen at -196°C. If normal sperm production has not been detected to begin at controls after the completion of cancer treatments of the patients who want to have a baby, cryoprotected sperm samples are being successfully used in assisted reproductive techniques. The number and age distribution of sperm samples cryoprotected in the ART Center of Gulhane Military Medical Academy between the years 2006 and 2015 are presented in Table 1.

AGES	2006-2009	2010	2011	2012	2013	2014	2015
≤20	-	-	13	3	4	19	4
20-25	-	-	13	32	28	21	38
26-30	-	-	3	6	12	9	11
31-35	-	-	6	4	2	4	7
36-40	-	-	3	1	2	0	2
≥41	-	-	1	2	0	2	4
TOTAL	22	23	39	48	48	55	66

**CONCLUSION:** The increase in numbers within the past years can be due the increase in the awareness about this issue and also may be an indicator of the increase in the cancer incidence in the males at reproductive ages.

**PHYGITAL INNOVATION IN HEALTH SERVICES: AN EXAMPLE OF MEDICAL DESIGN AND MANUFACTURING CENTER IN GULHANE MILITARY MEDICAL ACADEMY**

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**Orhan Fatih, Altinel Ozcan, Varol Semsettin, Tuncer Selahattin, Oguz Erbil**

**Aim:** Health system is a system, which includes different specializations. An important feature of this system is that changing and innovation are the most common. In this study, we aimed to reveal innovation combining physical and digital elements, which is called phygital innovation recently

**Introduction:** Phygital innovation in health system has wide range of topics from ethics to 3-D video calls/holograms with patient's relatives in ICU. Thanks to technologic facilities and digital technology, many benefits may be provided at the same time such as patient safety, patient rights, ethical and moral elements.

**Results:** Gulhane Military Medical Academy, Medical Design and Manufacturing Center (METU) are a unique center in terms of capacity and medical technologic opportunities in both Turkey and Europe. 3-D pictures of the patient and wounded area can be taken and then the information can be shared with other medical staffs far away from the scene. It may give an opportunity for physicians to simulate operation prior to real operation and may provide us with titanium models for prosthesis such as cranial injuries.

**Conclusion:** METU is a phygital innovation center which can combine physical with digital facilities for both the patient and physician. All the data can be collected through METU. Operation and prosthesis can be planned and made due to the data which can be collected previously. In this context, both Medical and engineering knowledges can be used for the same purpose.

### **PROLOTHERAPY FOR LATERAL EPICONDYLITIS (TENNIS ELBOW)**

**Orscelik Aydan, Seven Mehmet Murat, Turker Turker, Yildiz Yavuz**

**OBJECTIVE:** Chronic lateral epicondylitis (CLE) is common, debilitating and often refractory. Prolotherapy (PrT) is an injection therapy for tendinopathy. In this retrospective study the efficacy of PrT for CLE was evaluated.

**MATERIAL AND METHOD:** Sixteen military patients between the ages of 35 to 51 (mean age: 44.6 years) with CLE for more than 3 months, refractory to conservative treatments, were enrolled. PrT solution was injected onto the lateral epicondyle. Then, up to 5 mL of the solution was "peppered" on bone along a short segment of the tendon and annular ligament at the areas of palpated tenderness.

In multiple injections 3 weeks expected to next injection. All patients were prescribed with a home standard exercise program. The outcome measures Visual Analogue Scale (VAS) and DASH (The Disability of the Arm, Shoulder and Hand) score were assessed at baseline and 3 months after last injections.

**RESULTS:** PrT was performed for all 16 patient. 12 patients received a triple, 1 patient received a double and 3 patients received a single injection according to healing process. The VAS scale showed a significant improvement: the baseline score of  $8.1 \pm 1.3$  decreased to  $1.2 \pm 1.2$  at 3 months after last injections ( $p < 0.001$ ). The DASH score also showed a similar positive trend: the baseline score of  $78.6 \pm 11.4$  decreased to  $33.5 \pm 8.3$  at 3 months after last injections ( $p < 0.001$ ).

**CONCLUSION:** PrT resulted in safe, significant improvement of elbow pain and function compared to baseline status. This pilot study suggests the need for a definitive trial.

