

62nd

CIOR SUMMER CONGRESS

**4-8
August
2009
Sofia
BULGARIA**



Confédération Interalliée des Officiers Médicaux de Réserve
Interallied Confederation of Medical Reserve Officers



Summer Congress 2009 – Sofia (Bulgaria)
Congrès d'été 2009 – Sofia (Bulgarie)

“Military Trauma Care and Tactical Combat Care”

*“Traitement des urgences traumatiques et tactiques de soins
en milieu militaire”*

Abstracts of presentations
Résumés des conférences

Roemer HC, Stienstra S, Kanev K. (Edit. 2009)



CIOMR Summer Congress 2009

CIOMR Congr s d' t  2009

Scientific Programme

06 08 2009

0800 - 1220

Programme scientifique

06 08 2009

0800 - 1220

- 0800** **Arrival - Installation / Arriv e - Installation**
- 0810** **Blood, Sweat and Tears. Implementing an Operational Apheresis Capability.**
Doughty H.
- 0835** **Application of a Collagen-Gutamicine Sponge for open Fractures and Gunshot wounds Treatment.**
Marczynski W.
- 0900** **Frontline-Surgeon, A new Approach - The German Way -**
Hofmeister
- 0925** **Plastic and Reconstructive Surgery improves the Operational Efficiency of the Role 3 MMU.**
Thibert
- 0950** **Coffe break / Poster Session**
- 1015** **The Development and Utilisation of a new Training Paradigme to Increase the Skill Sets and the Numbers of Providers on the Front Lines in OIF and OEF.**
Kasulke
- 1040** **Combat Casualty Care; how do we keep up?**
Henny
- 1105** **Immediate Treatment of Severe Trauma and Use of Healthcare Products in Military Emergency Care; the French Experience.**
Boymond
- 1130** **Current Concepts in Treatment of Traumatic Liver Injury.**
Fellmer
- 1155** **New BALTS – Battlefield Advanced Trauma Life Support.**
Winston de Mello
- 1220** **Lunch 12.20 – 14.00**



CIOMR Summer Congress 2009
CIOMR Congr s d' t  2009

Scientific Programme

06 08 2009

1400 - 1800

Programme scientifique

06 08 2009

1400 - 1800

1400 Arrival - Installation / Arriv e - Installation

1410 Surgical Challenges in Operational Room Traumas.
Sherwood

1435 Commanding a Hospital Squadron in Afganistan.
Moles

1500 Forensic Identification of Military Airplane Casualties and Tsunami Victims.
Otto

1525 The Traumatic Britain Injury, Immune Suppression, Infection and Adaptive Immune Therapy Connection.
Griffin

1550 Coffe break / Poster Session

1615 The Use of Anthrax and Orthopox Therapeutic Antibodies from Human Origin in Biodefense.
Stienstra

1640 OPEX in Chad, Experience from a Reserve Doctor.
Nicol

1705 Examination and Archiving of Dental Data for Overseas Deployment and Identification.
Nuzzolese

1730 N.N.
N.N.

1755 Discussion

1930 CIOMR Dinner



CIOMR Summer Congress 2009
CIOMR Congr s d' t  2009

Scientific Programme

07 08 2009

0800 - 1220

Programme scientifique

07 08 2009

0800 - 1220

0800 Arrival - Installation / Arriv e - Installation

0810 Medical Challenges in UN Peacekeeping

Seet

0835 Assessment of the Quality of Life of Patients treated with Cementoplasty after Vertebral Bodies Fracture.

Galubinsky

0900 Acupuncture related Tactics and Techniques: Magic or Medicine?

Pock

0925 Issues of Lectures at Harvard Business School with Relevance for the Visibility of CIOMR.

Rahm

0950 Coffee break / Poster Session

1015 Capabilities of Military Medical Academy to Provide Protection in Case of Chemical Terrorism or Chemical Accident

Kanev

1040 Specific Problems of Military Ecology

Dragnev

1105 Automated Information System / AIS / for Analysis and Assessment of Data about a New Centre of Disaster Caused by Toxic Chemical Products

Hristova

1130 Wound Ballistics and Military Surgery Contemporary Achievements in Republic of Bulgaria

Vasilev

1155 Medical and Tactical Characteristics of Disaster Situations, Arising in Objects under the Ground Surface

Podoleshev

1220 Lunch 12.20-14.00



CIOMR Summer Congress 2009
CIOMR Congr s d' t  2009

Scientific Programme

07 08 2009

1400 - 1800

Programme scientifique

07 08 2009

1400 - 1800

- 1400 Arrival - Installation / Arriv e – Installation**
- 1410 Medical Intelligence in Mass Casualty Situations**
Kostadinov
- 1435 Medical Intelligence in Operational Planning Process**
Kostadinov
- 1500 The Host Nation Healthcare System Ambiguity in Medical Assessment**
Dimov
- 1525 Medical Intelligence in Force Health Protection**
Galabova
- 1550 Coffe break / Poster Session**
- 1615 The Problems of Chemical Terrorism**
Dishovsky
- 1640 Early Recovery of Servicemen after Training with an OC - Spray (PEPPER - Spray) and Treatment with a Local Anesthetic**
Konov
- 1705 Radiological Disaster – First Line Caesium Radionuclides Decorporation Treatment**
Manev
- 1730 Contemporary Aspects of Toxic Morbidity**
Neykovav
- 1755 Discussion**
- 1930 Bulgarian Evening**



CIOMR Summer Congress 2009
CIOMR Congr s d' t  2009

Scientific Programme

Poster Session

06.-07.08.09

Programme scientifique

Poster Session

06.-07.08.09

- 1. Techniques of Airsampling for Identification and Monitoring of Air Pollutions**
Bardarov
- 2. Implementation of the Method of Fluoride Reactivation for Demonstration of Intoxications with Organophosphorus Pesticides in Clinical Practice**
Dishovsky
- 3. Retard Forms of Oxime Reactivators of CHE – Complex with Polymers**
Dishovsky
- 4. Primary Registration Card for Disaster Victims**
Dragnev
- 5. Morphological Investigations in Carbamate Poisoned Rats with or without following Antidote Treatment**
Ivanov
- 6. The Medical Intelligence Contribution to the Intelligence Preparation of the Battle Space**
Kostadinov
- 7. Host Nation Politics Impact on Deployed Troops Medical Environment**
Kostadinov
- 8. Assessment of Systolic Function with Tissue Doppler in Patients with Anterior Myocardial Infarction and Interventional Treatment**
Lecheva
- 9. Evaluation of the Influence of some Reactivators of Cholinesterase on the Respiratory Tract, Blood Pressure and Heart Rate in Rats Poisoned with Soman**
Pencheva
- 10. Biochemical Investigations in Rats Poisoned by Lethal and Non-Lethal and Low Doses of Nerve Agents**
Sammaliev

“Techniques of air sampling for identification and monitoring of air pollutions”

Dr. Ventzislav Bardarov, PhD

¹Military Medical Academy, Sofia, Bulgaria

Introduction Inhalation is one of the ways of exposure to toxic compounds. Indication of such air pollutions and their monitoring needs of proper techniques, permitting their fast identification and sensitive measurement. Aim of this study is to present a thorough study of the methods applicable to this task.

Methods A comparison of some of the techniques, as “linear colorimetric”, “concentration on sorbents/liquid extraction”, “head-space” and “thermal desorbtion”, are presented and discussed.

Discussion/Conclusion In conclusion the advantages of “automated thermal desorbtion” are highlighted and recommended to be used in the air monitoring.

Biography Dr. Ventzislav Bardarov was born in 1949 in Vidin, Bulgaria;

Graduated 1974 – bachelor degree in chemistry - in Sofia University, Faculty of Chemistry.

After postgraduate study became MsSci in 1985. PhD from 2009.

Working fields – chromatographic analysis, toxicology.

Médicalisation de l'avant et produits de santé : l'expérience française.

Immediate treatment of severe trauma and use of healthcare products in military emergency care: the French experience

Claude BOYMOND

Faculté de Pharmacie. Strasbourg. France

Le service de santé des armées français a pour mission prioritaire d'assurer le soutien sanitaire des forces. La médicalisation de l'avant, premier maillon de la chaîne de soutien sanitaire déployée au plus près du combattant, est destinée à prendre en charge le plus rapidement possible les blessés. Cette médicalisation précoce nécessite l'utilisation de produits de santé (médicaments, dispositifs médicaux) adaptés et destinés à prendre en charge en priorité les hémorragies (garrots, pansements...), le choc hémodynamique (chlorure de sodium à 7,5%), les syndromes de détresse respiratoire (oxygène...) et les syndromes douloureux (morphine...). Certains produits de santé sont également disponibles pour faire face à des situations particulières comme une attaque par des agents neurotoxiques organophosphorés. Tous ces médicaments et dispositifs médicaux sont mis en place au niveau des postes de secours tenus par des médecins. Par ailleurs, des trousse individuelles du combattant, déployées en Afghanistan depuis juillet 2008, permettent la réalisation des gestes de survie par les camarades de combat et se déclinent soit en kit de base permettant le traitement hémostatique et de la douleur, soit en kit complet comprenant en plus une poche de soluté.

The fundamental mission of the French military medical health service is to support our troops when they are deployed from a medical standpoint. The early medical treatment of our wounded soldiers is the first level of the sanitary and medical support deployed in the battlefield. The combat casualty care must be implemented as soon as possible. So an early medical approach requires the use of health products (drugs and medical devices) in order to treat bleedings (use of tourniquets, bandages...), hemorrhagic shock (use of 7.5% sodium chloride...), distress respiratory syndrome (use of oxygen...) and severe pain (use of morphine...). Other health products are intended for the treatment of specific risks such as organophosphate poisoning. All these products are available in the medical centre in the battlefield. Since 2008 new individual emergency sets have been given to all soldiers that are deployed in a foreign operation theatre (i.e.: Afghanistan). These sets allow practising essential care and are available either as basic sets enabling to quickly address hemorrhagic shock or severe pain or as full sets which include an IV bag as well.

Biography

Pharmacien en chef Xavier BOHAND, Praticien Professeur agrégé, Hôpital d'Instruction des Armées Percy. Service de pharmacie hospitalière. Clamart, France.

Pharmacien en chef David ALMERAS, Praticien certifié, Hôpital d'Instruction des Armées du Val de Grâce. Service de pharmacie hospitalière. Paris, France.

Pharmacien en chef (R) Claude BOYMOND, Professeur, Faculté de Pharmacie. Strasbourg. France;

Chef du Secteur d'Instruction et de Recrutement du Service de Santé des Armées Nord-Est (France);

Président de la Fédération Nationale des Pharmaciens de Réserve (France).

Battlefield Advanced Trauma Life Support (BATLS) 2008.

Winston F de Mello L/RAMC

BATLS Training Team, Fort Blockhouse, Gosport, Hants PO12 2AB, UK

BATLS 2008 is a multidisciplinary course over three days that provides a stepwise approach to trauma resuscitation that acknowledges the tactical constraints at point of wounding, together with the incremental enhancement of interventional skills, diagnostic equipment, experience based judgement and trauma team sophistication at four successive echelons of care: 1) Care under fire 2) Tactical field Care 3) Field resuscitation and 4) Advanced resuscitation.

