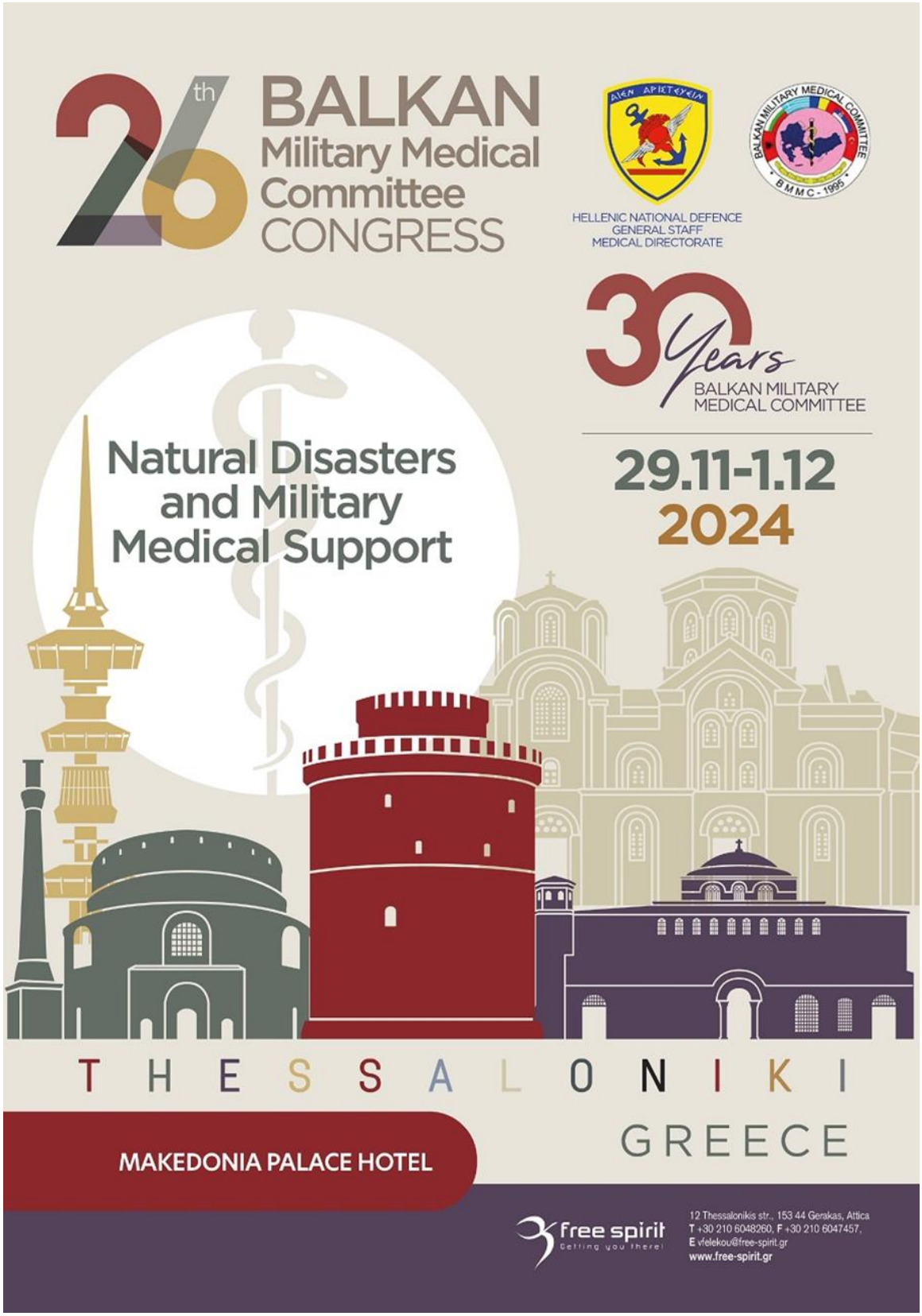
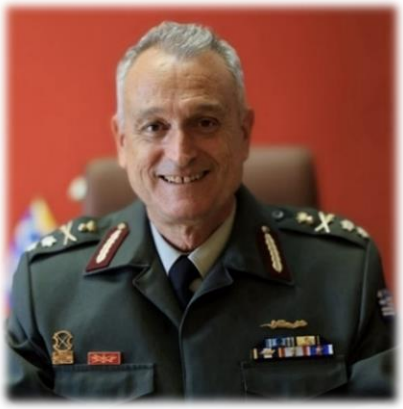



# BOOK OF ABSTRACTS

**26th BALKAN MILITARY MEDICAL COMMITTEE CONGRESS**
**29 November – 01 December 2024**
**MAKEDONIA PALACE HOTEL**
**Thessaloniki, Greece**



## The President of the 26th BMMC CONGRESS

## WELCOME SPEECH

Distinguished Guests, Dear Colleagues,

In my capacity as Surgeon General of the Hellenic Armed Forces I would like to welcome you to the 26th Congress of Balkan Military Medical Committee which is being held in Thessaloniki from 29th November to 1st December 2024.

Through BMMC channel, the military health communities of the Balkan Peninsula countries, find the opportunity to strengthen their relations and exchange knowledge and experiences in a common effort to promote and develop the Military Health Services of our countries. This year, under the central theme of "Natural Disasters and Military Medical Support", we aim to focus to a broader spectrum of cooperation, integrating the public sector and showing up the military interference and support to the citizens of our countries.

In addition to the scientific program, special emphasis is also placed on the cultural component with visits to archaeological sites in order to highlight the historical and cultural heritage of our country. Thessaloniki, main Balkan's multicultural crossroad, hostess of the 26th BMMC Congress, is logging for the most fruitful outcome and further propagate the warmth of Greek hospitality, 30 years after the signing of Thessaloniki Protocol at 13th November 1994.

With these thoughts and the certainty that the 26th BMMC Congress will not only meet but far exceed the expectations and standards of our community, I am looking forward to meeting you in Thessaloniki.

**Major General Dimitrios Kassimos, MD, PhD**
Surgeon General of the Hellenic Armed Forces

**26th BALKAN MILITARY MEDICAL COMMITTEE CONGRESS**
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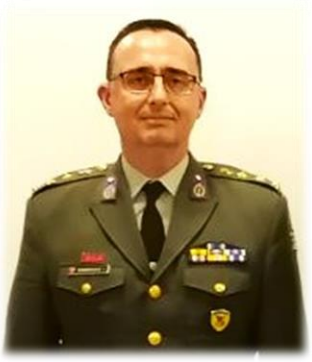

## The Greek National Board (GNB) for BMMC

## WELCOME SPEECHES

Respected Members of the Balkan Military Medical Community, Dear Colleagues,

In my capacity as Acting President of Balkan Military Medical Committee & President of Greek National Board, I would like to welcome all of you to the 26th BMMC Congress at Thessaloniki.

I truly believe that BMMC assists our countries in terms of ensuring the health of our soldiers and I am convinced that provides a highly valuable forum for productive debate regarding the military medical field. I am confident that all of us will contribute to the success of the 26th BMMC Congress through the comprehensive and scientifically sound presentations.

With these thoughts, I am looking forward to meeting in Thessaloniki, pending for the fruitful outcome of our Congress

**CAPT (N) Ioannis SFINIADAKIS, MD, MSc, LLM**
Acting President of BMMC & President of GNB

Distinguished Members of the Balkan Military Medical Community, Dear Colleagues,

The Balkan Military Medical Committee, from its establishment till now acts as the ideal platform for cooperation and collaboration between the Balkan participating countries. As a multinational initiative, aims not only to enrich scientific and training activities of the participating nations' Military Medical Services but furthermore to strengthen the relations and communication between the military medical personnel of our countries.

The 26th BMMC Congress is expected to be an important link in the chain of cooperation between our countries in the military health sector and will definitely serve in the most appropriate and fruitful way in exchanging ideas and practical experience in the military medical operational field.

With the above in mind, I am looking forward to meeting you in Thessaloniki.

**COL Christos VAMVAKIDIS, DVM, MA, MSc, PhD**
Acting Secretary General of BMMC &
Secretary General of GNB

**26th BALKAN MILITARY MEDICAL COMMITTEE CONGRESS**
**29 November – 01 December 2024**
**Thessaloniki, GREECE**

## BALKAN MILITARY MEDICAL COMMITTEE (BMMC) NATIONAL BOARDS (NBs)

**ALBANIA**

President of ANB:
**LTC Ardiana SINANI, MD, PhD, MSc**

Secretary General of ANB:
**CPT Dorela VASHA, MD, MSc**

**BULGARIA**

President of BNB:
**COL Assoc. Prof. Dimo DIMOV, MD PhD**

Secretary General of BNB:
**LTC Assoc. Prof. Georgi POPIVANOV, MD. PhD**

**GREECE**

Acting President of BMMC and President of GNB:
**CAPT (N) Ioannis SFINIADAKIS, MD, MSc, LLM**

Acting Secretary General of BMMC and Secretary General of GNB:
**COL Christos VAMVAKIDIS, DVM, MA, MSc, PhD**

**ROMANIA**

President of RNB:
**COL Assoc. Prof. Alexandru KERESZTES, MD, PhD**

Secretary General of RNB:
**COL Assoc. Prof. Catalin-Gabriel SMARANDACHE, MD, PhD**

**SERBIA**

President of SNB:
**COL Assist. Prof. Petar RISTIC, MD, PhD**

Secretary Gerneral of SNB:
**COL Stasa MUNITLAK, MD**

**TURKEY**

President of TNB:
**COL Prof. Ayhan KILIC, MD**

Secretary General of TNB:
**COL Assoc. Prof. Özlem ÖZTÜRK, MD**

## 26th BMMC CONGRESS ORGANIZING COMMITTEE

**HELLENIC NATIONAL DEFENCE GENERAL STAFF**

**CAPT (N) Ioannis SFINIADAKIS, MD, MSc, LLM**
**COL Christos VAMVAKIDIS, DVM, MA, MSc, PhD**
**COL Georgios LIAMPAS**
**CAPT (N) Stavroula FRESKA, RN**
**LTC Vasileios TRIMMIS, DVM, MA, BSc**
**LTC Eleni ALEXI, RN**
**MAJ Christos ROUSSOS**
**LCDR Vasileios KANTAS**
**LCDR Petros MICHALAKELIS**
**1LT Antigoni MOUDIOU**

**26th BALKAN MILITARY MEDICAL COMMITTEE CONGRESS**
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**MAKEDONIA PALACE HOTEL**
**Thessaloniki, Greece**

# GENERAL CONGRESS PROGRAM

## FRIDAY 29 NOVEMBER 2024

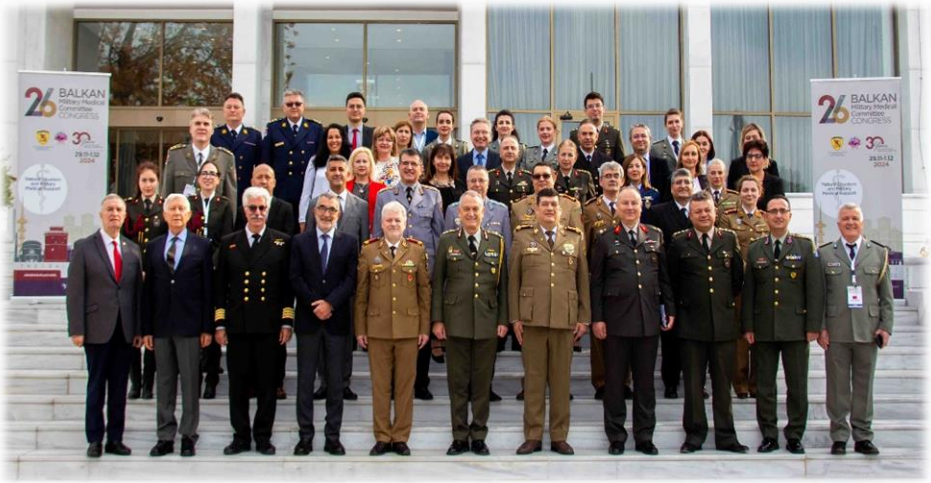
| | |
|---|---|
| **09:30-10:30** | Congress Opening Ceremony |
| **10:30-11:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **11:30-12:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **12:30-13:00** | Lunch Break |
| **13:00-14:00** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **14:00-15:00** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **15:00-16:00** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **16:00-17:00** | Coffee Break |
| **17:00-18:00** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **18:00-19:00** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |

## SATURDAY 30 NOVEMBER 2024

| | |
|---|---|
| **09:00-16:00** | Cultural Program |
| **16:30-17:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **17:30-18:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **18:30-19:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **21:00-23:00** | Gala Night Event |

## SUNDAY 01 DECEMBER 2024

| | |
|---|---|
| **09:30-10:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **10:30-11:30** | Oral Presentations (Conference Halls ALEXANDROS II & AMFITRION I) |
| **10:30-11:30** | Head of Delegations Official Meeting (Conference Hall CLIO) |
| **12:00-13:00** | Congress Closing Ceremony |
| **17:30-20:00** | 49th Post-Congress Official Meeting (Conference Hall CLIO) |



**26th BALKAN MILITARY MEDICAL COMMITTEE CONGRESS**
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**MAKEDONIA PALACE HOTEL**
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# SCIENTIFIC CONGRESS PROGRAM

## ORAL PRESENTATIONS (OP)

### FRIDAY 29 NOVEMBER 2024

**10:30–11:30 CONFERENCE HALL ALEXANDROS II**
**Chairpersons:** *COL Umut SAFER, MD (TUR), 2LT Veselin NIKOLOV (BUL)*

| | | |
|---|---|---|
| **OP001** | **Aeromedical Evacuation of Patients**<br>*Assist. Prof. Slavi ASOV, MD, PhD, Edlir GRUDA, MD, Antonio DIMITROV, MD, MAJ GEN (R) Corr. Member Prof. Nikolay PETROV, MD, Prof. Evelina ODISEEVA, MD, PhD* | **BUL** |
| **OP002** | **REBOA During MEDEVAC: Things to Consider, Challenges to Take. Can It Be a Crucial Tool for the CCAT (Critical Care Air Transport) Dogma?**<br>*LTC DEGERMETZOGLOU Nikolaos, MD, PhD, CDT 5th CLASS (MED) STAVRIANNAKOU Anna* | **GRC** |
| **OP003** | **Adherence To HPV Vaccination Among Military Medical Students**<br>*COL Daniel NICA* | **ROM** |
| **OP004** | **Trust In Vaccination Among Students of Medical Faculty of Military Medical Academy, University of Defense, Serbia**<br>*Ana Stošić, MD, Milena Krstić, Nebojša Jovanović, Sandra Stanković, Jelena Savić* | **SRB** |
| **OP005** | **Medical Support Provided by Naval Forces After the Earthquakes On 06 February 2023**<br>*CAPT (N) AFYON Murat, MD, CAPT (N) YEGINER Cenk, MD, CAPT (N) SAHİN Soykan, MD, LTJG KARAHUYUKLU Emre* | **TUR** |

**10:30–11:30 CONFERENCE HALL AMFITRION I**
**Chairpersons:** *CAPT (N) Ioannis SFINIADAKIS, MD (GRC), LT Alda AJDARI, MD (ALB)*

| | | |
|---|---|---|
| **OP006** | **New Technologies in Complex Orthopedic Cases – The Bridge Between Medicine and Military Science**<br>*Plamen IVANOV, Prof. Nedelcho TSACHEV, Radoslav MILEV, Nikola HARISKOV* | **BUL** |
| **OP007** | **Direct Anterior Approach (DAA) For Hemiarthroplasty in Elderly Patients with Hip Fractures**<br>*LTC Jugoslav MARINKOVIĆ* | **SRB** |
| **OP008** | **Comparative Analysis of the Prevalence and Anatomy of The Sulcus of the Caudate Process (Rouviere's Sulcus) During Laparoscopic Cholecystectomy - A Multicenter Observational Study**<br>*LCDR Dimitrios MANATAKIS HN, LTC Gerasim POPIVANOV, MAJ Daniel STEFANOV, LT Maria-Ioanna ANTONOPOULOU HN, COL Doru MOGA, LT Marina KONAKTCHIEVA, LT Nikolaos TASIS HN, MAJ Alexandru ILIESCU, MAJ GTN Prof. Ventsislav MUTAFCHIYSKI, LCDR Evangelos FRADELOS HN, COL Cătălin-Gabriel SMARANDACHE, COL Adrian POPENTIU* | **GRC** |

**OP009** **Multifocal Arterial Disease – Surgical Strategies** **ROM**
*I. DROC, A. ANASTASOAIE, M. DUMITRASCU, C. BUZILA, L. STAN*

**OP010** **Comparison Between Direct Anterior Approach vs. Lateral Approach in Total Hip Replacement in Military Personnel** **BUL**
*Plamen IVANOV, 1LT Petko GINEV, Assoc. Prof. Vladimir STEFANOV, LTC Assoc. Prof. Borislav ZLATEV, PhD, Prof. Nedelcho TZACHEV*

## 11:30–12:30 CONFERENCE HALL ALEXANDROS II

**Chairpersons:** *COL Christos VAMVAKIDIS, DVM, PhD (GRC), MAJ Daniel STEFANOV, MD (BUL)*

**OP011** **Foreign Military Medicine Literature for the Hellenic Armed Forces Training: The First Greek Edition of Borden Institute's Emergency War Surgery Textbook** **GRC**
*COL VOURVOULAKIS Georgios, LTC TSOUSKAS Ioannis, LTC ANASTASILAKIS Chrysostomos, LTC KOKARIDAS Apostolos, MAG PANTELIDOU Varvara, BG KOURIDAKIS Petros*

**OP012** **COVID-19 Measures at The Ministry of National Defense Ankara Special Care Center** **TUR**
*COL Pelin ÖZMEN, MD, COL Nilgün AKMAN, RN*

**OP013** **Attitudes Of Cadet Military Doctors Towards the Establishment of An International Organization for Students: Perspectives and Challenges** **BUL**
*LT Melani PIRGOVA, LT Yordan KOLEV, Assoc. Prof. Virsavia VASEVA, PhD*

**OP014** **A Comprehensive Analysis of Naval Operational Medicine in Turkiye: Current Issues of Concern and Lessons Learned** **TUR**
*CAPT GUNERIGOK Ali Ihsan, MD, CAPT DEMIROZEN H. Avni, MD, CAPT SAVASHAN Çağatay, MD, PhD, CAPT SAHIN Soykan, MD, PhD*

**OP015** **Combined Medical Engagement 2016 CIMIC** **SRB**
*MAJ Ass. Dr. Nikola PIJEVCEVIC, COL Prof. Dr. Zoran LAZIC, LTC Dr. Vladimir STEFANOVIC*

**OP016** **Pre-Disaster Relief Military Operation Risk Factors and Adrenaline Gut Response Index** **ROM**
*CIUMASU RIMBU Malina, MD, PhD, BUTA Corina, PhD*

## 11:30–12:30 CONFERENCE HALL AMFITRION I

**Chairpersons:** *COL Assoc. Prof. Catalin-Gabriel SMARANDACHE, MD, PhD (ROM), Diana TSAKOVA, MD (BUL)*

**OP017** **Abdominal Actinomycosis – Report of The First Liver Actinomycosis in Bulgaria and Review of The Literature** **BUL**
*Pavel DIMITROV, LTC Assoc. Prof. Georgi POPIVANOV, PhD, Assoc. Prof. Vasil MIHAJLOV, PhD, Tsonka LUKANOVA, PhD, Anelia ZASHEVA, Boryana ILCHEVA, CPT Marina KONAKTCHIEVA, PhD, Prof. Kirien KJOSSEV, PhD, MAJ Daniel STEFANOV, MAG GEN Prof. Ventsislav MUTAFCHYSKI, PhD*

**OP018** **Influence Of P16, P63, Cyclin D1 Immunohistochemistry and Nuclear Morphometric Analysis for Assessment of Cervical** **SRB**
*Prof. Biserka VUKOMANOVIC, Nebojsa JOVANOVIC, Jelena SAVIĆ, Ana STOSIC, Sandra STANKOVIC, Sanja DIMITRIJEVIC, PAVLOVIC Milan, Katarina DJURDJEVIC*

**OP019** **Conventional vs. Instillation NPWT In Surgical Site Infections – An Interim Analysis of Ongoing Prospective Trial** **BUL**
*Pavel DIMITROV, LTC Assoc. Prof. Georgi POPIVANOV, PhD, MAJ Daniel STEFANOV, Dimitar PENCHEV, Tsvetelina PAICHEVA, 1LT Marina KONAKTCHIEVA, Prof. Kirien KJOSSEV, MAJ GEN Prof. Ventsislav MUTAFCHIYSKI, PhD*

**OP020** **IPOM/IPOM+ Repair for Umbilical and Para-Umbilical Hernias: Technical Aspects and Our Experience** **ROM**

*COL POPENŢIU Adrian, MD, PhD, COL MOGA Doru, MD, PhD, MAJ ILIESCU Alexandru, COL Assoc. Prof. SMARANDACHE C.G., MD, PhD*

**OP021** **Gulhane Porphyria Laboratory: A Turkish Monocentric Retrospective Evaluation of A 10-Year Experience (2012-2021)** **TUR**

*LTC SERTOGLU Erdim, MD, COL OZTURK Ozlem, MD, COL UYANIK Metin, MD, COL TAPAN Serkan, MD, COL OZGURTAŞ Taner, MD, COL KURT Ismail, MD*

**OP022** **Management Of Gallbladder Cancer in A Bulgarian Surgical Department** **BUL**

*Elina TODOROVA, Prof. Ivelin TAKOROV, PhD, Assoc. Prof. Tsonka LUKANOVA, PhD, Dimitrina VALCHEVA, MAJ Sinan EMIN*

## 13:00–14:00 CONFERENCE HALL ALEXANDROS II

**Chairpersons:** *COL Bahadir CALISKAN, MD (TUR), Assoc. Prof. Tsonka LUKANOVA, PhD (BUL)*

**OP023** **Emergency Massive Transfusion Made Possible with Blood Product Transport By UAV: A Case Report** **TUR**

*CPT UNLU Mustafa Girayhan, MD, UNLU Aytekin, MD, COL CAMUR Murat, MD*

**OP024** **Foreign Military Medicine Literature for the Hellenic Armed Forces Training: A Series of TCCC Guidelines Translated in Greek** **GRC**

*LTC TSOUSKAS Ioannis, LTC ANASTASILAKIS Chrysostomos, MSG SASSOS Georgios, COL CHOULIARAS Eleftherios*

**OP025** **Supplying Blood by Drones** **BUL**

*Krasimira TERZIEVA, MD, COL Assoc. Prof. Dimo DIMOV, PhD, Prof. Rumen POPOV, PhD, Prof. Lyubomir ALEKSIEV, PhD*

**OP026** **TRLyP: Turkish Lyophilized Plasma Just Before Mass Production** **TUR**

*ESIM Ozgur, PhD, YILMAZ Soner, MD, EKER Ibrahim, MD, CETINKAYA Riza Aytac, MD, COL UNLU Aytekin, MD, CPT TURKOGLU Baki, MD*

**OP027** **Epidemiological Patterns and Etiology of Trauma at The University Trauma Hospital and Military Medical Unit, Tirana, Albania** **ALB**

*MAJ VASHA Dorela, MD, MAJ TAULLA Eriselda, MD, LTC SINANI Ardiana, MD, SHPUZA Aldo, MD, JOSIFI Mariola, MD, COL MUHAMETI Rushan, MD, COL RESO Elton, MD*

## 13:00–14:00 CONFERENCE HALL AMFITRION I

**Chairpersons:** *Prof. Biserka VUKOMANOVIC (SRB), MAJ Eliaveta GRANCHAROVA, MD (BUL)*

**OP028** **A Case Report of the Clinical Prognosis of an Atypical Sarcoidosis** **ALB**

*LT ISLAMAJ Arjeta, MD, MAJ HILA Elona, MD, MAJ KALOSHI Valdete, MD, GJANA Grisilda, MD, KASA Marsida, MD, LUKA Merita*

**OP029** **Headache: From an Innocent Symptom to A Life-Threatening Condition** **BUL**

Stratina STRATIEVA, Gabriel DIMITROV, Silvya PASHKUNOVA, Valentina GAVAZOVA

**OP030** **Necrotizing Fasciitis** **GRC**

*COL Eleni MOSTRATOU, MD, PHD, Pantelis PETROULAKIS, Aimilia Iris KARAMOLEGOU, Gerasimos Konstantinos VARSANIS, CPT Aikaterini DOUMANA, MD, Nikolaos TZORAS, MAJ Sotirios STAMOULIS, MD, COL Christos TSIRONIS, MD, COL Grigorios XARITOS, MD*

**OP031** **JAK-STAT Pathway Inhibitors in Treatment of Psoriatic Disease** **SRB**

*COL Miroslav DINIĆ, MD, PhD*

**OP032** **Cell Viability In SH-SY5Y Neuroblastoma Cells in Folic Acid Application by Using Jack-Stat Pathway** **TUR**
*COL GURAN Sefik, MD, KAPLAN Zehra Zeynep, KILIC Yigit Cemo, COBAN Zehra Dilsad, POLAT Yunus Emre, GULEC Kardelen, 1LT YUCE Alpertunga, TUNCBILEK Vildan, BAYKARA Meral Zehra, KILICARSLAN Ozgur*

**14:00–15:00 CONFERENCE HALL ALEXANDROS II**
**Chairpersons:** *COL Emre KARASAHIN, MD (TUR), Mariola JOSIFI, MD (ALB)*

**OP033** **The Effect of Nutritional Habits of Recruits on Their Anthropometric Parameters in A Military Unit** **TUR**
*CAPT YILDIRIM Mehmet MD, MAJ MUJARIC Hamdija MD, COL CETIN Mehmet MD*

**OP034** **Virtual Reality Assisted Physical Exercise for Parkinson's Disease to Increase Adherence and Improve Outcomes: Protocol for A Pilot Study** **BUL**
*Gabriel DIMITROV, Hristina MILANOVA, Stefka MANTAROVA*

**OP035** **Early Warning Diagnostic Signs and Symptoms of Meningococcal Infection in Army Recruits: A Literature Review** **GRC**
*1LT GAZI Maria, MD, CPT PAPAMICHALIS Theodoros, MD, CPT TANOU Kornilia, MD, CPT DOUMANA Aikaterini, MD, PETROULAKIS Pantelis, MD, COL MOSTRATOU Eleni, MD, PhD*

**OP036** **The Importance of a Parachutist's Health Condition, Especially During the Mission - Umbilical Hernia Possible Determining Factor of Unfitness** **ROM**
*CPT Dr. Simona Andreea TRAIAN-BALASESCU*

**OP037** **Degree And Significance of The Epidemiological Differences of Diseases and Injuries Between Soldiers and Civilians** **TUR**
*COL OZMEN Oğuzhan, MD, COL OZMEN Pelin, MD, COL YAKUT Ulaş, MD*

**14:00–15:00 CONFERENCE HALL AMFITRION I**
**Chairpersons:** *CAPT (N) Stavroula FRESKA, RN (GRC), Andreea CAPALNA, MD, PhD (ROM)*

**OP038** **Assessing Two Psychological Perspectives in Active Military Personnel: Development of Psychopathology and Resilience Inventories** **GRC**
*LTC THOMADAKIS Christoforos, PhD*

**OP039** **Enhancing the Detection of New Psychoactive Substances (NPS) to Address a Rising Public Health Concern** **ROM**
*Ilinca-Mihaela MARANDIUC, Corina Ștefania MATEI, Lăcrămioara TOPOLICEANU, Cristina ȘERBAN, Dida ARDELEANU*

**OP040** **Assessment Of the Relationship Between Disaster Preparedness Perceptions, Beliefs and Individual Preparedness Levels of Psychosocial Intervention Employees** **TUR**
*CAPT SAHIN Soykan, MD, PhD, GULEN SISMANLAR Sahika, MD*

**OP041** **Harnessing Artificial Intelligence for Early Detection of Post-Traumatic Stress Disorder (PTSD) in Military Personel** **GRC**
*2LT VELISSARIOU Ilias, RN, COL ATHANASIADOU Foteini, RN*

**OP042** **The Role of Psychological Safety and Resilience In SARS-COV-2 Infection** **ROM**
*Adriana NEAGU, Mihaela NICOLIN, Georgiana COVACI, DANCIU Andreea, CALOTĂ Flaviana, Răzvan HOMEAG, Adriana VARGA, Cristina BREDICEAN*

**15:00–16:00 CONFERENCE HALL ALEXANDROS II**
**Chairpersons:** *Assist. Prof. Slavi ASOV, PhD (BUL), LT Arjeta ISLAMAJ, MD (ALB)*

**OP043** **ROCCAS II: The Success of Colorectal Cancer Screening in Romanian Army** **ROM**
*COL Prof. Dr. Raluca S. COSTACHE, COL Prof. Dr. Mariana JINGA, COL Dr. Daniel O. COSTACHE*

**OP044** **Optimization Of Pain Control Management in Military-Related Mass Casualty Incidents by Using Regional Anesthesia Techniques** **BUL**
*1LT Georgi SEMOVSKI, MD, Assist. Prof. Slavi ASOV, MD, PhD, COL Assoc. Prof. Dimo DIMOV, MD, PhD*

**OP045** **Sharpness Of Vision of Pilots in Air Force of Serbia After +Gz Acceleration in Human Centrifuge** **SRB**
*Danijela RANDJELOVIC, Nenad BACEVIC, Svetlana MEDJEDOVIC*

**OP046** **Chronic Leg Ischemia Caused by Arterial Bullet Embolization** **TUR**
*CPT DEMIRKIRAN Tuna, MD, OZDEM Tayfun, MD, AKYOL Furkan Burak, MD, EROL Gökhan, MD, KARABACAK Kubilay, MD*

**OP047** **The Implications of Digestive Pathology on Aeronautical Personnel** **ROM**
*MAJ Kraft ALIN-ALEXANDRU, MD, PhD, Iolanda PAUN, MD, BG Oancea FLORIN, MD, PhD*

**OP048** **Anthropometric and Cardiopulmonary Reserve Related Factors and Their Correlation With G-Tolerance: 20-Year Systematic Review and Meta-Analysis** **GRC**
*2LT KONSTANTINIDIS Ioannis, MAJ SAVOURDOS Petros*

## 15:00–16:00 CONFERENCE HALL AMFITRION I

**Chairpersons:** *COL Bogdan-Ioan COCULESCU, MD, PhD (ROM), Prof. Snežana ĐORĐEVIĆ (SRB)*

**OP049** **Antimicrobial Resistance of Staphylococci Spp. Isolates Collected from Meat Samples** **GRC**
*COL TZIMOTOUDIS Nikolaos, DVM, COL GERONIKOS Dimitrios, DVM, MAJ DANIAS Pantelis, DVM, MAJ STAVROU Dimitra, DVM*

**OP050** **Microbiological Investigation of The Bacterial Biological Agent Simulants** **ROM**
*IONESCU Lucia-Elena, ORDEANU Viorel, POPESCU Diana-Mihaela, NECȘULESCU Marius*

**OP051** **The Role of The Mobile Toxicological-Chemical Unit of The National Poison Control Center in The Management of Mass Accidents** **SRB**
*Marko ANTUNOVIĆ, Tomislav REŽIĆ, Vladan LUKIĆ, Dragan ŽIVANOVIĆ, Nataša PERKOVIĆ VUKČEVIĆ, Slavica VUČINIĆ*

**OP052** **Toxicological Screening Strategies in Acute Poisoning with Neurotoxic Agents** **ROM**
*TOPOLICEANU Violeta-Lăcrămioara, DIDA Ardeleanu, MARANDIUC Ilinca-Mihaela, MATEI Corina-Stefania, ȘERBAN Cristina*

**OP053** **Risk Assessment: A Decision-Making Tool for Food Safety Problems** **GRC**
*COL TZIMOTOUDIS Nikolaos, DVM*

**OP054** **Optimizing A Gene Expression-Based Biological Dosimetry Method for X-Ray Irradiated Samples** **ROM**
*ANDONE Alina-Elena, RADU Speranța, CĂLBOREAN Octavian, IONESCU Lucia-Elena, SPANDOLE-DINU Sonia-Maria*

## 17:00–18:00 CONFERENCE HALL ALEXANDROS II

**Chairpersons:** *LTC Jugoslav MARINKOVIĆ, MD (SRB), 1LT Georgi SEMOVSKI (BUL)*

**OP055** **The Life of a Medical Cadet at the Hellenic Military Academy of Combat Support Officers** **GRC**
*CHIEF MSG, CDT 6th CLASS (MED) VALSAMIDIS Nikolaos*

**OP056** **Treatment And Benefits of Repetitive Transcranial Magnetic Stimulation on Patients with Refractory Depression at Military Medical Academy - Sofia** **BUL**
*MIDN DIMCHEV Iliyan, MIDN YORDANOVA Ralitsa, COL Assoc. Prof. Dr. DILKOV Dancho*

**OP057** **Analysis Of the Impact of SGLT2 Inhibitors On eGFR In Patients with Diabetes Mellitus Type II** **SRB**
*CDT Sara STANIĆ, COL Assoc. Prof. Petar RISTIC, COL Sasa KIKOVIC, MAJ Stevan JOVANOVIC*

**OP058** **Identifying And Increasing the Degree of Awareness About Post-Traumatic Stress Disorder in Romania** **ROM**
*SD FRT MARCU Gianina-Iazmina-Florentina, COL DANIEL NICA*

**OP059** **Perforated Appendicitis and Hospitalization Time in Childhood** **TUR**
*CDT VI (MED) ACAR Beyza, CAPT CALISKAN Bahadir, MD, BAHADIR Gokhan Berktug, MD, MAMBET Ervin, MD, COL DEMIRBAG Suzi, MD*

## 17:00–18:00 CONFERENCE HALL AMFITRION I

**Chairpersons:** *COL Ozlem OZTURK, MD (TUR), Ass. Prof. Dejan PILČEVIC (SRB)*

**OP060** **Pigmentation And Its Stressful Burden** **ALB**
*LTC SINANI Ardiana, MD, MAJ VASHA Dorela, MD, MAJ TAULLA Eriselda, MD*

**OP061** **Brainstem Auditory Evoked Potentials for Evaluation of The Risk of Chronic Traumatic Encephalopathy After Mild Traumatic Brain Injury** **BUL**
*Diana TSAKOVA, Acad. Prof. Latchezar TRAJKOV, MD, DSc*

**OP062** **Prospective Evaluation of Pulmonary Involvement in Patients with Primary Sjögren's Disease, Using Pulmonary Function Tests and High-Resolution Computed Tomography, Reveals High Prevalence of Subclinical Interstitial Lung Disease, Along with Small Airways Disease** **GRC**
*LCDR PANAGOPOULOS Panagiotis, CHATZIS Loukas, CHATZINIKITA Eirini, MALAGARI Katerina, VASSILAKOPOULOS Theodoros, TZIOUFAS Athanasios, GOULES Andreas*

**OP063** **Evolution Of Anti-SARS-COV-2 Antibody Levels In COVID-19 Patients in Pandemic Waves III and IV – A Romanian Experience** **ROM**
*COL COCULESCU Bogdan-Ioan, MD, PhD, PANĂ Marina, MD, PhD, VLADIMIRESCU Alexandru Filip, PhD, Prof. POPA Mircea-Ioan, MD, PhD*

**OP064** **The Relationship Between Mortality and Muscle and Fat Parameters Measured by Ultrasonography and Dual-Energy X-Ray Absorptiometry in Older Palliative Patients** **TUR**
*COL SAFER Umut, MD, CATIKKAS Nezahat Muge, MD, CALISKAN Burcu, Dietician, BINAY SAFER Vildan MD*

## 18:00–19:00 CONFERENCE HALL ALEXANDROS II

**Chairpersons:** *LTC Vasileios TRIMMIS, DVM (GRC), LTC Prof. Zoran TATIĆ (SRB)*

**OP065** **Viral Warfare in Military History** **ROM**
*SD MSG Nicole-Cătălina STRĂLICIUC, Assoc. Prof. Mădălina-Camelia SULTANA, MD, PhD*

**OP066** **Risk Of Dependence in Service Members and Veterans Due to Long-Term Benzodiazepine and Alcohol Use in The Context Of PTSD** **BUL**
*OFFICER CANDIDATE DIMITRO Filoteya, COL Assoc. Prof. DILKOV Dancho, PhD, NIKOLOVA Teodora, PhD, OFFICER CANDIDATE TONEVA Mariya, Midshipman 5th Class MUTAFOVA Mariya*

**OP067** **Foreign Military Medicine Literature for the Hellenic Armed Forces Training: Tactical Combat Casualty Care Course for All Service Members; Greek Curicullum** **GRC**
*CTD 5th CLASS (MED) TSINTSI Eleni, CTD 5th CLASS (MED) NIKOLAIDIS Sophoklis, CTD 5th CLASS (MED) MANGOU Elisavet, CTD 5th CLASS (MED) BATZAKIS Panagiotis, CTD 5th CLASS (MED) KADIRI Vaia, CTD 5th CLASS (MED) SALTA Nikoleta, CTD 5th CLASS (MED) KONSTANTAROS Konstantinos, CTD 5th CLASS (MED) DIMITRIADIS ILIAS, LTC TSOUSKAS Ioannis, COL VOURVOULAKIS Georgios*

**OP068** **Parameters Of Optical Coherence Tomography and Cognitive Status of Patients with Multiple Sclerosis in Correlation with Indicators of Functional Neurological Deficit** **SRB**
CDT Aleksandra STAJIĆ, Katarina PASOVSKI, Evica DINČIĆ

**OP069** **Surgical Ovarian Pathologies in Childhood** **TUR**
*CDT VI (MED) ACAR Beyza, CPT CALISKAN Bahadir, MD, BAHADIR Gokhan Berktug, MD, MAMBET Ervin, MD, COL SURER Ilhami, MD*

**OP070** **The Use Of 3D Printed Mechanical Prostheses for Upper Limb Segments in Favor of Military and Civilian Patients** **ROM**
*SD FRT ANDREI Tomas-Luis, COL Mihail-Sliviu TUDOSIE, MD, PhD*

**18:00–19:00 CONFERENCE HALL AMFITRION I**
**Chairpersons:** *Brindusa COFARU, MD, PhD (ROM), Mariola JOSIFI, MD (ALB)*

**OP071** **"Double Daily Doses" Of Cetrorelix May Raise Follicular Phase Progesterone More as Compared To "Single Doses", In Poor Ovarian Response Patients** **TUR**
*COL OZTURK Mustafa, MD, COL FIDAN Ulas, MD, COL CEYHAN Temel, MD, COL OZTURK Ozlem, MD, COL KARASAHIN Kazim Emre, MD, OZCAN L., MD, COL KORKMAZ C., MD*

**OP072** **Hairy Cell Leukemia After Splenectomy with Ascites** **ALB**
*MAJ TAULLA Eriselda, MD, MAJ VASHA Dorela, MD, KASA Marsida, MD, CELO Eni, MD, SHABA Elvina, MD*

**OP073** **Examination Of Fallopian Tubes Patency in The Treatment of Infertility** **SRB**
*LTC Nebojsa JOVANOVIC, PAVLOVIĆ M., DIMITRIJEVIĆ S., SAVIĆ J., STOŠIĆ A., STANKOVIĆ S.*

**OP074** **New Technologies and Artificial Intelligence in Monitoring and Treatment of Diabetes** **ROM**
*Brindusa COFARU, MD, Bogdan SIMIONESCU, Pharm.*

**OP075** **Short-Chain Fatty Acid Levels in Stools of Patients with Inflammatory Bowel Disease Are Lower Than Those in Healthy Subjects** **TUR**
*COL OZTURK Ozlem, MD, COL CELEBI Gurkan, MD, DUMAN Umut Goktan, MD, MAJ KUPCUK Erhan, MD, COL UYANIK Metin, MD, COL SERTOGLU Erdim, MD*