### **VIEUSSENS ARCH ANEURYSM AND FISTULIZATION TO PULMONARY ARTERY: CT ANGIOGRAPHY FINDINGS**

**Ors Fatih, Ozen Alptug, Hamcan Salih, Bozlar Ugur**

**OBJECTIVE:** Vieussens arch is a connection between conus branch of the right coronary artery and proximal right ventricular branch of the left anterior descending artery (LAD). Pathologies of this connection are really rare. The aim of this report is to represent CT angiography findings of aneurysm on Vieussens Arch and fistulisation to pulmonary artery in a case.

**MATERIAL AND METHOD:** A 73 year-old female patient consulted for chest pain in the emergency service. A suspicious fistula to pulmonary artery was visualized in echocardiographic evaluation and coronary CT angiography was scheduled for further evaluation. The CT angiography was performed with 640-slice CT scanner with 75 cc non-ionic intravenous contrast agent. CT angiography images were evaluated in dedicated workstation.

**RESULTS:** Atherosclerotic plaques were detected proximal and middle segments of LAD causing mild luminal stenosis on CT angiography. A focal aneurysm in size of 4 x 5.5 mm was detected on the Vieussens Arch, which between right coronary artery, and LAD. Additionally, thin connections visualized in between Vieussens Arch and pulmonary artery. **CONCLUSION:** Fistulas and aneurysms of Vieussens arch are extremely rare. CT angiography is a very helpful and useful technique in evaluating coronary artery fistulas and aneurysms due to its non-invasivity, easily and rapid

accessibility and capability to give detailed three-dimensional anatomical information.

### **A RARE COMPLICATION OF ACUTE PANCREATITIS: MRI FINDINGS OF WALLED OFF NECROSIS**

**Ozen Alptug, Akgun Veysel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Necrotizing pancreatitis (NP) is a severe medical condition seen in 30% of acute pancreatitis cases. Walled off necrosis is a late-term complication of acute NP. The aim of this article is to represent magnetic resonance imaging (MRI) findings of acute complicated NP.

**MATERIAL AND METHOD:** A 59-year-old female consulted to emergency service with abdominal pain 48 hours after ERCP procedure. The patient was on steroid treatment for asthma. Her blood tests indicated leukocytosis and high levels of amylase. For further evaluation, contrast enhanced computed tomography (CT) performed and findings were compatible with acute NP. Dynamic upper abdominal MRI and right hip MRI were performed for atypical complaints.

**RESULTS:** Inflammation and necrosis in pancreatic tissue and peripancreatic area, well-limited collections in three different locations in peripancreatic area were depicted. In addition, there was a wide septated zone with heterogenous intensity including fat intensities, extending from right perirenal to retroperitoneal area. In hip MRI that was performed to exclude a possible aseptic necrosis of the femoral head, bone tissue was totally normal but there was a fluid collection adjacent to the right hip joint.

**CONCLUSION:** Walled off necrosis is a severe clinical condition seen in 2-9% of acute NP cases. Differential diagnosis with pseudocyst is crucial due to different treatment techniques. Although CT is the modality of choice for diagnosis of acute pancreatitis, MRI is a referred technique in complicated patients due to its capability of differentiating edematous and necrotizing pancreatitis more reliably and defining complex fluid collections more accurately.

### **A RARE COMPLICATION OF HCC FOLLOWING PERCUTANEOUS BIOPSY: SEEDING METASTASIS**

**Ozen Alptug, Akgun Veysel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Hepatocellular carcinoma (HCC) is the 5th most diagnosed malignant cancer worldwide. Alfa-feto protein levels, imaging techniques and biopsy are main diagnostic methods. Seeding metastasis in biopsy tract is a rare but known complication. The aim of this report is to represent magnetic resonance imaging (MRI) findings of this rare complication.

**MATERIAL AND METHOD:** A 77 year-old male patient with a history of percutaneous biopsy for his liver mass consulted to our service for right subcostal swelling and rush. Ultrasonography revealed nodular lesions in the skin, subcutaneous tissue and within intercostal muscular tissues. For further evaluation, dynamic upper abdominal MRI in 3T equipment was scheduled.

**RESULTS:** T2 hyperintense lesions that were showing contrast wash-out were compatible with multifocal HCC in 4A, 5 and 6 liver segments were revealed. Additionally, in skin, subcutaneous tissue and within intercostal muscular tissues adjacent to lesion in segment 6 were determined compatible with seeding metastases showing similar signal and contrast features.