It adopts an interactive teaching methodology relying on more practical and directed case learning rather than lectures and the assessment is used to confirm the practical competence and understanding in a broad range of skills coupled with judgement in a team based scenario. The course is concentrated on readiness to meet immediate operational needs and concentrates on the management of the individual casualty by the professional health care provider (medic, nurse or doctor)

Implementation of the Method of Fluoride Reactivation for Demonstration of Intoxications with Organophosphorus Pesticides in Clinical Practice

Christophor Dishovsky¹, Tsvetan Popov¹, Vencislav Bardarov¹, Kamen Kanev¹, Aneta Hubenova², Ivan Samnaliev¹.

¹*Military Medical Academy, Dept. Medicine of Disasters and Toxicology, Sofia, BULGARIA* ²*Clinic of Toxicology, MHATEM "N.I.Pirogov", Sofia, Bulgaria*

OBJECTIVE: To explore the capabilities of implementation of the method for fluoride reactivation to two clinical cases of intoxications with organophosphorus pesticides.

MATERIAL AND METHODS: Blood serum and plasma samples from two clinical cases of intoxications with "Valsarel" (chlorpyrifos-ethyl) and mixture of chlorpyrifos and diazinon in the second case. Fluoride reactivation was followed by solid-phase extraction for separation of the yielded fluorophosphates. The samples were analyzed on gas chromatograph, equipped with nitrogen-phosphorus detector and GC-MS.

RESULTS: Intensive medical treatment in the hospitals, including carbochemoperfusion and drug treatment with toxogonin, atropine, diazepam, and caffeine was carried out. Positive results after implementation of the method for fluoride reactivation with identification of the organophosphate moiety were obtained 49 days (28 days in the second case) after intoxication. . The amount of serum Butyryl Cholinesterase (ChE) and Acetylcholinesterase (AChE) in erythrocytes was discussed in connection with the results of fluorid reactivation.

CONCLUSION: The methods for determination of the blood cholinesterases inhibition (AChE and BuChE) do not allow identification of the OPC. The detection of the parent compound and there metabolites is limited in time. The method for fluoride reactivation is applicable to cases of poisoning with organophosphorus pesticides, with capability to detect the cause of intoxication long-term after exposure, despite the applied intensive medical treatment.

ACKNOWLEDGEMENTS: The current study is connected to the joint scientific project "New biological markers for nerve agent exposure and antidote treatment of intoxications" in cooperation with the *TNO-PML* and is supported by MoD in The Netherlands and MoD of Bulgaria.

Christophor Dlshovsky was born in Sofia, Bulgaria, in 1940. He graduated in 1966 from Sofia Medical University. He obtained a PhD- (Kiev Medical Institute, Kiev, former USSR, 1971) and D.Sc. (Military Medical Academy, Sofia, 1989) degrees in toxicology for research of mechanism of action and development of new antidotes of nerve agents intoxications. Professor of Toxicology (1989) and Pharmacology (1996), with extensive experience of almost 40 years in Military Toxicology, Pharmacology and Chemical Defense. Included in the Golden Book of Bulgarian

Retard Forms of Oxime Reactivators of CHE – Complex with Polymers

Christophor Dishovsky, Iskra Petrova
Military Medical Academy, St.G.Sofiiski Str. 3, Sofia 1606, Bulgaria

Introduction: The oxime reactivators of cholinesterase are commonly used antidotes in treatment of organo-phosphorous poisoning. It is well known that they have relatively fast elimination from the organism. The aim of this study was to investigate antidotal action and basic pharmacokinetics of oxime complex with some polymeric structures. Two oximes – polycarboxilats of cholinesterase reactivator HS-6 ((3-carbamoyl-pyridinium-1-methyl)(2-hydroxyiminomethyl-pyridinium-1-methyl) ether dichloride) were synthesized in Laboratory for Experimental Toxicology of Military Medical Academy, Sofia and Institute of Radiobiology, Sofia (Pantev, Stefanova, Petrova, Dishovsky).

Metods: They are VM-83, on the basis of polyvinil–pirolidon maleinic acid and P-83, on the basis of polyvinil–pirolidon acrylic acid. The methods of synthesis and analysis of these oximes are presented in Bg Patent ? 52194 /1985. The end products of complexes were prepared in lyophilized forms.

Results: Those oximes have low own toxicity (LD 50 in mice, i.p. was 3000 mg/kg b.w.) in comparison with HS-6 (430 mg/kg b.w.) The antidotal efficacy of those oxime complexes after soman poisoning in rats was similar to that of the original HS-6. The same result were observed in the pharmacological (blood pressure, EKG, breathing, neuromuscular transmission), and biochemical (ChE) investigations. This result also showed that they have a prolonged antidote action.

Discussion: Tentative pharmacokinetic study, showed that VM-83 after i.m. administration was eliminated more slowly (elimination half-life 333, 85 min) than HS-6 (elimination half-life - 85, 26 min.). The problems of these complex oximes are instability and difficulties in the standardization procedure of the products. Another problem is that in this form they are not suitable for i.v. application.

Christophor Dlshovsky was born in Sofia, Bulgaria, in 1940. He graduated in 1966 from Sofia Medical University. He obtained a PhD- (Kiev Medical Institute, Kiev, former USSR, 1971) and D.Sc. (Military Medical Academy, Sofia, 1989) degrees in toxicology for research of mechanism of action and development of new antidotes of nerve agents intoxications. Professor of Toxicology (1989) and Pharmacology (1996), with extensive experience of almost 40 years in Military Toxicology, Pharmacology and Chemical Defense. Included in the Golden Book of Bulgarian Discoverers and Inventors. President of Bulgarian Toxicological Society (member of EUROTOX and IUTOX).

The Problems of Chemical Terrorism

Christophor Dishovsky

*Military Medical Academy, Department of Military Toxicology,
St. G. Sofiiski Str.3, Sofia 1606, Bulgaria*

Introduction: In addition to chemical weapons, terrorists can use different toxic chemicals from chemical industry, agriculture or products released from terrorist acts on industrial facilities. An attack of a chemical plant can liberate many different kinds of chemicals at once. Some specialists include different toxins in this group of terrorist agents.

The study of the accidents in chemical facilities, transportation, storage and others, the research of the chemical products, which are produced stored are important points in preparation of defence against chemical terrorism. The problems will be connected mainly with the identification and classification of dangerous substances and chemical facilities; documentation of industrial processes and products; development of risk maps; environmental monitoring; well organized health system; development of environmental protection; assessment of the available capability and contemporary technological devices for the detection and identification of a broad range of chemical compounds; modernization and optimization of individual protection; inventory and assessment of the available means for medical treatment of chemical intoxications; assessment of the available means for indication and control of chemical contamination and the effectiveness of decontamination.

Methods: The analysis of hospital preparedness in many countries showed that they are not prepared to treat victims of chemical terrorism. That is mainly connected with the lack of antidotes, preparedness for the decontamination and some medical resources like breathing apparatuses or supplied air-line respirators.

Results: Chemical terrorism can be connected not only with the use of large amount of toxic chemical compounds but with chronic and delayed effect of this agent. It is possible also that intoxication with small doses of toxic agent can be use from terrorist.

Discussion: Intensive education and training of physicians and first providers is needed to meet the medical challenges of chemical terrorism. The variety of characteristics of chemical agent used by terrorists needs improvement of detection, personal protection and decontamination including that of medical personal and equipment. The antidote treatment except of the adequate supply of the medical units and organization of national stockpiling, need a new extensive study of new antidotes and improvement of medical treatment in the area of terrorist acts.

The first year's experience of UK Operational Platelet Apheresis: An Urgent Operational Requirement (UOR)

HA Doughty¹, E Watkins¹, S Smedley², G Fitchett², S Rawlinson³

¹NHS Blood & Transplant, England, ²Medical & General Supplies Team, United Kingdom,

³Scottish National Blood Transfusion Service

Introduction. Haemostatic resuscitation requires a secure supply of blood components. In 2008, a 3-man multi-disciplinary team implemented apheresis in 2 operational theatres during an 8 weeks period. It has been sustained by M&GS with JMC and reserve medical officer support.

Methods. Donors: fully screened Emergency Donors, Group A preferred. Collection by Nursing officers and Bio-Medical staff with pre-operational apheresis training using the Haemonetics MCS+. Collections for emergency use. Procedures to minimise skill-fade. Planned platelet shelf-life 3-days.

Results. 139 single dose records reviewed. Data analysed for 125. Donors: 63 male; 34 female. 22 repeat donors. Group A: 73%. Mean pre-procedure platelet count: 272. All UK testing compliant. Median pH: 7.0. Donations transfused: 26%.

Conclusion. The project has delivered valuable emergency support. It has been enhanced to collect double platelet doses. Operational apheresis requires committed donors and staff to sustain the capability within a quality framework.

Biography: Dr Heidi Doughty L/RAMC(V) TD BSc MBBChir MBA FRCP FRCPath

Dr (Col) Heidi Doughty qualified in medicine from Cambridge in 1986. She completed her post-graduate general medical and haematology training in Nottingham and London and was accredited in haematology in 1995. She gained further experience in Jamaica and Cyprus before taking up her current post in 1998 as a Consultant in Transfusion Medicine.

Dr Doughty works for National Blood Service (NBS) in Birmingham with sessions at the University Hospital which hosts the Royal Centre of Defence Medicine. She is also the local NBS advisor to the military Blood Supply Team. Her interests include international development and transfusion support to trauma. She has conducted WHO and ISBT workshops in Eastern Europe and N Africa, promoting good clinical transfusion practice. She is a contributor to the Academic Institute of International Development of Transfusion Medicine, University of Groningen.

Colonel Doughty has been a member of the Territorial Army since 1981. Past military pathology activities include implementation of: a CIMIC blood donor project in Kabul; Operational Apheresis in Iraq and Afghanistan; and Flu resilience. She is currently the Commanding Officer of 202 (Midlands) Field Hospital (V) based in the West Midlands.

Primary Registration Card for Disaster Victims

Col.ret. Velichko L. Dragnev MD, PhD., Col.ret. Nikolai K. Podoleshev MD.,
Col.ret. Ivan K. Georev, MD., Col.ret. Valodya S. Arsov, MD

Military Medical Academy, Bulgaria

Introduction: In mass casualty situations, when the destruction effects overwhelm the capacity of the regional health care system, a medical triage is used to determine who will receive treatment and who will not. The successful trial accomplishment requires the medical specialists to be able to assess quickly the condition of the injured.

Methods: For this purpose we decided to develop a primary registration card for disaster victims (PRCDV) that combines the modern trends in this field.

Results: As a basis served the system for categorizing disaster victims, recommended by the World Medical Association that has been adopted worldwide in some form and involves 5 triage criteria. The algorithm of the PRCDV was enhanced by the criteria used in the so-called START-method (Simple Triage and Rapid Treatment) – respiration, perfusion and mental status.

Discussion: The card allows even minimally trained persons to recognize the severity of injuries and to sort multiple victims within a short period of time.