**OP076** **HPV Prevalence Among Patients with LEEP Procedure** **SRB**
*Dr. Jelena SAVIĆ, Dr. Sandra STANKOVIĆ, Dr. Milan PAVLOVIĆ, Dr. Sanja DIMITRIJEVIĆ, Dr. Ana STOŠIĆ, Dr. Nebojša JOVANOVIĆ*

## SATURDAY 30 NOVEMBER 2024

**16:30–17:30 CONFERENCE HALL ALEXANDROS II**
**Chairpersons:** *COL Adrian POPENTIU, MD, PhD (ROM), MAJ Eriselda TAULLA, MD (ALB)*

**OP077** **LITT Up the Maverick Spirit: A Comprehensive Review of Laser Interstitial Thermal Therapy for Managing Unresectable De Novo or Recurrent Glioblastoma** **ROM**
*SD SG MAJ Cristina Mihaela STIRBU, COL Assoc. Prof. SMARANDACHE Catalin Gabriel*

**OP078** **Early-Onset Myasthenia Gravis – A Case Report** **BUL**
*MIDN KIRILOVA Bogdana, MIDN NINOVA Nia, MIDN RUSEVA Sylvia, MIDN GEORGIEVA Dimana*

**OP079** **Novel Approaches in Military Surgical Training** **GRC**
*CTD 4th CLASS (MED) PAPALAMPROU Panagiotis, LIATSOS Alexandros, MAJ TRIANTAFYLLIDIS Agathaggelos, MD, CPT KLITSINIKOS Dimitrios, MD, COL TOULIOS Petros, MD*

**OP080** **Management of Acute Stroke within the Therapeutic Window in a Military Hospital: Thrombolysis and Thrombectomy - A Clinical Case Presentation** **ROM**
*2LT Ana Maria GHINEȚ, COL Assoc. Prof. Florentina Cristina PLEȘA, MD, PhD, COL Prof. Dr. Carmen-Adella SIRBU, MD, 2LT Cătălin-Florin COMAN, PhD, LT Ionuț CALOIANU, MD, Rodica GHEORGHE, MD, Andreea PLEȘA, MD*

**OP081** **Nanotechnology: A New Approach of Diagnosis, Monitoring, Treatment and Regenerative Medicine. Applications In Military Medicine** **BUL**
*OFFICER CANDIDATE Antonia PUSHKAROVA, OFFICER CANDIDATE Mihaela IVANOVA, OFFICER CANDIDATE Cindy GAVRAILOVA, 2LT Ilias VELISSARIOU, RN, Assoc. Prof. Miroslav EFTIMOV, PhD*

## 16:30–17:30 CONFERENCE HALL AMFITRION I

**Chairpersons:** *COL Daniel O. COSTACHE, MD (ROM), MD, PhD, Kristina KOSTIC, MD (SRB)*

**OP082** **Triple Valve Cardiac Surgery and Triple CABG: A Case Report** **SRB**
*Pavle DUGALIĆ, Dejan PERIĆ, Luka BABIĆ, Ljiljana MANDIĆ, Stefan SPASIĆ*

**OP083** **Cardiac Tumors - Symptoms and Treatment** **SRB**
*LTC Ass. Prof. DJURIĆ Predrag, Prof. MLADENOVIĆ Zorica, COL Ass. Prof. JOVIĆ Zoran, COL BOGDANOVIC Predrag, MD, LTC NOVIČIĆ Nataša, MD, CPT 1st CLASS ŽIVKOVIĆ MILJKOVIĆ Nataša, MD, ĆIRIĆ Nikolina, MD, MILIĆ Gordana, MD*

**OP084** **New Experimental Therapeutics Approaches in Case of Skin Exposure to Blistering Chemical Agents** **ROM**
*Cristina Anca SECARA, MD, PhD, COL Bogdan-Ioan COCULESCU, MD, PhD, Ana Maria CATRINA, PhD, Cerasela HAIDOIU, Diana POPESCU, PhD, Razvan NEAGU, PhD, 2LT Oana Cristina VOINEA, MD, PhD, COL Assoc. Prof. Mihail-Silviu TUDOSIE, MD, PhD*

**OP085** **Modalities Of Vacuum-Assisted Compressive Therapy in Granulation Tissue Formation** **SRB**
*LTC Sasa MILICEVIC, MD, PhD*

**OP086** **Effects of Third Molar Surgery on Sleep Health Parameters of Young Adults** **GRC**
*CPT APESSOS Ioulianos, LILLIS Theodoros, VOULGARIS Athanasios, ARCHONTOGEORGIS Kostas, STEIROPOULOS Paschalis, DABARAKIS Nikolaos*

## 17:30–18:30 CONFERENCE HALL ALEXANDROS II

**Chairpersons:** *CAPT (N) Stavroula FRESKA, RN (GRC), LTC Marinela MJEDA, RN (ALB)*

**OP087** **Utilization Of Fecal Management System to Prevent from Colostomy in Patients with Fournier's Gangrene** **TUR**
*CDT VI (MED) EROGUL Ayse Su, YILMAZ Kerim Bora, MD*

**OP088** **Mental Health Interventions for Combat-Related PTSD: Efficacy and Long-Term Outcomes in Military Veterans** **ROM**
*SD SLT Elena MOCANU, COL Med. Conf. Univ. Dr. Mihail - Silviu TUDOSIE*

**OP089** **Bioethics In Wartime Especially Triage on the Field** **GRC**
*CPL CDT 4th CLASS (NRS) TRIANTAFILLOU Evmorfia, LTC MALITSIDIS Dimitrios*

**OP090** **Possibilities For Application Of 4d-Printing in Military Branch** **BUL**
MIDN 4th CLASS KOSTOVA Nadezhda

**OP091** **Medical Assistance in The Tactical Field** **ROM**
*CPL SD ANGHEL Liviu-Florin, BG OANCEA Florin, MD, PhD*

**17:30–18:30 CONFERENCE HALL AMFITRION I**
**Chairpersons:** *Prof. Christina VIDINOVA, PhD (BUL), CPT Baki TURKOGLU, MD (TUR)*

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| **OP092** | **Limb Damage Control Orthopedics (LDCO) In High-Energy Fractures of The Lower Limb: Case Series Presentation**<br>*1LT Petko GINEV, LTC Assoc. Prof. Borislav ZLATEV, MD, PhD, Plamen IVANOV, MD* | **BUL** |
| **OP093** | **Correlation Of C-Reactive Protein Levels with Severity of Chronic Urticaria-Retrospective Analysis Of 145 Patients**<br>*Kristina KOSTIĆ, Tanja TIRNANIĆ, Lidija KANDOLF, COL Miroslav DINIĆ* | **SRB** |
| **OP094** | **Bacterial Resistance to Silver in Wound Care**<br>*Mihaela GEORGESCU, Carmen Mariana CHIFIRIUC* | **ROM** |
| **OP095** | **Bilateral Central Serous Chorioretinopathy in A Patient with Demyelinating Optic Neuritis Associated with Multiple Sclerosis**<br>*A. EVANGELINOU, E. LOUKOVITIS, S. ALMPANIDOU, M. ZARTALOUDI, Th. MIRACHTSIS* | **GRC** |
| **OP096** | **Treatment of Symptomatic Arterial Branch Macroaneurysm with Intravitreal Injection of Bevacizumab**<br>*Stavroula ALMPANIDOU, Athanasia EVANGELINOU, Melpomeni ZARTALOUDI, Elias NAKOS, Theodoros MIRACHTSIS* | **GRC** |

**18:30–19:30 CONFERENCE HALL ALEXANDROS II**
**Chairpersons:** *LTC Vasileios TRIMMIS, DVM (GRC), MAJ Baki TURKOGLU, MD (TUR)*

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| **OP097** | **The Impact of HIV in the Military: Medical, Legal, and Ethical Aspects**<br>*SD SG MAJ Alexandru-Marius STANCU, Prof. Simona RUȚĂ, MD, PhD* | **ROM** |
| **OP098** | **Women's Participation in International Military Operations**<br>*CDT 3rd CLASS (NRS) VASILEIOY Nafsika, CDT 3rd CLASS (NRS) SKREKA Dimitra, MAJ BALOGIANNI Agori* | **GRC** |
| **OP099** | **Novel Tactical Communications Gadget Employed by Military Personnel in High-Noise Combat Environments**<br>*SD SFC BĂCANU Georgiana, MAJ GURĂU Cristina MD, PhD* | **ROM** |
| **OP100** | **Battlefield Hemorrhage Control: Tranexamic Acid Use in Military Medicine**<br>*MIDN PEEV Viktor, MIDN KONSULOV Vasil* | **BUL** |
| **OP101** | **Osseointegration In War Veterans**<br>*SD 2LT Camelia PRECOP, Munjed AL MUDERIS, MD, PhD* | **ROM** |
| **OP102** | **Atresia Ani Type II with Rectovaginal Fistula in a 2-Month-Old Puppy**<br>*CDT 4th CLASS (VET) MAKRI Evangelia, Prof. PAPAZOGLOU Lysimachos* | **GRC** |

**18:30–19:30 CONFERENCE HALL AMFITRION I**
**Chairpersons:** *COL Assoc. Prof. Atanas KALAYDZIEV, PhD (BUL), COL Theodoros MIRACHTSIS, MD (GRC)*

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| **OP103** | **Our Results with The Usage of Faricimab (Vabysmo) In Patients with Wet AMD**<br>*Prof. Christina VIDINOVA, MD, PhD, COL Assoc. Prof. Atanas KALAYDZHIEV, PhD* | **BUL** |
| **OP104** | **Epiretinal Membrane Peeling Secondary to Proliferative Vitreoretinopathy in The Left Eye Following Open-Globe Injury**<br>*A. EVANGELINOU, S. ALMPANIDOU, M. ZARTALOUDI, D. TZAKRI, K. ANASTASILAKIS, Th. MIRACHTSIS, Ch. SIOULIS* | **GRC** |
| **OP105** | **OCT – A Characteristic of Primary Open Angle and Normal Tension Glaucoma**<br>*COL Assoc. Prof. Atanas KALAYDZHIEV, PhD, Prof. Christina VIDINOVA, MD, PhD* | **BUL** |

**OP106** **Management Strategy for Silicone Oil Migration into the Anterior Chamber: A Case Report in a Pseudophakic Patient** **GRC**
*S. ALMPANIDOU, A. EVANGELINOU, M. ZARTALOUDI, D. TZAKRI, Th. MIRACHTSIS, Ch. SIOULIS*

**OP107** **Preoperative Preparation of Patients: The Impact of Following the Recommended Steps in Prevention of Hospital Acquired Infections** **ROM**
*PCC Dr. Andreea CAPILNA, LTC Dr. Simina DUMITRACHE, COL Dr. Adrian GARBEA, Dr. Ciprian SILAGHI, COL Dr. Roald GAVRILAS, COL Dr. Alexandru KERESZTES, PCC Dr. Adrian BARACAN*

**OP108** **Surveillance Of Nosocomial Infections at University Trauma Hospital and Military Medical Unit, Tirana** **ALB**
*JOSIFI Mariola, MD, MAJ VASHA Dorela, MD, FAZLLI Valbona, MD, LTC SINANI Ardiana, MD, COL MUHAMETI Rushan, MD*

## SUNDAY 01 DECEMBER 2024

### 09:30–10:30 CONFERENCE HALL ALEXANDROS II

**Chairpersons:** *Malina RIMBU CIUMASU, MD, PhD (ROM), LTC Assoc. Prof. Borislav ZLATEV, PhD (BUL)*

**OP109** **Laboratory Findings in Osteoarthritis, How Does Biochemistry and Biomechanics Influence Disease's Progression** **ALB**
*LT AJDARI Alda MD, Prof. BACKA Teuta, MD, RAPUSHI Ervin*

**OP110** **Research On the Radioprotective Activity of Trimethylglycine (Betaine) And N-Acetyl-L-Cysteine in Cellular Models, Against the Development of Acute Radiation Syndrome (ARS) or Chronic Radiation Injuries (Stochastic Effects)** **BUL**
*RACHEVA Galina, PhD*

**OP111** **γ-HYDROXYBUTYRATE: New Drug, New Clinical and Analytical Challenges** **SRB**
*Snežana ĐORĐEVĆ, Gordana BRAJKOVIĆ, Marko ANTUNOVIĆ, Vladan LUKIĆ, Nataša PERKOVIĆ-VUKČEVIĆ, Slavica VUCINIC*

**OP112** **Corrosive Ingestion in Childhood Is a Serious Problem** **TUR**
*CAPT CALISKAN Bahadir MD, BAHADIR Gokhan Berktug MD, GORDU Bilge MD, COL SURER Ilhami MD*

**OP113** **Biological Approach in Management of Critical Size Bone Defects in Long Bones** **BUL**
*LTC Assoc. Prof. Borislav ZLATEV, LT Petko GINEV, Plamen IVANOV*

### 09:30–10:30 CONFERENCE HALL AMFITRION I

**Chairpersons:** *LTC Predrag ĐURIĆ (SRB), 1LT Petko GINEV, MD (BUL)*

**OP114** **The Shift from Early Total Care to Damage Control Orthopedics (DCO)** **BUL**
*2LT Veselin NIKOLOV*

**OP115** **From Frontline to Healthline: Eyetracking Software for Remote Health Monitoring in the Armed Forces** **GRC**
*2LT Dimitra PANTELAKI[1], Anna NIKOLAIDOU[2], Athanasia SANDALI[3], Theodora GIANNI[4], Chrysoula STRIFTI[5], Maria-Eleni KADREVI[6], Lambros LAMBROGIANNIS[7]*

**OP116** **Machine Learning Algorithms for Prediction of Mortality in High Kinetic Energy Trauma** **TUR**
*CELEPLİ Salih, MD, BIGAT Irem, MS, MAJ TURKOGLU Baki, MD, KARAKAS Bilgi, MD, HIDIROĞLU Mehmet Mert, MD, KAYMAK Sahin, MD, SENOCAK Rahman, MD, EROGUL Osman, PhD*

**OP117** **Vascular Trauma in Parachuting Mishap – Case Report** **ROM**
*CPT Mihai TOMA, MD, PhD, CPT Zsolt TORDAI MD, LTC Assist. Prof. Ovidiu GRAD, MD, PhD, COL Lect. Valentin OPREA, MD, PhD*

**OP118** **Left Groin Hernia with Intraoperatively Diagnosed Spigelian Hernia – What to Do in Case of Synchronous Occult Hernia** **BUL**
*MAJ Daniel STEFANOV, Tsvetelina PAICHEVA, LTC Assoc. Prof. Georgi POPIVANOV, PhD, Prof. Kirien KJOSSEV, PhD, COL Assoc. Prof. Plamen IVANOV, PhD, MAJ GEN Prof. Ventsislav MUTAFCHIYSKI, PhD*

**10:30–11:30 CONFERENCE HALL ALEXANDROS II**
**Chairpersons:** *Andreea-Maria SMARANDACHE, MD, PhD (ROM), LTC Marinela MJEDA, RN (ALB)*

**OP119** **Changing Of Leading Microbiological Causers of Peritonitis in Patients on Peritoneal Dialysis with Impact on Treatment Outcomes - Own Experience** **SRB**
*Dejan PILCEVIC, RABRENOVIC V., PETROVIC M., PETROVIC M., VAVIC N., RAKONJAC B.*

**OP120** **Transfusion Therapy in Non-Identical, ABO – Compatible Liver Transplantation** **BUL**
*MAJ Elisaveta GRANCHAROVA, Prof. Rumen POPOV, Assoc. Prof. Tsonka LUKANOVA*

**OP121** **Nursing Care in External Fixator Applications in Gunshot Injuries** **ALB**
*LTC MJEDA Marinela, NRS, DISTAFA Valbona, NRS, MAJ GRËMI Armelina, NRS*

**OP122** **Colorectal Cancer Prevention in Family Doctors' Offices within the Integrated Clinical Outpatient Department through the Detection of Occult Blood in Stool** **ROM**
*Cristina RADU, RN, Elena NEDELCU, NRS Manager, Iulia Madalina STAICU, MD*

**OP123** **The Role of Physician Assistants in Role 2 HKIA: A Personal Reflection** **ROM**
*OR-7 Alexandru ROMANȚAN, CPT Mihai TOMA MD, PhD, COL Valentin OPREA MD, PhD*

**10:30–11:30 CONFERENCE HALL AMFITRION I**
**Chairpersons:** *COL Mustafa OZTURK, MD (TUR), LTC Prof. Zoran TATIĆ (SRB)*

**OP124** **The Effects Of "Military/Weapon Originated Noise" On Female/Pregnant Personnel** **TUR**
*COL KARASAHIN Kazim Emre, MD*

**OP125** **Therapeutic Potential of Zygomatic Implants in The Framework of Graftless Compensation of Extensive Bony Traumatic Defects in The Lateral Maxillary Region. A Retrospective Study with A Follow-Up Period Of 7 Years** **SRB**
*SEN. CPT DJURAN Boris, Oral Surgeon*

**OP126** **Effects Of Menstrual Cycle and Related Problems on Female Military Personnel: Facts and Possible Solutions** **TUR**
*ULUCAY Bensu, KARASAHIN Kazim Emre, MD*

**OP127** **Reconstruction Of Orofacial Defects of Different Etiology Using Dental Implants** **SRB**
*LTC Prof. Zoran TATIC, Oral Surgeon*

**OP128** **Tranexamic Acid in Emergency Care** **GRC**
*COL Eleni MOSTRATOU, MD, PhD, CPT Theodoros PAPAMICHALIS, MD, CPT Cornilia TANOU, MD, Eleni TSIOURI, Andreas SOURLAS, Theodoros FAFOUTIS, Nikolaos TZORAS*

## POSTER PRESENTATIONS (PP)

**FRIDAY 29 NOVEMBER – SUNDAY 01 DECEMBER 2024**
**CONFERENCE HALLS ALEXANDROS II & AMFITRION I FOYER**

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| **PP01** | **The Need to Optimize the Role of The Pharmacist in Disasters Medical Support**<br>*COL Nikolay ALEKSIEV, MPharm., COL Assoc. Prof. Dimo DIMOV, PhD* | **BUL** |
| **PP02** | **Analysis of Patients Treated of General Hospital for Active Treatment-Sofia of The Military Medical Academy for The Year 2023**<br>*Chief Assist. ALEXANDROV Alexander, PhD, Chief Assist. ALEXIEVA Ivanka, PhD, COL Assoc. Prof. POPIVANOV Ivan, PhD* | **BUL** |
| **PP03** | **Wartime Usage of Psychoactive Substances for Enhancing Effectiveness During Combat Operations**<br>*SD SFC BĂCANU Georgiana, SD MSG Vlad CONTESI, Assoc. Prof. COL TUDOSIE Mihail-Silviu, MD, PhD* | **ROM** |
| **PP04** | **Pulmonary Imaging in COVID-19 Patients**<br>*MAJ BALA Aurela, MD, JOSIFI Mariola, MD, LTC DURAKU Kujtime, MD, MAJ VASHA Dorela, MD* | **ALB** |
| **PP05** | **Acute Ischemic Stroke and the Role of Cardiac Biomarkers**<br>*BASHA Entela, MD, RANXHA Eris, MD* | **ALB** |
| **PP06** | **Navigating Pituitary Apoplexy: A Case of Rapid Diagnosis and Successful Management**<br>*ÇELO Eni, MD, MAJ TAULLA Eriselda, MD, KASA Marsida, MD* | **ALB** |
| **PP07** | **An Overview of Emergencies in Otorhinolaryngology at University Hospital of Trauma, Tirana**<br>*DANAJ Brikena, MD, MALO Grej, MD* | **ALB** |
| **PP08** | **Assessment of the Epidemiological and Clinical Differences Between Men and Women with Acute Myocardial Infarction**<br>*DIDA Blerina, MD, SUKAJ Bruna, MD* | **ALB** |
| **PP09** | **Leptospirosis, One of The Most Frequent Infectious Disease After Flooding: A Case Presentation**<br>*FEJZO Ina, MD, FEJZO Eristen, MD, MAJ BALA Aurela, MD, LTC DURAKU Kujtime, MD* | **ALB** |
| **PP10** | **Terrorist Acts-Preparedness for Medical Response**<br>*Chief Assist. Prof. GALABOVA Agnes, COL Assoc. Prof. DIMOV Dimo, MD, PhD, LTC Assoc. Prof. DILKOV Dancho, MD, PhD, ENG YANTCHEV Georgi, PhD* | **BUL** |
| **PP11** | **Distributive Justice – Triage**<br>*Assist. Prof. GEORGIEVA Hristina, 1LT Assist. Prof. KOYNOVA Zhenya, COL Assoc. Prof. POPIVANOV Ivan, PhD* | **BUL** |
| **PP12** | **The Smart Choice for Hemodialysis: Why Arteriovenous Fistulas are the Superior Option**<br>*GJANA Grisilda, MD, Assoc. Prof. ZENELAJ Arben, KASA Marsida, MD, SHEHAJ Larisa, MD, KAPIDANI Loredana, MD* | **ALB** |

**PP13** **Evaluation Of Lipid Blood Levels of Pilots in The Bulgaria Air Force** **BUL**
*GORANOVA Yana, PhD, RAMSHEVA Zorka, MD, GIROVA Natashka, MD*

**PP14** **A Clinical Case of a Patient with Churg-Strauss Syndrome and Dilated Cardiomyopathy** **BUL**
*1LT GRIGOROVA Boryana, MD, COL Prof. DASKALOV Ivaylo, MD, PhD, Prof. DEMIREVSKA Liliya, MD, PhD*

**PP15** **Pulmonary Fibrosis in Untreated Rheumatoid Arthritis** **ALB**
*LTC HILA Elona, MD, LT AJDARI Alda, MD, CPT ISLAMAJ Arjeta, MD*

**PP16** **From Lwoffii to Bereziniae: Analysis of an Outbreak in a Tertiary Hospital in Romania** **ROM**
*Raluca Maria HRIȘCĂ, Elisa Manuela MUNTEANU, Crina DUCA, Brîndușa Elena LIXANDRU, Bogdan Daniel JERDEA, Codruța Georgiana CARP*

**PP17** **Participation of Bulgarian Women Servicemen in First Aid Education and Training Courses** **BUL**
*MAJ Assist. Prof. IVANOVA Mariyana, 1LT Assist. Prof. RALCHEVA-ZHEKOVA Borqna, COL Assoc. Prof. POPIVANOV Ivan, PhD*

**P18** **The Necessity of Additional Sexual and Reproductive Health Education Programs for Women Servicemen** **BUL**
*MAJ Assist. Prof. IVANOVA Mariyana, 1LT Assist. Prof. RALCHEVA-ZHEKOVA Borqna, COL Assoc. Prof. POPIVANOV Ivan, PhD*

**PP19** **Clonidine to the Rescue: More Than Just Blood Pressure Control in Diabetic Gastroparesis** **ALB**
*KASA Marsida, MD, Assoc. Prof. RROJI Merita, GJANA Grisilda, MD, CULE Elda, MD, LUKA Merita, MD, CELO Eni, MD, MAJ TAULLA Eriselda, MD, KUQI Ardit, MD, Assoc. Prof. ELEZI Brunilda*

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*1LT Assist. Prof. KOYNOVA Zhenya, Assist. Prof. GEORGIEVA Hristina, Dr. CHESHMEDZHIEVA Atanaska, PhD, COL Assoc. Prof. POPIVANOV Ivan, PhD*

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*Dr. LAZAROV Peter, Assoc. Prof. GRIGOROV Nedyalko, PhD, COL Assoc. Prof. DIMOV Dimo, PhD, COL Assoc. Prof. POPIVANOV Ivan, PhD, 1LT Dr. GAMISHEVA Antonia, 1LT Dr. GEORGIEVA Eva*

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*COL MUHAMETI Rushan, MD, COL RESO Elton, MD, MALO Grej, MD, LT ZOGAJ Erjona, NS, LTC CEKA Adriatik, MD, KALLASHI Najada, MD, MUHAMETI Ruent, DILO Valdet, TABAKU Ina, MD, DEMKO Vidi, MD, MORINA Hytaete, MD, FERHATI Marsela*

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*MUMAJESI Suela, MD, GJANA Grisilda, MD, SPAHIA Nereida, MD, SEFERI Saimir, MD, GJECKA Elena, MD, KRUJA Bledar, MD*

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*1LT Assist. Prof. RALCHEVA-ZHEKOVA Boryana, MD, MAJ Assist. Prof. IVANOVA Maryana, MD, COL Assoc. Prof. POPIVANOV Ivan, PhD, MD*

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*1LT Assist. SEMOVSKI, George, MD, COL Assoc. Prof. DIMOV, Dimo, MD, PhD*

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*Prodromos SFINIADAKIS, Evdokia SFINIADAKI, Ioannis SFINIADAKIS, Despina SFINIADAKI, Ioanna TSIARA, Dimitra VASILEIOU-DERVISOGLOU, Konstantinos SFINIADAKIS*

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*E. SFINIADAKI, I. SFINIADAKIS, A.-I. PAPANTONAKI, E. MOUSTAKA, A. PETSIOU, M. VALAKOSTA, C. ALMPANI, P. LOUMOU, E. GEORGAKOPOULOU, P. DAMOULIS, J. ANASTASSOPOULOU, A. VITSOS, D. MOSSIALOS, M. RALLIS*

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*CPT SHEHAJ Larisa, MD, GJONBRATAJ Juarda, MD, GJONBRATAJ Endri, MD*

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*LTC Vasileios TRIMMIS, DVM, COL Christos VAMVAKIDIS, DVM, PhD*

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*CPT VASHA Dorela, MD, COL RESO Elton, MD, LTC SINANI Ardiana, MD, CPT TAULLA Eriselda, MD, COL MUHAMETI Rushan, MD*

26th BALKAN Military Medical Committee CONGRESS

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Natural Disasters and Military Medical Support


# 26th BMMC CONGRESS

**29 November – 01 December 2024**
**MAKEDONIA PALACE HOTEL**
**Thessaloniki, GREECE**

## ORAL PRESENTATIONS (OP)

## OP001

### Aeromedical Evacuation of Patients

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**Aim:** Casualties are inevitable in war or even low-level conflicts. A fundamental component of any military medical support system is medical evacuation. The main goal of evacuation is to reduce mortality among critically injured combat casualties. To achieve this goal, several decision problems such as the location of medical treatment facilities, relocation, dispatching, and routing have to be addressed.

**Material And Methods:** We conducted a systematic review of the literature, including the decision problems involved in the total military medical evacuation process and the forecast challenges of future MEDEVAC, and compared them with our experience and difficulties our intensive care team faced during the aeromedical evacuation by C-27J Spartan aircraft in response to the EU Civil Protection Mechanism, which was activated on 29 September 2023 at the request of Armenia.

**Results:** The military can potentially put together the best possible team of clinicians, cadets, specialists, nurses, and doctors to support personnel in disasters and accidents. Emerging concepts of decision-making techniques can enhance the performance and effectiveness of the MEDEVAC procedures.

**Conclusion:** Managing the entire MME system's functionality remains a significant challenge due to many factors, including the dangerous environment, resource constraints, a lack of suitably trained and equipped personnel, and the unpredictability of evacuation (time and skill level).

**Keywords:** aeromedical evacuation, military, casualties

## OP002

### REBOA During MEDEVAC: Things to Consider, Challenges to Take. Can It Be a Crucial Tool for The CCAT (Critical Care Air Transport) Dogma?

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**Introduction:** REBOA (Resuscitative Endovascular Balloon Occlusion of the Aorta) can be employed as a life-saving intervention for patients with severe hemorrhage. By temporarily occluding the aorta, REBOA helps control bleeding from pelvic or abdominal injuries, stabilizing the patient's condition during transport to a medical facility where definitive care can be provided. This intervention can significantly improve the chances of survival for critically injured patients during evacuation

**Purpose:** Presentation of REBOA technique during CCAT, as a tool for stabilizing critical patients during flight.

**Method:** Literature and STANAGs analysis and review. Lessons learned from MEDEVAC operations and comparison between guidelines for use.

**Results:** Critical Care Air Transport, commonly known as CCAT, refers to the specialized medical transport of critically ill or injured patients by air. It involves a highly trained medical team and equipment to provide necessary care during the flight. The flight itself has a lot of limitations, medical indications and contra-indications, and an unstable environment. REBOA is an excellent tool for stabilizing critical patients with internal bleeding, who require transport to a definite care medical facility. However, there are specific limitations in its use, such as time, sterile placement, the necessity of ultrasound equipment, continuous monitoring of the patient and the stability of the balloon. During flight, the procedure can only be executed in a stable height and total time should not exceed an hour due to the ischemic phenomena that take place afterwards. Limitations of the technique create challenges to take in order to further improve and develop this saving procedure.

**Conclusions:** Further research related to use of REBOA in CCAT must be focused on earlier diagnosis of bleeding, accurate criteria for initiation of REBOA after injury which may depend on development of rapid vascular access devices and techniques more so than on any other new improvements in REBOA. New technology is needed that permits extended mitigation of ischemia reperfusion injury below the balloon increasing duration for safe use of REBOA. For the field of REBOA to continue to progress, better visualization tools with regard to cannulation and targeted training of medical providers are critical.

## OP003

### Adherence To HPV Vaccination Among Military Medical Students

*COL Daniel NICA*

Military Medical Institute

**Introduction:** Starting from December 1, 2023, Romania starts a new immunization campaign through H.G. no. 781/2023 whereby women aged 19-45 benefit from a 50% vaccine compensation. Thus, from a price of 130E, it can be purchased for 65E per vaccine. The entire vaccination schedule includes the purchase of 3 vaccines, inoculated intramuscular at 0.2 and 6 months. Vaccines are also distributed through the national network of open circuit pharmacies. To benefit from this compensation, people must be insured and present a compensated prescription to the pharmacy. The administration of the vaccine is carried out in medical offices.
The main objective of this research is to identify the main reasons for adherence to HPV vaccination among female military medical students.

**Material and methods:** The study is qualitative research. The method used is the structured interview on a sample of 10 subjects, military medical students, vaccinated against HPV.

**Results and conclusions:** The study reflects an increase in awareness regarding the importance of vaccination, a positive acceptance of the HPV vaccine and therefore, a greater adherence to vaccination. Despite the start on December 1, 2023 of a new phase of HPV vaccination in Romania, numerous external or internal factors can influence the desire to be vaccinated among young people who are the subject of vaccination. considering this an important decision for their health. Information played a different role in each person's decisions, from active support to a more passive attitude. Fears and concerns about the vaccine were generally minimal, with most having only minor concerns about immediate adverse reactions. Vaccine accessibility received from various sources, such as medical courses, the Internet, and physician referrals, contributed to varying levels of understanding of the HPV vaccine. Family was considered to be improved, due to increased availability in pharmacies and price reduction through partial settlement.

**Keywords:** national public health policies, adherence, vaccination

## OP004

### Trust In Vaccination Among Students of Medical Faculty of Military Medical Academy, University of Defense, Serbia

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The success of vaccination is of immense military importance and is based on the trust and acceptance of vaccines by military doctors that can influence the rest of the personal.

The aim of this study was to assess the potential association between knowledge, risk perception and trust in vaccination among future military doctors.

A cross-sectional study was conducted using anonymously filled structured questionnaire. The questions related to 2 types of vaccines, against Covid-19, as an example of a recently current vaccine during a pandemic, and against HPV, as a vaccine for the prevention of continuously present diseases.

A total of 30 students, (17 females, 13 males) aged 22-25 were included in the survey; 26 received the vaccine against Covid-19. Although only one respondent had a mild adverse reaction, 75% of them believed that the vaccine had not been sufficiently tested beforehand, and 50% had fear of the consequences of the vaccine in future. No one was vaccinated against HPV, but 65% of women and slightly fewer men (46%) said they would receive this vaccine. In the future, 22 (73%) respondents would vaccinate their children, and there was no difference between the sexes.

Public opinion, incomplete and unverified information can significantly affect the mistrust of health professionals in vaccines, even if from their own experience they have no reason for it, which was shown in relation to the vaccine against Covid19. As a consequence of medical education, there was a great gender-neutral trust in protection against HPV transmission and HPV-related diseases.

**Keywords:** vaccine, Covid-19, HPV

## OP005

### Medical Support Provided by Naval Forces After the Earthquakes On 06 February 2023

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**Objective:** Studies, in coordination with Ministry of National Defense General Directorate of Military Health Services and Ministry of Health, on providing Role-2 healthcare services on Bayraktar Class LST ships during naval operations, humanitarian aid operations and natural disasters have been continuing since March 2020.

**Material And Method:** Data regarding medical support provided by Naval Forces after the earthquakes on 06 February 2023 were examined retrospectively from the records.

**Results:** With the personnel and logistic support of Ministry of Health, the capability of one operating room, 10-bed patient care unit, simple service laboratory unit, radiology unit with x-ray and fast-ultrasonography, sterilization unit, emergency area with 120 stretchers had been obtained. The first patient admission on ships was made on 09 February 2023. The duty of TCG Sancaktar ended as of 04 May 2023 while TCG Bayraktar had served in the area until 05 June 2023. During this period, 20.792 person received health service and 37 operations (2 C/S abdominal, lower/upper extremity bone fractures, drainage of chest or extremity abscess, foreign body excision form extremity, compartment syndrome etc.) were performed on board. Additionally, TCG İskenderun, personnel transport ship with no operating room, contributed to medical evacuation. 328 injured citizens and 110 companions were evacuated from Iskenderun to Mersin.

**Conclusion:** Based on the lessons learned and the mission reports prepared by the personnel assigned to the ships, studies on improving Role-2 healthcare services on these ships are continuing.

## OP006

### New Technologies in Complex Orthopaedic Cases – The Bridge Between Medicine and Military Science

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Military Medical Academy – Sofia

**Aim:** Individual partial pelvic replacement (PPR) is a complex but reliable reconstruction for highly complex acetabular defects, even after multiple surgeries. The surgical goal is the best possible primary stability through the metallic filling of a pelvic defect in the main loading zone, to secure contact surfaces to the patient's bone and stable anchorage utilizing screws or pegs, as well as good and long-term secondary stability.

**Case Report:** We present a case of a 69-year-old female with a bilateral congenital hip dislocation. In 1994 she underwent a simultaneous bilateral total hip replacement (THR). In 1996 and 1998 two more surgeries were performed due to acetabular protrusion of the right hip, followed by a revision hip replacement of the right hip in 2016. In 2021 the patient was admitted to our clinic for a reoperation because of persistent pain and movement impairment. The planning principle and fixation were based on the individual defect, the surgeon's experience and other patient-specific circumstances. The application of AR during the surgery secured the correct implant placement via a simple navigation tool that works like a holographic medical assistant representing the twin 3D digital models of the real implant.

**Results:** After the revision hip replacement an improvement in movements and restoration of normal daily activities were observed. Based on Harris Hip Scale (HHS) the result was between 80-90 points. The individual PPR and application of AR promote the achievement of maximal bone-implant fixation consistent with acetabular defect and bone stock.

**Conclusions:** Individual PPR is a treatment of choice in complicated orthopedic cases with poor bone stock and anatomical deformity. AR allows a more precise and accurate approach in both medicine and military science.

## OP007

### Direct Anterior Approach (DAA) for hemiarthroplasty in elderly patients with hip fractures

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DAA is a subject of interest and debate in orthopedic surgery. Elderly patients often have reduced strength and mobility, so any approach that can facilitate a quicker recovery is advantageous. The direct anterior approach is associated with less muscle damage and may allow for faster mobilization and return to activities of daily living. Older patients may be at higher risk of dislocation following hip surgery due to factors such as frailty and cognitive impairment.

**Goal:** To compare recovery rate and blood loss as survival with anterior and posterior hip approaches.

**Method:** The direct anterior approach is thought to provide better stability and may reduce the risk of dislocation compared to other approaches. The direct anterior approach involves fewer muscle detachments and may result in less soft tissue trauma, potentially reducing the risk of wound complications.

**Results:** By comparing the results of patients who were operated on with the posterior and DAA approaches, we determined a significantly better outcome with DAA in terms of faster recovery, less blood loss.

**Conclusion:** However, it's essential to consider that not all elderly patients are suitable candidates for this approach. Therefore, the decision to use the direct anterior approach in elderly patients should be made on a case-by-case basis, taking into account individual patient characteristics and surgical considerations.

## OP008

### Comparative Analysis of The Prevalence and Anatomy of The Sulcus of The Caudate Process (Rouviere's Sulcus) During Laparoscopic Cholecystectomy - A Multicentre Observational Study

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**Aim:** The sulcus of the caudate process has been identified as a useful anatomical landmark, to avoid vasculobiliary injuries during laparoscopic cholecystectomy. The purpose of this collaborative study was to compare its prevalence and anatomy among the Bulgarian, Greek and Romanian populations.

**Material-Method:** In total, 300 patients, who underwent cholecystectomy in the Surgical Departments of three participating hospitals, were included in the analysis. The sulcus was identified prior to any dissection within the hepatocystic triangle and its morphology was categorized as groove, slit or scar.

**Results:** 210 patients were females (70%) and 90 (30%) were males, with a mean age of 56.1 ± 14.6 years. Demographic and surgical characteristics did not differ statistically between the 3 populations. Overall, the sulcus was present in 83.3%, with similar prevalence among the three subgroups (GR 88% vs BG 84% vs RO 78%, p=0.16). The majority of cases exhibited a groove-type sulcus (58% overall), and this was more prevalent in GR 69% vs BG 57% vs RO 46% (p=0.045). Slit and scar types were observed more frequently in the RO subgroup. In all three subgroups, the vascular pedicle was visible within the groove in roughly half the cases (p=0.94). The sulcus was statistically longer in GR (24.1mm) vs BG (18.5mm) vs RO (14.6mm) (p<0.001). In the majority of cases, the sulcus had a horizontal course (overall 71.2%), which was statistically more frequent in GR (83%) vs BG (74%) vs RO (55%). Conversely, the oblique course (overall 26.8%) was more frequent in RO (40%) vs BG (25%) and GR (17%), p=0.002.

**Conclusion:** Despite certain anatomical differences among the three countries, the sulcus of the caudate process can be identified in the majority of patients during cholecystectomy.

## OP009

### Multifocal Arterial Disease - Surgical Strategies

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Atherosclerosis is a global disease affecting multiple organs. The more symptomatic lesion or the lesion with the strongest prognostic impact should be treated first. Coronary artery disease may coexist with carotid artery stenosis, abdominal aortic aneurysms, and/or peripheral artery disease (PAD).

Recent studies have confirmed that patients with multivascular bed disease have a greater risk for major cardiovascular events than patients with monovascular attempt.

In 2003 on one year period, on 400 direct arterial revascularisations we had 11 patients with multiple sites of atherosclerotic disease. The decade more affected was 60 – 70 years old. After 20 years, in 2023, the number of patients increases a lot, at 120, and the patients were older. (Decade 70-80 y). Men were more affected.

The lesions should be treated as follows: carotid, coronaries and aorta or peripheral lesions. When two arterial beds are symptomatic (ex: AAA more than 7cm in diam. or in imminence of rupture associated with left main disease) we can perform simultaneous procedures (open or endovascular), but with higher mortality rate (25%).

**Results:** Vascular patients often have concomitant arterial disease affecting more than one territory. Identification of silent vascular disease is essential to improve cardiovascular mortality and morbidity rates. The treatment of multifocal arterial disease should include aggressive risk factor management, lifestyle changes, and appropriate drug therapy.

**Keywords:** atherosclerosis, carotid stenosis, coronary stenosis, peripheral disease, endovascular/open-surgery

## OP010

### Comparison Between Direct Anterior Approach vs. Lateral Approach in Total Hip Replacement in Military Personnel

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**Aim**: Nowadays the direct anterior approach (DAA) is the most preferred approach to the hip joint performing total hip arthroplasty. The lateral approach (LA) is transmuscular by splitting the gluteus medius muscle. The DAA is performed using specifically designed instruments and tables plus intra-operative fluoroscopy. This approach, however, may be performed using a regular table with standard arthroplasty tools, alternative patient positioning, and without intraoperative imaging.