**CONCLUSION:** Seeding metastasis of HCC is a rare complication that can prevent surgical treatment. Therefore, coaxial percutaneous biopsy should be preferred in cases suspicious for HCC. Radiologists should always keep seeding metastasis in mind in follow-up cases with HCC.

### **EMPHYSEMATOUS PYELONEPHRITIS: CT AND MRI FINDINGS**

**Ozen Alptug, Akgun Veysel, Battal Bilal, Tasar Mustafa**

**OBJECTIVE:** Emphysematous pyelonephritis (EP) is a rare acute suppurative necrotizing infection with gas formation in renal parenchyma, collecting system and perirenal tissue. Mortality rate of this urologic emergency is relatively high. This condition occurs in mostly diabetic patients (90-96%) and is diagnosed by imaging procedures. The aim of this report is to represent computed tomography (CT) and magnetic resonance imaging (MRI) findings of a case with EP.

**MATERIAL AND METHOD:** A 35-year-old female with poorly controlled diabetes consulted to E.R. in general poor-health

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condition. Leukocytosis and pyuria were detected in first examination. In ultrasonography, left kidney was enlarged and gas-indicating echogenities were detected in collecting system. Abdominopelvic CT and MRI were performed for further evaluation.

**RESULTS:** Left kidney size was increased and parenchyma was heterogenous in abdominopelvic contrast-enhanced CT. Parenchymal air densities and large retroperitoneal abscess formation were observed. In upper abdominal contrast-enhanced MRI, two abscesses in left kidney, which are hypointense in T1A, hyperintense in T2A, were detected and showed peripheral contrast enhancement. In addition, multiple air-bubbles without any signal were existed in perirenal area in all sequences. Imaging findings were indicating EP accompanying with abscess formations.

**CONCLUSION:** EP is a rare but life-threatening medical condition and early diagnosis is crucial. This condition is seen in female patient's 6-times more than males and most of the patients have history of poorly controlled diabetes. There are no specific clinical symptoms and laboratory findings and thus, diagnosis depends on radiological examinations. MRI is very useful in diagnosis and follow-up of EP.

### **PATENT DUCTUS ARTERIOSUS ASSOCIATED WITH SUPRAAORTIC VASCULAR ANOMALIES: CT ANGIOGRAPHY FINDINGS**

**Ozen Alptug, Bozlar Ugur, Ors Fatih, Ugurel Mehmet Sahin**

**OBJECTIVE:** It is crucial to identify supraaortic vascular abnormalities before surgical or endovascular treatments. The aim of this case report is to represent CT angiography findings.

**MATERIAL AND METHOD:** A 61 year-old male patient consulted complaining from right central facial paralysis and left hemiparesis and directed to our service for CT angiography of head and neck arteries. The CT angiography was performed with 640-slice CT scanner with 80 ml non-ionic intravenous contrast agent. CT angiography images were evaluated on dedicated workstation.

**RESULTS:** An 8.5 mm sized patent ductus arteriosus was detected between proximal descending aorta and left main pulmonary artery. Additionally, it was detected that right subclavian artery originating from arcus aorta as the last vessel and reaching to right subclavian region coursing at the posterior of trachea and esophagus (aberrant right subclavian artery anomaly). Also, right vertebral artery was

originated from right main carotid artery instead of right subclavian artery.

**CONCLUSION:** CT angiography is a very useful technique for the evaluation of aorta and supraaortic vascular structures due to its non-invasiveness, easy accessibility, feasibility, high spatial resolution and availability of multiplanar imaging.

### **COULD BE TREATED A YOUNG MAN WITH HYPERTENSION BY SURGERY: A CASE REPORT WITH EXTRAADRENAL PARANGLIOMA**

**Ozer M. Tahir, Demirbas Seref, Ince Mehmet, Kahraman S. Deniz, Kozak Orhan**

Paranglioma arising from neural crest cell in the autonomic nervous system are rare tumors. The tumors are benign but often carries up to 10% of malignant features. They originated from chemoreceptor of the body. Clinical symptoms such as hypertension, headache, sweating and palpitations are secondary to increased catecholamine releasing, are nonspecific. Treatment is surgical excision. We shared a case diagnosed as extraadrenal paraganglioma.