Specific Problems of Military Ecology

Assoc. Prof. Dragnev V., MD, PhD, Chem.eng. A. Galabova, V. Lambova, MD,
Disaster Medicine and Toxicology Department, Military Medical Academy, Sofia, Bulgaria

Introduction: The aim of the article is to outline the specific particularities and problems of military ecology by assessing the effects of military activities on the environment.

Methods: Literature data was used about environmental issues concerning the impact on environment from military activities and military conflicts. In accordance to the contemporary concepts about the negative impact of military activities the nowadays implemented measures are not enough acceptable.

Results: It is necessary to conduct research and analyses of the negative factors and assess their effect on the environment as well as providing strict measures to execute the existing regulations.

Discussion: A moment of importance is to include the problems of military ecology in the routine training program in Disaster Medicine in Military Medical Academy.

Author's Biography

Col.ret. Assoc. Prof. Velichko Dragnev, MD, PhD was born in 1946. From 1973-1997 he has acquired different positions some of which are : Chief of Army Medical Service- Russe, Teacher in Military Medical Academy-Algeria, Chief assistant in Medical Protection Sector, Military Medical Academy /MMA/- Sofia, Head of Military Hospital with school- Russe. Now he is head of Disaster Medicine Research Laboratory. Col. Ret. Assoc. Prof. Velichko Dragnev , MD, PhD poses two medical specialties- Toxicology and Disaster Medicine.

Current concepts in treatment of traumatic liver injury

P.Fellmer, M. Tautenhan, S. Jonas

Department of Surgery, University of Leipzig, Germany

The effective treatment of blunt and penetrating abdominal trauma is one of the most important issues in acute military medicine. Especially the treatment of severe liver trauma has changed in recent years. The introduction of routine abdominal CT scan and the options of endovascular procedures caused a shift from routine surgical versus non-surgical treatment in the management of traumatic liver injuries.

The availability of less invasive procedures has expanded dramatically the treatment options. The knowledge and the indications of different treatment options is a crucial point in planning military medicine structures in the home countries as well as abroad.

Assessment of the Quality of Life of patients following Cementoplasty after The Spinal Vertebrae Fractures.

Andrzej Galubinski¹, Wojciech Kloc², Barbara Czaja², Mikolaj Majkowicz³,

1Neurological Outpatient Clinic in Gdynia; 2Neurosurgical Department, Pomeranian Centre for Traumatology, the Nicolaus Copernicus Specialist Provincial Hospital in Gdansk; 3Department for Studies of the Quality of Life, Medical University in Gdansk;

Introduction and purpose: Life quality assessment, conditioned by the state of health, is often the method used to measure the severity of a disease and determine the effects of treatment and care. An important element of this assessment is subjective pain experience, and the complications of osteoporosis fractures are most apparent at the time when patients are suffering pain. Vertebral fracture is a common complication of osteoporosis, which not only affects the general health of patients, but also provides a medical, social and economic problem. Such fractures may lead to a long period of immobilization which significantly reduces the quality of a patients' life, and may lead to disability and even death. The aim of this work is to convey the current knowledge regarding treatment options for patients with osteoporosis complications such as compression fractures, and to assess the quality of life of patients through the analysis of perceptible pain, anxiety and depression.

Material and method: The subject of the study was a group of 231 patients with spinal vertebral fractures treated with cementoplasty at the Departments of Neurosurgery at the Pomeranian Center of Traumatology in the Nicolaus Copernicus Provincial Specialist Hospital of Gdansk. The history was taken twice – for the first time on the day of admission to the hospital, and the second time a month after the cementoplasty treatment was performed. The purpose of the study was to determine what impact and improvement on the quality of life of the patient was achieved by the cementoplasty treatment.

Results and conclusion: Spinal Vertebrae cementoplasty is a very precise and technically difficult process but we are convinced has a significant influence in the reduction of pain and improving the quality of life for our patients.

Biography

Dr A. Galubinski graduated from the Military Medical University in 1975 and completed his residency in neurology in 1985. From 1981 to 2004 he had worked as an assistant and later, consultant at the Neurological Department, Hospital of the Military Navy, in Gdansk. From 2002 to 2007 he served as a Senior Medical Officer of the Pomeranian Province. He is a main author and co-author of seventeen scientific papers on the brain blood flow and neurological diseases. Currently, he works as a senior consultant in neurology at a main outpatient medical clinic in Gdynia. He is a representative of Poland to CIOMR where he holds a position of National VP.

The Traumatic Brain Injury, Immune Suppression, Infection and Adaptive Immune Therapy Connection

Gerald Dieter Griffin MR, PharmD

It is widely known that the immune system is suppressed by brain trauma, and that an infection often accompanies this trauma. The literature and potential causes of the immune suppression, infection and potential treatment of this nosocomial/hospital acquired infection will be presented and explored.

Brigadier General Gerald Dieter Griffin was born Sept. 8, 1940 in Staufenberg, Germany, and came to America as the adopted son of an American Army Sergeant. He attended the University of California at Berkeley, where he received a Bachelor's Degree in German & Zoology. He subsequently completed a Doctorate in Clinical Pharmacy/ Pharmacology at the University of the Pacific. BG Griffin received his Medical Degree from the University of Juarez/Case Western Reserve/Cleveland, Ohio Clerkship Program and completed a Flexible Internship at University Hospitals, Case Western Reserve University, School of Medicine, Cleveland, Ohio. His Residency in Emergency Medicine was completed at Brooke Army Medical Center, Fort Sam Houston, Texas. BG Griffin's military career as an officer began Aug. 24, 1968, when he was commissioned a 2d Lieutenant of Infantry after completing Officer Candidate School. His most recent promotion, to Brigadier General, occurred 10 October 1998. Prior to OCS, he served as an enlisted infantry soldier and medic for 4 years. BG Griffin was mandatorily retired for age in 2002, and re-appointed Colonel after he retired as a General Officer, with a 3 year Active Duty 'retiree recall' extension as an Emergency Physician. Dr Griffin retired again 21 Oct 2005, as Brigadier General, Medical Corps, US Army. BG Griffin served 41 1/2 years in America's Army.

General Griffin's active duty assignments include Basic Combat Training & Advanced Infantry Training, Ft.Ord, Ca; Basic Medic Tng & LVN Course, Ft Sam Houston, Tx; Medic, SB Hays AH, Ft.Ord, Ca; CHIEF, Pharmacy Services, Indian Health Service Hospital, Cass Lake, Minn.; GENERAL MEDICAL OFFICER, 7th Medical Battalion, Fort Ord, Calif.; ATTENDING PHYSICIAN and CHIEF, AMIC, Brooke Army Medical Center, Ft Sam Houston, Tx; RESIDENT in Emergency Medicine, BAMC, FSH, Tx; ASST CHIEF of Emergency Medicine, Wm Beaumont Army Medical Center, El Paso, Tx; CHIEF, Emergency Medical Services, S.B. Hays Army Hospital, Fort Ord, Cal; EMERGENCY PHYSICIAN, Landstuhl ARMC, Germany; EMERGENCY PHYSICIAN, 10th Special Forces/40th Commando, British Royal Marines, Iraq, Ops Provide Comfort/Gallant Haven; Acting VII CORPS SURGEON, OP. Provide Comfort; COMMANDER, 7216th IMSU, Op Joint Endeavor; EMERGENCY PHYSICIAN & GMO, Heidelberg USAH & Darmstadt USAC, Germany; EMERGENCY PHYSICIAN, 67CSH & Wuerzburg MEDDAC, Germany; CHIEF, ER & DEPUTY CDR / HOSPITAL COMMANDANT / CHIEF, PROFESSIONAL SERVICES, TF Med Falcon, Camp Bondsteel, Kosovo; CHIEF, Emergency Medicine/Triage & DEPUTY CDR/ HOSPITAL COMMANDANT/ CHIEF, PROFESSIONAL SERVICES, Task Force 67, and 67CSH, Mosul, Iraq, OIF II; GMO/ER Doc, 118 ASMB, in Babylon, Ashraf & Balad, Iraq, OIF II.

BG Griffin's Reserve assignments include 49th Infantry Division HQ (Assistant S1); RIFLE PLATOON LEADER and XO Co. C(-), 185th Mechanized Infantry Bn; COMMANDER, C Co.(-), 4.2 Mortar Platoon; HQ Co COMMANDER, 445th Civil Affairs Co. His medical

assignments in the Reserve include: BATTALION SURGEON, 200th ADA Battalion; FIELD MEDICAL ASSISTANT, 256th General Hospital; GMO, 352d Evacuation Hospital; COMMANDER, 147th Medical Detachment (OA); COMMANDER, Sec. 4, 6253d U.S. Army Hospital; COMMANDER, 828th Evacuation Hospital; COMMANDER, 359th Combat Support Hospital; COMMANDER, 347th General Hospital; COMMANDER, 352d Combat Support Hospital; He assumed COMMAND of the 2d Medical Brigade on 1 June 1998.

General Griffin's military awards include the Legion of Merit, Bronze Star Medal with "V" Device for Valor, the Purple Heart Medal, Meritorious Service Medal (3) , Army Commendation Medal (5), Army Achievement Medal (2), the Joint Meritorious Unit Award (2), Army Superior Unit Award, Army Reserve Components Achievement Medal (2), the National Defense Service Medal (3), Armed Forces Service Medal, Humanitarian Service Medal, the Armed Forces Reserve Medal (4) & "M" # "2", the Army Service Ribbon, the Overseas Service Ribbon(3), the Army Reserve Overseas Training Ribbon (2), Kuwait Liberation Medal, the Kosovo Campaign Medal & the UN Medal, the Iraqi Campaign Medal, the GWOT Service Medal, the Expert Field Medical Badge, the Combat Medical Badge and the Combat Action Badge. He is a member of the Order of Military Medical Merit, and a Distinguished Member of the Army Medical Department Regiment. He proudly wears the Special Forces Combat Patch .

His military education includes graduation from Basic Combat Training, Advanced Infantry Training, Medic Training, OCS, the Infantry Officer Basic Course, the AMEDD Officer Advanced Course, U.S. Army Command and General Staff College, and the U.S. Army War College.

Doctor Griffin is certified by the written examination of the American Board of Emergency Medicine. He is a Diplomate and Fellow of the American Board and College of Forensic Medicine, and was a Diplomate of the American Board of General Practice. He is at home in Pacific Grove, California, and Germany with his wife Carolyn. They have three married daughters, Katherine, Renate, and Sarah, and five grandchildren. He continues to serve America's Army and the Nation as a Life member of AUSA, ROA & as a Delegate in CIOMR. He served as the National Surgeon of the ROA, 2006-2008.

Combat Casualty Care: how do we keep up?

Walter HENNY MD

Introduction

After the conclusion of the Vietnam Conflict developments in trauma care occurred in the civilian world in particular. Since the 2nd Gulf War and the Afghanistan Conflict experiences in military trauma care have been very influential. Exchange between both arenas has not always been direct.

Discussion

From a “historical” point of view developments in trauma care will be discussed, emphasizing where those developments first occurred and whether there was direct exchange of knowledge and skills between civilian and military medicine.