**Material And Methods:** This is a retrospective study held between 2020 and 2024. It contains 32 patients with LA and 24 with DAA. Gender distribution IN DAA group was 9 females and 15 males, in the LA group - 24 male and 11 females. The standard lateral approach with the first 24 cases using DAA was compared. DAA and LA were performed by two different surgeons in one center. Harris Hip Score and Oxford Hip Score were used for the assessment of the functional outcome.

**Results:** Patients were examined during the hospital stay, at 2 weeks, 6 weeks, and 1 year postoperatively. Harris hip score in the DAA group increased from 74 to 92, Oxford Hip Score from 28 to 44, LA group HHS – 61 to 91 and OHS 20-45. Surgery time in the DAA and LA groups were average of 128 min and 72 min, respectively. In DAA no leg length discrepancy was observed, while in the LA group, the operating leg was longer with an average of 4 mm (-8mm to +15mm). It was measured by X-ray and clinically.

**Conclusion:** DAA is safe, minimally invasive, and with faster recovery when there is an experienced surgeon, who outscores the learning curve. LA has a low learning curve with better visualization of the acetabulum and femur and a low chance for implant malposition.

**Keywords:** total hip replacement, direct anterior approach, lateral approach, military personnel.

## OP011

### Foreign Military Medicine Literature for The Hellenic Armed Forces Training: The First Greek Edition of Borden Institute's Emergency War Surgery Textbook

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1 NATO Rapid Deployment Corps- Greece,
2 300 Deployable Medical Treatment Facility,
3 442 Forward Medical Supplies Depot,
4 219 Mobile Surgical Hospital,
5 424 General Military Training Hospital,
6 Hellenic Military Academy of Combat Support Officers

**Aim:** To present the efforts and procedure to translate the US Borden Institute's Emergency War Surgery (EWS) textbook in Greek, in order to facilitate battlefield surgery training of the Hellenic Armed Forces personnel.

**Material- Methods:** The Borden Institute of the US Army Medical Center of Excellence publishes the renowned Emergency War Surgery, which is an unrivaled textbook on the best practices and principles of forward deployed trauma surgery. Previous versions of this textbook were the foundation for the corresponding Hellenic Army Field Manual, which was released in 1980. Since then, no revised edition has been introduced in the Hellenic Armed Forces. Thus, we chose to translate the latest EWS 5th edition, to provide our surgeons with up-to-date battlefield surgery knowledge.

**Results:** After appropriate correspondence with Borden Institute, in 2019 we gained permission for the Greek translation of EWS 5th edition. The project, although hampered by the COVID pandemic consequences on the duties of the team members, was finalized in 2022. The revised edition served as the basis of the upcoming revised edition of the Hellenic Army EWS Field Manual, the first revision in 44 years. The final product, which was duly refined as to correspond better to the Hellenic military medical system, is expected to be released in 2025.

**Conclusions:** The Greek edition of EWS is intended to become a valuable resource for our military medical personnel. This book does not replace proper surgical and critical care training, but will provide the reader with the skills and concepts to maximize the chances for our wounded soldiers to survive possible combat injuries.

## OP012

### COVID-19 Measures at The Ministry of National Defense Ankara Special Care Center

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2 Turkish Armed Forces, General Directorate of Management Services, Gaziler Social Rehabilitation Manager/Ankara/ TÜRKIYE

**Objective:** Sharing of the measures taken for the Ministry of National Defense Ankara Special Care Center during the COVID-19 pandemic.

**Material And Methods:** The examples from all around the world were examined simultaneously and the institution was managed based on the recommendations of the Ministry of Health Science Committee.

**Results:** There are 234 elderly people residing in the institution. Along with the epidemic, information trainings were given primarily to all people in there. Mask-distance-hygiene measures were explained, Visits were prohibited. The elderly was prevented from leaving the institution. The personnel started working in shifts. The elderly and staff were given PCR tests whenever there was any doubt. Staff and the elderly were vaccinated rapidly when the first vaccines were brought to Turkey. In order to prevent the immobility of the elderly, physiotherapists-nurses and elderly care personnel were provided with in-bed exercises and other exercises. Older people were taken to support approaches in small groups by psychologists and social workers. In terms of nutrition, fruit kefir-herbal teas were frequently provided in snacks. Rooms were cleaned with sodium hypochlorite. Personnel and elderly people with symptoms during the process were isolated within the scope of isolation measures.

**Conclusion:** The process was dynamically managed in the special care center within the scope of scientific recommendations. In this way, in contrast to what is happening in the world, no tragedies were experienced in our institution and there were not deaths due to COVID-19.

## OP013

### Attitudes Of Cadet Military Doctors Towards The Establishment Of An International Organization For Students: Perspectives And Challenges

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**Aim:** The study aims to explore the attitudes of cadet military doctors towards the establishment of an international organization for students, focusing on perceived benefits, challenges, and overall perspectives.

**Materials And Methods:** A qualitative approach was employed, utilizing surveys and interviews with cadet military doctors from first to sixth year participating in the joint program of the Naval Academy “Nikola Y. Vaptsarov”, Medical University - Varna, and the Military Medical Academy in Sofia. Data were collected through structured questionnaires and analyzed thematically to identify common trends and sentiments.

**Results:** The findings reveal a generally positive attitude among cadets towards establishing such an organization, highlighting benefits such as enhanced collaboration, knowledge exchange, and networking opportunities. However, concerns regarding bureaucratic challenges, resource allocation, and the potential for conflicting interests were also noted.

**Conclusions:** The establishment of an international student organization is viewed favorably by cadet military doctors, who recognize its potential advantages and challenges. Addressing the concerns raised will be crucial for the successful implementation and sustainability of the organization.

**Keywords:** cadet military doctors, international organization, student perspectives, challenges, collaboration.

## OP014

### A Comprehensive Analysis of Naval Operational Medicine in Turkiye: Current Issues of Concern and Lessons Learned

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**Objective:** This paper aims to introduce DETAM, the Naval Medical Training and Research Center of Turkish Navy and to present the outcome of Naval Medical Conference on "Sea Power Support to HADR Operations".

**Material And Method:** DETAM, established on August 6, 2007 in Istanbul is a subordinate unit of Turkish Navy. DETAM's mission is to provide subject matter expertise for combat readiness and to carry out operational medicine training, preventive medicine, research and development, test and evaluation within the scope of protecting the health of warfighter personnel and improving their performance. This paper outlines the progress of naval medical support and current issues of concern in Turkish Navy and provides the outcome of 13rd Naval Medical Conference of Turkish Navy.

**Results:** With the establishment of DETAM, the support for combat readiness in naval operational medical fields including but not limited to diving, submarine, surface warfare, special operational forces, environmental and disaster medicine, operational medicine training have been addressed and covered step-by-step. The main capacity building areas, challenges and lessons learned will be discussed with an emphasis on the need for cooperation and collaboration. Furthermore, the outcome of 13rd Naval Medical Conference initiated a high reliability organization approach for sea power support to HADR operations.

**Conclusion:** Naval operational medicine is an essential field for modern navies. However, due to its multidisciplinary nature, it is quite difficult to build and maintain an all-in-one capacity in this field. Therefore, cooperation and collaboration between countries in this field is of utmost importance.

## OP015

### Combined Medical Engagement 2016 CIMIC

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Cooperation between Ohio National Guard and Serbian Army started in 2006 and since that time it is growing and deepening with every year. During this time, we had over 70 State Partnership Programs this one was special because that was the first part of trilateral medical activity between USA, Serbia and Angola. Total number of personnel was from Ohio National Guard 29, from Serbia 25 and Angola 3.Focus of this cooperation are Build partnerships to enhance security and prevent the evolution of local crisis into regional conflicts, prevent violent extremist organizations to create transnational threats, continue Peace Keeping Operations Base Development and Assistance (South Base),Maintain Unit Level Exchanges, Peace Keeping Operations Base Development and Assistance (South Base), Consequence Management, Cyber Defense – Staff Assistance Visit (SAV), Helicopter Unit Operations, Introduction to US ROTC, Women in professional Armed Forces, Chaplaincy Development. CME appeared to foster good working relationships between the U.S. and Serbia which begun in 2006 thorough PSP. Now introducingAngola because further engagements between the three countries are in planning and underway, December 2017 Pambala in Angola was realised. It is unlikely that a traditional unidirectional donation and assistance type mission, where primary medical care was provided without further education, training, or needs assessments, would have achieved these same objectives. Other goal is also to see operability of medical core of armies and their capabilities The last but not the least is building friendship between nations because we are ambassadors of our countries.

**Keywords:** combined medical engagement, military dentistry

## OP016

### Pre-Disaster Relief Military Operation Risk Factors and Adrenaline Gut Response Index

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In recent years more military assets have been deployed around the world for the purposes of disaster relief and this trend looks set to continue as a result of the strategic context, the increasingly harsh nature of disasters, making environments more difficult and hazardous to operate in, the military being better suited to operating in a timely way in adverse circumstances compared to most other organisations, growing expectations on the part of the public for improved responses, including the reassurance that can be provided by a military presence and the unique skills and capabilities which armed forces have developed in different theatres which have applicability in civil contexts. Biology of function (BoF) indices are diagnostic tools in endobiogeny, a global systems approach to human biology that reflect the action of the endocrine system, involved in stress reaction and adaptation, on cellular level. The aim of this study was to assess the functionality of stress adaptation in a routine medical evaluation of military population based on endobiogeny approach. Material and methods: We measured Adrenaline Gut Response (AGR) index in military personnel using an endobiogeny based formula.

**Results:** We found a significant percent of low AGR indeces.

**Discussions:** Low AGR index is associated with dysfunctions in reaction and adaptation to stressors. Conclusions: Assessing functionality of adaptation to stress capabilities and adjusting its dysfunctions before involvement in a disaster relief operation may help militaries involved cope better and ensure the efficiency and performance of the operation.

**Keywords:** disaster, military, Endobiogeny, Adrenaline Gut Response

## OP017

### Abdominal Actinomycosis – Report of The First Liver Actinomycosis in Bulgaria and Review of The Literature

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**Aim:** Actinomycosis is an indolent but invasive granulomatous infection. The exact preoperative diagnosis is rare (< 10%) and the most frequent preoperative diagnoses are neoplasms, Crohn's disease, tuberculosis, complicated diverticulitis, endometriosis, pelvic inflammatory disease, and genital tumors in women.

**Case Report:** We report a 40-year-old man admitted to the Emergency department with a huge liver mass and a septic condition. CT revealed a heterogeneous, polycystic mass of the right liver with a diameter of 19 cm, thrombosis of the right portal branch, ascites, and right pleural effusion. The patient was managed by right trisectionectomy (seg. IV-VIII) with a successful outcome.

**Discussion:** During 1993-2024 in Bulgaria a total of 18 papers, describing 36 cases were identified. The localization was as follows: 16 cases with cervicofacial, 4 with pelvic, 2 with thoracic, and 15 with abdominal actinomycosis. In the last (20 pts., incl. five new cases from our Institution), in 60% of the cases there was localization in the right colon. In 94%, the preoperative diagnosis was a tumor, while Crohn's disease was diagnosed in one case. In most cases, the CT demonstrated heterogeneous mass with infiltration of the adjacent tissues. Approximately 50% of the cases were operated in an emergency. In 2/3 of the cases with pelvic actinomycosis, there was a history of intrauterine contraception.

**Conclusion:** The present series describes the first case of liver actinomycosis in Bulgaria. The analysis of the Bulgarian literature demonstrates almost equal rates of cervicofacial and abdominal actinomycosis. The last is located mainly in the right colon (60%). In 94% of the cases, the preoperative diagnosis was tumor.

**Keywords:** abdominal and liver actinomycosis, treatment.

## OP018

### Influence Of P16, P63, Cyclin D1 Immunohistochemistry and Nuclear Morphometric Analysis for Assessment of Cervical

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**Background/Aim:** Human papilloma virus (HPV) infection is the most important factor in genesis of cervical cancer and cervical precancerous dysplastic squamous intraepithelial lesions (SIL). The proliferation of the immature cells is the mode of influence of HPV on the epithelial cells of the cervix. The aim of this study was to evaluate the usefulness of the P16, P63, cyclin D1 immunohistochemical markers and application of nuclear morphometric analysis for assessment of cervical dysplasia.

**Methods:** Retrospective study included 92 women with detection of presence of high-risk HPV by polymerase chain reaction (PCR), with histopathology diagnosis Low-grade SIL (LSIL) or High-grade SIL (HSIL). Immunohistochemical staining for p16, p63, cyclin D1 and morphometric analysis of the nuclear surface area were performed after biopsy. The control group were 12 women without SIL and without HPV infection. This study was conducted in accordance with the Helsinki Declaration.

**Results:** Comparing immunohistochemical expression of p16 and p63, highly statistically significant differences ($p < 0.001$) were established among the control, LSIL and HSIL groups, while cyclin D1 showed significant statistical difference ($p < 0.05$). The most useful variations were observed in nuclear morphology and nuclear surface area that had highly statistically significant differences ($p < 0.001$) among the control, LSIL and HSIL groups.

**Conclusion:** This study reported that immunohistochemical analysis of p16, p63 and cyclin D1 are useful for diagnosis of cervical dysplasia. Also, morphometric analysis of the nuclear surface area is useful with high significance for diagnosis of LSIL and HSIL.

**Keywords:** dysplasia, HPV

## OP019

### Conventional vs. Instillation NPWT In Surgical Site Infections – An Interim Analysis of Ongoing Prospective Trial

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**Aim:** The study aims to compare the effectiveness of NPWT and NPWTi using an improvised system with continuous lavage with saline and chlorhexidine in superficial and deep SSIs after conventional laparotomy or laparoscopic abdominal surgery.

**Material And Methods:** The study analyzes a prospective database encompassing January 2018-December 2023. All patients underwent surgical debridement and lavage with 3-5 l saline. Systemic antibiotics were administered according to the antibiogram. In both NPWT groups, the wound was filled with Granufoam®, KCl. The continuous instillation was performed with Chlorhexidine 0.1% 300 ml in 700 ml saline three times daily. A continuous pressure of 125 mmHg was applied using the hospital suction system. Double masking was applied (Investigator and Outcomes Assessor). Primary outcomes were the rate of wound closure and 30-day infection recurrence rate. Secondary outcomes were hospital stay, number of OR visits, and time to wound closure (suture or flap). The study is registered in ClinicalTrials.gov with ID: NCT06014788.

**Results:** A total of 62 consecutive patients (standard NPWT-41, NPWTi-21) have been included. Deep SSI was present in 32 cases-19 in NPWT and 13 in NPWTi. The mean age was 60.8 vs. 57 years. The rate of wound closure was 93% vs. 91%, the 30-day infection recurrence rate was 2% vs. 10%, and the complication rate was 2% vs. 10%. The secondary outcomes were as follows: hospital stay – 19.3 vs. 20.8 days, number of OR visits – 3.71 vs. 2.9, and time to wound closure (suture or flap) – 11.8 vs. 11.6 days. None of the abovementioned differences was statistically significant.

**Conclusion:** The interim analysis of this prospective ongoing trial demonstrates no significant benefit of NPWTi compared to the conventional NPWT in superficial or deep SSIs after laparotomy.

**Keywords:** NWPT, instillation, superficial and deep surgical site infections.

## OP020

### IPOM/IPOM+ Repair for Umbilical and Para-Umbilical Hernias. Technical Aspects and Our Experience

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**Aim:** The purpose of our study is to present this modern approach to the cure of umbilical region hernias, and our department´s experience in this field. Since this condition is common in young, active people, the minimally invasive approach is the best choice, with shorter hospital stay and faster recovery.

**Material and Methods:** To begin with, we are showing some technical aspects of IPOM and IPOM+ interventions, illustrated with intra-operative media clips, images and literature data. We have performed a retrospective study, using our department´s database. The cases were collected from the Jan 2019-Jan2024 period. Using the inclusion criteria, we enrolled 134 patients in the study. Besides the demographical data, we have investigated the length of hospital stay, duration of surgery, postoperative pain, complications. Our group´s characteristics are being presented, together with the short and medium-term results.

**Results:** For the selected cases, IPOM technique had the best results, lowest percent of complications and fastest return to active physical life.

**Conclusion:** The IPOM technique is a valuable tool for the modern treatment of umbilical region hernias, and the intervention of choice for the selected cases.

**Key Words:** umbilical hernia, IPOM technique

## OP021

### Gulhane Porphyrıa Laboratory: A Turkısh Monocentrıc Retrospectıve Evaluatıon Of A 10-Year Experıence (2012-2021)

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**Objectıve**: In 1956 an epidemic of PCT occurred between 1956 and 1961 due to hexachlorobenzene in southeastern Turkey and it was estimated that over 3000 individuals were affected. The registered history of the porphyrias and the awareness of this disease started at these years for Turkey.

**Materıals And Methods:** Gulhane Porphyria Laboratory is established in 1994. It is a member of European Porphyria Network since December 2011 and used to be also involved in RCPA external quality assurance scheme for porphyrias since 1996. Twelve types of porphyrin analysis [porphobilinogen scanning and quantitation (urinary), aminolevulinic acid (urinary), total porphyrin (urinary, stool, plasma, whole blood), fluorescence emission scanning (plasma), free/metal protoporphyrin, porphyrin fractionation with HPLC (urinary and stool), erythrocyte porphobilinogen deaminase activity] are being performed by using different analytical techniques (fluorimetric measurement and scanning, spectrophotometric, UV-spot test, TLC, HPLC) in our laboratory.

**Results:** During this period (2012-2021), 31 patients who were mis-/undiagnosed already have been diagnosed to have cutaneous porphyria. The diagnostic distribution of the cutaneous porphyria cases was as follows: EPP(n=8), PCT(n=11), VP(n=7), CEP(n=5). On the other hand, 40 patients with acute porphyrias including 35 AIP and 5 HCP with the help of clinical and biochemical findings.

**Conclusıon:** Especially in countries with a compulsory military service system such as ours, it is very important to accurately diagnose rare diseases such as porphyria, especially at the age of military service. As being the only “Reference (Service) Laboratory” for porphyria disorders, it is aimed to establish genetic diagnosis and counseling with DNA mutation analysis.

## OP022

### Management Of Gallbladder Cancer in A Bulgarian Surgical Department

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**Aim:** Because of the anatomical features of the gallbladder, gallbladder cancer can quickly invade the liver parenchyma, the hepatoduodenal ligament, the duodenum, and nearby organs. As a result, different types of surgical resections are performed based on the tumor's stage. Consequently, there remains significant debate regarding the appropriate indications for each treatment approach. This study presents our experience with gallbladder cancer patients treated in our department.

**Material And Methods:** We retrospectively reviewed cases of gallbladder carcinoma managed surgically from 2019 to 2024. We analyzed and presented perioperative and postoperative data, histological results, and patient follow-up.

**Results:** The cohort comprised 15 patients, with a distribution of 3 males and 12 females, all undergoing minimally invasive procedures - laparoscopic biopsy (n=4), simple cholecystectomy (n=3), and radical liver resections with lymph node dissection (n=8). The mean operative time was 204 (60-480) minutes, and the mean postoperative hospital stay was 7.3 days (3-70). Three cases had complications: one was categorized as Clavien-Dindo I, and the other two as Clavien-Dindo IIIa. In the liver resection group, 37.5% of the patients (n=3) were in the T2b stage, while 62.5% (n=5) were in the T3 stage. The three-year survival rate of our patients is 65%.

**Conclusion:** This study underscores the critical nature of strategic surgical intervention and vigilant postoperative management in enhancing outcomes for gallbladder carcinoma patients. Our findings contribute to the growing body of evidence supporting the importance of early detection and tailored surgical approaches.

**Keywords:** Gallbladder cancer, surgical outcomes, liver resection.

## OP023

### Emergency Massive Transfusion Made Possible with Blood Product Transport By UAV: A Case Report

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**Objective:** Unmanned Aerial vehicles (UAVs) are increasingly used in transportation of health supplies. This case report shares our experience of using a UAV to send blood products and perform a massive transfusion on a patient who required monitoring far from advanced healthcare services after an explosion-related injury.

**Case Report:** An explosion at a distant military site caused significant blood loss, stage III hemorrhagic shock along with amputation of left knee and open comminuted fracture at the right knee in a young multi-trauma patient. Early evacuation was not possible due to adverse weather and geographical conditions. It was decided to perform an on-site blood transfusion for the patient. Using a UAV equipped with a blood-transportation bag, 6 units of erythrocyte suspension and 3 units of fresh frozen plasma were delivered in 2 sorties and transfused to the patient. The transfusion was completed within 3 hours post-injury, significantly improving the patient's vital signs. The patient was transferred to a Role-3 health facility 8 hours post-injury, where appropriate surgical intervention was performed. After a 10-day postoperative follow-up in advanced hospitals, the patient was discharged in good condition.

**Conclusion:** This trauma case involved a successful massive transfusion facilitated by UAV, preventing the progression of hemorrhagic shock. Our literature review indicates this is the first known case of massive transfusion aid by UAV.

## OP024

### Foreign Military Medicine Literature for The Hellenic Armed Forces Training: A Series of TCCC Guidelines Translated in Greek

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**Aim:** To present the efforts to translate the TCCC guidelines in Greek, in order to facilitate TCCC training of the Hellenic Armed Forces personnel.

**Material- Methods:** The Committee on Tactical Combat Casualty Care (CoTCCC) of the US Joint Trauma System establishes clinical practice guidelines for the delivery of Tactical Combat Casualty Care (TCCC) on the battlefield. Since TCCC Guidelines are the standard of care for the modern battlefield, we received official approval by the CoTCCC for the Greek translation of the TCCC Quick Reference Guide and the TCCC guidelines for Medical Personnel.

**Results:** After appropriate correspondence with CoTCCC members, we gained the copyright of the Greek translation of the TCCC Quick Reference Guide in 2018. In 2020 we published the first Greek translation of the TCCC guidelines for Medical Personnel. As CoTCCC regularly revises the guidelines, based on evidence-based medicine, emerging research, lessons learned from the battlefield, we continued to translate each consecutive revised edition. The second Greek edition was published in 2021 and the latest edition was released in 2024.

**Conclusions:** TCCC has saved hundreds of lives in conflicts around the globe. The CoTCCC guidelines are a keystone for the appropriate training and standardized delivery of lifesaving battlefield trauma care. The translation of these guidelines in our native language, facilitates the training of the Hellenic Armed Forces Medical personnel and serves as a useful practical aid, enabling Greek Medical Providers to render up-to-date combat casualty care.

## OP025

### Supplying Blood by Drones

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**Aim:** The drones are increasingly utilized in military and civilian missions, search and rescue operations, telemedicine, disaster management, and medical supply. This study aims to explore the potential of using drones for blood supply.

**Material And Methods:** A literature review was conducted to investigate the scientific evidence regarding the benefits and challenges of drone blood delivery.

**Results:** Bleeding is a leading cause of early death in trauma patients, and timely blood transfusion during the "golden hour" significantly impacts recovery outcomes. There is a growing interest in prehospital blood delivery and transfusion in disaster scenarios, remote areas with limited access, and military conflicts where air superiority is lacking. Drones can play a crucial role in both casualty evacuation and blood delivery. Blood transfusions are administered by trained medics following established protocols. Recent developments in Ukraine have allowed combat medics to perform prehospital blood transfusions. Rwanda, East Africa, has implemented the routine transportation of blood components by drones, with ongoing research in the US, Canada, Japan, and other countries.

**Conclusions:** Utilizing drones for transporting blood components offers a rapid delivery solution in remote and hard-to-reach regions and densely populated areas facing logistical challenges. This method also benefits small medical facilities with limited access to blood components. In combat medical support, drone technology addresses challenges associated with blood delivery to the battlefield as well as prolonged and complex medical evacuations during high-intensity battles and shortages of healthcare personnel.

**Keywords:** Blood supply, drones, blood transport, prehospital blood transfusion.

## OP026

### TRLyP: Turkish Lyophilized Plasma Just Before Mass Production

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**Objective:** Early and balanced blood product transfusion reduces mortality in trauma patients with bleeding. Plasma, one of these blood products, is usually used as fresh frozen plasma (FFP), which is difficult to manufacture, preserve and use. Only several countries produce the lyophilized form of plasma that can be stored and used more easily. In our study, we aimed to produce lyophilized plasma (LyP) using novel techniques.

**Material And Method:** 6ml blood samples taken from volunteers were centrifugated at 5000 rpm for 5 minutes. Fibrinogen, factor V (FV) and factor VIII (FVIII) activities were analyzed to evaluate whether the product would comply with the standards after lyophilization. Plasmas were taken into petri dishes and frozen at -40°C. Then lyophilization was applied at varied time, pressure, and temperatures. The obtained LyPs were kept at room temperature for 15 days, and then rehydrated with distilled water to simulate usage.

**Results:** Especially under 0.05 mBar pressure and 48 hours of lyophilization at +10°C, fibrinogen activity increased (1.58 %), FV and FVIII decreased (10.57 % and 12.11 %, respectively). With these values, the produced LyP not only met the international LyP production standards, but also had factor activities that could provide better hemostasis than the French LyP, which is still the most widely used lyophilized plasma form in the world.

**Conclusion:** In the production of LyP, it is possible to exceed world standards under suitable conditions. After patent and reliability studies, we aim to start mass production of “Turkish Lyophilized Plasma” under the name of TRLyP.

## OP027

### Epidemiological Patterns and Etiology of Trauma at The University Trauma Hospital and Military Medical Unit, Tirana, Albania

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**Background:** Despite advances in technology, hospital infrastructure, and human resources, trauma continues to be a major problem of public health worldwide. The University Trauma Hospital (UTH) stands as Albania's sole tertiary hospital and, in its emergency department, receives around 4150 polytrauma cases monthly.

**Methods:** This was an epidemiological retrospective study. Data were collected and analyzed for the period 2022- 2023. Descriptive statistics were used to describe the cases presented to the UTH according to age, sex, etiology, types and mortality of trauma.

**Results:** Approximately 0.3% of the Albanian population annually seeks specialized trauma care at a tertiary level. The majority of injuries occurred in individuals aged 15 to 65. Car accidents showed an 83% increase from February to August. Incidents involving hits with heavy objects surged by 75% from January to August. The data also highlighted falls as a predominant etiology, registering the highest cases in October with 2437 incidents. The average length of stay at UTH was 7.23±0.55 days, and the hospital mortality rate was 2.3%.

**Conclusions:** The UTH in Tirana plays a crucial role in providing care for trauma cases in Albania. The data underscores the importance of understanding trauma patterns and etiologies to implement effective preventive strategies and public health interventions.

## OP028

### A Case Report of The Clinical Prognosis of An Atypical Sarcoidosis

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**Objective/Purpose:** We present e rare case of Sarcoidosis with an atypical clinical symptom and their clinical prognosis, where the patient unspecific complains make difficulty in finding the accurate diagnosis.

**Material and Methods:** Case report- A 40 Y.O. male with a 2-year history of an untreated and undiagnosed abdominal pain was admitted by gastro-hepatologist at Internal Medicine Unit, suspected for a malignancy of gastrointestinal tract. In the left forearm is touched a 2-3 cm lymph node. Meanwhile he doesn't have any history for previous pulmonary disease. In this moment we start the discussion and the difficulty of the diagnosis.

**Results:** Thoracic- abdominal CT-SCAN shows mediastinal and abdominal lymph nodes and splenomegaly. Laboratory findings shows elevated Urea, Creatinine, ESR, Electrolyte: Ca++, K+, Calcemic, ACE. Meanwhile, Hemogram, Glucose, 25-OH vitamin D, CEA, AFP, CA 19-9, Ferritin, TSH, Anti-TPO, ALT, AST, GGT, ALP, LDH, Amylase, Anti-DNA, ENA are normal. Lymph node biopsy: shows altered lymph node stricter with multiple granulomatous lesions, without central necrosis, which goes for a Sarcoidosis lesion.

**Conclusion:** Despite the fact that sarcoidosis is not a very common disease, it should always be taken into consideration as a differential diagnosis, since the initial signs can be very subtle and underestimated by patients. Also, we need to have a consistent follow up of the patient so we can have a good prognosis.

## OP029

### Headache - From an Innocent Symptom to A Life-Threatening Condition

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**Aim:** To perform a systematic analysis of the types of headaches - primary and secondary not only in neurological patients but also in the general population, to recognize alarming symptoms and correct treatment.

**Materials And Methods:** The International Classification of Headache Disorders was used. The high frequency of this symptom requires recognition and a targeted search for the so-called "red flags." A detailed anamnesis is sufficient for a basic orientation of the type of headache and the urgency of the condition. A neurologist estimates the assessment of clinical-laboratory, instrumental, and neuroimaging methods.

**Results:** Headache is one of the most common symptoms in medical practice, which necessitates accurate diagnosis. In primary headaches, no exogenous cause of pain is established, and specific pathogenesis and treatment are known. The primary headaches are migraine, tension headache, and trigeminal autonomic headaches (cluster headache, paroxysmal hemicrania). Secondary headaches occur during another disease (tumors, trauma, vascular, endocrine, infectious, inflammatory, ocular, ENT, etc.). Red flags requiring treatment by a neurologist are: acute onset, severe, progressive pain, provocation by physical activity, nausea, vomiting, fever, changes in consciousness, focal neurological deficit, age over 50 years, etc.

**Conclusion:** Headache is one of the most common reasons for a medical consult. Its differential diagnostic plan is extensively broad, with causes ranging from stress to a life-threatening condition. Recognizing red flags is a priority.

## OP030

### Necrotizing Fasciitis

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**Aim:** Necrotizing soft-tissue infections can occur after major traumatic injuries, as well as after minor breaches of the skin (e.g., insect bites) and nonpenetrating soft-tissue injuries (e.g., muscle strain or contusion). Predisposing factors include diabetic or decubitus ulcers. Radiograph can show gas in tissues.

**Material-Method:** A 60-year-old man, was admitted to hospital because of pain and swelling of left leg. 20 days before, patient had minor penetrating trauma in foot, without pain, due to peripheral neuropathy. On examination: cellulitis of foot extending to ankle, exudates, ulcer. Laboratory tests: leukocytosis, elevated CRP: 281 mg/dl. Diabetes mellitus was diagnosed (glucose 350 mg/dl, HbA1C 13,7). Treatment with broad-spectrum antimicrobial therapy, low-molecular-weight heparin for prevention, and tetanus immunization was provided.

**Results:** over a period of 24 hours, inflammation become extensive, the skin turned purplish, and bullae appeared. Crepitus was present. A radiograph of leg showed gas in the tissues. Computed tomography revealed gas in the muscles up to the knee and soft tissue edema. Emergency surgical debridement of all necrotic muscle was performed. Gram's staining and culture: peptococcus spp. A second and third debridement, skin graft and vacuum device took place during hospitalization. After 7 weeks of antimicrobial therapy and hyperbaric oxygen, the patient's condition improved and was discharged with insulin.

**Conclusions:** Poorly controlled diabetes is a predisposing factor for necrotizing fasciitis. Plain radiographs may show only soft-tissue edema. Clinicians should have a high index of suspicion for this life-threatening condition. Early surgical debridement (in 6 hours) and appropriate antibiotics are crucial for recovery.

## OP031

### JAK-STAT Pathway Inhibitors in Treatment of Psoriatic Disease

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The JAK-STAT signaling pathway mediates key cellular processes including immune response, cell differentiation, division and death. Medications that interfere with different JAK-STAT signaling patterns have potential indications for various medical conditions, including. inflammatory or immune mediated diseases such as psoriasis, vitiligo, atopic dermatitis and alopecia areata. Inflammation in psoriasis is mainly promoted by IL-23, which induces the differentiation of naïve T-cells into Th17 lymphocytes and their clonal expansion. IL-23 signal transduction is mediated by TYK2. IL-22, produced by Th22 cells, is mediated by the JAK-STAT pathway and induces keratinocyte proliferation. The release of IL-22, in association with IL-15, is signaled by JAK1 and JAK3; therefore, JAK/TYK inhibition is a potential target for its treatment. Tofacitinib, solcitinib, baricitiniband deucravacitinib showed a PASI75 response superior to that of placebo at both week 8 and week 12 in RCTs on moderate to severe plaque psoriasis. In meta-analysis, tofacitinib (15 and 10 mg, BID) and deucravacitinib (6 mg BID and 12 mg/d) had the best Physician Global Assessment (PGA) and PASI75 responses (at weeks 8 and 12) among JAKi. Drugs under study are deucravacitinib, brepocitinib, and ropsacitinib, all TKY2 inhibitors. Tofacitinib 5 mg BID may be effective in treating nail psoriasis in 33% of patients achieved NAPSI50 at week 16. The only topical JAKi under study is an JAK1/JAK2 inhibitor brepocitinib, JAK2/TYK2 inhibitors are promising, more immunologically selective, restricting the possibility of side effects and leading to replace classic immunosuppressants.

## OP032

### Cell Viability In SH-SY5Y Neuroblastoma Cells in Folic Acid Application by Using JACK-STAT Pathway

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**Abstract:** Folic acid and folate are forms of a water-soluble B vitamin. Folic acid is used as a supplement by women during pregnancy to reduce the risk of neural tube defects. Folic acid supplementation is reported with the suppression of tumor development in literature. Here, the effect of folic acid was analyzed for cell proliferation and viability on euroblastoma cells. The gene expression differences of folic acid receptors and JAK/STAT pathway were analyzed.

**Material And Method:** FA solutions were prepared on 1µM, 5µM, 10µM concentrations and applied on neuroblastoma SH-SY5Y cells. XTT cell proliferation assay and cell viability assay were used for finding cell proliferation and viability. The gene expression differences were analyzed on FOLR1, JAK1, STAT3, PIAS1, PTPN1 and SOCS-1 genes on neuroblastoma cells by using real time polymerase chain reaction.

**Results:** In XTT assay, LD50 dosage was found as 22µM FA concentration on SH-SY5Y neuroblastoma cells. Cell viability was found as 93% in control, 96% in 1-5µM, 97% in 10µM folic acid application ($p<0.005$). FOLR1, STAT3 and SOCS-1 gene expressions were found higher than control ($p<0.005$). JAK1, PIAS1 and PTPN1 gene expressions were found as similar to control ($p\geq0.05$).

**Conclusion:** Folic acid in different concentrations increased the neuroblastoma tumor cell viability. Our results supported similar findings on the same cell type in literature. Increased FOLR1 gene expression results can be interpreted that FA causes an increasing in folate receptors. High STAT3 and SOCS-1 gene expressions observed in our experiment may be the result of folic acids' effect on JAK/STAT pathway in neuroblastoma cells.

## OP033

### The Effect of Nutritional Habits of Recruits on Their Anthropometric Parameters in A Military Unit

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**Objective:** Nutrition is a conscious action that must be taken to obtain the nutrients the body needs in sufficient quantities in order to maintain health and improve the quality of life. The aim of the study was to examine the nutritional habits and food consumption frequency Armed Forces of Bosnia and Herzegovina soldiers before basic training, to make anthropometric measurements and to determine whether there is a relationship between the regular nutrition during 10 weeks of basic military training and anthropometric parameters.

**Materials and Methods:** The participants were both male and female cadets, and the research is a cross-sectional study and was conducted as a descriptive-analytical method.

**Results:** A total of the 150 participants, 87,30% were male and 12,70% were female. The mean age of male and female participants was 23,21±1,56 and 23,05±1,54 years. Mean height was 179,90±6,60 cm in male participants and 166,90±7,20 cm in female participants. Body weight was 77,70±10,30 kg in male participants and 62,40±7,90 kg in female participants. BMĠ was 24,01±2,92 kg/m2 in male participants and 22,5±2,31 kg/m2 in female participants.

**Conclusion:** In this study, it was found that the daily frequency of nutrition was appropriate according to WHO recommendations, but there was a deficiency in the consumption of some food groups. Dietary habits are important link in the initial training of candidates entering military service. In this regard, we believe that it is necessary to introduce a new methodology of planning nutritional guidelines in the Armed Forces of Bosnia and Herzegovina.

## OP034

### Virtual Reality Assisted Physical Exercise for Parkinson's Disease to Increase Adherence and Improve Outcomes: Protocol for A Pilot Study

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**Aim:** Parkinson's disease (PD) is a neurodegenerative disorder characterized by progressive motor and nonmotor symptoms. Physical exercise has proven beneficial, though patient adherence remains a challenge. Virtual reality (VR) technology offers a promising solution through its immersive and engaging nature. Our study aims to assess the impact of VR-assisted exercise on adherence and its effects on balance, motor function, and quality of life in patients with PD.

**Material And Methods:** This trial will enroll at least 24 patients with early to moderate PD (Hoehn & Yahr stages 1–2.5). Patients will be randomly assigned to one of two groups: (1) VR-assisted stationary bike training (n≥12), (2) stationary bike training without VR (n≥12). Each exercise session will last up to 1 hour, twice weekly, for 2 months. The primary endpoint will be the mean total exercise duration, indicating adherence. Secondary outcomes will include the number of missed sessions, measures on the Berg Balance Scale, Movement Disorder Society-Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part III, Timed Up and Go (TUG), Parkinson's Disease Questionnaire (PDQ-39), and adverse events. Inclusion criteria are ages 50–75 years and confirmed PD. Exclusion criteria include active physical training, use of antipsychotics, Mini-Mental State Examination (MMSE) score less than 22, or cardiovascular conditions limiting exercise.

**Results:** We hypothesize that the VR-assisted group will exhibit improved adherence, reflected by longer exercise duration and fewer missed sessions than the control group. Consequently, better outcomes on motor function, balance, and quality of life are expected over the control group without VR. However, adverse events like motion sickness, eye strain, headaches, and neck pain may be more frequent in the VR group.

**Conclusion:** Our study will assess the effect of VR on exercise adherence in PD patients. We believe that the power of VR technology lies in its ability to immerse and engage, rather than directly enhance the therapeutic effect of physical exercise. Therefore, comparing gamified to non-gamified exercises solely by equalizing their volume may not be fully representative, and future studies may require a different evaluative framework to fully assess the therapeutic potential of such interventions.

## OP035

### Early Warning Diagnostic Signs and Symptoms of Meningococcal Infection in Army Recruits: A Literature Review

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**Aim:** This literature review aims to identify early diagnostic signs and symptoms of meningococcal infection in army recruits, a population at increased risk due to various factors such as close living quarters. Early detection is critical in improving outcomes, as meningococcal disease can progress rapidly and become life-threatening.

**Material - Method:** An extensive search was conducted using PubMed, the European Center for Disease Prevention and Control (ECDC), and the Centers for Disease Control and Prevention (CDC) databases. Studies focusing on the clinical presentation, early diagnostic indicators, and laboratory findings indicative of meningococcal infection were reviewed.

**Results:** Early signs and symptoms of meningococcal infection were found to include fever and tachycardia, often presenting subtly in the initial stages, as well as other non-specific symptoms common in many self-limiting viral infections. Specific clinical signs such as petechial or purpuric rash, neck stiffness, and altered mental status were identified as strong indicators of advanced disease. Laboratory findings relevant to early detection include among others elevated procalcitonin and C-reactive protein (CRP) levels, alongside leukocytosis or leukopenia. Cerebrospinal fluid (CSF) analysis demonstrating elevated white cell counts and decreased glucose levels remains a diagnostic cornerstone in suspected meningitis cases.

**Conclusions:** The findings underscore the heightened risk of meningococcal infection among army recruits, a susceptible population due to multiple factors that facilitate rapid disease transmission. Given the high-risk nature of military environments and the swift progression of the disease, which can result in severe complications or death if not promptly recognized, heightened medical vigilance for the early detection of warning signs and symptoms of meningococcal disease is critical. Initiating antibiotic therapy before hospital admission and further diagnostic investigation is essential for improving outcomes.

## OP036

### The Importance of a Parachutist's Health Condition, Especially During the Mission - Umbilical Hernia Possible Determining Factor of Unfitness

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**Purpose:** Quantification of the risk of umbilical hernia diagnosis during parachuting activities. Chirurgie Generala, Institutul National de Medicina Aeronautica si Spatiala. This type of activity involves many risks to which military personnel are exposed, determining possible long-term pathologies (respiratory, neurological, cardiovascular, ENT, ophthalmological, etc.) but also immediate ones (traumas). A less discussed pathology is that of the abdominal/thoracic wall, for example umbilical hernia. As we well know, one of the frequent causes of abdominal hernias is the increase in abdominal pressure through compression and distention.