21-year-old male was admitted with palpitation and he was diagnosed as secondary hypertension. Urine WMA, normetanephrine and norepinephrine levels were significantly higher. On the abdominal-CT revealed a soft tissue mass in the presacral region which was surrounding the abdominal aorta. The CT-angiography made in order to determine the relationship between blood vessels and mass. The hypervascular mass contained calcification, surrounds aortic wall was found at the level of distal abdominal aorta. Also, a similar natured mass was found at the level of L5 vertebra.

The mass has seen as described in the CT and it was to compresses to the vena cava on the exploration. Tumors were removed in coordination with the anesthesia. Postoperatively, the patient's blood pressure returned to normal values and structures that were reported in accordance with lesions histologically paraganglioma to be removed. The patient was discharged on the 10th postoperative day without any problems.

Functional paragangliomas can be detected in the early stages because of symptoms and they can be resected as surgically with curative treatment. The alpha and beta-adrenergic blockers should be given and patients should be closely monitored during the operation.

### **EVALUATION OF CURRENT CONCEPTS AND RECENT ADVANCES IN STEREOTACTIC RADIOSURGERY (SRS) OF GLOMUS JUGULARE TUMORS (GJT)**

**Sager Omer, Dincoglan Ferrat, Uysal Bora, Demiral Selcuk, Gamsiz Hakan, Beyzadeoglu Murat**

**OBJECTIVE:** Stereotactic radiosurgery (SRS), a very advanced and modernized form of radiation therapy, allows the delivery of high fraction doses to well-defined targets in the brain. Herein, we review current concepts, recent advances, and future perspectives in SRS of GJT.

**MATERIAL AND METHOD:** SRS is a relatively new treatment concept for the management of glomus jugulare tumors, however, there is compiling data from studies with increasing follow-up durations which support the use of SRS as a safe and effective therapeutic option.

**RESULTS:** Recent improvements in SRS include advances in neuroimaging, radiation treatment techniques, equipment, treatment planning and delivery systems. Gamma knife technology has recently been capable of extended anatomical reach, which may have implications for treating some GJT below the skull base. Moreover, recent introduction of noninvasive, relocatable cranial immobilization systems allow for fractionated stereotactic treatments with the Gamma knife technology, which also enable accurate radiotherapeutic management of larger GJT with the high mechanical accuracy of Gamma knife radiosurgery systems. Despite limited experience with LINAC-based systems for GJT radiosurgery, comparable safety and efficacy has been demonstrated.

**CONCLUSION:** Compiling data from studies with increasing follow-up durations demonstrate excellent local control with a favorable toxicity profile for SRS of GJT. Recently, SRS is being more increasingly used both as the upfront management modality and as a complementary or salvage therapeutic option for GJT. As a safe and effective treatment strategy, SRS appears to play an increasing role in the management of most patients suffering from GJT in the near future.

### **STEREOTACTIC BODY RADIATION THERAPY (SBRT) FOR LOCALLY RECURRENT LUNG CANCER**

**Sager Omer, Gamsiz Hakan, Dincoglan Ferrat, Demiral Selcuk, Uysal Bora, Beyzadeoglu Murat**

**OBJECTIVE:** Local recurrence is a predominant pattern of failure for lung cancers. Stereotactic Body Radiation

Therapy (SBRT) emerged as a viable therapeutic option in judicious management of locally recurrent lung cancers. Herein, we review current concepts in radiotherapeutic management of recurrent lung cancers and report a case treated with highly sophisticated SBRT for local recurrence of lung cancer.

**MATERIAL AND METHOD:** A 62-year-old male patient was admitted to our clinic with primary diagnosis of locally advanced non-small cell lung cancer (NSCLC). After thorough evaluation by the multidisciplinary team of experts, he received 60 Gy of radiotherapy to the primary lung tumor and involved node regions in the primary disease setting. Periodical follow up examinations revealed treatment response, but he was found to have locally recurrent disease in 2016. Since the lesion was not deemed amenable to surgical resection, the patient was referred to Radiation Oncology Department for SBRT. After detailed analysis of critical organ doses, he received 30 Gy in 3 fractions using fractions of 10 Gy each on alternating days.

**RESULTS:** At the first follow up after SBRT in 2016, the patient has partial response with reduction in the size of locally recurrent lesion. He had no significant toxicity attributed to radiation therapy. The patient still attends periodical follow up examinations without any evidence of disease progression.