Interaction between the two evolved only gradually, and reasons for that will be explored.

A case will be made for ongoing interaction between civilian and military medicine, emphasizing the importance of listening to those “who’ve been there, done that”, and of “immediately” incorporating their experiences into existing paradigms.

Biography

Colonel HENNY is a retired general surgeon, formerly of the University Hospital Rotterdam, the Netherlands.

After completing his national service in 1971 – 1972 he remained involved in military medicine as a Reservist. At present he is part of a training group, preparing military medical personnel for deployment to Afghanistan.

His life-long interest has been acute care, both inside and outside the hospital, by doctors and other medical personnel. His second interest is medical education.

Colonel HENNY has been active in CIOMR since 1981, serving in several positions. He represents CIOMR in the COMEDS Expert Panel on Military Medical Education since 1998.

Front line (Theater) Surgeon- a new approach. The German way

Stephan Hofmeister, MD, PhD, FS

“Hausaerztliche Versorgungsgemeinschaft Eilbek”

Papenstr. 13+ Ruckteschellweg 2, 22089 Hamburg Germany

Recognizing that increasing subspecialisation in civilian surgical training stands opposed to the needs of a broadly trained general surgeon for military purposes a new way of training military surgeons had to be found for countries whose military strongly relies on Surgeons who are trained in civilian environments or will return to civilian environments after military duty.

I will explain the new surgical qualification process for the German Medical Corps and compare the different approaches between this approach and civilian surgical qualification.

I will outline the impact of such a program financially and infrastructural.

Analyzing the advantages and disadvantages of such an approach the audience will be invited to discuss the matter and compare to their systems.

After evaluation the audience can judge whether similar modifications to their systems could improve patient care in military front line surgery.

Biography

Born May 25th 1965 in Tuebingen, GERMANY

1986 – 1993 University of Heidelberg Medical School, Heidelberg, Germany

1992 – 1993 Internship: USA, Australia, Switzerland

1993 PhD: “Early detection of retinal damage in patients with IDDM using blue light perimetrie” Eyeclinic, University of Heidelberg)

1993-1994 Resident: Clinic for haematology and oncology at Hamburg, Germany

1994-1995 Resident: Internal medicine and gastroenterology, Academic teaching hospital of the University of Heidelberg, Bad Friedrichshall, Germany

1995-1997 Ship’s Surgeon German Navy FGS „Schleswig-Holstein“

1997 – 1998 Flight Surgeon Naval Air Wing 2

1999-now self employed GP and Internist in private practice in Hamburg, Germany

4 / 2006 Specialist for Internal and General Medicine

since 2006 associated teacher and teaching facility for the University of Hamburg Medical School, Family Medicine and GP Faculty

2007 Qualification „Palliative Care Specialist“

Reservist Positions:

2001- 2004 Naval Medical Institute at Krohnshagen, Germany

Instructor ultrasound and diving medicine

2004-2007 Medical Ops Officers for the Surgeon General of the Navy

Fleet Headquarter Glücksburg, Germany

June 2006 22. GER / US RES OFF EX CVN „USS Eisenhower“

2006 - 2008 Medical Ops Officer, Medical Regional Command 2 Diez, Germany, G 3.2

8 / 2008 Medical Ops Officer, Head of Department

Medical Regional Command 2 Diez, Germany Position G 3

Vice President of the German Medical Reserve Officer Council

Member of German CIOMR Delegation

Designated Vice President for German CIOMR Presidency 2010 -2012

“Automated Information System/Ais/ for Analysis and Assessment of Data about a New Centre of Disaster Caused by Toxic Chemical Products”

Kr. Hristova

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction

The purpose is to create and use AIS for analysis and assessment of data about a new centre of disaster caused by toxic chemical products.

Methods

Normative and reference information about toxic products and industrial centers where are prerequisites for occurrence of damages; current data installing and correction; deduction of data and algorithm for giving medical aid to civilians affected by the damage.

Results

AIS provides the opportunity for substance identification, for variation calculation and multifactor prediction of situations in chemical industry, for specification of the type and size of the resources and means necessary for the liquidation of the damage consequences.

Discussion/Conclusion

The use of AIS lessens the time for taking of prompt decisions at the centre of damage concerning the necessary recourses and means and their gradual increase in order to liquidate damage consequences.

Biography

	Hristova Krassimira Gentcheva
Date of birth:	07.03.1955
Location:	Sofia, Bulgaria.
Nationality:	Bulgarian
Occupation field:	Disaster medicine
Work experience:	32 years, chemist engineer from 1981, researcher from 1984.
Name of organization:	Military Medical Academy from 1991.
Education:	Higher chemical and technological institute
Qualification:	Chemist engineer, assist.prof.

“Capabilities of Military Medical Academy to provide protection in case of chemical terrorism or chemical accident”

¹Kamen Kanev, ²Ivan Samnaliev, ³Velichko Dragnev, ⁴Vencislav Bardarov, ⁵Christofer Dishovsky

*Military Medical Academy, Sofia, Bulgaria
Department of Toxicology and Medicine of Disasters*

¹*Clinic of Toxicology*

^{2,5}*Laboratory of Military Toxicology*

³*Laboratory of Medicine of Disasters*

⁴*Toxicochemical Laboratory*

Introduction: The political and military situation in the world during the past years has clearly shown that terrorist threat is not just theory or hypotheses. The threat is real and readiness for an adequate response is very important. The successful counteraction of chemical terrorism requires different structures and institutions to be involved so that all aspects of the chemical defense to be covered. Military Medical Academy plays a very important role in the current national system aimed to provide adequate response of case of chemical accident, terrorist act or disasters followed by release of chemical agents.

Discussion: Department of Toxicology and Medicine of Disasters at Military Medical Academy is a well-organized structure which is responsible to provide protection of armed forces and civil population in case of chemical accident or terrorist act. Clinic of toxicology, Laboratory of military toxicology, Laboratory of medicine of disasters and Toxicochemical laboratory are involved into the department. Each of them has specific functions and tasks in providing chemical defense. The capabilities of these structures are discussed.

Biography:

Col (ret) Kamen Kanev, MD, PhD was born in 1952. 1979 graduated with master of science degree in human medicine from Medical Academy (Medical Faculty). PhD degree in 1985 and DSc degree from 2009. Graduated with Master of science degree in Medical Management – 2004 (University for National and World Economics, Sofia). Associated professor Kanev poses the following acknowledged medical specialties – Internal Diseases, Toxicology, Military Toxicology, Emergency Medicine and Disaster Medicine. He has been assigned as a Head of Chair Disaster Medicine and Toxicology in 2004, after being associate professor in Chair for Emergency Medicine for two years.

Associated professor Kanev has done various postgraduate specializations in the fields of toxicology, military toxicology, medical management, emergency medicine etc., in several countries – Japan, Russia, Switzerland, USA, France. He has more than 100 scientific publications and much more participations in scientific national and international scientific forums.

The Development and Utilization of a New Training Paradigm to Increase the Skill Sets and the Numbers of Providers on the Front Lines in OIF and OEF

Major General Robert J. Kasulke MD MPA FACS
Deputy Surgeon General, Mobilization, Readiness and Reserve Affairs (USAR)

Introduction: In my presentation, I will discuss the specifics of the training for a new category of providers in the ranks of the US Army; the Combat Life Saver". I will compare the training of these unique individuals to the skill sets that are taught to the traditional Combat Medics in their training.

I will show the dramatic decrease in combat mortality rates that began when the Combat lifesavers were placed on the battlefields.

Methods: Mortality and survival statistics from OIF and OEF

Results: Across the board mortality rates of 6% since the inception of this program.

Discussion/Conclusion: We have seen a dramatic decrease in the mortality rates, since the combat life saver program was launched and these soldiers arrived on the battlefield and started using their lifesaving skill sets.

Other Nation's Army's may want to emulate some of this type of training for their own combat personnel.

SOURCE AND YEARS OF COMMISSIONED SERVICE

Direct, Over 25

CURRENT OCCUPATION

President, Robert J. Kasulke, MD, PC, Watertown, New York

MILITARY SCHOOLS ATTENDED

Army Medical Department Officer Basic and Advanced Courses

United States Army Command General Staff College

United States Army War College

EDUCATIONAL DEGREES

Fordham University - BS Degree - Biology

Syracuse University Maxwell School of Citizenship and

Public Administration - MPA Degree - Public Administration

State University of New York, Syracuse, College of Medicine -

MD Degree - Medicine

FOREIGN LANGUAGE

None recorded

PROMOTIONS

DATES OF APPOINTMENT

<u>Rank</u>	<u>Component</u>	<u>Date</u>
CPT	USAR	11 Jun 80
MAJ	USAR	15 Nov 83
LTC	USAR	14 Nov 90
COL	USAR	28 Jun 96
BG	USAR	14 Jan 02
MG	USAR	01 Jul 05

MAJOR DUTY ASSIGNMENT

<u>FROM</u>	<u>TO</u>	<u>ASSIGNMENT</u>
-------------	-----------	-------------------

USAR - NOT ON ACTIVE DUTY

Jun 80	Jul 81	General Surgeon, 5503d United States Army Hospital, Columbia, Missouri (Jun-Jul 81, non-rated)
Aug 81	Jan 84	General Surgeon, 912th Combat Support Hospital, Johnson City, Tennessee
		Student, Combat Casualty Care Course, Fort Sam Houston, Texas
Jan 84	Aug 84	(Jan 83, ADT) Control Group

Major General ROBERT JOHN KASULKE (USAR)

Aug 84	Aug 92	Commander, Hospital Units 1, 2 and 3, 310th Field Hospital, Malone, New York
Aug 92	Aug 93	General Surgeon, 376th Combat Support Hospital (Hospital Unit Base), Malone, New York
Aug 93	Aug 94	Chief of Surgery, 376th Combat Support Hospital (Hospital Unit Surgical), Liverpool, New York
Aug 94	Aug 95	Commander, 376th Combat Support Hospital (Hospital Unit Surgical), Liverpool, New York
Aug 95	Aug 99	Commander, 4218th United States Army Hospital, Liverpool, New York
Aug 99	May 01	Commander, 865th Combat Support Hospital, Utica, New York
May 01	Mar 05	Commander, 8th Medical Brigade, Brooklyn, New York
Mar 05	Jul 05	Deputy Surgeon (IMA), Mobilization, Readiness and Reserve Affairs, Office of the Surgeon General, Falls Church, Virginia

SUMMARY OF JOINT EXPERIENCE

<u>DATE</u>	<u>RANK</u>	<u>ASSIGNMENT</u>
-------------	-------------	-------------------

None

US DECORATIONS AND BADGES

Legion of Merit
 Meritorious Service Medal
 Army Commendation Medal (with 2 Oak Leaf Clusters)
 Expert Field Medical Badge

As of 3 March 2006

Early Recovery of Servicemen after Training with an OC - Spray (PEPPER - Spray) and Treatment with a Local Anesthetic

LtC Valentin Konov MD

Department of Disaster Medicine and Toxicology, Military Medical Academy

Introduction: The aim of the present work is to prove the advantage of a local anesthetic application immediately after spraying with OC - spray (PEPPER - spray).