**Material and Method:** We performed a prospective study on a number of 631 paratroopers, of which 153 presented umbilical hernias.

**Results:** Following the research related to the technical data of a parachute flight (the weight of the equipment used, the exposure pressures at altitudes, the parachute opening and landing shocks, the distance travelled to regroup the fully equipped parachutist) according to the results of the study, it can be found that this activity has a high risk of producing abdominal hernias - a pathology that can be remedied by a surgical procedure to resume the activity.

**Conclusions:** The complete approach to the pathologies associated with the parachuting activity can determine, in the case of the application of individual and collective prevention manoeuvres, the decrease in the number of umbilical hernias known retroactively to military personnel.

## OP037

### Degree And Significance of The Epidemiological Differences of Diseases and Injuries Between Soldiers and Civilians

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**Objectıve:** The aim of study is to search that “In terms of epidemiology and prevalences of soldier’s injuries and diseases are differ from civilians’” and “prevalences are affected by population, conditions, areas, kind of disease or injuries".

**Materıal And Method:** This study focused on scientific articles that organized on active, veteran military personnel’s and civilian’s diseases, injuries and their data that accessible in official sources or scientific studies. This study can be described as Retrospective Case Control Study in terms of comparability. We calculated odds ratios for every case separately. Differences in case area, case condition and case population between civilians and soldiers were also measured.

**Results:** 40 subcases were worked in 20 main from scientific studies. Odds Ratios were measured 0,02-45,05 and 0,02-31,67 in civilians and soldiers respectively. There weren’t significant differences between Civilian and Soldier in terms of Odds Ratio ($p<0,05$, $p=0,11$). We determined significant differences between Civilians and Soldiers in term of “Condition” and “Area” as $p=0,00$ for both. In comparison of variables, we determined that populations groups of soldiers have got significant differences on Odds Ratio ($p<0,05$, $p=0,03$). Difference could be seen only between “below 1.000” and “1.000.000 and over” population groups in term of affecting to Odds Ratio in Soldiers.

**Conclusıon:** We can provide to increase number of armies which sharing soldier’s health circumstances with medical institutes and personnel who work on military injuries and diseases through suitable safety channels. We can emphasize the importance of military health data inadequacy in terms of medical intelligence.

## OP038

### Assessing Two Psychological Perspectives in Active Military Personnel: Development of Psychopathology and Resilience Inventories

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**Aim:** To provide an overview of the first steps taken to develop two psychological inventories assessing psychological perspectives in military personnel.

**Results:** The need for scientific and reliable measures assessing complicating psychological constructs has been a necessity in scientific literature over decades. In line with this challenging topic, Hellenic National Defence General Staff has initiated a scientific collaboration with National Kapodistrian University to develop for the first time two inventories assessing psychological perspectives in active military personnel: psychopathology and resilience. In this presentation, initial steps of both formulated theoretical frameworks as well as item development phase for each inventory are discussed. Also, starting phases of collaboration between psychologists from the military (Department of Employee Selection and Development) and the University of Athens (Department of Psychology) are presented.

**Conclusion:** Future steps and more scientific questions are discussed regarding applications and generalizability of such inventories in greater military contexts and populations.

## OP039

### Enhancing the Detection of New Psychoactive Substances (NPS) to Address a Rising Public Health Concern

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**Introduction:** The proliferation of novel psychoactive substances (NPS) poses a significant challenge to both national and international drug markets, as well as to global mental health. NPS are often structural or functional analogues of controlled substances, designed to mimic the effects of the original drug while evading detection in standard drug testing and legal classification. NPS intoxication is diagnosed through patient history, physical exam, and laboratory tests. The Viva-ProE® System is used for initial screening, but requires confirmation with more precise methods like Gas Chromatography-Mass Spectrometry (GC-MS/MS) or Liquid Chromatography-Mass Spectrometry (LC-MS/MS).

**Materials and Methods:** An observational, retrospective study were conducted from January 1, 2021 to July 30, 2024 and included patients presenting with NPS acute intoxication and admitted to the Intensive Care Unit II of the Clinical Toxicology Department at the Bucharest Emergency Hospital. The patients' biological samples were analysed in the Clinical Toxicology Laboratory using the Gas Chromatography-Mass Spectrometry (GC-MS/MS) method and utilizing the immunoenzymatic method employing the Viva-ProE® System with EMIT® technology (Siemens Healthineers).

**Results:** The study reveals a rise in ICU admissions due to NPS intoxication. The results of conventional rapid toxicological tests often diverge from those obtained through GC-MS/MS analysis. Consequently, developing a GC-MS/MS method incorporating compound derivatization is crucial for the identification of novel psychoactive substances.

**Conclusions:** The clinically validated and reliable testing of NPS from human samples, coupled with community-driven initiatives such as harm reduction, will be of paramount importance, especially in combating NPS prevalence and the use of other illicit synthetic substances.

## OP040

### Assessment Of the Relationship Between Disaster Preparedness Perceptions, Beliefs and Individual Preparedness Levels of Psychosocial Intervention Employees

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**Objective:** Aimed to examine psychosocial intervention employees' (social worker, psychologist and child development specialist) preparedness levels for disasters, the precautions they are taking in response to possible disasters, and how their prior education about managing disasters affects their attitude.

**Materials And Methods:** 283 psychosocial intervention workers, working actively in the Ministry of Health and institutions outside the Ministry, participated in the cross-sectional study between June 2019 and March 2021. Participants' both beliefs, perceptions and level of disaster preparedness were evaluated electronically.

**Results:** Out of 283 participants, 155 (54,8%) were psychologists, 87 (30,7%) were social workers, and 41 (14,5%) were child development specialists. 84,1% of the participants responded that they are not prepared enough for an upcoming disaster. Even though 92,2% of them were afraid of disasters, only 65,9% of them precisely knew what precautions to take, and 77,7% of them indicated that even if they have time to be prepared, they consciously choose not to do it.

**Conclusion:** Psychosocial intervention employees who participated showed significantly low preparedness levels. The fact that participants experienced disaster and took part in disasters did not affect their level of disaster preparedness nor did it mobilize them to prepare. This can be explained by the assumption that they believe that the existing risks will not come on their own and that they transfer the task of preparing to the institutions responsible for disasters.

## OP041

### Harnessing Artificial Intelligence for Early Detection of Post-Traumatic Stress Disorder (PTSD) in Military Personel

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**Aim:** The aim of this review is to highlight research on harnessing artificial intelligence for early detection of post-traumatic stress disorder in military personnel. Furthermore, the study investigates how AI-driven tools can be employed to identify PTSD symptoms more accurately and efficiently compared to traditional diagnostic methods.

**Material-Method:** The main search was conducted in three electronic databases (PubMed, BASE and Science Direct). The main keywords used are PTSD, artificial intelligence, military personnel. A comprehensive review of existing AI methodologies was conducted, focusing on machine learning (ML) and natural language processing (NLP) techniques applied to various data sources such as electronic health records (EHRs), social media activity, and speech patterns. The effectiveness of these AI tools was evaluated through a comparison of their accuracy, sensitivity, and specificity against traditional diagnostic approaches.

**Results:** The findings indicate that AI algorithms demonstrate a high degree of accuracy in detecting PTSD. For example, NLP techniques applied to EHRs identified PTSD symptoms with over 85% accuracy, while ML models analyzing social media posts predicted PTSD onset in veterans with significant precision. These results suggest that AI can outperform traditional methods in both the speed and accuracy of PTSD detection.

**Conclusions:** AI has the potential to revolutionize the detection of PTSD in military personnel by providing more objective and efficient diagnostic tools. The implementation of AI in clinical practice could lead to earlier interventions and more personalized treatment plans. However, challenges such as data privacy concerns, ethical considerations, and the need for standardized AI protocols must be addressed to fully realize the benefits of these technologies.

## OP042

### The Role of Psychological Safety and Resilience In SARS-COV-2 Infection

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**Introduction:** Psychological safety and emotional resilience are crucial factors in the recovery of post-COVID patients. Neuroperception of psychological safety is essential for understanding the neurobiological mechanisms underlying the stress response. Resilience represents the ability of an individual to cope with negative life events and recover adaptively.

**Objectives:** The study aims to evaluate the relationship between perceived psychological safety, resilience, and psychosocial factors three years after hospitalization for SARS-CoV-2 infection.

**Materials And Methods:** The study sample consisted of 46 patients who were hospitalized in 2021 due to SARS-CoV-2 infection and were evaluated this year. The parameters studied included sociodemographic data, compassion, psychological safety (Neuroperception of Psychological Safety Scale - Context-Specific Version NPSS-C), and resilience (Brief Resilience Scale BRS). The obtained data were statistically analyzed.

**Results:** There was a moderate negative correlation between compassion and resilience ($r=-0.369$), as well as between psychological safety and resilience ($r=-0.393$). Higher values of psychological safety and compassion was associated with lower resilience. The t-test showed no significant differences between gender and psychological safety ($t=0.232$, $p=0.817$) or compassion ($t=1.962$, $p=0.058$). Additionally, resilience scores were found to be at a low level.

**Conclusions:** Psychosocial relationships and levels of compassion influence the resilience of subjects who were hospitalized for SARS-CoV-2 infection. Resilience involves not only surviving a challenge but also learning and subsequent emotional development.

## OP043

### ROCCAS II, The Success of Colorectal Cancer Screening in Romanian Army

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Until 2022, there was no national colorectal cancer screening program in Romania. This led to an unjustifiably high incidence of cases of lower digestive neoplasia diagnosed in advanced stages, without curative indication.

In 2022, the Central Military Emergency University Hospital won an EU-funded colorectal cancer screening project. The duration of the project was 3 years and the amount invested was approximately 5 million euro. Together with partners from civil society, we enrolled in the project more than 48,000 apparently healthy subjects aged between 50 and 74 years, living in Bucharest and Ilfov County.

We present the final data of this project, which at the moment is considered a great success. Our project represented the largest European funding at that time attracted by an institution within the Ministry of Defence.

## OP044

### Optimization Of Pain Control Management In Military-Related Mass Casualty Incidents By Using Regional Anesthesia Techniques

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**Aim:** Adequate pain relief therapy in military-related mass casualty incidents is one of the challenges facing modern medicine. The possibilities of field analgesia are limited due to the adverse effects of opioids: depression of breathing and hemodynamics. These limitations lead to suboptimal pain relief with all the related complications. New pain management approaches should be implemented to achieve pain control at the site of the incident.

**Material And Methods:** We have conducted a scoping review of the current trends, benefits, potentialities, and limitations of regional anesthesia to determine its applicability in military-related mass casualty situations. We searched PubMed/MEDLINE and Scopus to identify relevant reports published between January 1, 2007, and December 12, 2023, by following the PRISMA (Preferred-Reporting-Items-for-Systematic-Reviews-and-Meta-Analyses) extension for scoping review guidelines.

**Results:** Early application of regional analgesia techniques has the potential to deliver optimal analgesia in patients in mass casualty incidents. Regional anesthesia could reduce the need for the use of opioids and create relative comfort for the patient, facilitating his stay in Role 1, his evacuation, and the first days of treatment.
Conclusion: Military healthcare authorities must insist on developing capabilities for the delivery of regional anesthesia in pre-hospital settings in military-related mass casualty incidences.

**Keywords:** Pre-hospital analgesia, Trauma care, Regional anesthesia

## OP045

### Sharpness Of Vision of Pilots in Air Force of Serbia After + Gz ACCELERATION In Human Centrifuge

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**Background/Aim:** The high speeds achieved during the take-off, flight, and landing of modern aircraft present limitations for the visual system. The importance of maintaining visual function during these intervals has been recognized since the earliest stages of aviation development. Because of the great practical importance of air combat, research on visual stress during flight is of great importance receives much attention. Vision is the most important sensory function in terms of both flight safety and the quality performance of flight duties.

**Methods:** Visual acuity of 12 Air Force pilots was investigated before and after exposure to +Gz acceleration in a human centrifuge. This centrifuge is a combination gravity and altitude apparatus, capable of reaching accelerations of up to 20 G and simulating altitudes of up to 30,000 m. Each pilot had individual centrifuge training, and individual skills were first stated measured at the first time of exposure to G acceleration and again in a one week. The training level that corresponds to the improvement of individual skills during submission to Gz acceleration was applied.

**Results:** Exposure to +Gz acceleration provokes significant reactions and fluctuations in the eye, immediately after exposure to +Gz acceleration, there was a transient decrease in visual acuity at a distance of 0,02 +_ 0,04 degrees of visual angle. Pupil diameter increased from 3.5 to 5,6mm. This dilatation continued for 15 min following exposure to acceleration, Changes on the eye bottom were not noted. Previous work has shown that exposure to +Gz acceleration results in an increase in the depth of the eye chamber, Energy reserves in retinal tissue and the central nervous system allow continued operation of brain and visual systems to continue for a few seconds following interruption of blood supply to the head. This enables rapid tolerance to high G loads for a short period of time, usually approximately 5 seconds.

**Conclusion:** At high initial rates of acceleration, significant changes in visual function can occur. However, the importance of maintaining visual acuity is increasing due to the application of novel functional displays for rapid orientation of the pilot in space, the configuration of the area field, aircraft opponents, and weapon systems. Therefore, it is necessary to continue studies that will provide accurate indicators of visual acuity in the context of real Gz acceleration and spatial disorientation.

## OP046

### Chronic Leg Ischemia Caused by Arterial Bullet Embolization

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**Objective:** Embolization of a bullet into peripheral arterial circulation is rare, often leading to exsanguinating haemorrhage and death. Self-tamponade can help survival but may cause local or systemic effects like pleural and pericardial effusion, arrhythmias, pulmonary embolism, or as illustrated in this case, peripheral ischemia.

**Case Report:** A 22-year-old male with a history of a gunshot to the right shoulder and left hemithorax 4 months ago presented with a complaint of pain in the right leg while ambulating an average of 300 steps during three months. Upon physical examination, distal pulses in the right leg could not be palpated. The patient exhibited evidence of previous trauma, including bullet entry and exit sites in the right thorax and shoulder. Imaging studies, including Doppler ultrasound and CT angiography, revealed the presence of a 21 mm bullet within the lumen of the right popliteal artery. Surgical intervention was planned.

**Conclusion:** An inconsistent number of wounds suggests a retained bullet or shrapnel, potentially intravascular, requiring careful examination and multiple investigations. Bullet emboli are very rare cases encountered in daily practice. Approximately 250 cases have been reported in the literature. Embolism to the arterial system may occur after cardiac or arterial injury, but paradoxical arterial embolism after venous injury has also been reported in the literature. Arterial bullet embolism may cause acute or chronic ischemia, as seen in our case. The best treatment option is surgery because of ischemia and infection.

## OP047

### The Implications of Digestive Pathology on Aeronautical Personnel

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Diseases of the digestive tract are common in the general population and therefore will have the same prevalence in aeronautical personnel.

Pathology belonging to the gastrointestinal and hepato-bilio-pancreatic spheres, although not causing extreme incapacitating events such as acute cardiovascular or neurological events, can prevent staff from performing their duties.

Most digestive disorders are acute in nature and can have a loud onset that develops quickly, before or during aeronautical activity. Often the evolution is self-limiting and the resolution is spontaneous, other times it requires a short-term treatment alongside a restriction from flying until symptoms disappear. Therefore, long-term implications are almost absent.

However, chronic digestive pathology often presents an insidious and dragging evolution with a relapsing character that requires a long-term medical sanction to modify the natural evolution of the disease. The impact of these pathologies is significantly exacerbated by the unpredictability of the episodes, and may cause long-term barriers to the performance of aeronautical activity. Nowadays, with advances in treatment many of these conditions can be managed effectively.

The present paper describes the effects of the aeronautical environment on the digestive tract, addressing gastrointestinal and hepato-bilio-pancreatic pathology in terms of its impact on aeronautical personnel.

We consider that an early medical management of the patient in a multidisciplinary aeronautical specific context will offer a relevant professional perspective, leading to successful outcome that results in rapid return of aeronautical personnel to activity.

## OP048

### Anthropometric And Cardiopulmonary Reserve Related Factors and Their Correlation With G-Tolerance: 20-Year Systematic Review and Meta-Analysis

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**Aim:** New generation of fighter jets with wide speed range and high maneuverability that could cause significant changes in human physiology and impact on pilot performance have been made available. Therefore, high demands on pilot tolerance in G forces are of utmost importance for flight safety and the avoidance of G-induced loss of consciousness. This systematic review and meta-analysis aim to identify the correlation of anthropometric and cardiopulmonary reserve related factors with increased tolerance to G-forces in Airforce pilots.

**Material-Method:** A PICOs model was formulated to construct and outline the exact questions of the study, a PRISMA flow diagram was prepared, and quality assessment was conducted using the Newcastle Ottawa Scale (NOS) and the Cochrane quality assessment tool. For the meta-analysis, IBM SPSS Statistics 28$^{th}$ Edition was utilized, and forest plot diagrams were made.

**Results:** A total of twenty-three articles were retrieved from the main databases, and a table was created to summarize the information found.

**Conclusions:** New indexes, such as Heart Rate Variability and Cardiac Force Index, have been proposed for the choice of Airforce pilots with increased G-Tolerance. Increased mean arterial pressure and systematic vascular resistance, increased heart rate variability, increased wall stiffness of precapillary leg vessels and vasoconstrictor reserve have been positively related to increased tolerance to G-forces, whereas very elevated cardiac output and stroke volume, increased heart rate at rest and decreased heart rate increase are associated with decreased G-tolerance. It can be concluded from the meta-analysis that increased G-Tolerance is positively correlated with increased height ($p=0.24$), decreased weight ($p<0.01$), increased BMI ($p<0.01$), increased muscle mass ($p=0.15$), increased FEV1/FVC ration ($p<0.0001$).

## OP049

### Antimicrobial Resistance of Staphylococci Spp. Isolates Collected from Meat Samples

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**Objective:** The aim of the present study was to investigate the antimicrobial resistance pattern of Staphylococcus spp. strains isolated from meat samples.

**Materials and methods:** A total of 90 Staphylococcus spp., 36 strains of S. aureus and 54 strains of coagulase-negative Staphylococcus strains (CoN), were isolated from meat samples collected from suppliers located in the area of Athens and southern Greece. The isolation and identification of the isolates conducted according to method described in ISO 6888-1:2021. The disc diffusion method on Mueller-Hinton Agar was used for the determination of the antimicrobial susceptibility. The test was performed by using standard discs containing norfloxacin (10μg), tetracycline (30μg), gentamicin (10μg), trimethoprim-sulfamethoxazol (1,25/23,75μg), benzylpenicillin (10unit), erythromycin (15μg), clindamycin (2μg), cefoxitin (30μg). The microbial strains were evaluated for resistance to the antimicrobial agents according to the guidelines and criteria of the European Committee on Antimicrobial Susceptibility Testing (EUCAST).

**Result(s):** 63 strains (70,0%) were resistant to at least one antimicrobial agent (28 S. aureus and 35 CoN Staphylococci). All strains tested were susceptible to trimethoprim-sulfamethoxazol. As expected, because of the ability of staphylococci to produce penicillinase, the highest percentage of resistance was detected against benzylpenicillin (57,8%). Two strains (5,6%) of S. aureus strains were resistant to cefoxitin. In addition, the resistance against the rest of the antimicrobials ranged from 7,8 to 16,7%. Interestingly, 6 (17%) of the S. aureus strains are characterized as multidrug-resistant (MDR) bacteria. Similarly, 6 (11%) CoN strains expressed resistance to 3 or more antimicrobial classes.

**Conclusion:** Under certain circumstances the meat samples could be a significant reservoir and a mean of disseminating Staphylococci which are resistant to various antimicrobial substances.

## OP050

### Microbiological Investigation of The Bacterial Biological Agent Simulants

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Medical protection against biological weapons is important for the armed forces and the civilian population They may contain living and non-living "militarized" biological agents that has military and medical importance and cause contagious or non-contagious infectious diseases, lethal or incapacitating. In this context it is very important to be prepared with means for early detection and warning. Thus, the existence of a Portfolio of simulants of bacterial biological agents as test controls in the laboratory can be an extremely useful.

**Materials and Methods:** The studies were carried out on lyophilized bacterial strains belonging to the Bacillus genus, as simulants for Bacillus anthracis (B. megaterium, B. subtilis, B. cereus). They were cultivated on specific culture media using classic bacteriological techniques. The cultures obtained were subsequently identified by mass spectrometry. If the bacterial agent was not found in the database, at least two tests of the same strain from two different cultures, obtained on the same culture medium, under the same cultivation conditions, starting from the same lyophilized ampoule, were performed.

**Results and Discussion:** The conditions for the cultivation of microorganisms were optimized. We created a Strain file that contains data with the characteristics of revitalization and cultivation media, optimal temperatures to achieve faithful reproducibility and equal terms of comparison, morpho tinctorial characteristics associated with smear images to document their purity, and mass spectra. The chromatograms were entered into the database for reference use.

**Conclusions:** The strains were stored in cryopreservation media in order to create the portfolio of biological agents' simulants.

## OP051

### The Role Of The Mobile Toxicological-Chemical Unit Of The National Poison Control Center In The Management Of Mass Accidents

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**Introduction:** National Poison Control Centre (NPCC) is the reference institution in Serbia for diagnosis and treatment of poisoning, information support for medical institutions and general public, educationand organization of management of patients in case of mass chemical accidents.

**Objective:** To present the role, activities of the NPCC and its Mobile Toxicological Chemical Unit (MTCU).

**Results:** Besides risk assessment and provision of reliable informationon toxic chemicals, major role of NPCC isorganization and management of victims of chemical accidents. NPCC has been engaged in the management of four major chemical accidents during the last few years. After the Haz-Mat accident it is crucial to acquire information on toxicity of compound and the possible risk to human health and environment. Most hospitals are not fully prepared to handle poisoned patients, which may have such number and severity of injuries that can overwhelm the ability of local medical resources to deliver comprehensive medical care. However, each medical institution has responsibilities and must be included in the management of chemical accidents. The MTCU is equipped and trained for detection and quantification of chemicals in environmental and biological material (Analytical unit), and organization and medical treatment of poisoned patients on the field (Medical unit). It has been engaged in numerous training activities related to responding to chemical accidents of different extent, detection of toxic chemicals and some situations of package hoaxes, suspected to be nerve or biological agents. Its organization has been proven to be effective in emergency medical response to chemical disasters.

**Keywords**: mass accidents, disasters, poisoning, medical management and support

## OP052

### Toxicological Screening Strategies in Acute Poisoning with Neurotoxic Agents

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Poisoning by neurotoxic compounds is a major public health problem due to their high toxicity and rapid impact on the central nervous system. These compounds include industrial chemicals, pesticides, and neurotoxic warfare agents.

The primary objective was to perform a rapid and accurate toxicological screening, facilitating appropriate therapeutic interventions and reducing the risks associated with delay in diagnosis.

We developed an observational study of the concordance of serum cholinesterase values with the presence or absence of neurotoxic compounds in the urine based on data collected one year period at the Clinical Emergency Hospital of Bucharest - Clinical Toxicology Laboratory, affiliated with the Cantacuzino National Medico-Military Institute for Research and Development.

Quantification of biomarker- PsCHE was conducted utilizing enzymatic/kinetic method, with high sensitivity and specificity, employing the Viva-ProE® System (Siemens Healthineers). Neurotoxic agents were identified and confirmed with the Gas Chromatography System coupled with Mass Spectrometer (Agilent Technology), after isolating urine samples via LLE extraction.

Throughout the year, 227 cholinesterase tests were carried out for the monitoring and diagnosis of acute intoxication. In 167 cases, serum values were below 5320 U/L, showing an inhibition of enzyme activity, supported by the presence of neurotoxic agents with a toxicity mechanism similar to organophosphate pesticides in the analyzed urine samples.

**Conclusion:** The study confirms that a multimodal strategy, using a toxicological screening based on complementary analytical methods on different biological matrices, represents an effective approach for obtaining reliable results for the rapid diagnosis of intoxications with neurotoxic agents.

## OP053

### Risk Assessment: A Decision-Making Tool for Food Safety Problems

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There is no single definition for the risk assessment, but the common components to all of them are the processes of the hazard identification, the exposure assessment and the risk characterization and, finally, the combination of the probability of exposure to a hazard and the impact of the hazard on at-risk population. The methodology of conducting a risk assessment can be qualitative, semi-quantitative or quantitative. No matter the applied technique and the extend and quality of the available data and resources, the risk assessment remains a valuable science-based tool for establishing standards, developing and comparing risk management measures and evaluating safety of food handling processes or new products.

## OP054

### Optimizing A Gene Expression-Based Biological Dosimetry Method for X-Ray Irradiated Samples

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Biological dosimetry is essential for evaluating radiation exposure during CBRN accidents/incidents. Molecular techniques based on gene expression, unlike traditional cytogenetic methods, offer faster assessments and do not require highly-specialized personnel. This study assessed how RNA extraction methods and reference gene selections affect the reliability and accuracy of gene expression analysis for biological dosimetry.

Blood samples were collected from a donor and irradiated with 0 Gy (sham), 0.6 Gy, and 2 Gy of X-rays at 1 Gy/min. After a 4-hour incubation, RNA was extracted using an organic solvent-based method from 250 µL of whole blood and 1 million lymphocytes isolated by density gradient centrifugation. RNA was quantified, and 150 ng from each sample were reverse-transcribed to cDNA. Gene expression of DDB2 and FDXR was quantified using HPRT1 or 18S rRNA as reference genes employing the 2-ΔΔCt method. Variations in gene expression were observed based on radiation dose and RNA extraction method. Whole blood extraction yielded more RNA but less reliable data, observed as variability in gene expression levels in repeated experiments. RNA from lymphocytes provided consistent results. Normalization to 18S rRNA led to large increases in expression levels, likely due to high expression of this gene. In contrast, normalization to HPRT1 provided reproducible results in successive experiments. Gene expression levels for DDB2 and FDXR obtained using lymphocyte-derived RNA and normalized to HPRT1 showed a dose-dependent increase, consistent with literature reports.

In conclusion, optimizing RNA extraction and selecting suitable reference genes are critical for accurate results.

## OP055

### The Life of a Medical Cadet at The Hellenic Military Academy of Combat Support Officers

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**Aim:** To provide a concise overview of the education received in the Hellenic Military Academy of Combat Support Officers and the School of Medicine of the Aristotle University of Thessaloniki.

**Material:** The presentation consists of two main parts. The first part concerns the military training provided during a cadet's time at the Hellenic Military Academy of Combat Support Officers (HMAoCSO). It attempts a brief description of the history of the Academy, from its founding as the Military Medicine School in 1947 until today, while also making special mention of Captain Doctor Fokas Fokas, whose name the camp housing the school currently bears. Detailed information is presented regarding the admission process to the Academy, the basic aspects of the cadets' daily lives, the activities in which they participate during their time at the Academy, as well as the military courses taught by experienced instructors. The first part concludes with the presentation of the applied military training that cadets participate in throughout the year. The second part concerns the academic education of the medical department of the school, as provided by the Aristotle University of Thessaloniki. Similarly, it presents the daily life of the students at the university. The responsibilities of the students are explained in detail depending on the year of study, while some snapshots of their participation in lecture halls, laboratory courses, clinical work, and finally their active involvement in clinical practice during the later years of their studies are also highlighted.

## OP056

### Treatment And Benefits of Repetitive Transcranial Magnetic Stimulation on Patients with Refractory Depression at Military Medical Academy – Sofia

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**Aim:** Repetitive transcranial magnetic stimulation (rTMS) as a treatment for depression has been studied for over two decades. Repetitive TMS was approved by the Food and Drug Administration in 2008 for the treatment of depression after at least one failed trial of an antidepressant medication of adequate dose and duration. This study evaluated whether rTMS treatments may be associated with measurable improvements in depression symptoms for treated military and civilian beneficiaries in Sofia, Bulgaria suffering from depression. It also examined the number of failed medication trials patients underwent before rTMS treatment.

**Materials And Methods:** The study was conducted at the Department of Psychiatry at the MMA - Sofia and 34 patients with average to severe refractory depression participated. Symptom assessment and dynamics were monitored by clinical follow-up and standardized depressive symptom rating scales HAMD 17 and MADRS.

**Results:** A sign of significant improvement is taken as at least a 50% reduction in symptoms on the scales. The mean initial HAM-D score at the 1st session was 36 (equal to severe depression). The mean HAM-D score at the 10$^{th}$ session was 23 (equal to moderate depression). The mean HAM-D score at the 20$^{th}$ session (end of treatment) was 17 (equal to mild depression). Patients reported high satisfaction with treatment results, improved quality of life, and a subjective improvement in mood, sleep quality, and motivation. There was no switching into manic states.

**Conclusions:** Based on the results obtained, the study suggests that rTMS is a promising effective adjuvant therapy and possibly an effective alternative to medication treatment for refractory depression, with minimal to no side effects.

**Keywords:** rTMS, refractory depression, military personnel, patients, therapy

## OP057

### Analysis Of the Impact of SGLT2 Inhibitors On eGFR In Patients with Diabetes Mellitus Type II

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**Introduction:** Sodium-glucose cotransporter 2 inhibitors (SGLT2i) have been developed for the treatment of hyperglycemia in patients with type 2 diabetes mellitus (T2DM). Trial results indicate that SGLT2 inhibitors have the potential to reduce the progression of chronic kidney disease in patients with T2DM.

**Aim:** To determine the impact of SGLT2i on the estimated glomerular filtration rate (eGFR) and the differences in eGFR reduction between patients who were treated with SGLT2i and those who were not.

**Material and Methods:** The research included 143 patients with T2DM. 80 patients were treated with SGLT2i. The control group consisted of 63 patients. Biochemical parameters (HbA1c and serum creatinine) were monitored at the time of initiation of therapy and then once a year for the next five years or until therapy was changed.

**Results:** The mean age of patients treated with SGLT2i was 68.6±9.1 years. 57 patients (71.3%) were men, and 23 (28.7%) were women. 43 patients (53.8%) used Dapagliflozin, and 37 (46.3%) Empagliflozin. The initial value of eGFR0 was 94. Compared to the initial values, there was no significant difference in the value of eGFR after one year (eGFR1 95) ($p=0.925$), nor after two years ($p=0.760$). The calculated values of eGFR after three, four and five years from the introduction of therapy were respectively 87, 86.5 and 86 and were statistically significantly lower ($p=0.023$; $p=0.013$; $p<0.001$) than the initial values of eGFR0. There is no statistically significant difference in eGFR at the beginning of therapy, nor during the five-year follow-up between the group of patients treated with SGLT2i and those who were not.

**Conclusion:** In both groups of patients during the five-year period, the decrease in eGFR was significant, which is consistent with the nature of T2DM progression. According to literature data, the average decrease in eGFR in persons diagnosed with T2DM is 2.5 mL/min/1.73 m2/year, while in the group of patients receiving SGLT2i it was 1.6 mL/min/1.73 m2/year over the full study period.

## OP058

### Identifying And Increasing the Degree of Awareness About Post-Traumatic Stress Disorder in Romania

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**Objective:** Post-traumatic stress disorder is a common psychiatric condition among military personnel returning from war zone deployment. Studies conducted by the U.S. The Department of Veteran Affairs show a 29% incidence for veterans of the Afghanistan and Iraq deployments. Treatment in Romania for this condition has started in the past years and the level of awareness among military personnel is still low. The purpose of this paper is to present the level of knowledge of non-medical military personnel and the importance of good information among them.

**Material and Method:** A questionnaire with simple-answer questions addressed to a target group consisting of military high school students, students of the force academies and active military personnel of the Romanian Army, which aims at the degree of awareness of the importance of information about PTSD and the sources of information used by them.

**Results:** The questionnaire shows that currently the information level of non-medical military personnel regarding PTSD is medium, the main source of information for the target group being the Internet. The majority of the group believes that it is important to have information about PTSD, but around 55% of them answered wrong when asked questions about the symptomatology of the condition, which demonstrates a lack of information.

**Conclusion:** Raising awareness of PTSD is important, as it provides the military personnel with better training in handling possible situations in which they or those around them may be affected. In this manner, the rate of people addressing a specialist can increase, and they can receive the necessary help in time.

## OP059

### Perforated Appendicitis and Hospitalization Time in Childhood

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**Objective:** Appendicitis is a most common cause of acute abdomen in children. In this age group it is difficult to make the correct diagnosis because of discordance of physical examination and the symptoms differentiate to many other diseases. Early diagnosis and treatment are important to prevent perforation which causes long hospitalization and morbidity.

**Material-Method:** The clinical charts of children had surgery for appendicitis between February 2022 and 2024 were reviewed retrospectively. Demographic data include age, gender, symptoms, surgery findings and hospitalization time.

**Results:** The children performed appendectomy (n=390, 126 girl and 264 boy) were hospitalized for 1 to 20 days (mean 4,3). Hospitalization time was 2,9 days in acute appendicitis and 7,6 days in perforated appendicitis. Seventy-two of boys (27,2%) perforated appendicitis hospitalized 6,8 days, 41 of girls (32,5%) perforated appendicitis hospitalized for 7,5 days.

**Conclusion:** Appendicitis is the most common causes of acute abdominal causes in children presenting with abdominal pain. Detailed physical examination should be made and should be kept under surveillance. There was a significant difference in the hospitalization time who were operated for perforated appendicitis in the pediatric patient group. Although one of the most important data affecting hospitalization time was acute and perforated discrimination, it was statistically showed ($p<0,05$) that the hospitalization time (average 5.3 days) increased in the patient group of 4-9 years of age (mean 5.3 days) compared to 10-18 age group (average 4 days).

## OP060

### Pigmentation And Its Stressful Burden

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**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 characterized 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 Dermatology Service in period October 2014 - March 2015 was examined having or not Vitiligo. 39 Cases with Vitiligo were diagnosed through the physical standard examination. In these 39 patients' diagnosis with Vitiligo were applied DLQI questionnaire: From 39 patient, 22 were females and 17 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 are the age groups 15-24 and 25-34, represent the highest percentage of the persons who have concerns as the result of the skin disease 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:** Finally, the etiology and pathogenesis of vitiligo remains unclear. It is still not understood what causes the destruction of melanocytes. Also, uncertainties remain about the natural history and epidemiology of this disease. Current treatments help to alleviate symptoms for temporary repigmentation of vitiliginous patches, but these do not cure the underlying disease.

## OP061

### Brainstem Auditory Evoked Potentials for Evaluation of The Risk of Chronic Traumatic Encephalopathy After Mild Traumatic Brain Injury

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**Objective:** Improving the clinical diagnosis of mild Traumatic brain injury (m TBI) through the use of early biomarkers can help us to predict patients at risk of neurodegeneration after mTBI. The conventional imaging tests CT/MRI are limited in their capacity to assess microstructural or functional damages due to mTBI. There is an increasing urgency to develop new diagnostic modalities for the accurate identification of at-risk patients. This study aims to investigate changes in Brainstem Auditory Evoked Potentials (BAEP) as diagnostic and prognostic neurophysiological markers in patients with single or repetitive concussions.

**Methods:** 84 patients with mild TBI were included in the study: 72 patients with single mTBI, and 12 patients after repetitive concussions. In all patients, CT/MRI was conducted to exclude more severe TBI. BAEP was conducted in the first month after injury. BAEP follow-up was carried out on the 3rd, and 6th month, one year after the trauma to 16 of them.

**Results:** The markers of brainstem dysfunction are found in both groups: delayed peak latencies, abnormal prolongation of I-III, III-V, and I-V interpeak intervals, significant interaural differences, low amplitude or absence of the main BAEP- waves. More than one type of abnormality was found in 17 cases.

**Conclusions:** BAEP can be applied as a diagnostic method in patients with CT/MRI-negative mild TBI. Persistent BAEP abnormalities can be used as diagnostic and prognostic neurophysiological markers for incomplete recovery, accurate identification of at-risk patients, and initiation of preventative therapy early in the disease course.

**Keywords:** mild TBI, Evoked potentials, neurodegeneration

## OP062

### Prospective Evaluation of Pulmonary Involvement in Patients with Primary Sjögren's Disease, Using Pulmonary Function Tests and High-Resolution Computed Tomography, Reveals High Prevalence of Subclinical Interstitial Lung Disease, Along with Small Airways Disease

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**Aim:** Interstitial lung disease (ILD) and small airways disease (SAD) are frequent pulmonary manifestations of primary Sjögren's disease (SjD). The relation between these two entities and their real prevalence in SjD patients with subjective complaints of respiratory disease are still elusive. Our purpose was to describe the clinical, functional and imaging findings of pulmonary disease in SjD and investigate the association with serologic features and the salivary gland biopsy focus score.

**Material-Method:** Consecutive SjD patients with respiratory symptoms and/or asymptomatic patients with abnormal pulmonary function tests, followed up in the Department of Pathophysiology (member of the European Reference Network, ERN), were recruited prospectively, from October 2022 to March 2024. Abnormal PFTs were defined as FVC<80% and/or $FEF_{25-75}$<60% and/or DLCO<70%. A hundred and one patients with primary SjD comprised the study group. All patients: i) underwent pulmonary and small airway's function assessment with spirometry, measurement of DLCO, single breath nitrogen washout, impulse oscillometry, ii) high resolution computed tomography (HRCT) of the lungs evaluated blindly by a specialized radiologist for the presence of ILD and SAD according to international consensus criteria[1], and iii) replied to specific questionnaires for dyspnea and cough.

**Results:** The mean±SD age of the 101 (96% females) patients at SjD onset was 50.7±13.1 years and the median disease duration from SjD onset until current evaluation was 10 years (range: 0-38). Eighty-five patients were symptomatic. Thirty-two (31.7%) patients had findings of ILD on HRCT. No statistical differences were identified between SjD patients with and without ILD in terms of sex, age at SjD, disease duration, treatment modalities and smoking history (Table 1). SjD-ILD patients presented more frequently with dyspnea and cough assessed by the respiratory questionnaires [FACIT-D (median: 38.6 vs. 32.8, p=0.010), SGRQ (median: 19.6 vs. 6.1, p=0.019), CAT (median: 3 vs. 1, p=0.006)] compared to non ILD-SjD patients. They also had worse small airway's function indices [lower $FEF_{25-75}$ (median: 62.5% vs. 86%, p=0.015), higher R5-R20 (median: 0.100 vs. 0.064 kPa/L/s, p=0.030) and more frequently abnormal phase III slope>120% (48% vs. 23%, p=0.031)] as well as SAD findings on HRCT than non-ILD

controls (25% vs. 9%, p=0.027). SjD-ILD patients had more frequently elevated CRP at the time of evaluation (28% vs. 7%, p=0.017), higher disease activity (ESSDAI 4 vs. 2, p=0.003), lymphoma history (33% vs. 10%, p=0.005) and a tendency to develop more frequently anti-Ro52 (80% vs. 61%, p=0.071). Interestingly, at SjD diagnosis SjD-ILD patients had higher focus score on salivary gland biopsy (3.56 vs. 1.50, p=0.002) and lower unstimulated salivary flow (0.60 vs. 1.85 ml/15min, p=0.012).

**Conclusion:** Interstitial lung disease and small airways disease occur frequently among SjD patients. Interstitial lung disease is associated with worse SAD leading to respiratory symptoms and functional lung impairment, as well as higher focus score at SjD diagnosis and higher disease activity.

## OP063

### Evolution Of Anti-SARS-COV-2 Antibody Levels In COVID-19 Patients in Pandemic Waves III and IV – A Romanian Experience

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**Objective:** Evaluation of the immune status during the first six months from infection with the SARS-CoV-2 virus by evaluating the IgM and IgG antibodies between Oct.- Dec. 2021 in COVID-19 patients from Bucharest.