**CONCLUSION:** SBRT may offer a viable non-invasive management strategy for locally recurrent lung cancers.

### **MEDICAL AIR TRANSPORT OPERATIONS OF TURKISH ARMED FORCES DURING OPERATION ENDURING FREEDOM OF AFGHANISTAN**

**Salman Necati, Acar Yahya Ayhan, Tezel Onur**

**OBJECTIVE:** We aimed to present our experiences and data about medical air transport operations of Turkish Armed Forces during Operation Enduring Freedom of Afghanistan.

**MATERIAL AND METHOD:** A retrospective observational study. We collected the written data of medical air transport cases between 2003 and 2014. Data includes date (month/ year), medical team (physician, nurse, anesthesiology technician) of flight; gender, age, Glasgow

coma scale, medical condition of patient (good/moderate/bad), life threatening condition (+/-), endotracheal intubation (+/-), spontaneous ventilation (+/-), medications used during flight, systolic blood pressure, diastolic blood pressure, pulse per minute, saturation of oxygen, trauma (+/-, type of injury), trauma site and surgical intervention data of patients.

**RESULTS:** The NATO-led International Security and Assistance Force (ISAF) conducted training, development, and humanitarian activities in addition to security operations during its 12 years in Afghanistan. During 12 year period, 18 patients were transported by Turkish medical team at 10 medical air transport operations from Kabul to Ankara. Five of patients (28%) were civilians and 13 (72%) of patients were soldiers. Physicians reported that 10 of patients (56%) had life threatening conditions and five (28%) of the patients were endotracheal intubated at the handover procedures.

**CONCLUSION:** Medical air transport facilities had an important role at both military medical activities and humanitarian care facilities in operation enduring freedom of Afghanistan. We can conclude that particularly the patients with life threatening conditions benefited from these operations.

### **NUTCRACKER SYNDROME: 320 DETECTOR ROW CT FINDINGS**

**Sari Sebahattin, Ersen Mehmet, Hamcan Salih, Celikkanat Serhat, Bozlar Ugur, Tasar Mustafa**

**OBJECTIVE:** The nutcracker syndrome (NS), alias renal vein entrapment syndrome, is a rare entity that can be easily overlooked. Pathophysiological findings like pain, hematuria, and proteinuria, pelvic congestion in females or varicocele in males could be seen after renal vein narrowing which is caused by outer compressions. The narrowing of renal vein is most commonly seen in left renal vein between the abdominal aorta (AA) and superior mesenteric artery (SMA). In this report we aimed to show the CT angiography (CTA) findings of nutcracker syndrome.

**MATERIAL AND METHOD:** A 22 year-old-male patient with abdominal pain and hematuria had CT examination as the result of left renal vein expansion that is observed in US imaging.

**RESULTS:** Axial and coronal CTA images showed that left renal vein is narrowed between the SMA and AA also the proximal part of left renal vein is expanded.

**CONCLUSION:** NS is a clinical condition, which is related with outer compression of the aortomesenteric renal vein. Due to its rarity it might usually be misdiagnosed by clinicians and radiologists. It is first described by El Sadr and Mina in 1950, that the left renal vein is compressed between the abdominal aorta and superior mesenteric artery. Then, in 1972, Dr. Schepper named this disease as Nutcracker Syndrome. Recently it is understood that the patients with hematuria and proteinuria who previously treated as nephritis are having NS. Duplex Ultrasound should be used as the initial imaging instrument. In the other hand CTA provides superior information about vascular and non-vascular abnormalities.

### **NURSES' EXPERIENCES, KNOWLEDGE AND EXPECTATIONS ABOUT GENETICS AND GENETIC COUNSELING**

**Tenekeci Elif Gokce, Kara Belguzar**

**OBJECTIVE:** This study aimed to determine the experiences, knowledge and expectations of nurses regarding genetics and genetic counseling and their related factors.

**MATERIAL AND METHOD:** The sample of this cross-sectional study consisted of 113 nurses working in a military hospital in Turkey. An information form and the questionnaire on roles of nurses in genetic applications and the questionnaire on genetic consultancy, basic conceptual genetic knowledge and information sources of nurses in genetic applications were used for collect data. Descriptive statistics and Chi-square test were conducted.