Methods: The effect of a local anesthetic use immediately after an impact with a Pepper – spray was examined. Two groups of healthy servicemen from a Bulgarian military contingent in Iraq were observed, who were trained with OC - spray (PEPPER - spray) in relation to the consequences on human health.

The working group, comprised of service men who immediately after a physiotoxic incapacitant exposure were treated with a local anesthetic (two drops in each eye sack), while the servicemen from the control group were not treated.

Results- The results were recorded by using analysis method, clinical assessment of the subjective complaints and the health status observed by the doctor of the contingent.

Conclusions- The use of a local anesthetic considerably advances the tolerance of OC - spray (PEPPER - spray), symptoms are maximally mitigated, the period of subjective complaints is reduced, helps the early recovery after the impact.

Biography

Leut. Col. Valentin Konov, MD was born in 1966. 2007-2008 and 2008-2009 was deployed in Iraq. Now he is head of a ward in Disaster Medicine Research Laboratory. Leut. Col. Valentin Konov, MD poses two medical specialties- Internal Medicine and Disaster Medicine.

„Medical Intelligence in Mass Casualty Situations“.

R. Kostadinov, Assoc.Professor K. Kanev, DSc

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction Regardless causes MASCAL situations always are great challenge for medical support. The aim of the article is to present the MASCAL medical support capabilities enhance by implementing MEDINTEL.

Methods By means of descriptive method the most important MASCAL features from medical point of view were analyzed. Comparative and cluster analyses were applied in order to define the medical support areas where MEDINTEL processed data could enhance medical activities effectiveness.

Results Collected, analyzed and processed data by MEDINTEL is essential for appropriate MASCAL medical support planning and execution. Great majority of the data required in case of MASCAL (routes for ingress and egress, terrain, weather and environment associated risk both for casualties and rescue teams, medical means and capabilities reinforcement provision) is maintained by MEDINTEL.

Discussion/Conclusion From performed analyses was concluded that timely request and implementation of MEDINTEL is tool for enhancing medical effectiveness in limited means and capabilities circumstances and time constrain, observed in MASCAL situation.

„Medical Intelligence in the Operational Planning Process“.

R. Kostadinov, MD

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction In the best interest of military operations, planners need to assess any possible risk to their operations. The aim of the article is to define MEDINTEL contribution in overall operational planning process.

Methods By means of descriptive method OPP stages requiring MEDINTEL were listed. Deductive, comparative and heuristic analyses were applied in order to formulate MEDINTEL data scope and importance in every particular OPP stage.

Results As a result of performed analyses MEDINT was defined as an essential part not only of the medical risk assessment but also of the overall force risk assessment. MEDINT feeds medical planning during all stages of the operational planning process. In addition to this it provides the commander with processed information on operational medical risks that is included in .intelligence threat analysis and evaluation of courses of action.

Discussion/Conclusion Therefore the rational conclusion of analyzed in the article data is that MEDINT has significant contribution to military planning process.

„The Medical Intelligence Contribution to the Intelligence Preparation of the Battle Space “.

R. Kostadinov, MD

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction IPB is an analytical methodology that is conducted by intelligence organisations to produce intelligence assessments, estimates and other intelligence products in support of the commander’s decision making process.

The aim of the presentation is to identify MEDINT contribution to IPB defining MEDINTEL necessity and importance.

Methods Medical considerations in the existing environment and in issues related to political, cultural, military, socio-economical and geographical influences were presented by means of descriptive analysis. Deductive, cluster and heuristic analyses were applied in defining MEDINTEL contribution to IPB.

Results Through the medium of performed analyses IPB areas and steps where MEDINTEL contributions are required were listed. The systematic and dynamic process of medical contribution to the IPB was presented in its close relation to the individual steps of the Commander’s decision making cycle.

Discussion/Conclusion Performed analyses and obtained results led to conclusion that MEDINTEL contribution to IPB are essential for maintaining situational awareness, performing adequate threat assessment and appropriate preventive measures implementation.

„Host Nation Politics Impact on Deployed Troops Medical Environment”

R. Kostadinov, MD, D.Dimov, MD

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction Politics stability and trends are influencing entire spectrum Host Nation society and economy. The aim of the article is to define the most politically vulnerable areas that change probably will create threats to deployed personnel health.

Methods By means of descriptive method politics influence on Host Nation medical related environment was analyzed. Comparative and cluster analyses were applied to define and list those politically vulnerable areas that changes affect deployed troops medical environment.

Results Performed analyses led to comprehensive list of politically influenced areas with direct affect on health threat and health risks level for deployed servicemen. Available transport, communication and medical infrastructure, as well as cultural, religious customs and social behavior were among the top listed areas with high politics dependence and direct impact on deployed forces health status and combat readiness.

“Medical Intelligence in Force Health Protection”

R. Kostadinov, Assoc.Professor K. Kanev, DSc

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction History presents large number evidence where personnel losses caused by disease and non-battle injuries have affected the outcome of military operations.

The aim of the article is to present MEDINTEL contribution to FHP planning and execution process.

Methods By means of descriptive method FHP priorities were analyzed and listed. Comparative and cluster analyses were applied to define and list those MEDINTEL inputs required for adequate and proper FHP planning and execution.

Results Health hazards identification and related health threat and risks levels assessment were defined as a prerequisite for proper preventive medicine measures planning and implementation. Timely provided MEDINTEL products to medical planners were assessed as a basis for adequate FHP reaction to dynamic changing medical and tactic environment.

Discussion/Conclusion Based on the performed analyses was concluded that MEDINTEL provides comprehensive picture of existing medical environment and prognosticate its development, thus contributing for proper FHP planning and execution.

„The Host Nation Healthcare System Ambiguity in Medical Assessment”

R. Kostadinov, A.Galabova

Chair Disaster Medicine and Toxicology, Military Medical Academy, Sofia, Bulgaria

Introduction Health threat to the deployed personnel is the eminence of health hazard probability to inflict health failure.

The aim of the article is to define host nation healthcare system (HNHS) features with possibility to create health threats to deployed military personnel.

Methods Descriptive method was applied to list HNHS features with possible impact on military servicemen health, combat fitness and readiness. By means of comparative and deductive analyses those HNHS features posing threat were defined with circumstances multiplying deployed troops’ health risks.

Results As a result of performed analyses the HNHS regulated areas such as population sanitary and hygiene level; spread of epidemiologic and endemic diseases; water and food safety; medical equipment and consumables as well as treatment facilities capabilities, availability and accessibility, means and routes for medical evacuation have been defined as highly influential to deployed troops health. For this reason HNHS should be assessed as a medical threat as well.

Biography LtCol Rostislav Kostadinov, MD was born in 1965 and since 1991 has been on active military service. LtCol Kostadinov poses three acknowledged medical specialties – Internal Diseases, Orthopedics and Traumatology, and Disaster Medicine. He has been assigned as a regimental health service commander, various positions as a medical specialist in Military Medical Academy internal diseases and surgical departments, as well as in Military Medical Detachment for Emergency Response. In 2005 LtCol Kostadinov was

assigned as medical staff officer in NATO Allied Joint Force Command Headquarters, Napoli, Italy. From July 2007 he is head of newly established Ward for Military Medical Intelligence in Military Medical Academy.

Assessment of Systolic Function with Tissue Doppler in Patients with Anterior Myocardial Infarction and Interventional Treatment

M. Lecheva¹, K. Ramshev¹, T. Donova²

¹*Clinic of Intensive Therapy-Military Medical Academy, Sofia;* ²*Department of internal Propedeutics UMHAT "Aleksandrovska" - Sofia*

Introduction: Tissue Doppler echocardiography /TDE/ is a new noninvasive method complementary conventional echocardiography.

Methods: The aim of the study was to assess quantitative changes of regional systolic function by TDE in patients with anterior myocardial infarction /MI/ and interventional treatment with stent implantation. Patients were divided in two groups: Group 1 with LAD occlusion 26 (21 male) and group 2 –control 18 (12 male) pts. A TDE examination was conducted in all 44 patients before coronarography - exam 1, and patients with MI were followed avr. 2,4 days -exam 2 and avr.- 32,4 days - exam 3 ,after stenting.

Results: The results showed increasing on Sm between the first and the second examination, decreasing S1, as a decreasing on E/E`.

Conclusion: Regional systolic function showed improvement as assessed by TDE after successful angioplasty.

Biography

I finished my high education in Medical Academy-Sofia in 1993 year. I have worked in Military Medical Academy, Sofia-Clinic of Intensive Therapy since 1993. In 1998 year I graduated in Internal disease and 2001 I graduated in Cardiology. I have licence of conventional echocardiography since 2007 year.

„Radiological disaster – first line Caesium radionuclides decorporation treatment“.

A. Manev

¹*Military Medical Academy, NBC-center, Laboratory of Radiobiology*

Introduction: Caesium radionuclides is radiological important, fast and high resorbtive, and has high biological turnover and distribution. Because that resources for first hours decorporation treatment is most important for final treatment results. There is a three basic approaches: 1. Radionuclide resorbtion blockade; 2. Radionuclide reabsorbtion blockade; 3. Tissue deposited radionuclide trapping and turn out. The aim of this study is to show the relative importance of different approaches and maximum attainable decorporation results without any prophylaxis.

Methods: The 3-days continuous treatment procedures starting from tenth minute ,was investigated on the mouse pulse incorporation model.

Results: Watersoluble cyanoferates treatment show the limit of 50% decorporation, when waterinsoluble cyanoferates limit was over 60%. Watersoluble cyanoferates cause an overcontrolle content of radionuclide at day 20.

Combination of cyanoferates, aminosugars, aminoacids and electrolytes, show the decorporation limit over 90%.

Conclusion: Using all basic approaches is possible to decorporate 90% caesium radionuclide within 3 days.

Biography: **Alexey Markov Manev**

Address: Janko Sakasov str. 9-b ent. A, Sofia, 1504, Bulgaria.

Phones: 00 359(02)9440788 home

00 359(02)9226420 office

GSM: 0887068478

Fax: 00 359(02)95226536

Nationality: Bulgarian

Date of birth: 03.10.1951y.

Occupational field: Medical officer,researcher-radiobiology from 1979 y.

Work experience: 32 years,medical officer- 1977-2008. Ass. Professor from 1997 y.

Chief of Departament of Radiobiology and Radiation Protection from 2003 y.

Chief of Laboratory of Radiobiology from 2004 y. to 2008 y.

Name of organisation: Military Medical Academy from 1978 y.

Education: High medical, Medical Academy-Sofia 1969-1975 y.

Title of qualification: Doctor of medicine – 1982 y.

From 03.10.1951 y. reserve medical officer and assotiated professor in Laboratory of Radiobiology – NBC-center, Military Medical Academy-Sofia.

Application of a collagen-gentamycine sponge for open fractures and gunshot wounds treatment.

Wojciech J. Marczyński

*Orthopedics Department of Postgraduate Medical Education Centre,
Medical University of Warsaw, Poland*

Wounds accompanying open fractures and gunshot injuries are commonly considered as primarily infected.