**Material And Method:** The study enrolled 108 unvaccinated COVID-19 patients who did not receive cortisone or various other therapies. All patients were tested for SARS-CoV-2 antibodies with rapid tests and the ELISA method. The control group (negative control) consisted of 12 people who had not experienced COVID-19 infection and had tested negative at the time of collection. The positive control group consisted of 3 vaccinated people. To interpret the results, we used a myCurvetFit computer program (https://mycurvefit.com).

**Results:** The interpretation of the results was carried out according to the manufacturer's recommendations (Euroimmun, Germany), as follows: IgG-anti spike (RU/ml) = positive values ≥ 11 and IgG-anti NCP = positive values ≥ 1.1. Recombinant Anti Human SARS-CoV-2 IgG Spike S1 + = 86. SARS-CoV-2 IgG anti-modified nucleocapsid protein += 57. In rapid testing, all processed samples with validated results were compliant for examination. 79 people (41 with positive PCR test) had IgM = +, 31 = ++, while 39 simultaneously showed IgM with IgG, indicating infection in the acute phase of the disease/infection, including in asymptomatic individuals. 87 patients showed IgG, of which 21 = +, 14 = ++, 22 = +++, and the remaining 30 = ++++ (intensity above the control one). Of these 87 people with a positive IgG test, 43 had both IgM and IgG bands present.

**Conclusion:** Vaccine use is a priority. Only vaccines can prevent a new epidemic or pandemic with this virus in the future. However, immunizing 80% of the population requires time until this threshold is reached, so finding complementary ways to keep the evolution of the pandemic under control and to prevent a possible re-emergence of the disease is recommended.

## OP064

### The Relationship Between Mortality and Muscle and Fat Parameters Measured by Ultrasonography and Dual-Energy X-Ray Absorptiometry in Older Palliative Patients

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**Objective:** Numerous studies investigated the association of body composition with mortality but the evidence is conflicting. We aimed to investigate the relationship between mortality and muscle and fat parameters measured by ultrasonography (USG) and dual-energy x-ray absorptiometry (DXA) in older palliative patients.

**Material And Method:** A retrospective, cross-sectional study was planned on 51 patients (mean age: 80.2±6.9 years, 54.9%: female). Along with demographics, comorbidities, and nutritional status, anthropometrics and the subcutaneous fat thickness, muscle thickness (MT), and cross-sectional area (CSA) of the rectus femoris (RF) and biceps brachii (BB) muscles were measured via USG and muscle and fat parameters via DXA. Cox regression analysis was used to examine the associates of mortality.

**Results:** One-year mortality rate was 35.3%. The non-survivors had significantly lower weight, right leg fat mass, and visceral adipose tissue (VAT) (p=0.029, 0.047, and 0.026, respectively). There was no independent predictor of mortality. According to the correlation analyses, RFMT was positively correlated with VAT (r=0.528, p=0.024) while BBMT was positively correlated with right leg muscle mass and right leg fat (r=0.532, p=0.019 and r=0.582, p=0.009) and BBCSA was positively correlated with right leg fat (r=0.529, p=0.024).

**Conclusion:** Low weight, right leg fat mass, and VAT may have predictive value in estimating mortality in older palliative patients. This was the first research investigating the mortality-associated muscle and fat parameters measured by both USG and DXA in a palliative unit. Multicenter, prospective studies are needed for better interpretation.

## OP065

### Viral warfare in military history

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**Introduction:** The use of viruses as biological weapons represents a critical point in the ethics and implementation of warfare. Historically associated with significant mortality and morbidity, viral agents have been covertly used to exploit their destructive potential. This study explores the historical deployment of viruses in warfare, the subsequent international legal responses, and the implications for modern military strategies.

**Methods:** Utilizing a review of existing literature, this study synthesizes information from historical accounts, military archives, and international law documents. Key databases and bibliographic sources (PubMED, NCBI, Research Gate) were analyzed to understand the evolution of biological warfare and the global stance against the use of viral agents as weapons.

**Results:** Findings indicate a marked decrease in the militarization of biological agents following the establishment of the Biological Weapons Convention (BWC) in 1972, which significantly contributed to the stigmatization and cessation of biological weapons programs. Despite the treaty's success, challenges in verification and compliance persist, exacerbated by advances in biotechnology and genetic engineering.

**Conclusion:** The prohibition of viruses as weapons in warfare is supported by robust international legal frameworks and ethical consensus. Continued international vigilance and cooperation are imperative to address emerging threats and ensure that the use of viral agents in conflicts remains a relic of the past. The study emphasizes the importance of strengthening global biodefense strategies and improving the enforcement mechanisms of the Biological Weapons Convention (BWC).

**Keywords:** viruses, biological weapons, Biological Weapons Convention

## OP066

### Risk Of Dependence in Service Members and Veterans Due to Long-Term Benzodiazepine and Alcohol Use in The Context Of PTSD

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The current study examines the relationship between long-term benzodiazepine and alcohol use and the risk of dependence among service members and veterans with post-traumatic stress disorder (PTSD). PTSD is a common disorder among military personnel who have experienced traumatic events at least a few months ago. The significant risk of developing dependence from the long-term use of benzodiazepine preparations and alcohol is highlighted. It is argued that the application of alternative therapeutic methods, and in particular the limitation of long-term use of these substances, is necessary to reduce the risk of dependence and abuse.

A significant percentage of those affected resort to the use of benzodiazepines and alcoholic agents due to familiar symptoms such as insomnia, flashbacks, start reflexes and anxiety to counteract the symptoms. Although these substances can provide short-term relief, their long-term use carries the risk of developing addiction, especially for people suffering from PTSD. Benzodiazepines, used to reduce anxiety and insomnia, often lead to tolerance and dependence when used long-term. Alcohol use is also common as a form of self-medication, further complicating therapeutic interventions.

Studies show the need to limit the prescription of benzodiazepines for long periods and the need to use alternative approaches to treating PTSD that reduce the risk of addiction. Addiction prevention in military personnel and veterans requires a complex approach, including psychotherapy, cognitive behavioral therapy, EMDR, TMS, and monitoring of psychoactive substance use.

**Keywords:** PTSD, addiction, benzodiazepines, alcohol, military personnel, veterans, insomnia, flashback, psychotherapy

## OP067

### Foreign Military Medicine Literature for The Hellenic Armed Forces Training: Tactical Combat Casualty Care Course for All Service Members; Greek Curicullum

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**Aim:** To present the procedures and challenges of translating the curriculum of the Tactical Combat Casualty Care Course for All Service Members (TCCC ASM) in Greek.

**Material- Methods:** TCCC was developed by the Joint Trauma System (JTS) of the US Department of Defense to provide the best evidence-based trauma care on the battlefield. The TCCC ASM Course is intended to familiarize primarily non-medical personnel with TCCC concepts and basic lifesaving skills. Up to now, no official translation of this Course in Greek exists, a fact hampering the desirable standardization level. A team of Medical Cadets 5th Class from Military Academy of Combat Support Officers was comprised under proper supervision in order to translate in Greek the complete TCCC ASM Course curriculum.

**Results:** After appropriate correspondence with JTS leadership, the team was granted permission for the official Greek translation of TCCC ASM Course curriculum. The curriculum features supporting materiel, presentations, skill cards, checklists, as well as educational videos and a full Train-the-trainer section. During the translating procedure, the main challenges were: the adaptation of the original material to a product understandable by non-medical Greek personnel; proper subtitling and synchronization of videos; achieving consensus in course terminology and ensuring usage and distribution procedures that promote standardization.

**Conclusions:** The Greek ASM Course is intended to replace current military first aid courses in the Hellenic Armed Forces and become the joint standard of basic pre-hospital battlefield trauma care training. Our effort has been actively supported by JTS and, after official implementation, it is expected to expand to the other levels of TCCC Training, enabling all military personnel to reduce preventable battlefield deaths.

## OP068

### Parameters Of Optical Coherence Tomography and Cognitive Status of Patients with Multiple Sclerosis in Correlation with Indicators of Functional Neurological Deficit

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**Introduction:** Multiple sclerosis (MS) is characterized by disabling motor, visual and cognitive symptoms. Cognitive deficits and the presence of neurodegeneration at the level of the retina can be indicators of a more severe form of MS.

**Aim:** Assessment of the relationship between cognitive dysfunction parameters and optical coherence tomography (OCT) as indicators of neurodegeneration and their correlation with tests for assessing the degree of disability.

**Material and Methods:** The Symbol Digit Modalities Test (SDMT) was used to assess cognitive function, and OCT to determine the thickness of the retinal nerve fiber layer (RNFL) and ganglion cell layer (GCL). Expanded Disability Status Scale (EDSS), Timed 25-Foot Walk (T25FW) and 9-Hole Peg Test (9-HPT) were used to assess the degree of disability.

**Results:** The study showed that there is a significant negative correlation between SDMT and 9-HPT dominant hand, but also with 9-HPT non-dominant, T25FW and EDSS. A significant positive correlation of medium strength SDMT with RNFL at the papilla level of both eyes and a positive correlation of high strength with GCL thinning in both eyes were shown. A significant negative correlation existed between 9-HPT and OCT parameters.

**Conclusion:** A strong correlation was shown between the presence of cognitive deficit and OCT indicators of neurodegeneration at the level of the retina, more significantly based on the thinning of the GCL. Of the tests for assessing disability, the 9-HPT is the most sensitive indicator of the presence of cognitive deficits and retinal thinning in MS.

**Keywords:** multiple sclerosis; SDMT; 9-HPT; OCT

## OP069

### Surgical Ovarian Pathologies in Childhood

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**Objective:** There are many causes of abdominal pain in children. It is hard to diagnose the causes of acute abdomen in children. Girls with acute abdomen; the diagnosis is difficult with examination and imaging methods due to the location of the ovary pelvic.

**Material-Method:** The data of children who were operated in our clinic between January 2022 and January 2024 with ovarian pathology evaluated retrospectively. Age ranged from 5 months to 17 years (median 15 years).

**Results:** Fourteen of 25 patients underwent detorsion surgery because of ovarian torsion. Dermoid cyst excision was performed in 7 children (2 left ovaries, 3 right ovaries, 2 bilateral). Ovarian sparing surgery was performed in a child for muscinous cyst adenoma with ovarian torsion. In 16 of 17 children with ovarian cyst was underwent partial cystectomy and remaining one was undergoing oophorectomy. While 22 of 25 pediatric patients were performed laparoscopically, 3 of them were underwent open surgery.

**Conclusion:** Ovarian cysts over then 4 cm have greater risk of torsion in pediatric patients due to the relatively small pelvis. Although ovarian pathologies are mostly benign, prompt intervention is required due to disruption of ovarian blood supply and future fertility problems. Ovarian pathologies should be considered in female patients presenting with acute abdomen.

## OP070

### The Use Of 3D Printed Mechanical Prostheses for Upper Limb Segments in Favor of Military and Civilian Patients

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**Objective:** Mechanical Prostheses are a resource already used in the civilian post-traumatic medical field for amputations of different segments of the upper limb. The aim of this work is to introduce and popularize the idea of 3D printed mechanical prostheses in the military as well as civilian medical field.

**Materials and Methods:** The information used in this paper is taken from medical literature, online resources as well as using data taken from a civilian patient.

**Results:** This paper explains how 3D printed mechanical prostheses can become a valuable resource in post-traumatic medicine, how they can help patients to regain the function of the amputated limb within the limits of the prosthesis and to regain self-confidence and live an easier life.

**Conclusion:** Prostheses for different amputated parts of the upper limb are already in use, but there is a possibility to implement 3D printed prostheses which would reduce the acquisition costs, for the patients, significantly.

## OP071

### "Double Daily Doses" Of Cetrorelix May Raise Follicular Phase Progesterone More as Compared To "Single Doses", In Poor Ovarian Response Patients

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**Objective:** Follicular phase progesterone rise (FPPR) adversely affects fresh in vitro fertilization (IVF) cycles. A single daily dose of Cetrorelix has been used to prevent early luteinizing Hormone (LH) surge. We speculated that doubling the daily dose might have a positive effect in patients who have early LH surges despite receiving the single daily dose treatment.

**Material - Method:** On hCG injection days, the progesterone levels of POR patients who received a single (group 1, n = 59) versus double daily dose of Cetrorelix (group 2, n= 75) were compared. Patients with FPPR were detected, and a comparison of progesterone levels was made between patients of both groups.

**Results:** FPPR patients in group 2 had significantly higher progesterone levels during hCG day. When progesterone cut-off levels of 0.8, 1.0, and 1.2 [ng/mL] were used for group 1 patients, 15.3%, 13.6%, and 6.8% of the patients developed FPPR, respectively. When the progesterone cut-off levels of 0.8, 1.0, and 1.2 [ng/mL] were used for group 2, the results detected were 45.3%, 30.7%, and 21.3%, respectively. A significant statistical difference in progesterone levels was observed between the groups.

**Conclusion:** While the double daily dose of Cetrorelix was initially thought by some authors to suppress early LH rise more effectively, we have observed that it increases the FPPR more when compared to a single daily dose regime. We suggest using frozen cycles instead of fresh cycles in order to have better endometrial receptivity in patients who seem to benefit from higher daily doses of Cetrorelix.

## OP072

### Hairy Cell Leukemia After Splenectomy with Ascites

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**Objective:** How to differentiate an HCL. HCL is a rare chronic leukemia (B-cell malignancy). It constitutes 2 % of all leukemias.

**Case Description:** A 45-year-old man was hospitalized with a three months history of abdominal swelling, dyspnea, weakness, anorexia, The physical examination showed cutaneous and conjunctival pallor, ecchymosis in the right hypochondria, the abdomen above thorax level without collateral circulation and hepatomegaly. In 2011 he had done splenectomy and was treated with prednisone (In that time he went to the hospital not in Albania with pancytopenia and massive splenomegaly.)
CBC showed: bicytopenia (anemia and thrombocytopenia). Serum B12, folates, A.D.A in serum, $\gamma$ interferon, ceruloplasmin, serum copper, ASMA, ANA, AMA, CEA, AFP, CA 19-9, LDH, RCP, total bilirubin 0,7 mg/dl, AST, ALT and other parameters within the normal range. Total proteins 4,5 g/dl, TP 60%, INR 1.32, sideremi 222.21µg/dl.
The bone marrow biopsy shows: hypercellularity, reduction of myeloid and megakariocytar series. IHC: CD20+++, CD3---, CD5+--, CD8+--, CD15+--, CD38+--, CD138+--, Glycophorin A++-, Bcl-2 +++, CD34---, CD117---, MPO---, CD4---
Leukocyte Immunophenotyping of peripheral blood: CD19+83%, CD20+90%, CD11c+90%, CD25+90%, FMC7+60%, CD103+90%.
We treat him with Cladribine 0.14mg/kg/d I.V day1-5. The patient one year after admission is in remission.

**Conclusion:** The diagnosis was Hairy cell Leukemia.

## OP073

### Examination Of Fallopian Tubes Patency In The Treatment Of Infertility

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**Aim:** Examine the possibility of pregnancy in the first 6 months after the fallopian tubal patency test procedure.

**Method:** In the Center for Gynecology and Human Reproduction, Military Medical Academy, Belgrade, a prospective study of fallopian tubal patency in the treatment of infertility was conducted. A total of 44 female patients between the ages of 22 and 40 were examined. Applied (atraumatic) method of hysterosalpingography with a rubber balloon catheter was applied, and after that the patients were followed for the next 6 months to determine whether conception had occurred.

**Results:** Complete patency of the fallopian tubes was found in 45.5% of cases Bilateral fallopian tubal obstruction was present in 20.5% of cases. Unilateral fallopian tubal obstruction was present in 6.8% cases. Under stronger pressure thought the fallopian tube was found at 27.3%. Coincidence. The occurrence of pregnancy in 6 months after the examination of fallopian tube of patency test procedure was in 17.1% of cases. The degree of pain during the intervention of the fallopian tube patency test was evaluated by the patients using the Wong-Baker scale. There was no pain in 63% of patients, mild pain in 19.4% of patients, moderate pain in 11.1% of patients, moderately severe pain in 6.5% of patients, severe pain in 0% of patients, the strongest possible pain in 0% of patients.

**Conclusion:** The occurrence of pregnancy in infertile women is possible after examination of the patency of the fallopian tubes, and for this reason it is correct to wait 6 months after the intervention and after that period apply biomedical assisted fertilization - IVF.

**Keywords:** infertility, fallopian tubes patency

## OP074

### New Technologies and Artificial Intelligence in Monitoring and Treatment of Diabetes

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**Context:** Artificial intelligence (AI) is a fast-growing field in diabetes. Principles of machine learning have been used to build algorithms to support predictive models in order to obtain a better glycemic control, reducing fasting and postprandial glucose levels, glucose excursions and glycosylated haemoglobin. AI introduced a paradigm shift in diabetes care from conventional management strategies to building targeted data- driven precision care. AI will be critical to achieve near - normal glycaemia and to reduce patient's mental burden. The multitude of decisions through the day can overwhelm patients, leading to abandonment of technologies. Current systems continue to require multiple dosing decisions surrounding meals, exercise, exams, traveling. Incorporating AI in diabetes treatment can promote pharmaco- adherence and provide personalised management.

**Evidence Acquisition:** The "Queen Mary" Emergency Military Hospital Brasov is the first military hospital implementing The Romanian National Health Diabetes Programme - Pumps and Sensors. The patients benefit from Continuous Glucose Monitoring Systems (CGMS), insulin pumps, integrated sensor-augmented insulin pump therapy - fully reimbursed by National Health System. Our team also has the expertise in insulin therapy with Advanced Hybrid Closed Loop Systems (AHCLS) – in adults and children. The clinical cases illustrate the benefit of new technologies in improving the metabolic control, the physical health and the especially the quality of life of diabetic patients.

**Keywords:** diabetes, artificial intelligence, insulin pumps, glucose sensors

## OP075

### Short-Chain Fatty Acid Levels in Stools of Patients with Inflammatory Bowel Disease Are Lower Than Those in Healthy Subjects

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**Objective:** Short-chain fatty acids (SCFAs) are produced when the microbiota in the large intestines cause fermentation of dietary carbohydrates and fibers. These fatty acids constitute the primary energy source of colon mucosal cells and have a protective effect in patients suffering from inflammatory bowel disease (IBD). This study aimed to compare the SCFA levels in stools of IBD patients and healthy controls.

**Material and Method:** 34 IBD patients and 30 healthy controls aged 18 and over were included in the study. The IBD group was further divided into two groups based on the status of the disease, as active (26%) and in remission (74%). Stool samples were collected, and stool acetic acid, propionic acid, and butyric acid levels were measured using a GC-MS measurement method.

**Results:** A statistically significant difference was observed between fecal SCFA concentrations of IBD and healthy control groups ($p<0.05$). However, fecal SCFA concentrations of Crohn's disease and ulcerative colitis patients did not differ significantly. Furthermore, no statistically significant difference was observed when the participants' diet type and the number of meals were compared with fecal SCFA concentrations ($p>0.05$).

**Conclusion:** In general, fecal SCFA levels in IBD patients were lower than those in healthy controls. Moreover, diet type and the number of meals had no effect on stool SCFA levels in IBD patients and healthy individuals.

## OP076

### HPV Prevalence Among Patients with LEEP Procedure

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**Introduction:** Human papillomavirus (HPV) infection is primarily genital viral infection encompassing over 100 different types. While most HPV strains lack oncogenic potential, those implicated in cervical cancer development are of significant concern. Clinical colposcopic observations, coupled with cytological examinations, guide decisions regarding interventions-cervical biopsy. LEEP (Loop electrosurgical excision procedure) biopsy is a modern gynecological procedure for removing abnormal cervical tissue using metal wire in the form of a loop.

**Aim:** This study aims to investigate the prevalence and diagnostic methodologies of HPV infection among patients undergoing LEEP at the Center for Gynecology and Human Reproduction of the Military Medical Academy.

**Material and methods:** A retrospective analysis encompassed 111 patients undergoing LEEP biopsy of the cervix between 2021 and 2023. Data included HPV typing from cervical smears pre- and post-intervention, alongside histopathological results from the biopsied samples, sourced from medical records.

**Results:** Of the 111 patients, pre-intervention cervical smears were obtained from 28 (25%) individuals, with HPV detected in 20 (18%) cases and 8 (7%) yielding negative results. Post-intervention, 6 (5%) patients tested positive for HPV, while 14 (12%) were negative. Thirteen (11%) patients had complete data. Histopathological analysis confirmed HPV infection in 58 (52%) cases.

**Conclusion:** This study underscores the necessity of comprehensive HPV diagnostic protocols to monitor infection frequency and disease progression. Further professional inquiry in this domain remains crucial.

**Keywords:** LEEP, HPV

## OP077

### LITT Up the Maverick Spirit: A Comprehensive Review of Laser Interstitial Thermal Therapy for Managing Unresectable De Novo or Recurrent Glioblastoma

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**Objective:** This review aims to evaluate the efficacy and safety of Laser Interstitial Thermal Therapy (LITT) as a viable adjuvant therapy for recurrent and de novo glioblastoma, focusing on unresectable tumors. Additionally, the review seeks to highlight essential aspects related to patient selection.

**Materials and Methods:** A comprehensive literature search was conducted, targeting prospective and retrospective studies, as well as randomized controlled trials. The review acknowledges limitations, including underreported complications post-LITT and the reliance on small cohort studies for quality assessment.

**Results:** Recent prospective and retrospective studies have examined the effectiveness and safety of LITT in both de novo and recurrent IDH wild-type glioblastoma, particularly in patient's ineligible for gross-total resection or those who do not prefer surgery alternatives. Our review encompassed five articles, totalling 440 patients with either diagnosis. Notably, LITT was administered concurrently with chemotherapy, leading to a significantly improved overall survival rate in recurrent glioblastoma patients compared to de novo cases. Progression-free survival, however, showed no significant difference. These outcomes surpassed those of conventional surgical resection, considering the unique characteristics of these diagnoses. Patient selection played a crucial role, with the Karnofsky Performance Scale (KPS) and mean tumoral volume (MTVa) emerging as key determinants of prognosis. A KPS below 70 points and an MTV exceeding 15 $cm^3$ were associated with worse prognosis. While adverse effects post-LITT procedure were observed, many were transient and linked to the aforementioned factors, such as newly developed neurological deficits and haemorrhage. On the other hand, reviewed randomized controlled trials underscored the importance of refining protocols, emphasizing the need for future large cohort studies to enhance our understanding of LITT's potential in glioblastoma treatment.

**Conclusion:** LITT presents a compelling cytoreductive strategy for patients with recurrent IDH wild-type glioblastoma, demonstrating increased effectiveness when combined with adjuvant chemotherapy. It also serves as a viable alternative to conventional surgical resection, yielding a comparable median overall survival. Additionally, its minimally invasive nature contributes to a shorter hospitalization period and reduces risks associated with craniotomies or craniectomies. Like many other

treatment modalities, careful patient selection remains crucial in optimizing outcomes with this procedure.

**Keywords:** laser interstitial thermal therapy, adjuvant therapy, glioblastoma, de novo, recurrent.

## OP078

### Early-Onset Myasthenia Gravis - A Case Report

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Myasthenia gravis is the most common and researched autoimmune disorder affecting the neuromuscular junction. The typical presentation involves fluctuating muscle weakness that is more prominent in the afternoon and is exacerbated by physical exertion. The weakness of the muscles is highly variable.

**Case Report:** A 22-year-old female presents with double vision and difficulty walking and climbing stairs due to lower limb weakness. The weakness increased in severity a month before the hospitalization after an unspecified upper respiratory tract infection. The patient reports fluctuating symptoms occurring over a period of three years - trouble running and mild bulbar involvement: difficulty chewing, swallowing and vocal changes after prolonged speaking. The patient reports exacerbations before/during the menstrual cycle. An EMG with repetitive nerve stimulation testing with low-frequency stimulation of n. peroneus, n. ulnaris, n. accessorius et n. facialis dex. establishes a disturbance of neuro-muscular transmission of post-synaptic type. Antibodies against the acetylcholine receptor were detected. CT of the chest found benign hyperplasia of the thymus. The patient showed marked improvement after being prescribed pyridostigmine bromide. A VATS thymectomy was performed a year after diagnosis.

**Conclusion:** Myasthenia gravis is frequently difficult to diagnose due to its vague symptoms, which may delay the diagnosis by two years.

**Keywords:** Myasthenia, Gravis, autoimmune, acetylcholine, weakness

## OP079

### Novel Approaches in Military Surgical Training

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**Aim:** Rising conflicts all around the world are causing challenges about medical and, especially, surgical support of military forces to increase rapidly. On this basis, plenty of research has been conducted regarding the most efficient methods of military surgeons' training. This project aims to present the current situation concerning military surgical training and the challenges that must be dealt with. Most importantly, it investigates arising training methods and how can they be implemented.

**Material – Method:** A search of the current literature in the online databases PubMed, Scopus and Google Scholar was performed, settling the timescale from 2019 to 2024. Additionally, material from the TCCC guidelines of US Army Medical Corps was collected.

**Results**: Our search identified 35 scientific articles regarding military surgical training, from which 20 were finally chosen as this project's literature. The number of relevant publications is directly associated with data from previous and current war operations and training methods.

**Conclusions:** The conventional military surgical training methods includes basically the utilization of Military Treatment Facilities (MTF) as training centers. However, as the number of war conflicts globally declines, military surgeons' workload and, consequently, operative experience also decreases, turning surgical readiness into a debatable issue. Rotations in terms of Military – civilian surgical partnerships (MCP's), provision of humanitarian care and establishment of knowledge – skills – abilities (KSA) score could enhance surgical competency. Additionally, the exploitation of technological achievements, such as tele-mentoring, robotic surgery, as well as virtual (VR), augmented (AR) and mixed (MR) reality leads the way towards the future of surgical education. Finally, the integration of TCCC algorithm in the training curriculum of military medical – and nonmedical – stuff has been demonstrated to save lives in the prehospital combat environment.

## OP080

### Management of Acute Stroke within the Therapeutic Window in a Military Hospital: Thrombolysis and Thrombectomy - A Clinical Case Presentation

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Acute ischemic stroke represents a critical medical emergency that requires immediate intervention, with thrombolysis and thrombectomy within the therapeutic window significantly impacting patient outcomes. This presentation discusses the management of a complex case in a military hospital, highlighting the importance of time-sensitive, specialized care. The case shows a 73-year-old female with multiple comorbidities, such as Grade III Hypertension, Ischemic Cardiomyopathy, NYHA Class II Heart Failure, and Dyslipidemia. Despite chronic anticoagulation for atrial fibrillation, her INR was subtherapeutic. She presented in the Emergency Room with acute left-sided weakness and hypoesthesia, 2 hours and 20 minutes after symptom onset, with an initial National Institutes of Health Stroke Scale (NIHSS) score of 15, indicating significant neurological impairment.

Thrombolysis was administered, without any change in the patients' NIHSS score. Following an angio-CT, an occlusion was identified, which led to mechanical thrombectomy. Post-procedure, the NIHSS score improved to 3, leaving only mild residual hemiparesis.

This case highlights the essential role of timely thrombolysis and thrombectomy in acute stroke management within a military hospital setting and the beneficial results which improve the patients' quality of life. It emphasizes the need for rapid assessment, specialized interventions, and a multidisciplinary approach to optimize patient outcomes, demonstrating how these factors are crucial in managing complex stroke cases effectively.

## OP081

### Nanotechnology: A New Approach Of Diagnosis, Monitoring, Treatment And Regenerative Medicine. Applications In Military Medicine

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**Aim:** This literature review analyses the application of nanotechnology in military medicine and its role in improving care and reducing casualties and permanent disability among military personnel. The review highlights the need for wider adoption of innovations and assesses key opportunities and challenges regarding efficacy, safety, and ethics.

**Materials And Methods:** The analysis was conducted through a systematic overview of articles and documents related to nanotechnology in the military and medical fields. Sources include the Homeland Defence and Security Information Analysis Centre, the National Centre for Biotechnology Information, and the Institute of Space Research and Technology at the Bulgarian Academy of Sciences.

**Results:** In military medicine, nanotechnology has applications such as: Nanosensors and devices can provide real-time vital signs monitoring; early chemical and biological agent detection; needleless drug injections. Transport nanosystems may be useful for delivering drugs with low bioavailability or that require special storage conditions. Hemostats and antiseptics such as chitosan, fibrin nanofibrils, and silver nanofibres also can be incorporated into nanoparticles. Nanotechnologically produced plasma expanders and nanocapsular substitutes for human erythrocytes and platelets would be invaluable on the battlefield. In regenerative medicine - dendrimers, nanorods, carbon spheres, etc. can be used for molecular targeting of processes mediating cell and tissue regeneration.

**Conclusion:** Nanotechnology is a viable prospect for improving the efficiency of medical care and reducing the mortality and permanent disability of military personnel. However, as a new technology, many more studies are needed to elucidate its safety profile. Limited information, high costs, and regulatory obstacles are also challenges.

**Keywords:** military medicine, nanotechnology, innovation, regeneration, emergency medicine

## OP082

### Triple Valve Cardiac Surgery and Triple CABG. A Case Report

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**Case Report:** Multiple valve surgery combined with CABG is complex and challenging procedure associated with high early morbidity and mortality. We report successful mitral and aortic valve replacement and tricuspidalanuloplasty combined with triple CABG and postoperative pericardial drainage complication. A 77-year-old man underwent surgical treatment of severe aortic stenosis, mitral and tricuspidalin sufficience and coronary artery disease. Patient symptoms included fatigue and shortness of breath, anginal pain, leg swelling and palpitation. Echocardiography showed markedly calcified aortic valve (AVA 0,5 $cm^2$, PG mean 61 mmHg, peak jet velocity 5,05 m/s), reduced global left ventricle contractility (EF 48-50%), calcified posterior mitral valve lefleat and cleft between A2 and A3 scalops, mitral and tricuspidal regurgitation 3+ both, right ventricle systolic pressure 60 mmHg. Coronarography revealed three vessel disease (LAD 90-95% stenosis, ACX 90-95%, RCA 70-90%). Patients' comorbidities included atrial fibrillation and chronic renal failure. Through median sternotomy, in total cardiopulmonary bypass fashion and moderate hypothermia 28C and cardioplegic cardiac arrest, first was performed distal anastomosis between vein grafts and coronary arteries. Calcified aortic valve was excised through transvers autotomy and implanted artefficialaoric valve StJude A19. Through left atriotomy was implanted mitral bio prothesis StJude 27M with suspensory apparatus preservation. Tricuspidalanuloplasty was performed using Kay procedure. Operation lasted six hours with cardiopulmonary bypass time 287 minutes and aortic cross clamp time 169 minutes. Patient spent five days in ICU. Pericardial effusion was observed on $13^{th}$ postoperative day. After pericardiocenthesis and drainage loss about 1500ml hemorrhagic content, patient became hemodynamically unstable and immediately was reoperated. Intraoperatively was found pericardial catheter penetrating right ventricle. Injury was sutured. Patient was discharged on 29th postoperative day. Pathohistological findings showed fibrosis, hyalinization, calcification and metaplastic ossification of aortic valve. After 12 months of follow-up patient was free of congestive and anginal symptoms with well controledatrial fibrillation.

**Keywords:** multiple valve surgery, CABG

## OP083

### Cardiac Tumors - Symptoms and Treatment

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**Introduction:** Cardiac tumors represent a rarely condition characterized by abnormal growth and usually presented with non-specific symptoms as irregular heartbeat, weakness, shortness of breath, dizziness and chest pain. We classified cardiac tumors as either primary, which are not so common, occurring 1 in 3000 patients, ¾ of them are benign, and more often, secondary. Myxoma account for approximately 50% of primary cardiac tumor. In most cases cardiac imaging, especially echocardiography, can detect tumors size and location in early ages. Many patients are asymptomatic, but more often, due to tumor growth, patients begin to experience symptoms of heart failure, arrhythmia, angina and constitutional symptoms like fever, anemia and weight loss.

**Case Report:** We presented a case 70-years old female with palpitations, tachycardia, shortness of breath, dizziness and chest pain. Ehocardiography revealed huge cardiac tumor 66 x 34 mm, fixed to interatrial septum, with obstruction of cardic flow through the left side of heart. Coronary angiography showed dominant right coronary artery with abnormal branch responsible for arborization of cardiac tumor in left atrium, as well as myocardial bridge on left anterior descending artery without significant coronary artery stenosis. Patient was presented to Heart Team and urgent cardiac surgery was performed in order to remove tumor from left atrium. Pathohistological findings confirmed myxoma. Conclusion. Cardiac tumors may be presented in late ages with nonspecific symptoms similar to many other more common cardiovascular diseases like heart failure, arrhythmia and angina due to tumor growth.

**Keywords:** nonspecific symptoms, echocardiography, myxoma, urgent surgery

## OP084

### New Experimental Therapeutics Approaches in Case of Skin Exposure to Blistering Chemical Agents

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**Objective:** Experimental evaluation of the effectiveness of a newly developed therapeutic formula in case of exposure to blistering chemical agents.

**Methods:** A complex therapeutic formula was developed containing antioxidant, anti-inflammatory compounds, antiseptics, and epidermal growth factors. In vitro, tests were performed by incubating human fibroblasts with CEES (2-chloroethyl ethyl-sulphide at median inhibitory concentration) and the therapeutic formula. Cell viability was tested by using the MTT cell proliferation kit. In vivo studies, with the approval of the Ethics Committee A/5278/19.07.2021 and that of the Sanitary and Veterinary and For Food Safety Directorate 38/11.08.2021, were performed by cutaneous administration of a single dose of vesicant corresponding to the median lethal dose and the treatment administered daily for 10 days, to 4 groups of Wistar male rats. At the end of the study, immunofluorescence studies were carried out on the affected skin.

**Results:** The treatment reduced the cytotoxicity of CEES at median inhibitory concentrations (T-test: p1=0,003 n1=n2=6; p2 = 0.001 n3=n4=6). In vivo, studies showed that the newly developed therapeutic formula was beneficial by achieving 100% protection at a vesicant agent dose of 1DL50. Immunofluorescence skin studies showed the expressions of c-ROS (a marker of oxidative aggression) and PARP-1 (a marker of DNA repair) antibodies.

**Conclusions:** In vitro MTT cytotoxicity test revealed the protective effect of the newly developed therapeutic formula, in case of exposure to blistering chemical agents. The expression of biomarkers mentioned above confirms the involvement of oxidative aggression and nuclear DNA damage in the pathogenesis of skin lesions induced by blistering agents, as well as the protective effect of newly developed complex treatment.

**Keywords:** blistering agents, 2-chloroethyl ethyl-sulphide, complex therapeutic formula

## OP085

### Modalities Of Vacuum-Assisted Compressive Therapy in Granulation Tissue Formation

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**Aim:** Modalities of vacuum-assisted compression therapy are continuous and intermittent. The aim of the work is to evaluate which of the two modalities is better for the formation of granulation tissue.

**Method:** We treated 45 patients with skin defects of different localization using both modalities of vacuum-assisted compression therapy. Depending on the depth of the defect and the presence of an infectious agent, vacuum-assisted compression therapy was applied one or more times for a duration of 7 days. Initially, we applied the continuous modality in all patients.

**Results:** Depending on the speed of granulation tissue formation, we applied continuous or intermittent modality. We divided the patients into groups depending on the applied modality, and a negative pressure of 125 mm Hg was used in all examined patients. The time of formation of granulation tissue is significantly shorter in patients who used both modalities.

**Conclusion:** Both modalities of vacuum-assisted compression therapy led to the formation of granulation tissue, but each modality has its own role.

**Keywords:** vacuum-assisted compression therapy, granulation tissue

## OP086

### Effects of Third Molar Surgery on Sleep Health Parameters of Young Adults

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**Aim:** The aim of this study is to assess the changes in patient-reported sleep health outcomes after third molar surgery and to investigate any associations between sleep parameters and post-extraction pain.

**Material – Method:** Young adults without known comorbidities who were in need of mandibular third molar surgical extraction were included. All participants completed a sleep diary, the Epworth Sleepiness Scale (ESS), Pittsburgh Sleep Quality Index (PSQI) and Athens Insomnia Scale (AIS) questionnaires, which were used to assess sleep habits, daytime sleepiness, sleep quality and insomnia severity one week before and after extraction. In addition, a visual analog scale was completed postoperatively to assess the perception of pain.

**Results:** Out of 75 patients who completed the study protocol, 32 (42.7%) were males and 43 (57.3%) were females, with a mean age of 24.01 (±3.43) years. Postoperatively, statistically significant higher scores were observed for PSQI [4.85 (±2.32) before vs. 5.39 (±2.75) after, $p = 0.041$], AIS [5.56 (±3.23) before vs. 6.91 (±4.06) after, $p < 0.001$] and average weekly number of nocturnal awakenings [2.01 (±3.72) before vs. 4.19 (±5.20) after, $p < 0.001$] but not for ESS, average weekly sleep duration and average weekly sleep onset latency. Pain perception was increased in patients who slept worse on almost all seven postoperative days, although this did not reach statistical significance.

**Conclusions:** Third molar surgery impacts sleep quality and insomnia severity in the first week after extraction, while there is no effect on daytime sleepiness. The worsening of subjective sleep symptoms after extraction may be associated with an increased perception of pain.

## OP087

### Utilization Of Fecal Management System to Prevent from Colostomy in Patients with Fournier's Gangrene

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**Abstract:** Fecal Management System (FMS) is an indwelling fecal management catheter used in diarrhea, fecal incontinence and diversion, all of which can cause significant problems in the monitoring, treatment and care of ICU patients. In perineal burns and infections, fecal contamination may cause wound infections, delayed healing, skin graft loss, and sepsis. Fournier's gangrene is a significant progressive infection with up to 40% reported mortality that requires extensive and repeated surgical debridement. We present our experience with FMS in management of patients with Fournier's gangrene and avoidance of colostomy.

**Material and Method:** FMS was used to prevent fecal contamination in the perianal area subjected to repeated surgical debridement. There were 4 patients (2 males, 2 females). Their average age was 58.

**Results:** Following the treatment, the infection was finally under control with negative pressure closure. In all 4 patients, the wounds healed without the need for colostomy and epithelialization was achieved in the perineal region.

**Conclusion:** Colostomy is a serious surgery that can be performed to provide fecal diversion and prevent contamination; however, it can cause complications. Avoiding colostomy ensures patients' protection from invasive procedures under anesthesia that may affect their immunity and wound healing and prevents second surgery for colostomy closure and associated complications. It has been also reported to prevent psychosocial problems caused by these situations, shorten hospital stay by reducing repeated surgical intervention risks, and reduce treatment costs.

## OP088

### Mental Health Interventions for Combat-Related PTSD: Efficacy and Long-Term Outcomes in Military Veterans

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**Background:** Posttraumatic stress disorder (PTSD) is a chronic, debilitating psychiatric disorder. Anxiety, depersonalization, derealization, insomnia, recurrent nightmares, depression, and suicidal thoughts are common symptoms. Moreover, it can result in stress-related physical health issues such as cardiovascular disease, type 2 diabetes, and vicious habits. Currently, the treatment includes trauma-focused psychotherapies and antidepressants. Commonly, treatment resistance occurs when PTSD sufferers are overwhelmed by the negative memories of their trauma that they cannot engage in therapy.

**Objective:** This review aims to present recent findings regarding the effectiveness and safety of 3,4 methylenedioxymethamphetamine (MDMA)-assisted therapy for treating chronic PTSD in both civilians and military personnel.

**Material and Methods:** This review comprehends the latest studies on the topic published by Multidisciplinary Association for Psychedelic Studies (MAPS) and by the most relevant databases such as PubMed, Google Scholar, Microsoft Academics, and EMBASE, from the last 4 years. Data was gathered regarding finished clinical trials.

**Results:** In comparison to anxiolytics, antidepressants, and antipsychotics, MDMA does not require daily dosing. The treatment strategy may lessen subsequent medication adherence issues seen in PTSD patients as well as the frequency of adverse events. Anxiety, headaches, exhaustion, muscle tension, and insomnia were the most frequently reported adverse reactions during experimental sessions. As a releaser of serotonin, noradrenaline, dopamine, and oxytocin, MDMA increased levels of self-confidence, awareness, and closeness among participants and motivated them to engage in therapy by reducing reactivity to trauma reminders.