**RESULTS:** The mean age of the nurses was  $33.0 \pm 6.8$  years and 64.6% had a baccalaureate degree in nursing. The majority of the nurses defined their roles in genetics as providing information to patients and their families about a genetic test (74.3%) and gathering family history (85.8%). Many nurses did not have any information about the genetic counseling centres (97.3%) and they wanted to participate in a course on genetic diseases and counseling (75.2%). Many nurses reported that their knowledge on genetic counseling (62.8%) and ethical aspects of human genetics (77.0%) was insufficient. Knowledge about genetic consultancy was higher among nurses with longer working duration ( $\chi^2=13.05$ ,  $p=0.01$ ). Knowledge on ethical aspects of human genetics was higher in nurses who had higher education levels ( $\chi^2=6.81$ ,  $p=0.03$ ).

**CONCLUSION:** The results indicated that nurses did not have adequate information on genetics and genetic counseling. Therefore, nurses should be given information

about this topic in undergraduate education. The courses should be organized to meet training requirements for nurses.

### **PERSPECTIVES OF HOSPITALIZED OLDER PATIENTS TOWARDS PRACTICES OF INTERN NURSES**

**Tenekeci Elif Gokce, Kara Belguzar, Sari Elif Tugba, Bayraktar Serife**

**OBJECTIVE:** This study aimed to determine the views of hospitalized older patients towards practices of intern nurses (fourth-grade nursing students) and their related factors.

**MATERIAL AND METHOD:** This cross-sectional study included 70 adults aged 65 years or older hospitalized for different reasons in a military hospital in Turkey. Data were collected by using a questionnaire form related to socio-demographic characteristics and the views about the intern nurses. Descriptive statistics and Chi-square test were performed.

**RESULTS:** The mean age of the older patients was 72.6±6.2 years. The majority of the older patients reported that the intern nurses got into communication with them and helped them to feel better (92.4%) and the intern nurses respected for their privacy (86.9%). Some patients reported that they would be worried if the intern nurses perform invasive interventions (35.7%). It was found that older patients would not feel uncomfortable to be provided with service by the intern nurses when they apply to the hospital next time (85.7%). The patients who perceived support for themselves and their caregivers from intern nurses were more likely to be aged 75 years and over ( $\chi^2=20.01$ ,  $p<0.001$ ).

**CONCLUSION:** The results indicated that intern nurses mostly communicated with their older patients, informed them concerning the applications to be performed and respected their privacy. In order decrease the concerns of the older patients caused by the invasive interventions of the intern nurses, it might be suggested to increase the applied training opportunities and to perform these applications under the supervision of clinic nurses.

### **THREE DIFFERENT CASES OF FOREIGN BODY ASPIRATION: CT FINDINGS (SYMPTOMS OR RESULTS)**

**Toktoraliev Joomart, Verim Samet, Inan Kemal, Ors Fatih**

**OBJECTIVE:** Foreign body aspiration is any object getting stuck in the tracheobronchial system during the oral or nasal breathing. In the majority of cases more than 75% of foreign body aspiration affects children of 1-3 years old. It is more common and frequent in male babies. Unlike those in adults up to 15 years each in pediatric patients two main bronchi branch through similar terms. Therefore, foreign body aspiration in this patient group is close to the rate observed in both main bronchus. Up to 80% of aspirated foreign bodies are radiolucent. Foods most commonly and especially nut fragments, account for the majority of aspirated objects. Foreign body aspiration is most of seen in children with bronchial air trapping. The removal of foreign bodies' within the four hours quickly improves the prognosis. The aim of this paper is to present the CT findings and three cases of foreign body aspiration.

**MATERIALS AND METHODS:** One year, three years and seven years old males' patients was referred to our clinic at different times for evaluation of suspected foreign body aspiration. Before bronchoscopy to all patients was performed localization, CT examination for differential diagnosis and possible accompanying symptoms.

**FINDINGS:** At the chest radiography opacity of foreign bodies was seen only on seven years old male patient. During the CT examination foreign bodies were observed in one patient (7 years old) in the right main bronchus and other patients (1 year and 3 years) in the left main bronchus. Year old male patient was monitored as in the left lower lobe consolidation and interpreted as aspiration pneumonia.

**RESULT:** Foreign body aspiration is frequently seen in patients of the pediatric age group and it should be always taken into consideration to pediatric patients with sudden onset of shortness of breath. Unlike adult patients, pediatric patients with suspected foreign body should not only focus on the right main bronchus, but both main bronchi must be examined carefully.