Depending on mechanism, energy of trauma and extent of injuries there is various degree of ischemia and tissue necrosis. These problems are accurately included in Gustillo-Anderson classification. Biological reality of wound contamination and traumatic pathology of tissues are difficult to define but can be the cause of infectious complications – initially local and subsequently general. This situation entails the necessity of prevention of infections by careful and accurate debridement, fracture fixation and pharmacological management. Pharmacological prevention of infections relies on applying wide spectrum general antibiotics.

Wounds accompanying open and gunshot fractures are in high risk of infectious complications. Therefore there are indications for increasing the wound antibiotic concentration by application of collagen-gentamycine sponge.

The aim of the paper is to present the treatment results of open and gunshot fractures after using collagen-gentamycine sponge. Analysis included 23 patients with various war injuries.

The results of treatment show the relevant positive effect of collagen-gentamycine sponge on limitation or prevention of local infection intensity in primarily contaminated wounds.

Contemporary Aspects of Toxic Morbidity

Dr. L. Neykova, Assoc. Prof. K. Kanev M.D., Dr. V. Arnaudov
*Clinic of Emergency Toxicology and Allergology at the Military Medical
Academy Sofia, Bulgaria.*

Introduction: The clinical toxicology regards the problem with the acute exogenous intoxications. Its actuality is growing. The social and ecological disharmony and the industrialization, as well as the international terrorism in its various forms are a contributing factor.

Aim: To follow the morbidity; to differentiate the different toxic noxas as well as to improve the alorhytmus of the therapeutic behaviour.

Material and Method: Hereby we present a retrospective research of the structure of the toxicological morbidity. The review is for the period of three years: 2006 – 2008. 3673 patients were hospitalized in the Clinic of Emergency Toxicology and Allergology at Military Medical Academy in Sofia, Bulgaria. 1368 /37, 24%/ of them were hospitalized more than once.

Results: A tendency of increase of the suicidal attempts among women has been noticed. Among men the leading toxic noxa was the alcohol. There was also a worrying increase of the percentage of the patients with aggravated collateral psychiatric disease (depressive episode and schizophrenia). There was a significant decrease of the cases of intoxications with Psycho affective substances and psychotropic medicaments.

Conclusion: The good knowlege of the structure of the acute toxicological morbidity requires a deep analysis and prognosis. The determination of the most frequent pathology allowed for the improvement of the therapeutic behaviour. All that led to improvement of the health condition of the patients.

Biography of Lyudmila Neykova:

Born on 09.05. 1966. Montana, Bulgaria.

Graduated form Medical University in Sofia Bulgaria 1990.

1990 started work at Clinic of Emergency Toxicology and Allergology at the Military Medical Academy Sofia, Bulgaria.

Specialized in Clinical Toxicology in 1993.

Assistant since 1999,

OPEX AU TCHAD

EXPERIENCE D'UN MEDECIN DE RESERVE

Dr NICOL Claude Dr CORDEBAR Régis
Service de Santé des Armées

Cette 7^{ème} OPEX en 2007, en tant que Médecin Chef des Eléments Français du TCHAD à Abéché, a été une excellente expérience de la Médecine Militaire dans sa diversité avec une activité gratifiante : le Médecin Epervier étant le référent à la fois pour l'ANT (Armée Nationale Tchadienne), l'hôpital régional d'Abéché et tous les confrères locaux toutes disciplines confondues et même ceux des ONG présents sur le secteur.

Elle nous a permis d'avoir une activité dans tous les domaines de la médecine : soins courants et urgences, médecine tropicale, médecine préventive et d'hygiène, médecine de guerre et de catastrophe avec l'accueil d'afflux massifs de blessés de l'ANT (plus de 450 du 26 novembre au 07 décembre). Nous avons également fait du soutien, de l'écoute et de la psychiatrie, des EVASAN, de la médecine d'aptitude du travail. Sans oublier une présence lors des activités à risques (T.A.P, tirs de mortiers, M.R....).

Nous ne pouvons passer sous silence le problème des réfugiés : plus de 160.000 dans l'est du pays. Cette mission a été effectuée durant un état d'urgence décrété par le Président IDRIS DEBY ITNO, avec tout ce que cela comporte comme conséquences et dans des conditions climatiques difficiles.

OPEX IN CHAD

EXPERIENCE FROM A RESERVE DOCTOR

This 7th OPEX in 2007, as a doctor-in-chief of the French forces in CHAD in Abeche was an excellent experience of Military Medicine in its diversity. It was also a rewarding experience in a sense that the Epervier doctor is a referent for the ANT (Chadian National Army), for the regional hospital of Abeche, for all local fellow members in all disciplines taken together, as well as for other doctors working for the NGOs present in the sector.

We had activities in every field of medicine: standard/emergency care, tropical medicine, preventive and hygiene medicine, war and catastrophe medicine (between November 26 and December 7 more than 450 injured soldiers of the ANT were taken care of).

We also achieved activities of psychological and psychiatric nature, EVASAN as well as medicine for assessing fitness to work. We were present during high-risk activities (T.A.P, mortar firing, M.R....). We cannot pass over in silence the problem of the refugees: more than 160 000 in the east of the country.

This mission was accomplished in a situation of state of emergency imposed by President IDRIS DEBY ITNO with all the concomitant uncertainty and under difficult climatic conditions.

Biographie:

Médecin en Chef des Armées ® affecté à la D.R.S.S.A. de Brest

Membre du Club des Anesthésistes Réanimateurs et Urgentistes Militaires (CARUM)

Membre des Sociétés Françaises de Médecine d'Urgence et de Médecine de Catastrophe

Auditeur de l'Institut des Hautes Etudes de la Défense Nationale (IHEDN)

OPEX : Bosnie-Herzégovine (2 fois) – Croatie – Kosovo – Djibouti – Liban - Tchad

”Examination and archiving of dental data for overseas deployment and identification”

E. Nuzzolese, M. Nuzzolese, V. Marcario,
*Italian Red Cross Military Corp, auxiliary Armed Forces Corp, 11° Mobilization Centre,
Bari, Italy*

The dental exam, as suggested by the Dental Fitness STANAG 2466 and a letter circulated by the SANVET Department of the IT Army Logistics Inspectorate, requires annual health assessments of military personnel prior to deployment overseas, including a dental examination. This to achieve optimum military effectiveness. Dental examination is important to classify and identify those soldiers who may need dental treatments prior to deployment in order to achieve good and stable oral health for one year. Dental officers will register soldier odontograms which represent important data for future dental examinations and human identification processes. Dental data and DNA are, in fact, the two scientific methods applied for human identification. In particular skeletonized or carbonized human bodies will need the activation of a military dental field identifications services team (STANAG 2464). In this presentation the registration the 11° Mobilization Centre of the Italian Red Cross military corp in Bari is described.

Biography

Graduated in dentistry at the University of Bari (Italy) in 1994. A post-graduate in Legal Medicine and Forensic Odontology, holds a Research Doctorate degree on Analytic Morphometry applied to Forensic Identification. He is dental officer (reserve) of the Italian Army Italian and of the Italian Red Cross Military corp (auxiliary Armed Forces corp). Has participated twice to *Operation Ancient Babylon* in Iraq.

He is committed to forensic odontology, with particular interest to forensic dental identification and mass disaster management.

Lecturer for forensic odontology at the University of Bari (Italy) and Split (Croatia).

Forensic Identification of Military Airplane Casualties and Tsunami Victims

Wolfgang Otto¹, Manfred Dittmer²

¹ Dentist Center, Bruehl, Germany

*²Division of Forensic Medicine and Medical Investigation of Aircraft Accidents,
Fürstenfeldbruck, Germany*

Identifying unknown dead bodies is both a legal requirement and an ethical obligation to the victims and their next of kin. The bodies of flight accident victims frequently show a high degree of destruction of all body parts and the tsunami victims mostly had autolytic and decomposition processes. Therefore simple efforts of recognition are usually impossible and forensic methods of identification are required. The identification of unknown bodies is one of the core tasks of the Division of Forensic Medicine and medical Investigation of military aircraft accidents and as well as civil victims if the Federal Criminal Police Office needs assistance in their Disaster Victim Identification teams.

“Evaluation of the influence of some reactivators of cholinesterase on the respiratory tract, blood pressure and heart rate in rats poisoned with soman”

Teodora Pencheva, Ivan Samnaliev,
Department of Toxicology and Medicine of Disasters
Laboratory of Military Toxicology
Military Medical Academy, Sofia, Bulgaria

Goal of the current study was to evaluate the effects of two new synthesized reactivators of cholinesterase on some physiological parameters such as breathing, heart rate and blood pressure of rats poisoned with lethal dose of soman..

Material and method: Experiments were carried out on 35 male albino rats “Wistar”, 180-200 b.w. Blood pressure, heart rate and breathing were registered by using a modern compact research system which allows on-line record and analysis of the parameters studied. Three reactivators of ChE were tested for their effects on the physiological parameters. Two of them were new synthesized – BT-03 and BT-05 and the last one was very well known compound HI-6. The oximes, combined with atropine (14 $\mu\text{mol/kg}$), were injected i.v. in equimolar doses (14 $\mu\text{mol/kg}$) one minute after intoxication with 1 LD₅₀ of soman. The rate of survivors for 90 min. observation was registered as well.

Results: 1 LD₅₀ of soman caused very rapid failure of cardiovascular and respiratory tract and rats died within 10 min. Animals treated only with atropine did not survive more than 30 – 40 min. and died as well with the signs of respirator and heart arrest. All rats treated with HI-6 and BT-05 combined with atropine survived to the end of observation (90 min.). BT-03 was not able to reduce the toxic effects of soman on respiration and heart functions.

Conclusion: The modern compact research system used in the current work allowed the important physiological parameters to be registered. It makes possible the influence of nerve agent soman and additional antidote treatment on respiration, heart rate and blood pressure to be investigated. The results obtained demonstrated that drug combinations of HI-6 and BT-05 plus atropine completely reduced the toxic effects of soman on the studied physiological parameters.

Acupuncture Related Tactics & Techniques: Magic or Medicine?

Arnyce R. Pock, Richard C. Niemtow,
U.S. Air Force;

An ancient Chinese proverb says 'to find new things, first look for the old things. Although combat tactics have changed, the ancient art of acupuncture is increasingly being viewed as a valuable adjunct for managing a myriad of combat and non-combat related conditions.

These range from alleviating Traumatic Brain Injury (TBI) related headaches to reducing the agonizing pain associated with traumatic amputations. Acupuncture has also been shown to be effective in alleviating a wide spectrum of non-battle conditions such as acute/chronic migraines, back pain, chronic fatigue, hot flashes, neuropathic pain, as well as facilitating tobacco cessation and weight reduction.

This presentation will review some of the different types of acupuncture and acupuncture related technologies that are currently being used within the USAF Medical Service to help manage combat & non-combat related conditions. These include Traditional Acupuncture, Chinese Scalp Acupuncture, Korean Hand Acupuncture, Auricular Acupuncture, and the use of Electrical and/or Laser Stimulation. The presentation will conclude with a summary of how these techniques have been incorporated into the newly implemented, USAF "Battlefield Acupuncture for Deploying Physicians" course.