**Conclusions:** Compared to current treatments, MDMA assisted therapy has the potential to help patients suffering from treatment-resistant PTSD. There remains a long way to convince critics that a compound that is experienced recreationally by people may have benefits in its clinical form, only under medical supervision and in doses that are strictly regulated.

**Keywords:** MDMA, PTSD, MAPS

## OP089

### Bioethics In Wartime Especially Triage on the Field

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**Aim:** To discuss some bioethical dilemmas that must be solved by military nurses by finding compromises in specific situations of medical practice. First of all, health care workers have to make decisions that are affected by guidelines, nature and delivery of end-of-life care. This is achieved by the implementation of 'triage'. Triage is the process of prioritizing the care of patients on the battlefield and it is divided into three models that depend on the availability of medical personnel, equipment and supplies.

**Material- Method:** It references articles and research papers that were analyzed both in Greek and English literature. International databases that were utilized include Pub Med and Google Scholar. It also cites information on the action of nurses on the battlefield as well as the ethical dilemmas they have faced during the last decade.

**Results:** By implementing triage they can provide priority care to the most acute ones and to ensure the survival of the largest possible number of injured patients. This triage model uses certain criteria that make it manageable to receive, classify, and treat health losses and also confront similar situations on the battlefield in a more efficient way.

**Conclusions:** In conclusion, in wartime, the health workforce is sometimes called upon to violate one of the two oaths they have taken, either the Hippocratic oath that supports everyone's right to life or the military oath that promises loyalty and devotion to the country. Therefore, the difficult task of the military nurse becomes even more demanding and creates ethical dilemmas which the practitioner has to resolve during tragic situations.

## OP090

### Possibilities For Application Of 4D-Printing in Military Branch

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**Objective:** In the recent decade, new technologies have drastically developed - from creating physical objects from geometrical representations, also called 3D-Printing, to already established four-dimensional-printable objects that can react to external stimuli. This study examines how the evolution of 3D to 4D printing brings out new opportunities for the military branch, with an accent on the field of military doctors, based on research on the capabilities of these innovations.

**Materials & Methods:** A literature review and analysis of studies in PubMed and Research Gate were performed to summarize the characteristics and fields of application of the new technology. It included a combination of the following keywords: "4D-Printing", "medicine", "clothing" and "military". All of them were then compared to the original idea of the creator of the 4D-Printing, shared in an online interview.

**Results:** The results show that numerous articles describe the beneficial effects of the use of 4D-printing due to its lightness, compatibility and the ability to morph under the influence of variety of external stimuli.

**Conclusions:** The analysis shows that the 4D-Printing provides chances for better adaptation, comfort, practical usage, and training abilities for the soldiers and officers. Military doctors can use the technology to help deployed soldiers off the battlefield and help for faster recovery and operate in field hospitals.

**Keywords:** innovations, military branch, technologies, 3D-printing, 4D-Printing, military doctors

## OP091

### Medical Assistance in The Tactical Field

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**Objective:** The purpose of this paper is to present techniques, protocols and give information about emerging medical trends in the tactical field. Furthermore, it aims to highlight the place and the role of military medical doctrine in military operations. Military actions have undergone significant evolution, driven by the development of new types of weaponry, which causes numerous unprecedented injuries requiring military medical professionals to adapt. Depending on the scale of military manoeuvres, their outcomes, and the flexibility in the tactical field, operational medical support is closely linked to the necessity for military medical personnel to make deliberate, life-saving decisions on the spot, based on the capabilities available to them.

**Material And Method:** Every state's military stakeholder should strive to collaborate within the military alliances to communicate the unprecedented challenges faced in the operations theaters aiming to develop advanced protocols for the military medical doctrine. The key points covered in my presentation are: tactical field care protocols, tactical evacuation care, major incident medical management and support, mass casualty standard operating procedures, operational medical support in the land forces, ROLE (Rank of Level) medical facilities, Manoeuvrist Approach, Allied Joint Doctrine for Land Operations.

**Conclusion:** The best way to counteract new, unpredictable medical situations in the tactical field is to encourage military medical personnel to develop new techniques based on specific instances. The evolution of military medicine has been closely linked to the development of military tactics making the military medical doctor one of the crucial elements of modern warfare.

## OP092

### Limb Damage Control Orthopedics (LDCO) In High-Energy Fractures of The Lower Limb

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**Aim:** High-energy lower limb trauma is still a huge challenge in modern orthopedic practice. Treatment requires a complex approach and a multidisciplinary team to achieve optimal results. The multiple associated injuries and the severity of the local soft tissue status determine an individual approach in each case.

**Material - Methods:** The case series consists of 17 patients (9 with polytrauma) with a total of 17 fractures of the lower limb. It includes 15 males and 2 females aged between 41 and 58 years. According to the AO/ASIF classification: 32-B3 + 31-B - 2 cases; 32-B3 - 2 cases; 32-C2 - 2 cases; 41-C1 - 2 cases; 41-C2 - 2 cases, 43-C3 - 1 case; 42-B2 - 2 cases; 42 -B3 - 1 case 43-A1 - 1 case; 43-C2 - 2 cases. According to the Gustilo-Anderson and Western and Tscherne classifications: GA II – 9 cases; GA IIIA – 6 cases; Tscherne III-2 cases. All patients were treated with urgent IV antibiotics, irrigation, and debridement followed by surgical fixation with an external fixator. Two of the patients underwent fasciotomy of the leg. In the second stage, definitive internal fixation with or without bone grafting was performed.

**Results:** Bone union was achieved in all cases for a mean period of 5 months (4-9 months). One case required additional intervention - percutaneous stimulation of bone healing with marrow aspirate and demineralized bone matrix.

**Conclusion:** LDCO is an efficient method both in polytrauma patients and in cases not eligible for early definitive fixation.

## OP093

### Correlation Of C-Reactive Protein Levels with Severity of Chronic Urticaria - Retrospective Analysis Of 145 Patients

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**Background:** Chronic Urticaria (CU) is a multifactorial disease. Some studies showed that C-reactive protein (CRP), being an acute inflammation reactant, may enhance urticarial inflammation and thus disease activity in CU.

**Aim:** To analyse a correlation of CRP level to the severity of disease, autologous serum skin test positivity and presence/absence of angioedema.

**Methods:** Data about the patients treated at the Department of Dermatology from 2016-2023 were retrospectively analysed from the hospital database. Patients were classified in two groups depending on ASST result: group of patients with positive ASST and those with negative ASST, and also in group with treatment responsive disease and severe disease. Serum CRP levels were measured and correlated with disease treatment responsiveness and presence of angioedema.

**Results:** There were 83 (57%) females and 62 (43%) males. The autologous serum skin test (ASST) was performed in 117 patients. ASST was positive in 45 patients (38%). There was no statistically significant difference between ASST positive and ASST negative patients and serum CRP levels (Fisher's test, $p>0,05$). Statistically significant difference was found between serum CRP levels and in severity of CU determined by treatment responsiveness ($p<0,05$). Presence of angioedema was not in correlation with CRP levels ($p>0.05$).

**Conclusions:** In our patients CRP level showed positive correlation with severity of CU and negatively correlated with ASST test. The elevated CRP level found in our study point toward a low-grade systemic inflammatory response in CU and its predictive significance regarding treatment response.

## OP094

### Bacterial Resistance to Silver in Wound Care

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**Introduction:** Limb ulcers have increased morbidity, with numerous clinical manifestations: ubiquitous pain, interrupted sleep, limitation of mobility and physical capacity (Agale, 2013), also due to the high recurrence rate (Heyer et al., 2016). All this translates into a huge financial burden, both medical and social (Heyer et al., 2016). Although there are numerous international studies on the contribution of the skin microbiome to the evolution of chronic ulcers, in Romania, there are very few data on the virulence or microbial resistance phenotypes of the strains isolated from the mentioned pathologies. The elucidation of the molecular mechanisms of virulence and resistance, not only to antibiotics, but also to antiseptics (silver) used in the treatment of chronic ulcers is crucial in order to optimize therapeutic strategies (Mihai, 2014).

**Material and Methods:** Swabs were collected from hospitalized patients with various leg ulcers (between 2019-2020). The bacterial strains were isolated, identified, tested for microbial and antiseptic resistance.

**Results - Discussion:** A number of 100 bacterial strains were isolated by microbiological analysis of 83 samples of calf ulcer wound secretion collected from 83 hospitalized patients. The etiologies of the ulcers were represented by: chronic venous insufficiency, arterial insufficiency, type 1 & 2 diabetes, necrotizing vasculitis, Kaposi disease, squamous cell carcinoma, bone necrosis. Most patients had only one cause of the ulcers. Investigating the genetic determinism of resistance to silver ions allowed the identification of plasmid resistance markers in the composition of the sil operon, namely the presence of the silA, silB, silC genes that code for efflux pumps, the silE gene that codes for periplasmic proteins that bind Ag+ and the regulatory genes silR and silS, in strains of Staphylococcus spp. (especially S. aureus), followed by Escherichia coli and Pseudomonas aeuriginosa. Finley et al. analyzed a batch of 859 strains belonging to the genera Staphylococcus, Escherichia, Pseudomonas, Klebsiella, Enterococcus and Enterobacter and concluded that 32 of the strains were positive for the tested sil genes (silA, silB, silCBA, silE, silF, silP, silRS), 14 being positive for all 7 genes (Finley et al., 2015). Woods et al. isolated 60 strains from human and equine ulcers and tested for the presence of sil genes (silA, silB, silCBA, silE, silRS, silF, sil F), identifying 10 Enterobacter cloacae strains positive for all sil genes tested (Woods et al, 2009). Other strains reported to be resistant to silver were Acinetobacter baumannii, Salmonella typhimurium and Pseudomonas stutzeri (Percival et al., 2005).

**Conclusion:** Topical creams containing silver are used for treatment of leg ulcers. The increased prescription has led to the development of silver resistance in bacteria.

## OP095

### Bilateral Central Serous Chorioretinopathy in A Patient with Demyelinating Optic Neuritis Associated with Multiple Sclerosis

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**Introduction:** Demyelinating optic neuritis is commonly associated with multiple sclerosis, and its first-line treatment is systemic cortisol. One of the side effects of corticosteroid therapy is central serous chorioretinopathy, which can lead to decreased visual acuity.

**Case report:** This is the case of a 45-year-old male with a history of multiple sclerosis, diagnosed in 2007, one episode of optic neuritis in 2020 and bilateral central serous chorioretinopathy, likely induced by high-dose systemic corticosteroids and type A personality. He presented with impaired vision for one week, predominantly in the right eye. Best-corrected visual acuity (Snellen chart) was 8/10 in the right eye and 7/10 in the left eye. Ishihara test for color perception was normal but with difficulty. There was no right afferent pupillary defect. There was no oedema of the optic nerve.

**Results:** A magnetic resonance imaging scan of the brain and orbits suggested probable active perineuritis of the right eye. Optical coherence tomography indicated signs of chronic bilateral central serous chorioretinopathy.

**Conclusion:** Treating this patient is challenging because the use of cortisol for optic neuritis could lead to central serous chorioretinopathy relapse. Thus, an excellent collaboration between neurologists and ophthalmologists is mandatory.

**Keywords:** demyelinating optic neuritis, multiple sclerosis, bilateral central serous chorioretinopathy, cortisol

## OP096

### Treatment of Symptomatic Arterial Branch Macroaneurysm with Intravitreal Injection of Bevacizumab

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**Purpose:** To describe the therapeutic outcome of intravitreal injections of bevacizumab in a patient with symptomatic arterial branch retinal macroaneurysm.

**Case Description:** A 72-year-old female presented at the Ophthalmology Clinic of 424 General Military Training Hospital of Thessaloniki with self-reported decrease in visual acuity of the right eye. No systemic or ocular diseases were reported other than the smoking habit. Best corrected visual acuity in Snellen optotype was 20/63 in the right eye and 20/20 in the left eye. During fundoscopy of the right eye, a retinal arterial branch macroaneurysm approximately one papillary diameter above the macula was detected and its presence was further confirmed by the Optical Coherence Tomography (OCT). At the same time, the presence of edema in the macular region and around the aneurysm was also noted. A follow-up protocol with OCT and intravitreal injections of bevacizumab was proposed and the patient underwent 5 intravitreal injections of bevacizumab. After the last injection, significant regression of edema and improvement of visual acuity of the right eye up to 20/20 were observed.

**Conclusions:** Intravitreal injection of bevacizumab appears to contribute to the regression of macular edema secondary to macular arterial branch retinal aneurysm and could be an effective therapeutic option for the treatment of this clinical entity.

## OP097

### The Impact of HIV in the Military: Medical, Legal, and Ethical Aspects

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**Introduction:** HIV infection represents a global public health concern. Currently, the number of people infected with HIV is 39 million. This presentation will focus on the impact of this infection in the military and medical-military fields, strategies for modern therapy, the military system's stance on this infection, and how integration policies should be improved.

**Methods:** Statistical data from medical literature, data from the Joint United Nations Programme on HIV/AIDS (UNAIDS), military archives, and various reports from military personnel affected by HIV-related policies were used. Medical information on treatment strategies from authorized bibliographic sources was also utilized to better analyze and understand the complexity of HIV infection.

**Results:** The effectiveness of HIV infection treatment was demonstrated, along with how integration policies for military personnel affected by this infection should be changed. The discrepancy in attitudes towards infected military personnel was highlighted by comparing European countries with modern policies and treatments for this infection.

**Conclusion:** This infection should no longer be a sentence to a life of stigmatization and inability to reintegrate, as modern treatments have extraordinary effectiveness, prevention policies are vastly superior compared to historical data, and the military and medical-military systems are capable of supporting military personnel.

**Key words:** HIV, treatment, integration

## OP098

### Women's Participation in International Military Operations

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**Aim:** To provide information on the changing role of women in international military operations throughout time and to broaden our knowledge about the role of women in the armed forces. To emphasize that women's participation in the military has played a key role in military operations on land, sea and air. Although women's participation in state armies, particularly in operational roles, is relatively recent, women have been serving in the NATO armed forces and partner states outstandingly for many years.

**Material - Method:** Sources from Ministries of Defense Military Magazines, official websites with military content, NATO publications.

**Results:** After data processing it is concluded that going back in history, there has been a noticeable female presence since 1430, paving the way for many more to follow. The various occupational fields staffed by women and their roles in combat through those fields are then examined in detail. Women's physical weakness, emotional sensitivity, maternal role and inferior leadership skills are some of the stereotypes which are mentioned in order to shed light on the difficulties that women usually face. This, of course, is then contradicted by the fact that women contribute through their abilities, since they manage to achieve success both in battle and in supporting roles with active educational, communicative, informative, administrative and therapeutic roles. The analysis of statistical data shows that there is upgrowth in the number of women in the military and especially in international military operations since 2005.

**Conclusions:** Modern armed forces have the potential not only to fully integrate women but also to increase the overall level of the officers.

## OP099

### Novel Tactical Communications Gadget Employed by Military Personnel in High-Noise Combat Environments

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**Objective:** In order to facilitate quick, precise, and clear communication between military professionals in the field, this presentation aims to educate medical and military personnel about a gadget known as Molar-Mic. At the moment, the device produced by the company Sonitus is in its final tests for implementing the device in the equipment of US Air Force.

**Materials - Methods:** Based on a review of scientific literature and recently developed equipment, we believe that Molar-Mic has the potential to improve communication in all military fields.

**Results:** Over the years, as military technology and regulations have advanced, soldier communication has also undergone substantial evolution. Because military activities are diverse and can involve high stakes, accurate and fast communication between frontline troops is extremely important. Molar-Mic is a special communication tool made especially for law enforcement and military personnel. Bone conduction technology is used by the Molar-Mic to transfer sound. It is made out of a small gadget that attaches to the user's back teeth and transforms audio impulses into vibrations that go around the eardrum and into the inner ear via the skull bones. This provides clear communication while preserving situational awareness by enabling the user to hear sound without obstructing their ear canal. The device allows hands-free use in a variety of settings, including loud or dangerous ones. It is wireless and usually interfaces with other communication devices like radios or cell phones. With no need for visible microphones or additional headphones, this permits users to converse discreetly. Therefore, Molar-Mic is a novel device that paratroopers could employ when free-falling or pilots could use in noisy locations like military aircraft cockpits. Furthermore, when secrecy and quickness are crucial to the mission's success, land troops can likewise employ this technology with effectiveness.

**Conclusion:** In order to enable discrete, hands-free communication through dental prosthesis, Molar-Mic's technology comprises a sophisticated fusion of tiny electronics, bone conduction principles, and signal processing algorithms. We contend that more thorough research is required to develop this gadget, but in tactical scenarios for soldiers and even for combatants who no longer have intact hearing, the benefits this technology offers are valuable.

## OP100

### Battlefield Hemorrhage Control: Tranexamic Acid Use In Military Medicine

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**Aim:** The objective of this study is to evaluate the benefits of early administration of tranexamic acid (TXA) on survival rate, the incidence of vascular occlusive events, and the necessity for blood transfusions in patients experiencing significant hemorrhage following military-related trauma.

**Materials and Methods:** The data presented in this paper are based on a literature review conducted in the international database of "Google Scholar", "PubMed" and the National Library of Medicine. The studies analyzed in this paper are from both the civilian and military medical fields, with a particular focus on trauma-related bleeding management based on the experience of the medical corps in the wars in Iraq and Afghanistan.

**Results:** The majority of fatalities in battlefield conditions are classified as non-survivable. However, around 25% of them are classified as potentially survivable, and nearly all of these are caused by massive hemorrhage. TXA is an effective medication for controlling hemorrhage, particularly when administered within the first hour of the traumatic event. This reduces the mortality rate, postoperative coagulopathy, and the necessity for massive hemotransfusion.

**Conclusions:** The results of the research clearly and unequivocally show that the early administration of TXA to patients with massive bleeding in combat-related trauma is associated with a statistically significant improvement in mortality as well as blood product use. When used according to the latest TCCC protocol, it is beneficial, potentially life-saving, and cost-effective.

**Keywords:** Tranexamic Acid, hemorrhage control, combat-related trauma

## OP101

### Osseointegration In War Veterans

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**Introduction:** Osseointegration has emerged as a transformative approach in prosthetic rehabilitation, particularly for war veterans who have suffered limb loss. This presentation explores the profound impact of osseointegration on restoring functionality and improving the quality of life in this unique patient demographic. With a focus on a case study provided by Dr Munjed Al Muderis, this study highlights the practical outcomes and emotional recovery facilitated by advanced prosthetic technology.

**Methods and Materials:** This study is based on a comprehensive review of existing literature and augmented by a detailed case analysis of a war veteran who underwent the osseointegration procedure under the care of Dr Munjed Al Muderis. The methods include a longitudinal follow-up on prosthetic adaptation, functional mobility assessments, and patient-reported outcomes measures to evaluate the quality-of-life improvements post-procedure.

**Results:** The case study of the war veteran reveals significant improvements in prosthetic functionality and overall mobility, with a marked reduction in prosthetic-related discomfort and complications. The patient reported substantial enhancements in daily living activities and personal well-being, illustrating the life-changing potential of osseointegration for amputees.

**Conclusion:** Osseointegration represents a significant advancement in prosthetic science, particularly for war veterans facing the challenges of limb loss. The collaboration with Dr Munjed Al Muderis not only underscores the clinical success of such interventions but also emphasizes the importance of specialized care in the rehabilitation of veteran populations. This case study serves as a testament to the transformative possibilities of osseointegration, paving the way for broader application and research in this field.

**Keywords:** osseointegration, war veterans, amputee

## OP102

### Atresia Ani Type II with Rectovaginal Fistula in A 2-Month-Old Puppy

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**Aim:** This case study aims to present surgical correction of atresia ani and rectovaginal fistula in a 2-month-old puppy and to report the outcome.

**Material – Method:** A clinical examination revealed atresia ani and the presence of intestinal contents in the vaginal canal. A lateral radiograph was performed following oral administration of a contrast barium, classifying the atresia as Type II. Surgical correction involved an episiotomy to access and ligate the fistula, followed by the separate closure of the vaginal and rectal openings. The blind-ended rectum was then repositioned, incised, and sutured to the anal opening with interrupted sutures.

**Results:** Postoperatively, for 10 days, the puppy required assisted bowel evacuation. However, spontaneous defecation was subsequently achieved, indicating the success of the surgical intervention.

**Conclusions:** This case demonstrates that surgical correction is an effective treatment for atresia ani type II with a rectovaginal fistula. The procedure restored normal bowel function, as evidenced by the puppy's ability to perform spontaneous defecation postoperatively. Accurate anatomical classification of the atresia was important for designing the surgical planning and treatment.

## OP103

### Our Results with The Usage of Faricimab (Vabysmo) In Patients with Wet AMD

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**Aim:** Age-related macular degeneration – AMD affects more than 67 million people around the globe and is a cause of blindness worldwide. Our study shows the first results of the usage of Faricimab (Vabysmo) for the treatment of patients with wet forms of AMD.

**Material and Methods:** A total of 23 patients with a wet form of AMD were enrolled. They were thoroughly examined for VA, color fundus photography, OCT and OCT-A. 10 of them were treatment naïve and 13 patients were switched from Eylea. All were treated in a Treat and Extend manner after the first 4 loading doses.

**Results:** In the first group of treatment naïve patients a quick reduction of the intraretinal fluid was seen. Diminishment of CRT with more than 60 mk was observed even after the first two injections. The RPE detachments were also quickly flattened. In the second group, about 40% of the patients showed quick improvement with a reduction of the CRT of about 100 mk and drying of the macula. However, in about 10%, the change in the macular was not as rapid as in the first group. In less than 2% of the patients with advanced AMD no change after the switch was found.

**Conclusions:** Faricimab (Vabysmo) is effective both in treatment naïve and switched patients with AMD. The inhibition of the two signal pathways in Vabysmo leads to quicker and more effective reduction of intraretinal fluid in the macula and reduces CRT. The drug also has a long-lasting effect which is achieved with less number of applications. In treatment naïve patients the results are quicker than in switch patients. That may be due to the more advanced stage of AMD of the latter.

**Keywords:** wet AMD, Vabysmo (Faricimab), CRT

## OP104

### Epiretinal Membrane Peeling Secondary to Proliferative Vitreoretinopathy in The Left Eye Following Open-Globe Injury

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**Introduction:** Proliferative vitreoretinopathy (PVR) results from the formation of subretinal and epiretinal membranes, which typically occurs after pars plana vitrectomy for retinal detachment or penetrating trauma. The incidence of PVR in patients with open-globe injuries ranges from 40% to 60%.

**Case Report:** An 18-year-old male presented during a follow-up visit with an epiretinal membrane secondary to proliferative vitreoretinopathy (PVR) in the left eye. This condition was associated with an open-globe injury and a previous pars plana vitrectomy performed three months earlier. The patient's surgical history included anterior vitrectomy with repair of prolapsed vitreous and uveal tissue, and attempt of anatomical restoration of the globe on the day of injury. Ten days later another surgery was performed including scleral rupture suturing redo, cataract extraction, irrigation of anterior chamber blood clots, and pars plana vitrectomy with silicon oil tamponade for managing the detached retina.

**Methods:** Epiretinal membrane peeling for proliferative vitreoretinopathy (PVR) was performed. Two valved trocars were inserted at the 10 and 2 o'clock positions, under subconjunctival anaesthesia and obviously without irrigation. Using endoillumination and micro-forceps, the ERM was successfully removed under silicone oil tamponade, which is intended to remain in place indefinitely. There was no SO loss and no need for additional SO injection. Retinal traction was effectively relieved. Two 7.0 vicryl sutures were placed and the trocars were removed.

**Conclusion:** In this case, there is a greater anatomical than functional gain. The peeling of the epiretinal membrane results in the alleviation of traction, which mitigates the risk of potential future retinal detachment, subsequent surgical interventions, and phthisis bulbi.

**Keywords:** open-globe trauma, proliferative vitreoretinopathy, epiretinal membrane peeling

## OP105

### OCT – A Characteristic of Primary Open Angle and Normal Tension Glaucoma

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**Aim:** Optical coherence tomography angiography (OCTA) is a new, noninvasive technology that allows visualization of the retinal peripapillary vessels. The present study aims to present the most important OCT-A findings in patients with POAG and those with normal tension glaucoma.

**Material and Methods:** In our study, 25 patients with POAG and 11 with normal-tension glaucoma and perimetric changes were included. All of them were ophthalmologically examined in detail - vision, perimetry, ST-OCT (Topcon 2000), OCT-A (Cirrius, Zeiss). Changes in peripapillary vessel density (VD), changes in macular vascular network, and peripapillary choroid vascular defects were analyzed in detail.

**Results:** The main OCT-A findings for glaucoma development are the following: changes in the density of the peripapillary vascular network, changes in the macular vascular network, and peripapillary choroidal vascular defects. In the first group of patients with high-pressure POAG, decreased peripapillary vascular density was observed especially in the infero-temporal quadrants. These OCT A changes correlated with reduced RNFL thickness, GCC defects. The presence of choroid vascular defects was a marker of increased risk of disease progression. In 7 of the normal tension glaucoma patients, we observed reduced peripapillary vessel density much like that in the high-pressure glaucoma group ($P<0.025$ for all). In 4 of the patients with normal tension glaucoma, however, no change in peripapillary vessel density was observed.

**Conclusions:** OCT angiography provides detailed information on the microvascular network of the retina and choroid. Our studies show a significant reduction in peripapillary vessel density in glaucoma patients and some of those with normal tension glaucoma. The presence of peripapillary choroid defects is usually a marked sign of rapid glaucoma progression.

**Keywords:** OCT-A, glaucoma, peripapillary vessel density

## OP106

### Management Strategy for Silicone Oil Migration into the Anterior Chamber: A Case Report in a Pseudophakic Patient

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**Purpose:** To describe a technique for managing the migration of silicone oil (SO) into the anterior chamber (AC) in a pseudophakic eye.

**Case Presentation:** A 52-year-old male with a history of retinal detachment surgeries developed a long-term silicone oil (SO) bubble in the anterior chamber (AC), resulting in central corneal decompensation. To address this, a surgical procedure was performed to remove the SO bubble using an ophthalmic viscoelastic device (OVD) under topical anaesthesia. The AC was progressively filled with OVD through the main incision purposing to direct the SO bubble towards the main incision and simultaneously gentle pressure was applied to the posterior lip of the section to facilitate the displacement of the SO bubble through it.

**Conclusions:** The management of silicone oil (SO) migration into the anterior chamber (AC) presents a significant challenge in patients with a history of retinal detachment surgeries. This intervention aimed to restore corneal clarity and improve visual outcomes while mitigating the risk of retinal re-detachment associated with complete or even incomplete SO removal in the case of an AC irrigation attempt using balance salt solution. Further studies may be warranted to assess the long-term efficacy and safety of this technique.

**Keywords:** silicon oil tamponade, anterior chamber washout, retinal detachment

## OP107

### Preoperative Preparation of Patients: The Impact of Following the Recommended Steps in Prevention of Hospital Acquired Infections

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According to the international guidelines in place, the preoperative preparation of patients requires the application of a standard, mathematical protocol, the usefulness of which is demonstrated by the existing data in the specialized literature: the decrease in the number of surgical site infections from 45% to 8% and the rate of nosocomial infections with 37%.

The stages of preoperative preparation aim at: patient screening regarding colonization with multiresistant bacteria, decolonization, the immediate preoperative phase, intraoperative and postoperative approach.

Each phase includes measures related to the patient, the medical staff, the hospital environment and antibiotic prophylaxis, each of these steps being extremely well established.

The introduction of this preoperative preparation algorithm in the current procedures of surgical-specific hospitals, accompanied by check-in lists, leads to a safer surgical act for the patients, but equally for the medical staff.

It should also be mentioned that this protocol does not involve additional costs or investments for the hospital.

## OP108

### Surveillance Of Nosocomial Infections at University Trauma Hospital and Military Medical Unit, Tirana

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2 Laboratory Network

**Objective:** Nosocomial infections are significant problems as public health issues which need attention. 1-Determination of the prevalence of hospital infections in UTH. 2-Identification of the etiology of nosocomial infections in this hospital. The etiology of HAI is based on the source or type of infection and the responsible pathogen, which may be bacterial, viral, or fungal.

**Methods and Materials:** The study is designed as a prevalence study. Surveillance involves the collection, interpretation, and analysis of HAI data. The study was conducted during the period of March – August 2024, included: Surgery Clinics, Neurosurgery Clinic, Intensive Care Unit, etc. We prepared a schedule that includes all patients resulted positive with HAI, which has changed from one ward to another.

**Results:** It was analyzed a total of 63 cases resulted positive with HAI. The prevalence of HAI based on each ward was: Intensive Care Unit 23.8%; Internal disease Clinics 22.2%; Neurosurgery Clinic 20.6%; Orthopedic Clinics 14.2%; Constructive Surgery 14.2% and Surgery Clinics4.7%. Types of HAI are as follows: - Surgical site infections 42.5%; Urinary tract infections 41.4%; Bloodstream infections approximately 9.5% and other types related with throat infections, etc. The most common pathogens that cause the nosocomial infections are Acinetobacter baumannii, Staphylococcus aureus, Pseudomonas aeruginosa, Klebsiella pneumoniae, Escherichia coli, Proteus mirabilis, Enterococcus species and Enterobacter species.

**Conclusions:** The results of the prevalence of nosocomial infections at the UTH indicate the need of the daily infection control professionals work closely with patients in the wards. Reliable HAI detection, analysis and feedback are essential elements in optimizing HAI prevention and control.

## OP109

### Laboratory Findings in Osteoarthritis, How Does Biochemistry and Biomechanics Influence Disease's Progression

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**Objective:** The main objective is to monitor inflammation tests in primary osteoarthritis at a given point in time and independent of other metabolic factors that may interfere with inflammation.

**Materials and methods:** This analysis includes the identification and examination of inflammation tests in patients with primary OA. The realization of the study began with the formulation of the research question, the review of the literature related to the field of study, data collection, data analysis, and finally the generation of results and conclusions. Through qualitative and quantitative techniques, the presentation of the impact of factors such as age, gender, inflammation tests, and comorbidities on the morbidity of primary OA has been carried out. To present the results and provide a clearer visual explanation, tables and graphs have been used. In this study, the inductive method was employed, where from specific cases taken for study, referring to a particular place and time period, general conclusions are drawn that may be applicable in future analyses of the same field.

**Results:** The predominant gender among patients diagnosed with osteoarthritis is female. The majority of patients diagnosed with osteoarthritis suffer from one or more comorbidities. The most frequently encountered comorbidity in osteoarthritis patients is diabetes mellitus (DM). The most common type of osteoarthritis is gonarthrosis (knee osteoarthritis).The average value of the PCR variable (C-reactive protein) falls within the range [8;10] mg/L.The average value of the uric acid variable is 7 mg/dL.The average value of the HbA1c variable is 6.2 mmol/mol. The average value of the cholesterol variable falls within the range [0;200] mg/dL. The average value of the ESR variable (erythrocyte sedimentation rate) is 30 mm/h.

**Conclusion:** The results suggest a measurable increase in inflammation in primary osteoarthritis stage II, excluding patients with accompanying metabolic conditions.

## OP110

### Research On the Radioprotective Activity of Trimethylglycine (Betaine) And N-Acetyl-L-Cysteine in Cellular Models, Against the Development of Acute Radiation Syndrome (Ars) Or Chronic Radiation Injuries (Stochastic Effects)

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**Aim:** Radiation exposure can cause harmful damage to biological systems, leading to acute radiation syndrome or chronic radiation injuries. The natural amino acids Trimethylglycine (TMG, betaine) and N-Acetyl-L-Cysteine (NAC) have shown radioprotective potential due to their biochemical properties. Betaine acts primarily as a methyl donor in cellular metabolism. Its ability to stabilize cellular structures and reduce oxidative stress determines its radioprotector potential. NAC is a well-known antioxidant and a precursor to glutathione. It has anti-inflammatory features and reduces radiation-induced oxidative damage and subsequent inflammation. The combination of betaine and NAC could have a synergetic effect due to their complementary mechanisms of action. The current study aims to analyze the radioprotective potential of both amino acids, applied in-vitro, separately or in combination, 8 hours before the irradiation with 1 Gy absorbed dose.

**Materials and Methods:** Dicentric chromosomal assay (DCA, biomarkers for radiation exposure) and cytokinesis-block micronucleus assay (CBMN) have been used. The second assay is a good method to confirm the results obtained by the DCA. CBMN cannot be used as a single-use method, because it is not specified for radiation injuries.

**Results:** There was a significant decrease in the dicentric chromosome formation, compared to irradiated controls. The reduction is in the following order: trimethylglycine – N-acetyl-L-cysteine – combined action.

**Conclusions:** The study confirms the potential of natural amino acids to reduce oxidative stress, protect DNA, and prevent inflammation, making them suitable as effective radioprotectors.

**Keywords:** radioprotectors, Trimethylglycine (TMG, betaine), N-Acetyl-L-Cysteine (NAC), synergetic effect, Dicentric chromosomal assay (DCA), Cytokinesis-block micronucleus assay (CBMN)

## OP111

### γ-HYDROXYBUTYRATE: New Drug, New Clinical and Analytical Challenges

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ɣ-Hydroxybutyric acid (GHB) is a drug that has become popular lately because of its euphoric, relaxing and sociability effects. It's endogenous neurotransmitter and precursor of GABA so it acts on specific GHB-binding sites and GABA receptors. Illicit use of GHB is often associated with coma, seizures, death and drug-facilitated sexual assault. Clinical symptoms with low doses have amnestic and sedative effects, while higher doses result in bradycardia, respiratory depression and coma. Urine testing for GHB is not routinely available and concurrent use with alcohol complicates diagnosis of intoxication. The aim of this study is to present toxic effects of GHB and its analytical confirmation in urine.

In Poison Control Centre Serbia in 2023, 12 cases of GHB intoxication were registered. Clinical picture was presented as a coma, followed by an abrupt awakening during hospitalization. CNS findings also included amnesia. It was often difficult to diagnose GHB abuse. Clues included empty dark dropper bottles, attendance at a party or nightclub, or possible sexual assault. We developed a new analytical method of liquid chromatography with tandem mass spectrometry (LC-MS/MS) for detection of GHB in urine after solid-phase extraction. GHB was identified on the basis of the characteristic mass ions m/z 105, 87 and 45. Interpretation of possitive results was done according to literature data about endogenous GHB concentration. GHB poisonings are not common, but they can have severe clinical picture. Diagnosis is often complicated and applying of LC-MS/MS method in analysis of urine makes it easier.

**Keywords:** GHB, coma, diagnosis, urine, LC-MS/MS

## OP112

### Corrosive Ingestion in Childhood Is a Serious Problem

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**Objective:** Corrosive ingestion is an important health problem since it causes morbidity and mortality in childhood. Depending on the corrosive substance, chemical burns occur on the mucosa. Stricture of the esophagus burns are the most serious complications.

**Materials-Methods:** The records of patients who were hospitalized and treated for corrosive ingestion between 2018 and 2020 were retrospectively analyzed. Patient data were analyzed in terms of age, gender, symptoms, and findings at the time of admission, substances ingested, surgical findings, duration of hospitalization, and the need for expansion due to esophageal stenosis.

**Results:** There were 42 cases; 17 girls (40%) and 25 boys (60%). The mean age was 3.9 (10 mo-17 y). Esophagoscopy was performed in 27 of 42 patients (64%); other patients were followed conservatively. Duration of hospitalization was 1 to 7 days (average 2 d). In the follow-up of 42 patients, esophageal contrasted fluoroscopy was done in 18 of them with suspicion of stenosis. Stenosis was detected and esophageal dilatation was performed under general anesthesia in 2 children (4.7 %).

**Conclusion:** Although many legal regulations have currently been introduced into the use of corrosive substance, exposure to corrosive substances still occur. Despite the scientific progresses today, there are still no very effective techniques and methods in the treatment of these children. Because of that, it is more important to emphasize preventive healthcare and prevent accidents rather than therapeutic medicine.

## OP113

### Biological Approach in Management of Critical Size Bone Defects in Long Bones

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**Aim:** Despite the advances in regenerative medicine, managing critical-sized bone defects remains controversial and a serious challenge. The optimal clinical approach requires a precise bone and soft tissue loss management decision. The aim is to present our experience with handling critical-size bone defects using the principles of the diamond concept.

**Material and Methods:** The series includes 31 patients with critical-sized bone defects. There are 29 men and 2 women aged between 24 and 67. The defect is assessed on the preoperative ex-ray or during the debridement. The involved bone is the tibia in 16 cases, radius in 2 patients, femur in 7, ulna in 4, and humerus in 2. The bone defects were a result of trauma, nonunion, and infection. A staged surgical approach was used in 26 cases - debridement and implantation of Spacer with subsequent bone grafting. In 5 cases the defect was treated in one stage. The used grafts include non-ABG and composite bone substitutes.

**Results:** The follow-up period was between 12 and 48 months. Healing was achieved in 100% of the cases for 6-14 months. There were no cases of infection reoccurrence. Excellent osteointegration of the substitutes and subsequent bone regeneration were noted in all cases.

**Conclusion:** Critical-sized bone defects require an individual approach. Before choosing the optimal surgery approach, an accurate assessment of the local soft tissue status, comorbidities, and defect size should be performed.

## OP114

### The Shift from Early Total Care to Damage Control Orthopedics (DCO)

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**Aim:** The management of polytraumatized orthopedic patients remains a challenging issue. In recent years many efforts have been made to develop rescue techniques and to promote guidelines for the management of these patients. Currently, controversies persist between two orthopedic approaches: Early Total Care and Damage Control Orthopedics.

**Material and Methods:** Conventional orthopedic wisdom dictates that multiple long bone fractures should be treated as early and efficiently as possible through definitive fracture fixation. This approach was called Early Total Care (ETC) and was widely adopted during the 80s until the early 90s. It involved aggressively establishing early fracture stabilization either through intramedullary nailing or plating within the first 24 hours. The goal of ETC was to aid nursing care, reduce pulmonary complications, and hasten patient recovery. Advancements in the early 90s would allow for a deeper understanding of the pathophysiology of multiply-injured patients. Polytrauma produces a systemic inflammatory response syndrome (SIRS), which is balanced by a counter-regulatory anti-inflammatory response (CARS). The inflammatory response following trauma may trigger an excessive CARS, leading to adult respiratory distress syndrome (ARDS) or multi-organ dysfunction syndrome (MODS).

**Results:** The complexity of polytrauma cases entails a multi-disciplinary approach. Following advanced trauma life support protocols, general surgeons of the receiving trauma team make the initial assessment and deliver timely resuscitation. Life-threatening conditions are addressed first while associated orthopedic injuries must be properly documented and assessed. After a comprehensive investigation of clinical parameters, laboratory, and radiographic work-up, and close coordination with orthopedics and other specialists, the trauma team will need to make the quick distinction of whether early total care or damage control approach is the appropriate treatment option for orthopedic injuries.

**Conclusions:** The ETC and DCO approaches are both routinely employed in the management of polytrauma patients with orthopedic injuries. The majority of patients are likely to benefit from ETC but some patients are best managed using the DCO principle.

**Keywords:** Damage control, early total care, orthopedic trauma

## OP115

### From Frontline to Healthline: Eyetracking Software for Remote Health Monitoring in the Armed Forces

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**Aim:** To present an innovative telemedicine system integrating eye tracking and virtual reality (VR) technology for remote diagnosis and health monitoring, tailored to the needs of the Armed Forces.

**Materials and Methods:** The KORI system combines a VR headset, a smartphone application, and specialized eye-tracking algorithms. It was tested on 7 children using specially designed examination videos. The data were meticulously analyzed by two independent researchers to ensure consistency and accuracy, and the results were cross-validated against diagnoses provided by specialized ophthalmologists to establish reliability and clinical relevance.

**Results:** The system demonstrated high accuracy, with its diagnostic outputs closely aligning with traditional ophthalmological evaluations. This comparability underscores the system's potential to replicate conventional diagnostic methods in remote or resource-limited settings. Additionally, feedback from clinical users indicated areas for potential refinement, such as enhancing the user interface and expanding the database of diagnostic patterns.

**Conclusions:** This technology can provide a reliable and innovative solution for enhancing healthcare support in the Armed Forces. Its ability to deliver accurate and comparable results to traditional methods highlights its applicability in remote and austere environments. However, continued research and development are necessary to further optimize its functionality, improve user experience, and expand its diagnostic capabilities to meet a wider range of clinical requirements.

## OP116

### Machine Learning Algorithms for Prediction of Mortality in High Kinetic Energy Trauma

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**Objective:** High kinetic energy trauma (HKET) caused by explosives is one of the most difficult groups to manage among all traumas and has a very high mortality rate. Our aim is to estimate the mortality rate in these patients using machine learning (ML).

**Materials and Methods:** Patients treated for HKET in our hospital were retrospectively examined and 257 patients were included in the study. The effects of variables such as trauma scoring systems, blood tests, catheterization, microbiological examination results and hospital stay on mortality were evaluated using ML methods. SHAP values of the features were evaluated and one of the feature pairs with a correlation coefficient above 0.8 was removed from the data pool. Training-Test groups were separated as 80-20%. Support Vector Machine, K-Nearest Neighbors and Ensemble Learning algorithms were used to classify the features.

**Results:** 97% accuracy was achieved in mortality prediction with ML. The most predictive features are Injury Severity Score (ISS), New ISS, positive blood culture, chest tube, urinary catheter and central venous catheter placement status.

**Conclusion:** This ongoing study is one of the largest series on HKET due to explosives and is the first study to estimate mortality with ML in this patient group. It is seen that prognosis can be predicted with high accuracy by using ML methods using a limited number of parameters in HKET cases.

## OP117

### Vascular Trauma in Parachuting Mishap – Case Report

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**Objective:** This study aims to present a case of upper limb vascular injuries resulting from a parachuting accident, highlighting the rarity of such events and emphasizing the importance of prompt medical intervention in preserving limb function.

**Material and Methods**: Injuries occurring during parachuting are uncommon, with vascular injuries being particularly scarce (≤0.032%). A scenario involving a collision between two soldiers during a parachuting exercise led to one soldier exhibiting a bruise in the right cubital fossa. Subsequently, a 37-year-old military individual presented at the Emergency Department with symptoms including a hematoma, absence of distal pulse, pallor, pain, and edema in the right cubital fossa one-hour post-incident.

**Results:** Clinical suspicion of acute upper limb ischemia prompted diagnostic imaging studies, including ultrasound and angiography. Imaging findings revealed vascular abnormalities such as flow disruptions, double lumen configuration, intramural thrombus within a hematoma, and narrowing of the vascular lumen. Emergency surgical intervention involved resection of the injured portion of the right brachial artery, subsequent replacement with a vein graft (cephalic vein), and repair of a lesion at the basilar vein level, resulting in restoration of limb perfusion. Comprehensive postoperative care and rehabilitation led to complete recovery after a six-week course of physical therapy.

**Conclusions:** Early diagnosis and prompt surgical intervention are critical in preventing irreversible damage and achieving successful limb preservation in cases of traumatic vascular injuries. Additionally, structured postoperative rehabilitation plays a key role in ensuring optimal functional outcomes and the successful reintegration of the individual into active duty.

**Keywords:** Vascular injury, parachuting, arterial dissection

## OP118

### Left Groin Hernia with Intraoperatively Diagnosed Spigelian Hernia - What to Do in Case of Synchronous Occult Hernia

***MAJ Daniel STEFANOV***, *Tsvetelina PAICHEVA, LTC Assoc. Prof. Georgi POPIVANOV, PhD, Prof. Kirien KJOSSEV, PhD, COL Assoc. Prof. Plamen IVANOV, PhD, GEN-MAJ Prof. Ventsislav MUTAFCHIYSKI, PhD, DSc, FACS*

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Inguinal hernia is one of the most performed surgeries worldwide with more than 20 million operations annually. On the contrary, Spigelian hernia is a very rare primary ventral hernia with non-specific signs and symptoms and up to 2 % incidence per year worldwide. The laparoscopic hernia surgery allows for the detection of occult hernia in approximately 15 % of all surgeries (an asymptomatic hernia not detectable by physical examination). Despite the growing experience, there is no uniform agreement regarding the treatment strategy in these cases.

We present a 74-year-old male with complaints of bulging in the left groin area. On the physical exam, a reducible hernia was found. The CT finding was unremarkable. During the laparoscopy, however, indirect inguinal and ipsilateral Spigelian hernias with a size of 3x3 cm were found. Both hernias were repaired. The patient had an uneventful recovery and was discharged the next day.

There is no consensus among surgeons on what to do in case of an occult hernia. This is left at the discretion of the operating surgeon and the patient after giving sufficient and appropriate information.

**Keywords:** groin hernia, incidental finding, occult hernia

## OP119

### Changing Of Leading Microbiological Causers of Peritonitis in Patients on Peritoneal Dialysis with Impact on Treatment Outcomes - Own Experience

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2 Institute for microbiology, Military Medical Academy, Belgrade

**Objective:** Despite all established preventive measures peritonitis is still main complication in peritoneal dialysis.

**Material and Methods:** Medical records of PD peritonitis patients in Military Medical Academy between 2001. to 2010. and 2017.-2022. were reviewed.

**Results:** During the period 2001- 2010, there were 123 peritonitis episodes in 156 patients with incidence of 1 episode /29,91 patient months. Single Gram-positive organisms were isolated in 65,02 %, Gram negatives in 17,01%, polymicrobial forms in 3,25% and there were 13,09% sterile episodes. Coagulase-negative staphylococcus (CoNS) was the most common causer accounting for 41,46% of all peritonitis episodes (51/123), Staphylococcus aureus induced 7,32% cases and there was 1 episode of fungal peritonitis (1,63%). A total of 15 patients (12,19%) required transfer to hemodialysis with 3 peritonitis - related deaths (2,44%). In last 6 years we diagnosed 39 episodes of peritonitis in 32 patients with incidence of 0,20 pt/episodes/year, with increasing of proportion of Gram negative (28%), fungal (7,69%) and Staphylococcus aureus related episodes who became leading causer in 23,09% of total episodes. We verified reducing in CoNS (17,95%) and sterile forms (10,25%), also there were not polymicrobial forms. In this period, we transferred 6 patients (15,38%) on hemodialysis with 2 lethal outcomes (5,12%).

**Conclusion:** Decreasing rate of CoNS and culture negative peritonitis during last 6 years is confirmation of well conducted training our patients. On the other hand, increased rate of severe forms with unfavorable outcomes in definitely reduced population of patients demands better strategy in future selection and much more serious prevention in our patients.

**Keywords:** peritonitis, dialysis, outcomes

## OP120

### Transfusion Therapy in Non-Identical, ABO - Compatible Liver Transplantation

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2 First Clinic of Abdominal Surgery, MMA – Sofia

**Aim:** To identify the challenges faced by transfusion medicine in ABO -compatible non-identical liver transplantation.

**Materials and Methods:** A brief analysis of a 41-year-old patient who underwent liver transplantation from a non-identical but blood group-compatible donor. Standard gel technique with the IH-1000 apparatus was used for immunohematological tests and compatibility assays.

**Results:** The case involves a patient with decompensated liver cirrhosis. Upon inclusion on the transplant list, standard immunohematological tests were conducted, and the patient's blood type was identified as A1+/pos. The transplanted liver was from a donor with blood type O+/pos. Along with the transplanted liver, immunocompetent B-lymphocytes passively enter the recipient, producing antibodies against the recipient's erythrocyte antigens. This leads to subsequent hemolysis involving the complement system, known as passenger lymphocyte syndrome (PLS). To avoid this complication, a preoperative infusion of one vial of rituximab was administered. In the postoperative period, there were no clinical or laboratory indications of hemolysis.

**Conclusion:** The greatest challenge in non-identical but ABO-compatible liver transplantation is PLS, which can lead to hemolytic anemia of varying severity. In this case, we observed a normal postoperative period without serological complications.

**Keywords:** transfusion, transplantation, non–identical, PLS, hemolysis

## OP121

### Nursing Care in External Fixator Applications in Gunshot Injuries

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1 University Trauma Hospital
2 Health Inspectorate, Ministry of Defense
3 Military Medical Unit

**Purpose:** The purpose of this study is to analyze the use of temporary external fixation in the management of gunshot extremity injuries.

**Methodology:** In the period from January 2016 to June 2023, 49 patients with firearm injuries were treated. The basic treatment of the fractures was their immobilization with an external fixator. Complementary treatment has been the treatment of wounds and the application of general therapy.

**Discussions:** The External Fixator creates optimal conditions for the continuation of local and general treatment. Removal of necrotic tissue from complicated wounds. It allows space for the application of plastic surgical interventions. Fixes the fracture definitively, away from its area. It can be used in infected osteosynthesis as a continuation treatment.

**Conclusions:** Opened Fractures by firearms have also increased in Albania, and in their treatment, which is complex, nursing cooperation is also required. It is very necessary to acquire the application of the extern fixator as the optimal possible treatment in these cases. The role of the nurse in the management of post-operative situations, taking care of the general condition, of the wounds, the condition of the fixator spears, as well as the follow-up of the injured, is absolutely necessary.

**Recommendations:** Applying the external fixator to gunshot wounds and fractures is an optimal solution that provides immobilization at the fracture site by applying the means of fixation away from it and ensuring a stable osteosynthesis.

## OP122

### Colorectal Cancer Prevention in Family Doctors' Offices within the Integrated Clinical Outpatient Department through the Detection of Occult Blood in Stool

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Colorectal cancer is one of the most common forms of cancer found in both men and women, and its incidence is on the rise. The main risk factors include age, a diet high in red meat and low in fiber, sedentary lifestyle, and obesity. To prevent the occurrence of this pathology, one of the primary prevention methods is screening. This is an essential process for the early detection of precancerous changes or colorectal cancer in its early stages, before symptoms appear. Early detection through screening can significantly increase the chances of effective treatment and survival.

Thus, at the Central Military Emergency University Hospital, within the family doctors' offices in the Integrated Clinical Outpatient Department, in collaboration with specialized gastroenterologists, a two-year screening program was conducted during 2022-2023. This program was based on the test for detecting occult blood in stool (fecal immunochemical test - FIT). Patients who tested positive were referred for a colonoscopy in the Digestive Endoscopy Laboratory of the hospital. Approximately 6000 patients participated in the screening program carried out by the family doctors in the Integrated Clinical Outpatient Department, benefiting from the FIT test or colonoscopy.

The patients' engagement and interest in undergoing screening demonstrated the importance and their concern for prevention, especially among those at risk. This indicates the potential impact of implementing a national screening program through the Ministry of Health.

## OP123

### The Role of Physician Assistants in Role 2 HKIA: A Personal Reflection

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**Objective:** The primary objective of this study is to elucidate the contributions of the physician assistant within the context of personal experiences at the ROLE 2 Hospital HKIA, Afghanistan.

**Materials and Methods:** This study presents the author's first-hand experiences acquired at the ROLE 2 HKIA facility during the deployment period spanning from August 2021 to March 2022. The author encountered and managed patients with polytrauma, gunshot wounds, IED injuries, as well as cases of SARS-CoV-2 infection.

**Results:** Upon assuming responsibilities at the facility, the author initially served as a Trauma Team Leader (TTL) in the T3 Bay 8 area. Seeking to broaden their expertise, the author also worked in the Intensive Care Unit (ICU) and Surgical Department before ultimately becoming part of the Surgical Team at T1, Bay 1. Additionally, the author participated in an experiential exchange at the Role 3 facility in Bagram, where involvement in Surgical Team and ICU took place. Simulation-based medical training activities, such as cardiopulmonary resuscitation (CPR), venous catheterization, thoracic drainage, emergency thoracotomy, and Extended Focused Assessment with Sonography for Trauma (E-FAST), were also conducted regularly.

**Conclusions:** The author posits that the acquired experiences during the mission have broadened their understanding of military-related pathologies and enhanced their appreciation for the collaborative efforts among diverse nationalities and medical professionals. Furthermore, the author emphasizes the crucial role played by each individual within a field hospital setting, underscoring the indispensable nature of every team member for the effective functioning of the medical facility.

**Keywords:** HKIA, Role 2, physician assistant, trauma team

OP124

## The Effects Of "Military/Weapon Originated Noise" On Female/Pregnant Personnel

*COL KARASAHIN Kazim Emre, MD*

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**Objective:** An overlooked problem is the noise exposure in military environment, in action or in training. Explosive materials produce high decibels of sound. Exposure is usually repetitive. Since sound waves have energy, they have impact on tissues. Female military personnel may be exposed to loud noises during training. Ear protection is already indicated and necessary, but the exposure of a pregnancy to military sound environment is not studied. In this presentation, the sound's effects on women in a military setting are evaluated.

**Material - Method:** A research in military / medical literature was made and a review of the literature is assessed. Large information about weapon loudness levels and possible effects on human health is present in the scientific & military literature, however, there are no clear data on pregnant women's exposure to gunshot or explosive sounds. This information may be needed in the future.

**Results:** One of the outcomes of environmental sound exposure in pregnant women is reported to be preterm labor and delivery. It is also possible that female reproductive system is affected by environmental sound, which may be critical in military scenarios which often includes repetitive/explosive and loud-high decibel-sounds.

**Conclusion:** Stressing the importance of noise protection for military personnel in conflicts and in training is well known, but it may be even more important especially for pregnant female military personnel actively using any firearm or prone to be exposed to explosion sounds. The effect of environmental noise on female reproductive system is yet to be explored.

## OP125

### Therapeutic Potential of Zygomatic Implants in The Framework of Graftless Compensation of Extensive Bony Traumatic Defects in The Lateral Maxillary Region. A Retrospective Study with A Follow-Up Period of 7 Years

*SEN. CPT DJURAN Boris, Oral Surgeon*

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Zygomatic implants within the so-called graftless-restoration technique are attracting attention and are becoming an increasingly common method of choice for compensation in atrophic maxilla and extensive of traumatic defects in the region of the lateral maxilla due to the significantly lower cost of therapy, relatively low rate of post-surgical implant morbidity and late complications.

**Objective:** Retrospective monitoring of the success of zygomatic implants and the occurrence of associated complications over a period of 7 years.

**Material and Method:** The success of zygomatic implants was evaluated in 42 patients and 75 implants placed during a follow-up period of 7 years. The implanted implants were (JD Dental care, Sin implants Brazil, Noris medical Israel) with dimensions from 40mm to 57.5mm. The success parameters of the implants were evaluated, which were expressed as complete success or failure, while the rate of occurrence of possible complications was monitored.

**Results:** The group included 42 patients, 15 women, 27 men, aged from 45 to 70 with an average age of 53. The most frequent indications for compensation were: post-extraction atrophy of the alveolar ridge 70%, failed auricular implants 15%, malignancies 2%, chronic sinusitis 5%, trauma 5%, iatrogenic defects 3%. The success rate of implant integration was 100%. Early complications were present in 7% of patients in the form of swelling.

**Conclusion:** Zygomatic implants show a good therapeutic potential for compensating extensive bony traumatic defects in the lateral region of the maxilla with clear advantages compared to standard grafting techniques, but they also show certain limitations that should be considered when planning therapy and choosing a technique for compensating in this region.

**Keywords:** Zygomatic implants, traumatic defects, atrophic maxilla defects, therapeutic potential

## OP126

### Effects Of Menstrual Cycle and Related Problems on Female Military Personnel: Facts and Possible Solutions

*ULUCAY Bensu, KARASAHIN Kazim Emre MD*

University of Health Sciences, Gulhane Medical Faculty, Dept of Obstetrics and Gynecology, Ankara, TURKIYE

**Objective:** Menstrual cycle and its irregularities are important health issues of women in military. Women are taking part in armed forces in increasing numbers, comprising nearly one-fifth of the total personnel in the U.S. Military. In order to improve duty efficiency, it seems wise and essential to understand the effect of menstruation on female military personnel.

**Material - Method:** A literature search in the last 10 years was made to reveal data on the menstrual issues of female military personnel, in order to explore the extent of the problem.

**Results:** In the literature, issues like “menstrual pattern changes due to military training”, “possible effects of suppressing menses on military performance”, “inconveniences associated with menses during training and conflicts”, “the lack of privacy in military settings for menstrual hygiene practices”, were discussed, and all these issues were found to be worthy of attention for better duty performance.

**Conclusion:** Active military duty females encounter certain menstrual challenges that cause not only physiological but also logistical burdens and thus might impact readiness. The stress caused by military training may affect menstrual patterns and symptoms, and menstrual management and hygiene may be limited by accessible facilities in military conditions. Measures like suppressing or regulating menses may be considered as wise and cost-efficient measures.

## OP127

### Reconstruction Of Orofacial Defects Of Different Etiology Using Dental Implants

*LTC Prof. Zoran TATIC, Oral Surgeon*

Clinic for Dentistry, Military Medical Academy, University of Defense, Belgrade, Serbia

**Purpose/Aim:** The aim of this presentation is to show the rehabilitation of patientes with congenital,postraumatic and postresectional jaw defects and with severe bone atrophy.

**Materials and Methods:** Dental implants have created the possibility for a reliable basis for therapy with fixedand mobile dentures, and reconstrutive pre-prosthetic surgery. The main goal is to provide satisfactoryosseous and soft tissue support for prostheses, has shifted towards the provision of enough bone tissuewhich would enable implant placement in the most optimal position from the prosthetic point of view.

**Results and Conclusion:** Well planned prosthetic, periodontal and surgical therapy can result insatisfactory function and aesthetics, and reduce the maxillofacial deformity. Implant treatment is a safeprocedure and it has many advantages over classical prosthetic therapy solutions.

**Keywords:** craniofacial defects, osseous tissue support, soft tissue support

## OP128

### Tranexamic Acid in Emergency Care

*CPT Theodoros PAPAMICHALIS, MD[1], CPT Cornilia TANOU, MD[1], Eleni TSIOURI[1], Andreas SOURLAS[1], Theodoros FAFOUTIS[1], Nikolaos TZORAS[1,2], COL Eleni MOSTRATOU, MD, PhD[1]*

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**Aim:** Hemorrhage is related to very high mortality rates both in military and civilian practice. In fact, a significant number of patients die before or in the first hour after they reach hospital.

**Material-Method:** Tranexamic acid (TXA), an antifibrinolytic lysine analogue, has been discovered by Utako Okamoto. It can reduce bleeding in traumatic injuries and it is used for preoperative prophylaxis against anticipated major blood loss, for operations that confer a high risk of bleeding, such as orthopedic procedures including hip and knee replacement and spine surgery. The administration of tranexamic acid (TXA) has been researched in multiple bleeding conditions, such as trauma and post-partum hemorrhage.

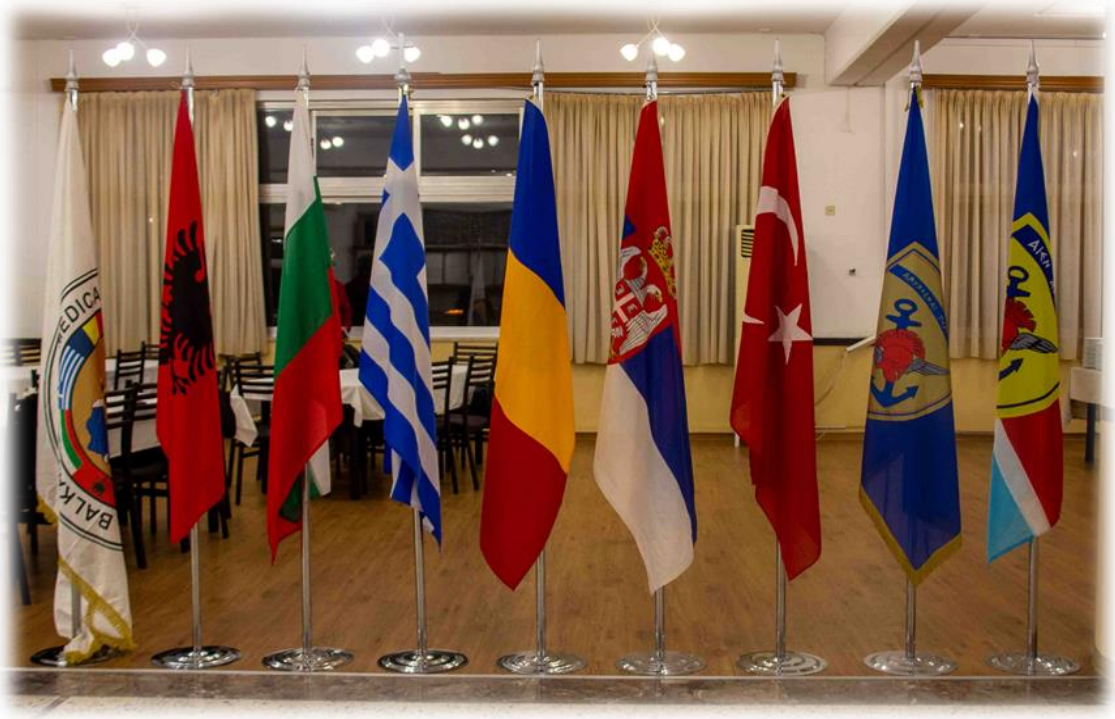
**Results:** Clinical Randomization of an Antifibrinolytic in Significant Hemorrhage 2 (CRASH-2) study shows a 11% reduced risk of death for general trauma patients having received TXA in less than 3 hours of hemorrhage onset, compared to those administered TXA at more than 3 hours. There is no evidence of increased vascular occlusive events. Dosing: 1 g IV over 10 min, then infusion of 1 g over 8 h. (CRASH-3) trial on traumatic brain injury, indicated that early treatment was significantly more effective for patients with mild and moderate head injuries than later treatment.

**Conclusions:** Administering TXA in the out-of-hospital setting is associated with reduced mortality compared to in hospital administration, suggesting that early administration of TXA, preferably before hospital arrival, may be advisable. Integrating TXA into trauma care protocols for early control of hemorrhage, has the potential to save lives for severely injured combat casualties.

26th BALKAN Military Medical Committee CONGRESS

HELLENIC NATIONAL DEFENCE GENERAL STAFF MEDICAL DIRECTORATE

Natural Disasters and Military Medical Support



# 26th BMMC CONGRESS

**29 November – 01 December 2024**
**MAKEDONIA PALACE HOTEL**
**Thessaloniki, GREECE**

## POSTER PRESENTATIONS (PP)

## PP01

### The Need To Optimize The Role Of The Pharmacist In Disasters Medical Support

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Department Disaster Medicine, Military Medical Academy, Sofia, Bulgaria

**Aim:** The increase of disasters worldwide challenges the health systems. One of the most important issues for dealing with disasters is the medical provision of the population and the shortage of personnel, which is particularly noticeable in Bulgaria. Pharmacists are a hidden reserve of the system. Relatively easily accessible to the population, in an accident they can take over some survivors and the slightly injured, relieving the health care system. Pharmaceutical supply describes the logistics of providing drugs to large numbers of patients. Pharmacists can coordinate disaster processes to eliminate duplicative therapies on emergency formularies, streamline documentation, and apply their expertise.

**Materials and Methods:** A review of the available scientific literature, official documents and interaction agreements was performed.

**Results:** Pharmacists perform activities and roles to manage outcomes during disasters.

**Conclusion:** Effective medical response to a disaster depends on the careful allocation of resources. By characterizing the roles of pharmacists, they will be optimally utilized to tailor an effective medical response.

**Keywords:** pharmacist, medical insurance, disasters

## PP02

### Analysis Of Patients Treated Of General Hospital For Active Treatment-Sofia Of The Military Medical Academy For The Year 2023

*Chief Assist. ALEXANDROV Alexander, PhD, Chief Assist. ALEXIEVA Ivanka, PhD, COL Assoc. Prof. POPIVANOV Ivan, PhD*

Department Military Medicine, Military Medical Academy, Sofia, Bulgaria

**Aim:** To make an analysis of the medical activity of the Medical Center-Sofia at the Military Medical Academy (MMA) in 2023. in terms of the amount of treated patients in the hospital and the workload of the individual clinics, making a comparison with the data for the previous years and drawing the necessary conclusions about the activity achieved and the development prospects for the next few years.

**Materials and Methods:** Data from the annual analysis of the state of the quality of hospital care in the Medical Center Sofia of the Medical Academy of Medical Sciences for 2022 and 2023 were used and were compared with the data for the previous years, with special attention being paid to the previous year 2022.

**Results:** There is a recovery of the quantitative indicators in terms of the number of treated patients, reaching the pre-epidemic levels of 2019. More than 75% of the clinics have an increase in the number of treated patients compared to the previous year 2022, while for the remaining 25% the decrease is insignificant.

**Conclusion:** This recovery is extremely important, because the quantitative indicators/number of treated patients, number of patients passed through the clinical paths/ report the activity of the hospital and they determine the success of the medical institution in the market of medical services, the role and place of the hospital in the system of national health care.

**Keywords:** number of transferred patients, change in the workload of the clinics, treated patients by clinic

**PP03**

## Wartime Usage of Psychoactive Substances for Enhancing Effectiveness During Combat Operations

*SD SFC BĂCANU Georgiana, SD MSG Vlad CONTESI, Assoc. Prof. COL TUDOSIE Mihail-Silviu, MD, PhD*

Institute of Military Medicine, Bucharest, Romania

**Objective:** This presentation's aim is to raise awareness about the endemic use of psychoactive substances in wartime, to analyse dangerous operational, social and economic by-products of it and to suggest innovative dental prosthesis means by which such substances may be used with the aim of attaining tactical superiority in combat.

**Materials and Methods:** Consultation of news outlets covering the wars in Ukraine and Israel as well as scientific literature regarding the consumption of drugs in combat zones, beginning in the Napoleonic Wars, has been conducted in August 2024. Additionally, we examined up-to-date information from specialized publications and scientific literature regarding the adaptation of dental crowns in the oral cavity.

**Results:** Throughout history drugs such as heroin, alcohol and hashish have been used by soldiers to tone down negative emotions associated with the horror and misery of combat while substances such as amphetamines, caffeine, and modafinil were and still are used for increasing energy levels of troops on the frontlines. Although the implementation of such substances as enhancement agents for soldiers may be controversial the data indicates widespread use and abuse of unregulated substances in high-intensity conflict zones which risks spilling over into civil society once the conflict ends or the combatant is rotated out the combat zone. As developments in recent years have shown, an emphasis on damage reduction and corrective measures is far more productive in circumventing both the hazards of chronic drug use and the dangers of prohibition-style wars on drugs especially in high-stress environments. Developing a dental crown with a compartment on the oral surface containing a psychoactive substance that dissolves in saliva and releases the substance gradually would be a controlled alternative that allows the substances to be consumed without the risks of usage in unsafe and unhygienic conditions.

**Conclusion:** By employing our knowledge about psychoactive stimulating substances as well as dental prosthesis we have come up with a method of administration which is both fast acting and adequate in the event of imminent hostile actions by the enemy.

## PP04

### Pulmonary Imaging In COVID-19 Patients

*Major BALA Aurela MD, JOSIFI Mariola MD, LTC DURAKU Kujtime MD, Major VASHA Dorela MD*

The purpose of this presentation is to highlight the common imaging findings in patients diagnosed with COVID-19 using clinical cases hospitalized in the Infectious Diseases ward, to describe the disease's evolution over time, and to discuss changes in imaging appearance in adults.

**Clinical Case:** A 56-year-old male patient presents in poor clinical condition with complaints of cough, difficulty breathing, extreme fatigue, weakness, and a fever of 39°C at the time of admission. Upon arrival, routine laboratory tests were performed, along with a nasopharyngeal swab for SARS-CoV-2, which resulted positive, and a thoracic CT scan. The patient's lab results showed mild anemia with Hgb=11g/dl, PCR=85mg/dl, D-dimer=1.02ug/mL, Ferritin=2301ng/mL. In the arterial blood gas analysis: PCO2=3.18kPa, PO2=7.18kPa, pH=7.5, SO2=89%. The CT scan performed upon emergency department admission showed stage 3 interstitial pneumonia, with diffuse ground-glass opacities, bilaterally distributed, subpleural, basal, and peripheral. The patient was placed on a combined therapy of Ceftriaxone, Levofloxacin, and Tocilizumab. The patient was placed on CPAP sessions and corticosteroid therapy at 1mg/kg of body weight. The patient became afebrile, with persistent cough and dyspnea, a decrease in inflammatory markers, and a slight increase in oxygen levels. In the third follow-up CT scan, pulmonary fibrosis was observed, with a slight increase in lung volume compared to the second CT but with a lower volume compared to the first CT.

**Conclusion:** In our case, the third CT scan performed after persistent dyspnea and cough revealed traction bronchiectasis associated with honeycombing and reticular opacities, suggestive of PF as a healing phase of pulmonary inflammation in areas previously occupied by opacities. Progressive hypoxemia and iatrogenic damage from mechanical ventilation are considered possible causes of post-COVID PF development.

## PP05

### Acute Ischemic Stroke and The Role of Cardiac Biomarkers

*BASHA Entela MD, RANXHA Eris MD*

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**Introduction:** Cardiac biomarkers are recognized as important laboratory tests to investigate the presence or progression of various cardiovascular diseases. Cardiac troponin T and proBNP are biomarkers currently used in the evaluation of symptoms associated with chest pain and heart failure. It is well known that cerebrovascular and cardiovascular diseases share common risk factors, such as arterial hypertension and diabetes mellitus. In recent years, data from several clinical trials have evaluated the usefulness of cardiac biomarkers in various neurological diseases, mainly in Cerebrovascular Diseases.

**Methods:** 128 patients hospitalized in the Neurovascular Service from January 2023 to January 2024 were subjected to the measurement of pro BNP, CK MB, Troponin in the acute phase of ischemic cerebral infarction (1 to 4 days after the installation of neurological deficits), due to and suspicion of myocardial infarction based on clinical data of patients.

**Results:** 256 patients with ischemic stroke (mean age 67 years, 39% female) were included, of which 66 (25%) had increased Troponin values, 124 (48%) had increased Pro BNP values and 58 (22 %) had increased values of Pro BNP, CK MB, Troponin, increased values which in subsequent cardiac explorations have not been significant for Myocardial Infarction after further cardiac evaluations.

**Conclusion:** The increase of cardiac biomarkers in acute ischemic stroke, including Pro BNP, CK MB, and Troponin shows a fair correlation of them with acute ischemic stroke, not overlooking the more complete cardiac control.

## PP06

### Navigating Pituitary Apoplexy: A Case of Rapid Diagnosis and Successful Management

*ÇELO Eni MD[1], MAJ TAULLA Eriselda MD[2], KASA Marsida MD[2]*

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2 Military Medical Unit, University Trauma Hospital

**Introduction:** Pituitary apoplexy (PA) is a rare but potentially life-threatening condition resulting from ischemic infarction or hemorrhage, typically involving pituitary tumors. PA often presents acutely with severe headache, nausea, altered consciousness, and visual disturbances, along with signs of cortisol deficiency. Other endocrine deficiencies may develop over time. Surgical decompression is indicated in severe cases, while those with mild symptoms can be treated conservatively.

**Case Presentation:** We report a 67-year-old man with L5-S1 spondylolisthesis, admitted for scheduled surgery. His medical history included type 2 diabetes, hypertension, and dyslipidemia. He was hospitalized in 2020 due to inferior paraplegia, with a normal head CT scan. Although he initially recovered well, he became lethargic and disoriented two days post-surgery. Examination revealed low blood pressure (86/60 mmHg) and a pulse rate of 113 bpm. Neurologically, he was unresponsive to verbal stimuli but responded to painful stimuli. A neurologist recommended a head MRI, which confirmed pituitary apoplexy. Laboratory results showed hypoglycemia (68 mg/dL), normal BUN, hyponatremia (sodium - 120 mmol/L), and low ACTH (5.5 pg/mL) and cortisol (1.8 mcg/dL) levels. Treatment focused on hemodynamic stabilization, correction of electrolyte imbalances, and corticosteroids. The patient received intravenous hydrocortisone (100 mg every 8 hours for 24 hours) and transitioned to oral hydrocortisone (20 mg in the morning and 10 mg at noon). Following treatment, he regained normal mental status without confusion. An ophthalmologic evaluation showed no visual deficits, allowing for conservative management. He was discharged after six days on glucocorticoid replacement therapy.

**Discussion:** This case highlights the importance of timely diagnosis of pituitary apoplexy after major surgery, contributing to a favorable outcome.

## PP07

### An Overview of Emergencies in Otorhinolaryngology at University Hospital of Trauma, Tirana

*DANAJ Brikena MD, MALO Grej MD*

University Hospital of Trauma, Tirana, Albania

**Introduction:** Otorhinolaryngology emergencies are a common complaint in the emergency department. These emergencies can occur in all the age groups and can present as a result of infection, trauma, and foreign bodies. The most common Ear, Nose and Throat (ENT) emergencies are epistaxis, foreign bodies in ear, nose and throat, stridor, trauma, facial bone fractures. Prompt assessment and immediate intervention can save lives and reduce the suffering arising out of these emergencies.
Methods: The present study focusses on determining the magnitude and pattern, outcome of patients with ENT emergencies. A cross sectional study was carried out in the casualty and ENT department of University Hospital of Trauma, Tirana, which is a tertiary care. The data was collected from June 2022 to May 2024.

**Results:** 1306 patients reported to casualty with ENT emergencies. Around 46.12% of emergencies were of Ear, 34.33% were related to nose and 19.54% were related to throat, neck and others. The most common ENT emergency among pediatric age group was foreign body in ear, nose, throat and aero digestive tract, while the most common ENT emergency in geriatric age group was Stridor. ENT emergencies are increasing in incidence due to increasing burden of road traffic accidents and early detection and institution of appropriate and adequate treatment may be important in preventing the progression of disease and minimizing complications.

**Conclusions:** The highest incidence of ENT emergencies in this study was in the age group of 41–60 years (36.68%); Labourers (27.47%) and Farmers (24–78%). Road traffic accidents was the most common cause of ENT emergencies—666 cases (51%) and 640(49%) of cases were under influence of Alcohol. Around 73.28% cases were stable and 26.71% cases were unstable during presentation. For 975 cases immediate intervention (Medical and Surgical) was done in the casualty and 140 cases required admission. Among the treated cases (1136), 988 (87%) cases recovered without complications.

## PP08

### Assessment Of the Epidemiological and Clinical Differences Between Men and Women with Acute Myocardial Infarction

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**Methods:** This retrospective study included 496 patients (270 men and 160 women) who were hospitalized at Coronary Care Unit of "Mother Theresa" from March to September 2018. We determined demographic data, AMI characteristics, cardiovascular risk factors, treatment and complication during the hospitalization.

**Results*:*** AMI is more frequent in men than in women and in men it is significantly more likely to occur at an earlier age than in women. Most patients had more than > 3 cardiovascular risk factors. Hypertension was the most widespread risk factor in males and females (91.4% vs. 88.1%). Men were more often smokers (P <0.001), while women suffered more from diabetes mellitus (P <0.001). Dyslipidemia was found in the same percentage as in males and in females but the average value of total cholesterol was found to be significantly higher in women (P =0.048). No gender differences were found in the intra hospital treatment meanwhile men post PCI / CABG were significantly more than women. (P = 0.035) VF and mechanical complications were more prevalent in males while women developed more cardiac insufficiency (P = 0.041) and cardiogenic shock. Data on mortality in patients with IAM showed that mortality increases with age in women.

**Conclusion:** The study data showed gender differences in the age of patients, cardiovascular risk factors, and intra hospital complications of patients with acute myocardial infarction. No differences were noted in the treatment between women and men. Intra hospital mortality is unavoidably linked with age of the patients. Older women have higher mortality compared to men of the same age.

**PP09**

## Leptospirosis, One of The Most Frequent Infectious Disease After Flooding. A Case Presentation

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**Objective:** Leptospirosis is a zoonotic spirochetal disease of global importance. Human infection occurs through direct contact with the urine of animal reservoirs or through contact with contaminated water, the environment in which the bacteria can survive. Even in Albania, leptospirosis is one of the most frequent zoonoses and represents 2% of all zoonotic diseases reported. The increase in the number of cases occur in the period after heavy rains, floods and extreme weather conditions. The aim is to analyze the factors responsible for increased number of cases of leptospirosis post-flood, prevention of leptospirosis among the flood affected population and early diagnosis.

**Methodology:** We reviewed epidemiological data, risk factors and the increase in the number of cases in the autumn and winter period. We present a case of a male, 65 years old, from Durres hospitalized on November, related to a period of heavy rain and flooding of this city. The correlation between his symptoms and flooding made an early diagnosis of leptospirosis.

**Results:** After natural disasters, mainly floods, the number of cases of Leptospira increases as a result of contamination of water with the urine of animal tanks, contact of human skin and mucous membranes with contaminated water, especially when there are lacerations, and living in overpopulated places during floods.

**Conclusions:** There is an increase in prevalence in the autumn and winter period, after heavy rains and floods. The key is the detection of the case when there is epidemiological data on floods and early diagnosis.

## PP10

### Terrorist Acts-Preparedness for Medical Response

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**Objective:** Currently, the terrorist group Islamic State-Khorasan carried out three serious attacks in Iran, Afghanistan and Russia. There are reports of al-Qaeda resurgence. Other groups (in Dagestan, Russia) or solo performers also participated. The attacks' planners use the opportunity of artificial intelligence. Intelligence services work actively to prevent attacks and destroy terrorist cells, but they do not always succeed. Thus, the main burden is borne by the medical services. The aim is to research the fundamentals related to evidence-based medicine to improve the organization of medical support.

**Material and Methods:** Analyzed sources related to the current state of the problem.

**Results:** It is considered that the weapons of terrorists are predominantly of conventional type - explosive devices, and firearms, but weapons of mass destruction should be not ignored. There are reports of jihadist calls for more recently used melee weapons. The medical response includes key components that still pose problems - reliable communication, tactical medical personnel protection, work under stress, hostile environment, overload of medical facilities, and unknown circumstances.

**Conclusions:** A terrorist attack with a large number of casualties equals to disaster situation. Various structures are involved, which should respond coordinately. The existing hospital disaster plans should be reviewed/updated to prevent the consequences of over-admission of casualties, the workload of the emergency medical teams in conditions of need for urgent assistance, use of the existing planned framework of medical overstrain in response to the peak of critical care in unforeseen circumstances.

**Keywords:** terrorism, disaster, medical response, plans

## PP11

### Distributive Justice – Triage

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**Aim:** Triage is a complex and dynamic decision-making process. The goal of war is victory, which prioritizes wounded soldiers who could easily return to combat over the interests of individual patients. The ethical premise of the Hippocratic Oath is disqualified, generating serious ethical dilemmas about justice related to the subjective nature of prioritizing care. The question "Who shall live?" unites clinicians, philosophers and anthropologists. The discussion does not end with the conflict between individual and collective, as life and death decisions are made in an environment of existing discrimination. One of the basic ethical principles in triage algorithms is the principle of distributive justice. The main purpose of this text is to generate questions through a critical look at the ethical framework of triage.

**Materials and Methods:** The methodology in this text is based on an interpretation of published materials from 2000 to 2023, through a structured search for materials related to the concept of "ethical triage" in the context of distributive justice.

**Results:** We integrated the results of the analysis based on the four principles of biomedical ethics. Three main ethical approaches to sorting have been outlined: utilitarianism, egalitarianism, and justice. Ethical values also include issues of human and moral rights.

**Conclusion:** Subjective field dynamics affect triage decision-making in different ways and threaten the principle of fairness.

**Keywords:** justice, bioethics, triage, bioethical principles, decision-making, ethical theories

## PP12

### The Smart Choice for Hemodialysis: Why Arteriovenous Fistulas Are the Superior Option

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Arteriovenous fistulas (AVF) are increasingly recognized as the optimal choice for vascular access in hemodialysis patients. This abstract outlines the numerous advantages of AVF over other access methods, such as arteriovenous grafts and central venous catheters. AVF demonstrate a significantly longer lifespan, which translates into fewer interventions and a lower likelihood of complications. Their design allows for higher blood flow rates, improving dialysis adequacy and overall treatment efficiency.

One of the most compelling benefits of AVF is their reduced risk of infection. Unlike central venous catheters, which are associated with higher rates of bloodstream infections, AVF present a safer option for long-term vascular access. Additionally, patients with AVF experience fewer hospitalizations due to complications, resulting in decreased healthcare costs and enhanced quality of life.

Furthermore, AVF require fewer surgical interventions after placement, minimizing the burden on patients and healthcare systems. Overall, the use of arteriovenous fistulas not only leads to better clinical outcomes but also significantly improves patient satisfaction.

In conclusion, arteriovenous fistulas should be prioritized in the planning of hemodialysis access due to their numerous advantages. As healthcare providers strive to improve patient care and outcomes, understanding and advocating for the benefits of AVFs will be crucial in optimizing treatment for individuals with end-stage renal disease (ERDS).

## PP13

### Evaluation Of Lipid Blood Levels of Pilots in The Bulgaria Air Force

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**Aim:** To ensure a long-lasting pilot career, annual preventive examinations are of key importance. Lipids are essential for many processes in the human body. High levels of total cholesterol increase the risk of developing atherosclerotic changes in the arterial vessels. Triglyceride control is essential for maintaining optimal health and preventing imbalances in lipid metabolism. Cardiovascular diseases are the medical conditions that most seriously threaten aviation safety, as they can cause the sudden incapacitation or death of a pilot during a flight. The present study aims to monitor the lipid status of the pilots of the Air Force of the Republic of Bulgaria.

**Materials and Methods:** A total of 40 pilots (35 men and 5 women) aged between 20 and 45 years were included in the study. Blood serum, taken in the morning on an empty stomach after a 12-hour fast, was used for the study of the lipid profile. The parameters - cholesterol, triglycerides, HDL and LDL cholesterol was studied.

**Results:** As a result of the research, an increase in the levels of total cholesterol and LDL cholesterol above the reference range was found in 10 of the examined men over 35 years of age. In the rest of the individuals, no deviation from the norm was observed for the studied indicators - cholesterol, triglycerides, HDL and LDL - cholesterol.

**Conclusion:** Prevention of Air Force aircrew should be of paramount importance in any country. Monitoring lipid status as part of annual preventive examinations, even in younger pilots, is considered a preventive care against cardiovascular diseases that can lead to serious disabilities and consequences. When there is a deviation from the norm in the lipid profile, a key role is correcting the risk factors in the lifestyle, including dietary habits.

**Keywords:** lipid profile, HDL, LDL cholesterol

## PP14

### A Clinical Case of a Patient with Churg-Strauss Syndrome and Dilated Cardiomyopathy

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**Aim:** Churg–Strauss syndrome (CSS) recently renamed eosinophilic granulomatosis with polyangiitis (EGPA) is a systemic disease, defined as necrotizing granulomatous inflammation with eosinophil infiltration and necrotizing vasculitis that affects small-to-medium-sized vessels. This clinical case aims to pay attention to heart involvement and complications that may cause a lethal exit.

**Material and Methods:** The clinical case is of a patient treated in Clinic of Cardiology, Military Medical academy, Sofia, where were conducted laboratory and instrumental tests. We have also used the medical documents and history provided to us by the patient.

**Results:** We present a clinical case of 52 years old man presenting with diagnosed Churg-Strauss syndrome (nasal polyposis, bronchial asthma, eosinophilia, CT evidence of pulmonitis, positive ANCA) and dilated cardiomyopathy with signs of decompensated congestive heart failure with reduced ejection fraction and a hypodebit condition, with echocardiographic evidence of left chamber apical thrombosis. We conducted a coronary angiography which showed no coronary artery stenosis. The right cardiac catheterization estimated fixed high grade pulmonary arterial hypertension. The Holter ECG monitoring showed paroxysmal atrial fibrillation, and complex ventricular arrhythmias, including no sustained ventricular tachycardia. Despite of the complex treatment, including corticosteroid therapy, and the resuscitation care the case ended lethally.

**Conclusions:** Clinical evidence of cardiac involvement in EGPA includes autoimmune myocarditis, intracardiac thrombi, myocardial ischemia, arrhythmias, pericarditis, and at last development of heart failure. Cardiac involvement shows a mixture of eosinophilic infiltration of the myocardium and endocardium, causing myocarditis and endocarditis, and small-coronary vessel vasculitis, which causes myocardial ischemia. Heart failure may develop as a consequence of the above lesions. Patients with heart involvement have a poorer prognosis.

**Keywords:** Churg-Strauss syndrome, dilated cardiomyopathy, heart failure with reduced ejection fraction

## PP15

### Pulmonary Fibrosis in Untreated Rheumatoid Arthritis

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**Objective:** The main objective is to highlight that pulmonary fibrosis, as a complication of untreated rheumatoid arthritis, is a condition that significantly reduces the patient's life expectancy and quality of life; therefore, its screening should be encouraged.

**Materials and methods:** "This analysis includes the identification and examination of pulmonary fibrosis through CT Scan and laboratory findings in rheumatic patients and its periodic follow up to achieve clinical improvement. The realization of the study began with the formulation of the research question, the review of the literature related to the field of study, data collection, data analysis, and finally the generation of results and conclusions.

**Results:** CT findings shows Interlobular reticulations, traction bronchiectasis, and heterogeneous ground-glass opacities are common findings in advanced pulmonary fibrosis considering autoimmunity. Lung nodules and micro nodulation are rare pulmonary manifestations of Rheumatoid Arthritis; thus, tumor markers are mandatory. Laboratory findings such as Rheumatoid Factor and Anti cyclic citrullinated peptide are expected to be multiple the norm. Inflammation markers such as PCR, ERS, D-dimer are usually high. Anti-inflammatory medicines, corticosteroids, immunosuppressants and pulmonary rehabilitation therapy are indicated.

**Conclusion:** The results suggest that detection of pulmonary involvement in rheumatoid arthritis at the right time is necessary to prevent the progression of the disease making its treatment difficult and the quality of life poor.

## PP16

### From Lwoffii to Bereziniae: Analysis of an Outbreak in a Tertiary Hospital in Romania

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Bacteria in the genus Acinetobacter pose a major threat in the hospital environment, causing infections difficult to treat due to their resistance to multiple classes of antibiotics. Although A. baumannii is the most common pathogen involved in healthcare-associated infections (HAIs), other species, such as A. lwoffii and A. bereziniae, are gradually gaining epidemiological importance. Acinetobacter lwoffii is part of the normal flora of the skin, oropharyngeal, and perineal mucosa.

**Methodology:** We conducted an epidemiological analysis of an HAI outbreak with A. lwoffii in a cardiovascular disease center of a tertiary hospital in Romania, between March and May 2022. Laboratory data, including PFGE results, epidemiological investigation, and interventions were evaluated.

**Results:** 30 patients were identified (21 men and 9 women), of which 28 had A. lwoffii bacteraemia, and two had central venous catheter infections. All strains showed resistance to carbapenems. 24 cases were associated with the intensive care unit. 10 strains were sent to a reference laboratory and all were reclassified as A. bereziniae., Following the implementation of strict infection control measures, the outbreak was declared over on May 11, 2022.

**Conclusions:** Correct identification of bacterial species is essential from an epidemiological point of view. This outbreak highlights the importance of active epidemiological surveillance and real-time monitoring of validated cultures to enable rapid and effective interventions to limit the spread of infections.

## PP17

### Participation Of Bulgarian Women Servicemen In First Aid Education And Training Courses

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**Aim:** To analyze the ratio between women and men on active duty in the Armed Forces of the Republic of Bulgaria, who had been educated and trained in Combat Lifesaver (CLS) and paramedics courses held in our Academy.

**Materials & Methods:** The data we used is the total number of men and women servicemen who were trained as combat lifesavers or paramedics for 2 years and 6 months (from 2021 to the present moment). We analyzed the ratio between both sexes in the Bulgarian Armed Forces (BAF) and compared it to the reported average percentage of women servicemen in the country for the same period.

**Results**: We report an active participation of women servicemen in the CLS courses. Almost half of the educated and trained army personnel for the period are female (46%). Notable is a combat lifesaver course last year, in which all trainees were female servicemen.

**Conclusion:** The increasing number of women on active duty worldwide is resulting in a higher percentage of deployed contingents, so they should be as battlefield-ready as their male counterparts. They are supposed to be skilled and reliable teammates at the daily routine work, on duty, and in the theatre of operation, as well as capable of providing effective first aid care to the wounded until they receive advanced medical care.

**Keywords:** women servicemen, Combat Lifesaver Course, Military Medical Simulation Training Center.

## PP18

### The Necessity of Additional Sexual and Reproductive Health Education Programs for Women Servicemen

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**Aim:** To analyze the necessity of additional educational programs concerning the sexual and reproductive health (SRH) of women servicemen. considering two main factors: the impact of SRH on the health status and the demand of the army women for this kind of additional program.

**Materials & Methods:** We analyzed the impact of SRH on the health status. The World Health Organization defines sexual health as a state of physical, emotional, mental, and social well-being related to sexuality, not only the absence of disease, dysfunction or infirmity. Data is presented from a voluntary anonymous questionnaire, conducted among 722 ((n=722) women on active duty in the Armed Forces (AF) of the Republic of Bulgaria (RB). More than half of the participants (56%, n=405) have declared they need additional health education programs and materials, concerning SRH.

**Results:** In Bulgaria, the women servicemen receive specialized gynecological health care in the structures of the military medical health care system or via the national health insurance system and the private sector. Annual prophylaxis conducted in the Military Hospitals is essential for screening, but women realize they cannot rely on medical check-ups once in a year. More than half of the participants in the questionnaire realize their health awareness has an important impact on their health status.

**Conclusion:** All National Reports in the last decade declare an increasing number of women servicemen. An inevitable part of the military service is maintaining the state of combat readiness. The additional SRH education programs will support their health awareness enough, so they will be able to recognize if a symptom is abnormal or not. Healthy women servicemen with normal reproduction will result in reduced financial resources for diagnosis, treatment and even emergency evacuation.

**Keywords:** women servicemen, sexual and reproductive health (SRH), health education programs.

## PP19

### Clonidine To The Rescue: More Than Just Blood Pressure Control In Diabetic Gastroparesis

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**Introduction:** Gastroparesis is a common gastrointestinal complication in patients with long-standing diabetes mellitus (DM), characterized by delayed gastric emptying without mechanical obstruction. Typical symptoms include nausea, vomiting, bloating, and early satiety. Standard treatments for gastroparesis, such as prokinetic agents and antiemetics, can sometimes fail to provide symptom relief, highlighting the need for alternative therapies.

**Case Report:** We present the case of a 65-year-old male with a 20-year history of type 2 diabetes mellitus, complicated by Diabetic Nephropathy (Chronic Kidney Disease stage 3), Retinopathy, and Peripheral neuropathy. The patient had a history of severe vomiting requiring hospitalization a year prior. After undergoing orthopedic surgery for a left ankle fracture, he developed severe postoperative vomiting, leading to persistent high level of BP (210/120 mmHg), acute kidney failure (creatinine 5 mg/dL), oligoanuria, and peripheral edema. Despite renal improvement with continuous venovenous hemodialysis (CVVHD) and the treatment with metoclopramide and ondansetron the patient's nausea persisted for seven days. Following the exclusion of neurological and other causes, diabetic gastroparesis was diagnosed. A trial of clonidine (100 mcg twice daily), typically used for diabetic enteropathy, led to significant symptom improvement within two days, allowing the patient to resume oral intake, stabilize renal function, and improve diuresis. The patient was discharged in stable condition and remained symptom-free at two months follow-up.

**Conclusion:** Clonidine is an alpha-2 adrenergic agonist traditionally used to manage hypertension and diabetic-related diarrhea. Its mechanism involves modulation of sympathetic and parasympathetic balance, which may restore gastric motility. This case suggests a potential novel use of clonidine in managing diabetic gastroparesis, particularly in cases refractory to standard therapies. Further studies are warranted to evaluate the efficacy and safety of clonidine in this setting.

## PP20

### Neovascular Age-Related Macular Degeneration (NARMD), Monitoring the Effectiveness of a Stable Treatment: A Prospective Study

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This study aims the long-term effectiveness, in terms of patient-relevant outcomes in patient diagnosed with nAMD. The best-corrected visual acuity (BCVA) data and OCT assessments of the last visit and the first presentation of nAMD visit of each patient were used in the analysis.

The main objective of this study was to compare the functional and structural visual outcomes of patients who did not adhere to their planned intravitreal anti-VEGF injection intervals (group 1) with those who did (group 2). This is important because there is currently no evidence on the optimum monitoring strategy for people with neovascular AMD, leading to uncertainty in how to correctly manage treatment for individuals or how to configure eye care services to support patients. This is a study identify the best outcomes in terms of BCVA and quality of life of people at risk of progression to late AMD (geographic form). Trials would need to measure visual outcomes and health service resource between the optimal management of people at risk of disease progression in relation to the use of resource. The cancellation of many intravitreal anti-VEGF injection appointments resulted in worse functional and structural outcomes in neovascular AMD patients.

We recommend that we should insist in respecting the continuity of care for nAMD patients for having better result in BCVA and quality of life maintenance.

## PP21

### Traumatic Uveitis-Glaucoma-Hyphema in Eyes with Scleral Fixation IOL

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**Introduction:** Uveitis-Glaucoma-Hyphema (UGH) syndrome, or Ellingson syndrome, is a complication resulting from the rubbing of the iris by intraocular lenses (IOLs), causing a spectrum of iris transillumination defects, pigment dispersion, as well as microhyphema and hyphema with elevated intraocular pressure (IOP).

In patients with Marfan syndrome, the probability of concomitant diseases such as high myopia, ectopia lentis, glaucoma, retinal detachment, and strabismus is high, along with complications from surgical interventions. After scleral fixation surgery of the IOL, patients with Marfan syndrome suffer from repeated episodes of UGH syndrome, triggered by heavy work and head positioning. The cause is also the lack of zonular support and the absence of vitreous due to vitrectomy. Diagnosis is made through clinical examination, where microhyphema, iris transillumination, and pupil deformation (iridodonesis) due to the displacement of the lens optic are observed in the slit lamp. Anterior OCT and UBM demonstrate floppy iris and rubbing of the IOL against the iris, with a deformed iris profile. Treatment is primarily conservative, involving topical antiglaucomatous and anti-inflammatory steroid medications.

**Keywords:** uveitis-glaucoma-hyphema syndrome, Marfan syndrome, scleral fixation IOL, pupillary capture by IOL, iris transillumination

## PP22

### Importance Of Oral Health for Military Personnel

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**Aim:** The oral health of servicemen is one of the key components of Armed Forces readiness, both for the individual and the Army as a whole. During operations, among the greatest concerns is the risk of developing dental emergencies and chronic conditions, which tend to be aggravated in the conditions of the dynamic and dangerous operational environment. Caries and its complications, gingivitis, periodontitis, bruxism and bruxomania, and the temporomandibular joint disorder, accompanied by severe and excruciating pain, significantly impair the combat readiness of the serviceman and hinder the effective performance of assigned tasks. The risk of the deterioration of oral health is also increased by the unfavorable conditions of the operational environment. Proper and regular maintenance of personal oral hygiene, rational nutrition, and staff visits to dentists are straitened. Adding to its deterioration are harmful habits, such as smoking, consumption of high-carbohydrate foods and energy drinks, and stress, which have a damaging effect on the soft and hard tissues of the oral cavity.

**Materials and Methods:** The importance of oral health for military personnel is systematized based on historical review, experience from international operations, official doctrinal documents, STANAGS, and scientific articles.

**Results:** The oral health of Armed Forces personnel is essential and, if not properly maintained, jeopardizes combat readiness and mission success.

**Conclusion:** Dentists in Bulgarian Armed Forces units and facilities must direct their attention and efforts to prevent dental emergencies and maintain servicemen's optimal oral health during operations.

**Keywords:** oral health, army readiness, dental emergencies, prevention, operational environment, dental support

## PP23

### Medical Evacuation Telemedicine And Emergency Care

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**Aim:** Telemedicine provides an opportunity for remote monitoring of patients during medical evacuations, facilitating interaction between teams. Using medical equipment designed for monitoring vital signs, hospital teams can track the patient's condition during transport to the medical facility. Recent fires in Europe, including Greece and Bulgaria, underscore the importance of effective medical evacuation strategies, which telemedicine can significantly contribute. The work aims to develop a robust and secure framework for real-time information exchange between evacuation teams and stationary medical facilities using telemedicine. This model aims to enhance remote patient monitoring and optimize the communication between emergency response teams and hospital-based medical staff during medical evacuations, particularly in disaster scenarios such as wildfires.

**Materials and Methods:** A significant number of literary sources were analyzed in the context of the stated objective. Protocols and algorithms of the EU/EEA have been reviewed.

**Results and Discussion:** The installed system at MMA for internet and wireless connection is used to monitor patients' vital signs and allows rapid information exchange between emergency medical services and external remote structures. This facilitates qualified assistance through communication between different medical teams.

**Conclusion:** The implementation of telecommunication systems in medical evacuation teams significantly improves coordination and decision-making processes. The exchange of real-time data and remote monitoring of patients' conditions ensures timely and accurate interventions for better patient outcomes in emergencies. Integrating telemedicine into medical evacuation protocols represents a critical step towards more efficient and responsive emergency medical care, especially in crises.

**Keywords:** Telemedicine, Medical Evacuation, Emergency Care

## PP24

### Antiphospholipid Syndrome Is a Autoimune Disorder

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**Objective:** Antiphospholipid syndrome is an autoimmune disorder characterised by venous/arterial thrombosis or fetal loss, laboratorically associated with the presence of anticardiolipin antibodies. In most of the cases the disorder is accompanied by another underlying disease such as Lupus Erythematosus or infective disease. Case report: The patient with the initiales P.V, 31 years old comes with complaints of swollen and pain in the fingers of the hand, photosensitivity, dry cough and red eyes. She has had two spontaneous miscarriages at fifth and tenth week of pregnancy. No family history for any genetic or autoimmune disorder. She has been treated with low doses of corticosteroids and non-steroids anti-inflammatory drugs. The laboratory tests reveal normal hemogram with a light elevation of the platelets, the differential was normal, the metabolic panel was normal with normal liver and kidney function, the lipidogram was normal. She has an elevated erythrosedimentation rate and a high PCR. The ANA test, the double-stranded DNA test and the antiphospholipid test resulted positive. The partial prothrombin time firstly was altered and then normalized after the therapy with Aspirin, Plaquenil and low dose steroids.

**Conclusion:** APLA can be primary or secondary and as secondary it can develop during the course of lupus or any other autoimmune condition, the elevation of the aPTT should raise the suspicion for APLA and should be followed by the antiphospholipid antibody tests.

## PP25

### Cyst Of Nuck: A Rare Finding in The Female Inguinal Region

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**Aim:** This case report describes a rare condition known as the cyst of the Canal of Nuck, which occurs in the female inguinal region. The aim is to present the clinical case of a female patient with a cystic lesion in the right inguinal area. The report aims to underscore the importance of accurate diagnosis and appropriate surgical intervention for achieving successful patient outcomes.

**Materials and Methods:** The patient, is a 44-year-old woman with a painless swelling in the right inguinal region. Clinical evaluation included magnetic resonance imaging (MRI), which revealed an oval cyst measuring 3.9 x 2.6 x 2.4 cm near the round ligament of the uterus. The cyst was categorized as type I based on the Counseller and Black classification. The approach involved surgical excision via a small right para-inguinal incision. The cyst was dissected from the round ligament and completely removed.

**Results:** The pathological examination confirmed the diagnosis of a cyst of the Canal of Nuck, with no communication with the peritoneal cavity. The patient had an uneventful recovery and was discharged the day after surgery. At a 12-month follow-up, there was no evidence of recurrence, demonstrating the efficacy of the surgical procedure.

**Conclusion:** Although rare, the cyst of the Canal of Nuck can be effectively managed with proper diagnosis and complete surgical excision. The report emphasizes that complete cyst removal offers excellent outcomes with minimal risk of recurrence, reinforcing the need for tailored surgical approaches in treating rare anatomical variations.

**KEYWORDS:** Cyst of Nuck, female inguinal region

## PP26

### Legality Of the Dentist to Provide Prehospital Emergency Medical Service

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Recently, there has been emigration and migration of medical personnel as a whole, which has led to shortages in the primary health service. In order to improve a primary link, that of the pre-hospital emergency medical service, many medical resources are required to be mobilized.

**Purpose:** Acceptance of the concept that a dentist is as much a doctor as a general practitioner to provide pre-hospital emergency medical services after the same training that is done in such cases for every medical personnel (EMS, PHTL, B-LSD, ACLS, etc.). The final goal of this topic is to propose legal changes, to give dentists the opportunity to serve in the pre-hospital medical emergency.

**Methods:** From the comparison, it turns out that ~88.4% of them are the same from the theoretical aspect (of the topics). Common subjects (33~39): Inorganic Chemistry, Organic Chemistry, Biology, Physics, Psychology, Sociology, Biostatistics, Informatics, Foreign Language I-II, Physical Education I+II, Environmental Health, Health Management, Health Economics, Medicine legal - Deontology, Immunology-Allergology, ENT-Oculist, Dermatology, Oro Maxillofacial Surgery, Genetics, Microbiology, etc.

**Discussion:** Beyond the subjects described above, about 20 clinical and surgical dental subjects are added to dentists, among them there are chapters on emergencies and first aid, as well as the interweaving of general and dental pathology. By logical deduction, the dentist (beyond the legal obligation he has according to Article 97 of the Criminal Code and Article 9 of the Code of Ethics and Deontology) after additional training after graduation as well as those specialized in Maxillo-Facial Surgery, can be given the legal right to worked in the pre-hospital medical emergency service.

**Conclusion:** For the different situations, based on several factors, such as: difficult terrain and not covered by a general practitioner, the inability to cope with an excessively large number of victims or patients in a disaster or a state of emergency, emigration and migration of general practitioners; the dentist can successfully complete the prehospital medical emergency management.

## PP27

### Simultaneous Detection of Benzodiazepines in Urine Using Liquid-Liquid Extraction and Gas Chromatography-Tandem Mass Spectrometry

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**Introduction:** Benzodiazepine misuse has led to an increase in overdose cases. Rapid and accurate toxicological analysis is necessary for diagnosis and effective treatment. Gas chromatography-tandem mass spectrometry (GC-MS/MS) is used for drug monitoring in biological samples. However, MS methods require chemical derivatization, extending analysis duration.

**Objectives:** The aim of this study was to simultaneous detect benzodiazepines in urine samples and to establish the limit of detection (LOD) for each compound using a liquid-liquid extraction (LLE) procedure, without analytes derivatization, followed by GC-MS/MS analysis.

**Methods:** The analysis method was developed and tested on drug-free urine samples spiked with increasing concentrations of benzodiazepines, using a standard solution of eight benzodiazepines. Benzodiazepine extraction was performed using LLE with a solvent mixture of chloroform:1,2-dichloroethane: dichloromethane (1:1:1, v/v/v). Chromatographic separation and analytes detection were conducted using a gas chromatograph coupled with a triple quadrupole mass spectrometer, operated in Full Scan mode.

**Results:** Benzodiazepines were identified by matching the obtained mass spectra with reference mass spectra, using specific m/z ratios and retention times. The LODs for benzodiazepines determined by GC-MS/MS were 1 ng/mL for diazepam, lorazepam, oxazepam, flunitrazepam, alprazolam, 5 ng/mL for temazepam and 25 ng/mL for nitrazepam and clonazepam.

**Conclusions:** The study demonstrates that the GC-MS/MS method, without analytes derivatization, provides sensitive and accurate detection of benzodiazepines in urine, making it suitable for toxicological evaluations in clinical practice.

**Keywords:** benzodiazepines, limit of detection, GC-MS/MS

## PP28

### Metal Artifacts in Thoracic and Neck Regions in CT SCAN, The Reduction

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**Introduction:** CT scan is a very important image modality for examining the patient due to information we receive from it in a very short time. Receiving high quality image is challenging but the evolution of the CT scan has helped the radiology technician a lot. In this article we are going to be focus in metal reduction artifacts. In polytrauma hospital when orthopedic, neurosurgical and surgical clinics are working mostly with patient that have implant on them, so having tools to reduce the artefacts from metals is crucial to not miss anything in regions around.

**Aims and Objectives:** The aim of this article is showing the effectiveness of I-MAR as important tool to use in patient with implant on, especially in thorax and neck regions. Material and methods: In this article we are showing 4 study case images from 4 patients received from our CT scan in radiology department of University Trauma Hospital. Siemens CT go. Top is 128 slice scans with two beam sources. We also used a formulary for radiologist to rate the images with and without I-MAR.

**Conclusion:** After comparing the raw dates images and images with I-MAR on, we concluded that I-MAR is a very useful algorithm to reduce artifacts. By using it, we can receive more information about soft tissues around implant and the regions nearby effected by artefacts. Using this algorithm help the technician receive a better-quality image. After analyzing the dates from formulary our radiologist concluded that I-MAR is an effective tool to receive a better image therefor to give a more précised diagnosis.

**Keywords*:*** I-MAR, artefacts, implants, patient, better quality, Thorax, Neck

## PP29

### The Co-Occurrence of Ulcerative Colitis and Minimal Change Disease: Clinical Implications and Management

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Ulcerative Colitis (UC) and minimal change disease (MCD) are distinct medical conditions affecting separate organ systems; however, recent evidence suggests a potential autoimmune connection between the two. Literature review have reported some cases where patients with UC develop MCD, suggesting that systemic immune responses may contribute to the onset of kidney disease in individuals with IBD complicating their treatment.

**Case Report:** A 38-year-old male patient reported to the emergency department after experiencing severe abdominal discomfort and bloody diarrhea for 2-3 days. He was diagnosed with severe acute colitis during a colonoscopy. A week after being admitted to the hospital, the patient had bilateral lower extremity edema and a reduced in urine output. His lab results showed impairment of renal function, with azotemia of 217.3 mg/dL and blood creatinine of 3.43 mg/dL. Urinalysis revealed a nephrotic range of proteinuria, with an increased tendency to advance up to 14 grams per day. Renal biopsy verified the minimal alteration lesions. The patient's kidney function significantly improved after treatment with corticosteroids, which were already being used together of low dose of mesalazine to manage his UC. During a year follow-up, the patient maintained preserved renal function and negative proteinuria.

**Discussion:** Managing patients with both UC and MCD provide a unique management challenge. The case highlights the possible link between chronic inflammatory conditions like UC and secondary kidney diseases like MCD. Its importance to control nephrotic syndrome and intestinal inflammation concurrently emphasis the need for interdisciplinary approaches to ensure the best care for affected patients. A close follow-up of renal function evaluation and urinalysis should be performed periodically through the entire course of UC treatment to detect renal impairment at the preclinical onset of symptoms.

## PP30

### Analysis Of The Medical Knowledge And Skills Acquired By The Trainees In The First Aid Courses At Military Medical Academy - Sofia

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**Aim:** To analyze the satisfaction of military personnel who completed a two-week training course on first aid in a tactical environment at the Military Medical Academy-Sofia and to draw the necessary conclusions about the organization, methodology, acquired knowledge, and skills. To identify areas that need improvement and outline prospects for development in the next few years.

**Materials and Methods:** The data we used is from the Vocational Training Center at the MMA for the number of trained military personnel in first aid courses in a tactical environment for the period from 05.22 until 07.24. A survey covering various factors of satisfaction was conducted among the trainees.

**Results:** During the observed period, 265 men and women from the age of 18 up to 65 were trained. They are military nonmedical personnel from the Armed Forces of the Republic of Bulgaria. Of these, 263 took part in the survey. A high level of satisfaction with both theoretical and practical training is observed among the trainees. The main recommendations are aimed at extending the duration of training, increasing practice hours, and conducting refresher courses.

**Conclusion:** Military first aid training courses are of great importance in handling the increasing complexity, distances, and lethality of the battlefield. Based on the results obtained among the trainees, we could summarize that to a large extent, they showed a serious attitude by objectively expressing their opinion regarding the studied aspects of the quality of training. From the obtained results, a high degree of satisfaction among military nonmedical personnel and justification of their expectations and needs is reported.

**Keywords:** first aid, education, assessment and analysis

## PP31

### Protocol For Analgesia in Disasters and Military Warfare Mass Casualty Incidents

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**Aim:** To analyze the satisfaction of military personnel who completed a two-week training course on first aid in a tactical environment at the Military Medical Academy-Sofia and to draw the necessary conclusions about the organization, methodology, acquired knowledge, and skills. To identify areas that need improvement and outline prospects for development in the next few years.

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**Keywords:** first aid, education, assessment and analysis

## PP32

### HEV: A Vaccine Preventable Disease

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**Background:** HEV is an RNA virus, primarily transmitted through the fecal-oral route. It is a major cause of acute viral hepatitis worldwide with more than 20millioninfections each year globally. It causes subclinical or mild self-limiting hepatitis in endemic and industrialized countries. However, it can cause severe disease, even chronic hepatitis, cirrhosis, fibrosis and hexohepatic manifestations, in pregnant women, immunocompromised individuals and children.

**Method:** Studies from the last decade, that took place in different countries of Asia, Africa, Europe and Latin America, were collected, in order to determine if HEV is a vaccine preventable infection disease.

**Results:** The majority of studies agreed that HIV infection is a risk factor for HEV infection. Nevertheless, there was not found association between the viral load, the duration of HIV, the age and the incidence of HEV seroprevalence. Additional risk factors were found to be the age, the gender and an association was found between cholesterol levels and HEV in HIV-infected people. It was interesting that sexual orientation and sexual practices weren't associated with higher incidence of HEV infection in HIV infected individuals. Last but not least, the educational status, the ethnicity and the region were associated with HEV prevalence. Clinical data have proven good short-term and long-term protection efficacy of HEV239 vaccine. It was effective (95% efficacy after the third dose) and well tolerated by the general population in China, including both men and women. When used 0,1,6 it was 100% efficient after the 2nd dose. However, there are insufficient data concerning immunogenicity, productivity, duration and safety among special subgroups.

**Conclusions:** The real challenge is to offer a HEV vaccine with immunogenicity, safety, long-term efficacy and affordable price to those who need it.

## PP33

### Experimental Gingivitis in Mice

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**Background and Aims:** Periodontitis is an inflammatory disease that leads to the destruction of gingival tissue and alveolar bone. Its primary etiological factor is biofilm dysbiosis, which results from bacterial accumulation. Diabetes Mellitus (DM) is a major risk factor for periodontal disease. Experimental animal models enable the study of its pathogenesis and the test of new treatments. The aim of this study was to develop an efficient gingivitis model in normal and diabetic mice, mimicking the pathogenesis in humans.

**Materials and Methods:** DM was induced by intraperitoneal injection of streptozotocin (STZ) and the induction of gingivitis was achieved by ligation. Clinical evaluations, histopathological analysis, pH and transepidermal water loss (TEWL) measurements, as well as body weight and blood glucose assessments were performed.

**Results:** Ligation of the maxillary incisors provided a successful and easy method for the induction of gingivitis in mice. Both normal and diabetic mice that received ligation developed periodontal disease. Severe inflammation, erythema, oedema, hemorrhage and dental caries were obtained and an abundance of neutrophils and lymphocytes was histologically identified in the periodontal tissue.

**Conclusion:** In conclusion, a successful and simplified model of gingivitis induction in mice was provided in both normal and diabetic mice.

## PP34

### Renal Cell Carcinoma with An Arteriovenous Malformation - A Case Report

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**Introduction:** Renal cell carcinoma (RCC) is the most common renal neoplasm and accounts for about 2% of adult malignancies. The classic presentation of RCC is hematuria (55%), abdominal pain (40%), and palpable abdominal mass (35%). This classic triad occurs in less than 10% of patients and at present more than 50% of RCC are diagnosed incidentally during cross-sectional imaging studies.

**Case Report:** This case study features a 67-year-old man who was referred to the emergency room due to subacute right flank pain radiating to the groin area, along with extensive hematuria. He had a medical history of smoking, hypertension, and nephrolithiasis. An ultrasound was first conducted, and the results showed that the right kidney had a solid mass. A contrast-enhanced CT was used to further the differential diagnosis, and the results revealed an exophytic mass involving the right kidney's mid-lower pole that measured 9 cm in size. Following intravenous contrast injection, there was a heterogeneous enhancement with central areas of necrosis and peripheral nodular hypervascularity areas. Significantly dilated ipsilateral patent renal veins, a convoluted collateral venous circulation network, and early and quick main renal vein filling occur during the cortico-medullary phase. These results are in line with AVF. The collecting system and tumor expansion into the perirenal area were not opacified.

**Discussion:** AVFs are an aberrant vascular shunt between the arterial and venous system due to absence of a capillary bed. The prevalence of AVFs is 0.04% in the general population and there are two types: congenital or acquired (after biopsy, trauma, and malignancy). RCC can promote some angiogenic factors that could explain the hypervascularity and the prevalence AVFs. On cross-sectional imaging, differentiation between AVFs (and arteriovenous malformations) and RCC can be challenging. Contrast-enhanced CT and MRI findings of AVFs are enlarged and tortuous vessels, hypertrophic draining veins during the early arterial and early enhancement of the inferior vena cava; numerous collateral circulations can be expected. AVFs-related symptoms include congestive heart failure, abdominal bruit and renal hypertension.

## PP35

### Coma And Medical Intervention in Trauma Hospital

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**Context:** This study includes all comatose cases filed in Emergency Service and Intensive Care Unit for the period 2015-2017.

**Purpose:** It is observed the incidence of medical complications in patients with coma and the nursing intervention.

**Methods:** Descriptive retrospective study based on data records and medical records from the register of Emergency Service and Intensive Care Unit.

**Results:** There were 144 comatose cases presented for the period 2015-2017. They were divided by gender, 94 males (65,24%), 50 women (34,72%), According to districts, from Tirana they were 69 cases (47,91%), Durres 23 cases (15,97%), Lezha 19 cases (13,19%), Kruja 6 cases (4,16%), Shkodra 1 case (0,69%), Kavaja 1 case (0,69%), Fier 2 cases (1,39%) other districts 22 cases (15,2%). The average of inpatient day was 2,5 days. Toxic Coma causes are: Alcoholic 61 patients (42.36%), Drug Overdoses 21 patients (14.83%), Opioids Overdoses 15 patients (10.51%), Carbon Monoxide Intoxication 5 patients (3.47%) and of unknown origin 42 patients (29.18%). There are 10 patients for whom mechanical ventilation is required (intubated) (6.94%). Patients according to age-group: 15-24 years old are 31 cases (21.52%), 25-34 years old are 50 cases (34.72%), 35-44 years old are 27 cases (18.75%), > 44 years old are 36 cases (10.6%). The average patient's age was 21.28 years old.

**Conclusion:** The most severe complication with serious life threatening is respiratory distress, which causes serious hypoxemia and reduce pulmonary ventilation. The respiratory insufficiency leads to unable oxygenation of the patients (6,94%). This is a life-threatening situation where accurate assessment and immediate life support medical interventions are decisive for the patient's life. The predominant diagnosis is the Alcoholic Intoxication that affects young people between the ages of 16 and 25 years old. The study found out that after passing the comatose condition without other complications the patients doesn't require further treatment.

## PP36

### Hellenic Armed Forces Veterinary Support: Academic – Military Training, Capabilities, Responsibilities and Future Operational Challenges

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Hellenic National Defense General Staff/Medical Directorate

**Aim:** To present the existing framework, concerning the academic – military training, general organization, mission, current capabilities – responsibilities of the Hellenic Armed Forces Veterinary Services and future operational challenges in terms of Military Veterinary Support.

**Material-Method:** Bibliographic review/synthesis based on the applicable national Military Medical/Veterinary Services literature.

**Results:** The Hellenic Armed Forces Veterinary Support, is provided by Veterinary Officers (graduates of the Combat Support Officers Military Academy and the Veterinary Medicine School of the Aristotle University of Thessaloniki) during their service in various posts (Military Veterinary Units, Major Military Commands/Formations and General Staff Medical Departments), with responsibilities mainly related to the quality/safety control of food and potable water, the monitoring of environmental factors and hazards, the prevention of contagious diseases outbreaks, the continuous primary/secondary veterinary care and hospitalization of Military Working Dogs and the preventive hygiene/veterinary support during the troops participation in peacekeeping missions abroad.

**Conclusion:** Military Veterinary Services is internationally a key pillar and integral part of Military Medical Support. Hellenic Armed Forces Veterinary Services, fully harmonized with the relevant NATO Standardization Agreements, in accordance with the current national/international legislation, scientific literature and practice and additionally in cooperation with a variety of scientific institutions and university departments, contribute crucially to their emerging medical obligations and responsibilities while aim to face sufficiently the increasingly emerging future operational challenges of Military Veterinary Support.

## PP37

### Stability Operations Through Military Veterinary Support: An Overview

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**Aim:** To provide an overview of the applied framework of Veterinary Support during Stability Military Operations.

**Material-Method:** Synthesis/bibliographic research based on applicable international/national governmental/military policy/doctrines, military medical/veterinary services literature and information-archives from military veterinarians served or involved in stability operations activities.

**Results:** In active theaters of military operations, medical civil-military stability operations figure prominently and include activities carried out by military veterinarians, concerning to humanitarian assistance and economic development of the host nation through infrastructure development, education/training, and provision of essential health service. Military veterinarians, contribute to immediate relief and shape conditions for long-term reconstruction of the host nation, while they build intellectual capacity related to animal health and food safety. Hellenic Armed Forces Veterinary Officers, during their participation in peacekeeping operations in the past, contributed, amongst other duties and responsibilities, great efforts in terms of stability operations, through activities such as promoting food and water safety/quality, conducting food safety inspections, mentoring local companies regarding food sanitation, working with Ministry of Agriculture to develop livestock quality, investigating outbreaks and improving veterinary public health practice etc.

**Conclusion:** Military veterinarians consist a crucial capacity for stability operations, which in turn are an important element in foreign policy and military operations. Their activities have the potential and play a critical role to shape conditions to achieve military objectives by gaining access and working among the people in the host nation, while they have a comparative advantage to operate on shorter time frames and seize the initiative in less than permissive, remote, austere and secure environments. Challenges related to doctrine, planning, training/education and matching skill sets to needs, must be addressed to maximize the potential of this small but highly trained pool of professionals and to ensure that future stability operations efforts are appropriate, well executed, effective, and efficient.

## PP38

### Healthcare Workers in Military Medical Unit And COVID-19 Infection

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**Introduction:** COVID-19 caused by the severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) is a global concern and has become a significant health problem since the number of infected cases and affected countries has escalated rapidly. Amongst the highest population at risk of exposure to the disease are health-care workers.

**Objective:** With the novel coronavirus pandemic the impact on the healthcare system and workers cannot be overlooked. Evaluation of infection rates in these groups are indicated, not only to ensure the safety of healthcare workers, but also to ensure they do not transmit the virus to patients.

**Methods:** Demographic and clinical data regarding suspected and infected cases among healthcare workers of University Trauma Hospital were obtained from medical records. Public Health specialists at Military Medical Unit were responsible for conducting COVID-19 testing and further evaluation.

**Results:** Our data demonstrated a rate of 25.8% infection among healthcare workers with a mean age of 43.5 and a dominance of female cases 64, 9%. The majority of infected cases were among nurses (70.1%) and the most case infection rate (CIR) was among nurses also, 96 positive cases out of 340 performed tests (28.2%).

**Conclusions:** Healthcare workers are among the highest group at risk of infection during the COVID-19 pandemic; therefore, evaluating infection rates and associated features is necessary to improve and adjust protective measures of these vulnerable, yet highly essential group.


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