### **A PATIENT OF TESTICULAR CARCINOMA, ADMITTED FOR CONSTIPATION COMPLAINTS**

**Bırol Yıldız, İbrahim Demirci, Nuri Karadurmuş, Şükrü Özeydin, Mustafa Öztürk**

**INTRODUCTION:** In many of the studies, only 30% of the patients with testicular masses were admitted to the hospital for complaints that localized to testes, and the

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majority was with symptoms of other localizations, often as back pain. In our case, the patient was admitted to the hospital for constipation, which was a very rare complaint.

CASE: 30 year-old male patient was evaluated in healthcare institutions due to the constipation complaint which began on August 2014 and existing for the last 6 months. Retroperitoneal mass was detected in the patient, and orchiectomy was performed following scrotal examination and ultrasonographic evaluation. The patient was diagnosed and treated with testicular neoplasm after orchiectomy and he is still under medical follow-up.

DISCUSSION: Testicular carcinoma is the most common malignancy in male patients in between 15-35 years of age and presents frequently with low back pain. It should be kept in mind that there could be atypical presentations as seen in our case.

### **INFERIOR VENA CAVA SYNDROME: AN EXCEPTIONAL COMPLICATION OF HEPATOCELLULAR CARCINOMA**

**Birol Yıldız, Nuri Karadurmuş, Şükrü Özaydın, Mustafa Öztürk, Bülent Karaman, İbrahim Demirci**

INTRODUCTION: Inferior Vena Cava (IVC) syndrome, which develops due to the compression, thrombosis, invasion or constriction of the vein, is a rarely encountered condition and presents with generalized edema in the lower extremities, scrotal edema and ascites. Although it's not as mortal as superior vena cava syndrome, IVC syndrome also worsens morbidity; and early diagnosis and treatment of syndrome is very important for patient comfort.

CASE: 66-year-old male patient admitted to hospital for dyspnea and abdominal distention on November 2015. In the examinations, a mass was detected in liver and biopsy was performed. By the histological analysis, hepatocellular carcinoma was diagnosed. Because the lesion was not suitable to radioembolisation procedure, he underwent chemoembolization procedure in interventional radiology clinic. Following the procedure, sorafenib treatment was started. During his follow-up visits, diffuse abdominal distension, lower extremity edema and scrotal edema were observed, and his symptoms did not decrease despite the appropriate diuretic treatment and ascites drainage. In the Abdominal imaging, it was found that Inferior Vena Cava was obstructed by compression of a conglomerated lymph node. The patient was scheduled for placing a stent in interventional radiology clinic.

CONCLUSION: Vena cava inferior syndrome is a rare syndrome and often interferes with the lower extremity

edema, scrotal swelling and abdominal ascites symptoms, which expected to develop in primary liver cancers or their metastases. Diagnosis of inferior vena cava syndrome should be considered, if symptomatic relief cannot be obtained in a patient presenting with these symptoms despite appropriate treatment.

### **METASTATIC MALIGNANT MESENCHYMAL TUMOR DEVELOPED ON THE GROUNDS OF PREEXISTING NEUROFIBROMATOSIS TYPE-I: A CASE REPORT**

**Birol Yıldız, İbrahim Demirci, Nuri Karadurmuş, Şükrü Özaydın, Mustafa Öztürk**

Introduction: Neurofibromatosis type I (NF-1) is a multisystem genetic disorder that is caused by the mutation of a gene on long (q) arm of chromosome 17 and seen in one of the 3000-4000 newborn. Diagnose is based on clinical and radiological findings. Depending on the localization of fibroma, many different symptoms and clinical signs can be encountered. In neurofibromatosis skin, eye, brain and bone tissues are primarily involved, but sometimes benign and malignant neoplasms can occur in abdominal region. In our case, we present an aggressive type of sarcoma developed on the ground of NF-1.

Case: 27-year-old male patient, who was diagnosed as NF-1 in December 2012, was admitted to hospital for weight loss, abdominal pain and constipation complaints in October 2015. A diffuse abdominal mass was detected in the examinations, compatible with some peritoneal and liver metastases.

A biopsy taken from the mass, and following the histological, clinical and radiological assessments, the patient was diagnosed as malignant mesenchymal tumor and 1st cure chemotherapy administered. The first cure of chemotherapy was well tolerated the patient and a reduction was observed in the size of liver mass. The second cure chemotherapy couldn't be administered because of the patient's impaired health condition. He has been taken to a follow-up program with palliative care support.

Conclusion: The patients with Neurofibromatosis type 1 (NF-1) are susceptible to the development of malignant and benign tumors.

Regular follow-up visits starting from the time of diagnosis will improve the chance of early diagnosis and treatment of these patients.

## **SINONASAL UNDIFFERENTIATED CARCINOMA PRESENTED WITH BILATERAL VISUAL LOSS**

**Yildiz Birol, Basgoz B. Bahadır, Karadurmuş Nuri, Ozaydin Sukru, Ozturk Mustafa**

**INTRODUCTION:** Sinonasal undifferentiated carcinoma is a very rare and aggressive tumor of paranasal sinuses and nasal cavity. It's difficult to distinguish it from other sinonasal tumors.

Treatment of the disease is difficult and prognosis also is poor. Despite presenting with visual loss is common, bilateral visual loss is very rare in the literature.

**CASE:** 21 years old male patient applied to hospital with complaints of nasal congestion in January 2005, visual loss in left eye in October 2015 and bilateral visual loss in November 2015.

There was no pathology found in fundoscopic examination however loss of bilateral light perception was detected. A mass that compressing the optic nerve and completely filling paranasal sinuses and nasal cavity was founded in computed tomography (CT) scan of paranasal sinuses and immediate surgery was performed to reduce compression effect of mass ON optic nerve.

Pathology specimen was reported as sinonasal undifferentiated carcinoma and hepatic metastasis was founded in body scanning for staging.

Chemotherapy protocol was administered a chemo-radiotherapy was planned in follow-up.

No improvement was obtained in visual loss and the patient is still under treatment and follow-up.

**CONCLUSION:** Sinonasal undifferentiated carcinoma is very aggressive tumor and early diagnosis and treatment is vital for better morbidity and mortality.

## **THROMBUS IN LEFT VENTRICUL APEX IN A CASE OF LUNG MALIGNANCY WITH PRESERVED LEFT VENTRICULAR EJECTION FRACTION**

**Birol Yıldız, Erol Gürsoy, İbrahim Demirci, Nuri Karadurmuş, Uygur Çağdaş Yüksel, Şükrü Özaydın, Mustafa Öztürk**

**INTRODUCTION:** Malignancy patients are prone to have thrombosis. In this group, thrombosis frequently occurs in the venous system and cause mortality through embolism in 20% of them. In our case, we presented a treatment of a thrombosis detected in left ventricular apex during the assessment of chest pain complaint, of a patient with preserved left ventricular ejection fraction.

**CASE:** 41 year old male patient with 20-25 pack/year smoking history and without any other known disease, was evaluated for shortness of breath, headache and trismus complaints that started 5 months ago. In the radiologic scan, infiltration in apicoposterior zone of the left lung and left pleural effusion was found. Bronchoscopic biopsy was performed and reported as malignant epithelial tumor, primarily compatible with adenocarcinoma, and pleural effusion cytology was also reported to be compatible with adenocarcinoma. For brain tissue involvement, Whole Brain Radiotherapy (RT) of 10 sessions was performed to the patient who was reported to have widespread metastases on the PET/CT imaging. Following the hospitalization in our clinic for chemotherapy, the patient complained crushing type chest pain and Electrocardiography (ECG) was performed. Although there were no ST segment changes in ECG, an echocardiography was performed because of ongoing sinus tachycardia and crushing type chest pain. In echocardiography, left ventricular apex was observed slightly hypokinetic but there were no severe valve problem. Left ventricular ejection fraction was measured as 58%. An organized 16x18 mm thrombosis seen at the apical side of left ventricle. With preliminary diagnosis of acute coronary syndrome, he was urgently taken to the hemodynamics laboratory and underwent emergency coronary angiography procedure. After coronary angiography showed normal coronary anatomy, patient was taken to the coronary care unit for surveillance. Following the confirmation of that his cardiac thrombus were not associated with acute coronary syndrome and after his chest pain relieved, the patient was transported to our clinic and low molecular weight heparin was administered. The patient is still under treatment and follow-up.

**CONCLUSION:** Since they are prone to having thrombosis and thromboembolism, patients with malignancy need prophylactic treatment, and diagnostic procedures are to be done quickly in case of having symptoms of thrombosis. It should be kept in mind that, in patients with malignancy, thrombosis can develop not only in the venous system but also in the arterial system, and morbidity-mortality rate can be reduced by early diagnosis and treatment.

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