Colonel (Dr.) Arnyce Pock is currently assigned to the Office of the U.S. Air Force Surgeon General where she serves as the Director of the Air Force Medical Corps and as the Chief of Medical Force Management. Dr. Pock is a graduate of the Uniformed Services University of the Health Sciences (USUHS) and is a board certified Internist and a practicing physician-acupuncturist.

Medical and Tactical Characteristic of Disaster Situations, Arising in Objects under the Ground Surface

N. Podoleshev, Kr. Hristova, V. Arsov,
*Disaster Medicine Research Laboratory, Department of Disaster Medicine and Toxicology,
Military Medical Academy – Sofia*

Introduction: The medical and tactical characteristic of the disaster situations is a base for making a decision, planning and realizing the medical providing.

The purpose of this article is to define the medical peculiarities of the disaster situations, arising in objects under the ground surface.

Metods: For the achieving of the settled purpose were analyzed the different types of disaster situations under the ground surface. By using historical-descriptive analysis and comparative analysis were reached the main specific characteristics of this type of disasters.

Results: The results from the carried out analyzes prove the necessity of detail knowing of the medico- tactical characteristics for an accurate and adequate estimation of the medical environment of this type of disasters and effective planning and realization of the medical actions needed.

Discussion: The specification of the medical environment of disasters, arising under the ground surface, sets the necessity of referred education of the medical specialists, preliminary planning and coordination of their activities with the rescue services during the extreme situation.

Biography

Col.ret. Nikolai Podoleshev, MD, was born in 1948. He has acquired different positions some of which are : senior teacher in Medical Protection Sector in Military Medical Academy /MMA/- Sofia, teacher in Military Medical Academy-Algeria, deputy chief of Dermatology Clinic, MMA- Sofia. Now he is head of ward in Disaster Medicine Research Laboratory. Col. Ret. Nikolai Podoleshev, poses two medical specialties- Dermatology and Disaster Medicine.

„Issues of Lectures at Harvard Business School with Relevance for the Visibility of CIOMR”.

H.C. Rahn
CIOMR, Germany

Although CIOMR is an international non-profit organization, it needs to evaluate and address its target groups by applying media and methods similar to those, which are familiar in civilian marketing practice. This presentation gives an overview of findings from a 3-year Harvard Business School training course for company owners and presidents (OPM), which are seen as helpful for enhancing visibility of CIOMR. Further, it evaluates specific objectives of the CIOMR concept, which can be supported. Relevant subjects of OPM e.g., Marketing, Sales or Negotiation Methods, were analysed with respect to their contents with relevance for further development of the image and influential power of CIOMR. The findings are that, considering the limited financial and human resources of CIOMR, specific issues of civilian marketing and sales theory and practice lectured at OPM, can play an important role. The implementation needs to efficiently select target groups and media and to extensively practice public affairs management. Its focus grounds on contents with military and civil relevance as its USP

Biography

Born 20 February 1957 in Wagassen (Germany)

1979-1986 Studies of Veterinary Medicine and Industrial Engineering, FU, TFH Berlin

1998-2001 OPM-Studies, Harvard Business School, Boston/MA

1987-1999 Marketing/Sales Manager, Pharmac. Industry (OTC) and Food Wholesale

since 2000 Owner Manager TIC Optics GmbH and Die Brillenfabrik, Pfaffenweiler (Germany), Director GKB Vision Ltd., Goa (India), Partner of Mülle, Rahn&Partner, Zurich (CH), Arsen Music, Breisach (Germany)

Status: Single

Hobby: Songwriter

“Biochemical investigations in rats poisoned by lethal and non-lethal and low doses of nerve agents”

Ivan Samnaliev, Trifon Ivanov, Christofer Dishovsky
Military Medical Academy, Sofia, Bulgaria
Department of Toxicology and Medicine of Disasters
Laboratory of Military Toxicology

Goal of the current study was to evaluate toxic effects of moderate and low doses of soman and tabun on some biochemical parameters in rats.

Material and method: Experiments were carried out on 120 male albino rats “Wistar”, 180-220 b.w. Three different doses of soman and tabun - 1.0 LD50, 0.5 LD50 and 0.1 LD50 (s.c.) were estimated for toxic effects on the following biochemical parameters; erythrocyte, brain, liver acetylcholinesterase and serum butyrylcholinesterase, albumin, total protein, ASAT, ALAT, ALP and creatinine. There was no antidote treatment after the challenge. The measurements were done 24 hr, 5 and 10 days after intoxications with soman and tabun.

Results: Erythrocyte and brain acetylcholinesterase were significantly inhibited after poisoning with 1.0 LD50, 0.5 LD50 and 0.1LD50 of soman. The rate of inhibition of cholinesterase was in a dose and time depending manner. Butyrylcholinesterase showed most deep inhibition one day after nerve agent challenge. Liver acetylcholinesterase did not show significant changes for all measurements. At the same time the values of total protein and albumin were increased and differences were significant 24 hr and 5 days after poisoning. ASAT, ALAT and ALP showed different changes without clear tendency.

Conclusion: Acetylcholinesterase is very sensitive to nerve agents poisoning even when intoxication is caused by moderate or low doses. At the same time seems that other biochemical parameters could be used as biomarkers for intoxication with nerve agents.

Surgical Challenges in Operating Room Traumas

Capt Peggy Ann Sherwood

My aim is to acquaint my listeners to the emotional, ethical, psychological, and physical challenges encountered as an operating room theatre nurse in Kandahar, Afghanistan.

I will attempt to demonstrate these challenges through an oral and brief slideshow presentation

Hopefully, by the end of my presentation, my listeners will be more enlightened of the situation in being a world away from family and friends in a dangerous and austere third world environment as our Canadian operating room team strived daily to deliver “the best care anywhere.

My discussion will give examples of the devastating and disabling injuries, the relentless rocket attacks, critical equipment shortages and 27 hour days which humbled us but did not destroy our enthusiasm to soldier on and complete the task at hand. Ours was a mandate to alleviate suffering, prevent disability wherever possible, and prolong quality life.

In my own conscience, I believed in our mission and in the fact that our team made a positive impact. There remains much to be done but I have confidence in my colleagues to continue the self sacrifice and dedication that we demonstrated on our tasking. It is not about “the medal” or “the money”—it’s about caring for humanity against adversity.

The use of ANTHRAX and ORTHOPOX THERAPEUTIC ANTIBODIES from HUMAN ORIGIN in BIODEFENSE

Cdr. Dr. Stef Stienstra
Royal Dutch Navy (KMR)

INTRODUCTION

It is impossible to protect whole nations from the effects of bioterrorism by preventive vaccination. There are too many possible agents, costs would be exorbitantly high, and the health risks associated with complex mass vaccination programs would be unacceptable. Adequate protection, however, could be provided via a combination of rapid detection and diagnosis and the treatment of those exposed with drugs which would be beneficial in all stages of disease. Monoclonal antibodies, preferably from human origin to prevent severe complications, which neutralize or block the pathological effects of biological agents, are the optimal candidates to be deployed in case of biological warfare or a bioterrorist event. Recent research has shown that a combination of monoclonal human antibodies against the protective antigen (PA) and lethal factor (LF) of the anthrax toxin is even after application 48 hours after the infection therapeutically effective. This new development offers a safe therapy which can start even several days after bioterror victims are possibly infected with anthrax spores.

STUDY DESIGN, “CLONING THE HUMAN RESPONSE™”

The human body is one of the better, and most suitably equipped places for the generation of monoclonal antibodies which are to be used effectively in humans for treatment. Such antibodies will be of optimal physiological specificity, affinity, and pharmacological properties. In addition, the chances on severe adverse effects and cross-reactivity with human tissues will be slim. Therefore the human immune response is used by the Dutch company IQ Therapeutics, a spin-off of the Groningen University and financially supported by the Dutch Armed Forces, as a basis for selecting the antibodies. People, immunised against or infected with the agent in question, donate blood cells voluntarily, which are used to generate fully human monoclonal antibodies. In this way effective therapeutics against the protective antigen (PA) and lethal factor (LF) toxin components of *Bacillus anthracis* are developed and currently antibodies against orthopox viruses are generated as well from donors, which have been immunized with vaccinia. Other projects are the development of therapeutic antibodies for MRSA (antibiotics resistant *Staphylococcus aureus*) and *Enterococcus* spp.

RESULTS, CLINICAL STUDIES IN THE COMING YEAR

Both human antibodies against the anthrax toxin components are efficacious in vitro and in pre- and post-exposure settings in mice and rabbits. The anti-LF antibody (IQNLF) is tested in a phase I clinical trial in Q3 of 2009. GMP-testing material is already available. The anti-PA antibody is in a pre-clinical stage, as are the other antibodies mentioned.

A remarkable result is that we have seen a strong synergistic effect in the treatment of anthrax infections when both anti-LF and anti-PA are used simultaneously. Studies have shown that a sub-optimal concentration of anti-PA can be supplemented with anti-LF to obtain 100% survival of the rabbits infected with a lethal dose of anthrax by inhalation.

The animal experiments indicated that with the use of dual (anti-LF and Anti-PA) antibodies the window of treatment can be extended as well. Whilst the onset of disease in the rabbit anthrax inhalation studies is in 25-29 hours, the lifesaving treatment of the animals with a

normal dose has proven to be still effective when the treatment starts 32 hours after the lethal dose is given.

CONCLUSION, Instant Immunity™ in biodefense

The Dutch company IQ Therapeutics has successfully generated and developed a fully human monoclonal antibody against the lethal factor of *Bacillus anthracis*. The same technology can be used to generate antibodies for passive immunisation after (suspected) exposure to other biological threat agents. As such antibodies are effective immediately after application; the scientists have termed them Instant Immunity™ antibodies.

There is a strong synergetic effect of human antibodies directed against LF and PA epitopes of anthrax, which leads to higher therapy rate, lower dose and bigger window of treatment.

Plastic and Reconstructive Surgery Improves The Operational Efficiency of the Role 3 MMU

Mark R. Thibert, M.D
18 (Thunder Bay) Field Amulance

Introduction : From July 27, 2008 – October 3, 2008 I was deployed to the Role 3 MMU, KAF. Although I was backfilling an OMFS position, I had the tremendous opportunity to be the first Canadian Forces Plastic Surgeon ever deployed in a Role 3 setting. During that interval I practiced the full spectrum of Plastic and Reconstructive Surgery. In addition to the OMFS activities, I also treated patients in the areas of complex wound reconstruction, hand surgery, burns, limb salvage, and microsurgery. Data will be presented demonstrating that the presence of Plastic and Reconstructive capabilities in the Role 3 MMU not only added to the breadth of surgical capabilities, but when applied adjunctively to the other surgical specialties, improved the operational throughput of the Role 3 facility.

Methods : Data regarding procedures performed, case types treated, and length of stay in the Role 3 MMU, KAF were studied during the interval July 27, 2008 – October 3, 2008, and for the preceding 12 month interval, with and without the presence of a Plastic Surgeon.

Results: The data indicated that during the time that Plastic Surgery services were available, the cases treated operatively increased to 367, compared to an average of 15 cases per 2 months during the preceding 12 months. The operational throughput of index cases including burns, complex hand injuries, and lower extremity trauma increased 85% in the presence of Plastic Surgery services.

Discussion/Conclusion: The presence of Plastic Surgery capability was shown to increase the operational throughput of the Role 3 MMU, KAF, during the interval July 27, 2008 – October 3, 2008. The expanded skill set of the Plastic Surgeon, when applied with appropriate judgement and selection, improved quality of care options.

This experience and these data demonstrate that further thought should be given to the regular inclusion of Plastic Surgery capabilities in the Role 3 operational environment.

Biography: Undergraduate Education: B.Sc. Biology, University of Western Ontario, London, Ontario, Canada, **Medical Education:** M.D - University of Western Ontario, London, Ontario, Canada, **Postgraduate Medical Education:** Rotating Internship; Fellowship in General Surgery - University of Western Ontario, London, Ontario, Canada; Fellowship in Plastic and Reconstructive Surgery – William Beaumont Hospital, Royal Oak, Michigan, USA; Fellowship in Hand and Microsurgery - University of Western Ontario, London, Ontario, Canada

Military Background:

1. Commanding Officer 18 (Thunder Bay) Field Ambulance, June 9, 2006 – present
2. Brigade Surgeon – July 2008 – present
3. Plastic Surgeon, Role 3 MMU, KAF, 27 July 08 – 3 October 08.
4. Flight Surgeon – 6 March 09

Academic:

1. Associate Clinical Professor of Surgery, Northern Ontario School of Medicine
2. Associate Clinical Professor, Faculty of Medicine, McMaster University
3. Adjunct Professor, Faculty of Kinesiology, Lakehead University

Professional:

Full-time solo practice, Plastic and Reconstructive Surgery, Thunder Bay Regional Health Sciences Center, Aug 1991 – present.

“Morphological Investigations in Carbamate Poisoned Rats with or without following Antidote Treatment”

Trifon Ivanov, Nadya Pavlova
Military Medical Academy, Sofia, Bulgaria
Department of Toxicology and Medicine of Disasters
Laboratory of Military Toxicology

Goal of the current study was to investigate the morphological changes in rats poisoned by highly toxic carbamates and to assess the influence of antidote treatment on the toxic effects and related to them histological changes.

Material and methods: Experiments were carried out on 26 male albino “Wistar” rats, 210 – 250 g. Body weight. Animals were poisoned by highly toxic carbamates, known as T 1123 and VK-85, and physostigmine as reversible inhibitor of cholinesterase. Intoxication was coursed i. p. with 1.0 and 2.0 LD₅₀ of mentioned compounds. Rats were decapitated 0.5, 1 and 2 hours after the carbamate challenge and following antidote treatment. As antidotes were used a drug mixture consisting of atropinum sulfuricum, ephedrinum hydrochloricum, a central acting cholinolitic (MA-1) and reactivator of cholinesterase (VT-82). Antidote treatment started 1 min. after the intoxication

Results: Rats without antidote treatment were decapitated 0.5 and 2 hours after the challenge. Animals with antidote treatment survived and were killed at the end of observation (24 hr). After autopsy materials for histological investigations was obtained from brain, some viscera and femoral muscle. The macroscopic view of untreated rats showed significant congestion and hyperemia of brain and viscera and spasm of stomach and intestine. At the same time in poisoned rats with following antidote treatment essential histological changes were not observed, except moderate hyperemia in brain and parenchyma, 24 hr after the carbamate intoxication

Conclusion: Results obtained from the current study showed that the intoxication with T-1123, Vk-85 and physostigmine caused non-specific histological changes in brain, viscera and skeletal muscles which did not have separate and independently diagnostic importance. Toxic effects of carbamate compounds tested in this study were most manifested during the first two hours after the challenge. After that and particularly 24 hours later animals were free from toxic signs. Antidote treatment when started 1 min after poisoning protected animals against lethal effects of carbamates. In this case histological changes were not found, except moderate hyperemia in brain and parenchyma.

„ Wound Ballistics and Military Surgery Contemporary Achievements in Republic of Bulgaria”

Borimir Vasilev, MD, DSc
¹Military Medical Academy, Sofia. Bulgaria

Introduction Wound process development is highly dependable on mechanism of tissue damage. In order to reveal in details the pathogenesis of the wound process caused by bullets with different ballistics, series of experiments in vivo and in vitro were performed.

Methods The wound profile result of experimental shots with 7.62x39mm and 5.45x39mm (100 m. distance) are presented on the simulate surfaces. Several wounding with “Makarov” gun and 7.62x39mm were performed on experimental animals (in accordance with ECVAM regulations).

Results The obtained results were analyzed from ballistics point of view, and were compared with recorded outcomes after similar wounding (peacetime and received in military missions). The war surgery development in Republic of Bulgaria is in accordance with acknowledged NATO standards.

Discussion/Conclusion In conclusion, modernized gunshot wounds classification, related to injuring agents’ mechanism of damage is presented.

Biography Colonel Borimir Vasilev, MD, DSc, is Associate Professor in Military Medical Academy. Specialist in General Surgery, Thoracic Surgery and War Surgery, he is interested in the fields of war surgery, particularly in terminal and wound ballistics, as well as gunshot injuries.

Authors:

*MD Ventzislav **Bardarov***

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: vbardarov@abv.bg

*Pharmacien en Chef Claude **Boymond***

Faculté de Pharmacie – Strasbourg - France,

74, Route du Rhin – BP 60024, F 67401 Illkirch; e-mail: boymond@pharma.u-strasbg.fr

*Col Winston **De Mello***

Pain Clinic, University Hospital of South Manchester

Southmoor Road, M 23 9LT, Manchester, e-mail: wdemello@uhsm.nhs.uk

*Col Prof. Christophor **Dishovsky***

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: Christophord@gmail.com

*Col V Heidi A. **Doughty***

National Health Service Blood & Transplant

Vincent Drive, Birmingham B15 2SG, e-mail: Heidi.doughty@nhsbt.nhs.uk

*Col Ass. Prof. Velichko **Dragnev***

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: medkat@vma.bg

*LCDR Peter T. **Fellmer MD***

University of Leipzig Dept. of visceral-, transplant, thoracic- and vascular surgery Liebigstr.

20 Leipzig D-04103 Peter.Fellmer@uniklinik-leipzig.de

*LtCol (r)dr Andrzej **Galubinski***

Neurological Outpatient Clinic in Gdynia

81-301 Gdynia 1, box 164, Poland, e-mail: agal@mp.pl

*BG Gerald **Griffin MD***

Biobanc USA

5 Lower Ragsdale, 93940 Monterey, CA, USA, e-mail: k6md@aol.com

*LtCol Stephan **Hofmeister MD***

Medical Regional Command 2, Diez

*Col Walter **Henny MD***

6 Boterdorps Verlaat Rotterdam 3054 XL, NL, e-mail: whenny@wanadoo.nl

*Ass. Prof. Krassimira **Hristova***

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: Krassimira_hristova@yahoo.com

*LtCol Ass. Prof. Kamen **Kanev** MD PHD*

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: kam5kan@yahoo.co.uk

*MG Robert John **KASULKE***

Deputy Surgeon (IMA), Mobilization, Readiness and Reserve Affairs, Office of the Surgeon

General, Falls Church, Virginia 22041-3258, 270 Clinton Street USA, 13601,

ckasulke@twcnny.rr.com

*LtCol Valentin **Konov** MD*

Department of Disaster Medicine and Toxicology, Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: medkat@nvma.bg

*LtCol Rostislav **Kostadinov** MD*

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: rostikosti@abv.bg

*Mihaela **Lecheva** MD*

Clinik of Intensive Therapy, Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: Lecheva_m@dir.bvg

*Col Alexey **Manev**, MD*

NBC-Center, Military Medical Academy

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: alexmanev@mbox.contact.bg

*Prof. Wojciech J. **Marczynski** MD, PhD*

Orthopedics Department of Postgraduate Medical Education Centre,

Medical University of Warsaw, Poland, e-mail: klin_ortop.a.grucy@wp.pl

*Luydmila **Neykova**, MD*

Department of Disaster Medicine and Toxicology, Military Medical Academy

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: Lussi66@abv.bg

*Medecin en Chef, DRSSA BREST Claude **Nicol**, MD*

Service de Santé des Armées

31 route de Clisson, 44330 Vallett, e-mail: Nicol.c@wanadoo.fr

*2Lt Emilio **Nuzzolese***

Italian Red Cross Military Corps

Viale JF Kennedy //, I-70124 Bari, e-mail: emillionu@tin.it

*LtCol MD dR Wolfgang H. **Otto***

Dentist Center Dr. Otto and Dr. Hensmann

Gartenstr. 1 Bruehl D-68782, e-mail: otto.wo@t-online.de

*Teodora **Pencheva** MD*

Military Medical Academy,

3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria

Colonel (Dr.) Arnyce Pock

Office of the U.S. Air Force Surgeon General
110 Luke Avenue, Rm 400; Bolling AFB, DC, e-mail: arnyce.pock@pentagon.af.mil

Col Nikolai Podoleshev MD

Military Medical Academy,
3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: medkat@vma.bg

LtCol Hans-Christian Rahn, DVM, MSIE, OPM

TIC Optics GmbH, Pfaffenweiler
Am Lehenbühl 1, D-79423 Heitersheim, e-mail: 993fan@gmx.de

Col Ivan Samnaliev MD PHD

Military Medical Academy
3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: isamnaliev@yahoo.com

COL Dr. Benjamin Hun Yew Seet

Surgeon General of Singapore, e-mail: SEET_Hun_Yew_Benjamin@starnet.gov.sg

Capt Peggy A. Sherwood

Department of National Defence
2126 Beacon Av West Sidney BC, V8L1W7 Canada, e-mail: peggysherwood@yahoo.com

Cdr Stef Stienstra MD

Royal Dutch Navy, Postbus 110, 6573 ZK Beek-Ubbergen, The Netherlands,
sstienstra@ciomr.org

Maj Mark Thibert

18 (Thunder Bay) Field Ambulance
43 N. Court Street, Thunder Bay, P7A 4T5 Ontario, Canada, e-mail: mthibert@tbaytel.net

Ivanov Trifon MD PHD

Military Medical Academy
3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: ivanovtr@yahoo.com

Col Borimir Vasilev MD, DSc.

Military Medical Academy,
3, Georgy Sofiisky Blvd., 1606 Sofia, Bulgaria, e-mail: borimir_vasilev@abv.bg

Secretary Scientific Committee:

LtCol Hermann C. Roemer MD, PHD

Specialist in General, Occupational and Environmental Medicine
Associated Teacher, Teaching Facility for the University of Essen/Duisburg Medical School
Group Practice, Internal, General, Family, Occupational, Environmental Medicine
Altenessener Strasse 442, 45329 Essen, Germany: hroemer@ciomr.org

Notes: