Free lectures

Friday 25 May
Free lectures

FL1
PALUDISME D'IMPORTATION CHEZ LES MILITAIRES :
RENFORCER LE MESSAGE DE PRÉVENTION
Méd Lt Col Belaaj R(3) ; Méd Lt Col Battikh R(1); Méd Cne Ayari H(1); Ph Cdt Jemli B (2); Méd Cdt Ben Abdelhafidh N(1); Méd Cdt M'Rabet A(3) ; Méd Lt Col M'sadek F (1); Méd Col Louzir B(1); Méd Cne Ajili F (1); Méd Cne Labidi J (1); Méd Cne Gharsallah I (1); Méd Cne Zriba S (1); Ph Col Gargouri S(2); Méd Col Othmani S (1)
(1) Service de Médecine Interne (2) Laboratoire de Parasitologie (3) Direction Générale de la Santé Militaire– Hôpital Militaire Principal d'Instruction de Tunis - Tunisie

FL2
CHILEAN CIVIL POLICE MENTAL HEALTH:
INICIAL LINEAMENTS OF INTERVATION PROJECT
CHILEAN CIVIL POLICE – HEALTH HEAD QUARTER
Prefect Inspector (H) Dr.Daniel Correa Suárez PhD MD – Psychologist Felipe González Campillo

FL3
INVESTIGATION OF OCCUPATIONAL RISKS OF NURSING STAFF WORKING AT A TRAINING HOSPITAL
M.Gulec. (TURKEY)

FL4
LE PSYCHOTRAUMATISME DE L'ENFANT LORS DU SEIME DE BOUMERDÈS (ALGÉRIE)
Baoudh Fethi, Allani Riadh,Slama Haifa,Bellaaj Riadh, Labbene Iheb, Batikh Riadh, Soussi Néjib, Bourghida Sami, Mannai Mohamed, Ben Chaabene Tarek, Dahmene Younes, Kallel Sofiene, Bachrouch Sahbi, Hamdi Mongi, Chebbi Med.Kamel,
Direction Generale De Sante Militaire Tunisie

FL5
TECHNIQUES AND OUTCOMES IN EXTREMITY VASCULAR INJURY:
A 28-MONTH WARTIME REPORT
T.Rasmussen (USA)

FL6
SOME FORM OF STRESS ACTIVATES ENDOGENOUS MARIJUANA LIKE SYSTEM AND ELICITS POWERFUL ANALGESIA BY DESCENDING PATHWAYS VIA DORSOLATERAL FUNICULUS
Ahmet DOGRUL, Melik SEYREK, Özgür YEfi‹LYURT, Serdar KAHRAMAN, TURKEY

FL7
MODERN ASPECTS FOR THERAPY OF NERVE AGENT POISONING
Col Dr. H. Thiermann1, Prof. Eyer2, Prof Zilker3, LtCol Dr. Worek1
1 Bundeswehr Institute of Pharmacology and Toxicology, Munich,
2 Walther-Straub-Institute of Pharmacology and Toxicology, Munich
3Toxicological Department of 2nd Medical Clinic, Technical University, Munich, Germany

FL8
ITALIAN AIR FORCE (ITAF) MEDICAL TRAINING IN SPACE MEDICINE AT GAGARIN COSMONAUT TRAINING CENTER
Torchia F.*, Verde P.*, Landolfi A.*, Tomao E.*.
* Italian Air Force, Medical Corps, Flight Experimental Center, Aerospace Medicine Department (Rome, Italy).

FL1

PALUDISME D'IMPORTATION CHEZ LES MILITAIRES : RENFORCER LE MESSAGE DE PRÉVENTION

Méd Lt Col Belaaj R(3) ; Méd Lt Col Battikh R(1); Méd Cne Ayari H(1); Ph Cdt Jemli B (2); Méd Cdt Ben Abdelhafidh N(1); Méd Cdt M'Rabet A(3) ; Méd Lt Col M'sadek F (1); Méd Col Louzir B(1); Méd Cne Ajili F (1); Méd Cne Labidi J (1); Méd Cne Gharsallah I (1); Méd Cne Zriba S (1); Ph Col Gargouri S(2); Méd Col Othmani S (1)
(1) Service de Médecine Interne (2) Laboratoire de Parasitologie (3) Direction Générale de la Santé Militaire– Hôpital Militaire Principal d'Instruction de Tunis - Tunisie

Introduction : Chez les militaires, le Paludisme d'importation reste une pathologie fréquente. Il témoigne essentiellement d'une mauvaise application des mesures prophylactiques. Notre but est de revoir les aspects épidémiologiques (notamment les mesures préventives), cliniques, biologiques, parasitologiques et évolutifs du paludisme d'importation chez nos militaires hospitalisés dans un service de médecine interne (Hôpital Militaire de Tunis – Tunisie) durant la période allant de janvier 1993 à mars 2007.
Résultats : Durant la période d'étude, nous avons hospitalisés 23 militaires pour paludisme après leur retour d'une mission dans un pays endémique (Rwanda, Cambodge, Congo). Tous les patients étaient de sexe masculin avec un âge moyen de 36 ans. L'interrogatoire avait révélé surtout une mauvaise observance de la chimioprophylaxie. La symptomatologie clinique était dominée par une fièvre importante, des céphalées et des arthromyalgies. Une pancytopénie (surtout une thrombopénie) et un syndrome inflammatoire biologique étaient presque constants. On a retrouvé plasmodium falciparum dans 10 cas, plasmodium ovalae dans 8cas, plasmodium vivax dans 4 cas, plasmodium malariae dans un cas. La parasitémie avait rarement dépassé les 5 %. Sous traitement anti-paludéen, l'évolution était favorable dans tous les cas.
Conclusion : Tout médecin militaire doit penser au paludisme devant un état fébrile chez un militaire au retour d'un pays endémique. L'inobservance des mesures préventives, essentiellement la chimioprophylaxie pendant le séjour et au retour au pays, est en partie, à l'origine de ces accès palustres. Une sensibilisation des militaires et un renforcement de leur éducation sanitaire avant et pendant le séjour sont nécessaires pour diminuer l'incidence de cette infection parfois grave mettant en jeu le pronostic vital du patient.

FL2

CHILEAN CIVIL POLICE MENTAL HEALTH: INICIAL LINEAMENTS OF INTERVATION PROJECT CHILEAN CIVIL POLICE – HEALTH HEAD QUARTER

Prefect Inspector (H) Dr.Daniel Correa Suárez PhD MD – Psychologist Felipe González Campillo
DR. DANIEL CORREA SUÁREZ, Prefect Inspector (H), Leader Headquarter, Chilean State Civil Police. Surgical Physican (Universidad Católica). Specialist in Phychiatry (Universidad de Chile). Adjunct professor (Universidad de Chile). Magister in Public Health. Doctor in Social Phychiatry (Universidad de Barcelona, Spain). Enviromental Judge (Heiddelberg University, Germany). Expert for programs of the United Nations Organization, for enviromental matters. Leader of health enviroment projet of the Chilean State Civil Police. Scientific publications in several countries. Member of various scientific societies in Chile and abroad.

FELIPE GONZALEZ CAMPILLO, Psychologist (Universidad Central) of the Chilean Civil Police Health Headquarter. Titled in Direction of Human Resources (Pontificia Universidad Católica), Postitled in psychotherapy in young people (Universidad de Chile), specialization studies, with 11 years of experiencie. Developing activities like psychotherapy, physical and experts evaluations, and also developing several activities in investigation, selecting personal and teaching. Adviser of the Mental Health Projet of the Chilean Civil Police Health Headquarter.

It is well know that the police staff constitute a specially vulnerable group to suffer threat to its emotional and physical health due to the highest exposition to risk facts asociated to their diary labor.
In this contect the main preocupation for the mental health of the police staff (during the several stages of policial course: entrance – process – pension) and their family, understanding mental health from a holistic aproach turning specialy relevant to prevent and face many affections and behaviors that goes against policial duties and the comfort of all the staff. Chilean Civil Police Health Headquarter has to do with the process of up-dating and institucional development (Minerva Plan), in the present time this Headquarter is working on a Mental Health Projet, which is in the stage of diagnose, design and planification, wich one we pretend to advance on protecction matters of good health of does who are members of the Chilean Civil Police and their family.

FL3

INVESTIGATION OF OCCUPATIONAL RISKS OF NURSING STAFF WORKING AT A TRAINING HOSPITAL

M.Gulec. (TURKEY)

Objective : Occupational risk factors nurses are exposed convey crucial importance for the well-being of patients as for themselves. This study aims to evaluate the working conditions associated with the encountering occupational risk factors.
Methods : A questionnaire designed to evaluate these factors was given to 225 nursing staff employed at the Military Medical Academy Training Hospital by face to face interview.
Results : It was found that 43 of them were high school graduates (19.1%), 182 had college or university degrees (80.1%), 208 had ever been in touch with blood and infected biological materials through their work life (92.4%), 186 had been in needle-stick injury (82.7%), 202 had injured while cutting ampoules (89.8%), 93 had injuries by contaminated cutting utensil (41.3%), 113 used personal protection methods (50.2%), 192 had used to wash their hands after each medical contact with the patient (85.3%), 171 had vaccination against Hepatitis B (76.0%), 39 had had Hepatitis B infection before (17.3%), 99 had allergy story to gloves (44.0%), 56 were declared to be allergic to drugs and medical tools (24.9%), 192 complained of backpain and lumbago, and finally all were found to have some psychological problems (85.3%).
The risk score for the incidence of exposure to occupational risk factors among nurses was found to be 10.2±0.2 furthermore. The survey showed that there was a correlation between exposure to risk factors and age and job duration, and those graduated from university were likely exposed to risk factors less than high school graduates. But no significant difference was found amongst nurses work in different clinics.
Conclusion: It was so concluded that nursing personnel were shown to be exposed to occupational risk factors at critical levels and it is necessary to emphasize the role and responsibility of hospital management and nurses themselves regarding to the protection and avoidance form those risks.
Key Words: Nurse, blood, infectious body fluids, occupational hazard.

FL4

LE PSYCHOTRAUMATISME DE L'ENFANT LORS DU SEIME DE BOUMERDÈS (ALGÉRIE)

Baoudh Fethi, Allani Riadh,Slama Haifa,Bellaaj Riadh, Labbene Iheb, Batikh Riadh, Soussi Néjib, Bourghida Sami, Mannai Mohamed, Ben Chaabene Tarek, Dahmene Younes, Kallel Sofiene, Bachrouch Sahbi, Hamdi Mongi, Chebbi Med.Kamel,
Direction Generale De Sante Militaire Tunisie

L'humanité a connu tout de son histoire des évènements teintés de violence.
Le vingt siècle a été un des siècles les plus sanglants de l'histoire de l'humanité (guerre, terrorisme, catastrophes naturelles, catastrophes technologiques …). Ces évènements sont responsables de traumatismes physiques et psychiques dont l'impact peut avoir des conséquences sérieuses sur le développement et la santé physique et mentale de l'enfant.
Les auteurs rapportent les manifestations cliniques du psychotraumatisme observé chez l'enfant durant l'action humanitaire Tunisienne en Algérie après le séisme du 21 Mai 2003 à Boumerdès. Nous avons assuré 972 consultations dont 200 pour psychotraumatisme.
Ces manifestations sont à type de lipothymie, de réaction d'angoisse (sueurs, tremblement, respiration accélérée), d'agitation, des fuites, d'anorexie, d'énurésie secondaire, d'insomnie, cauchemars et troubles du caractère et du comportement…
A cette occasion, les auteurs définissent le concept du psychotraumatisme, étudient ses manifestations cliniques immédiates

et au long cours et sensibilisent sur l'importance de son impact sur l'avenir des enfants touchés. Ils insistent sur la nécessité de la présence de psychologues et les psychiatres dans toute l'équipe médicale envoyée dans le cadre des cadre des actions humanitaires, notamment sur des terrains ou le psychotraumatisme est majeur.

FL5

TECHNIQUES AND OUTCOMES IN EXTREMITY VASCULAR INJURY: A 28-MONTH WARTIME REPORT

T.Rasmussen (USA)

Objective: The objective of this study is to present a 28-month experience with the management of extremity vascular injury from a Theater Hospital in Iraq including the description of forward (Level II) surgical care and contemporary vascular adjuncts.
Methods: From 1 September 2004 through December 31st 2006 vascular injuries treated at the United States Air Force Theater Hospital in Balad Iraq were prospectively entered into a registry and retrospectively reviewed.
Results: During the study 7,640 battle injuries were evaluated and 428 (5.6%) had a major vascular component which is twice that reported from the Vietnam War. Extremity vascular injuries were common and represented 74% (N=319) of vascular injuries. Temporary vascular shunts were used as an adjunct in 20% (N=64) of extremity injuries as one aspect of Level II surgical capability. Vascular reconstruction using autologous interposition vein grafts was prevalent (N=271). Wound management strategy included operative debridements and the negative pressure VAC dressing and resulted in primary or delayed primary closure of 66% (N=210) of wounds. Infections resulting in anastomotic blowout or requiring drainage occurred in 6.2% (N=20) of patients. The early amputation rate was 5% (N=16) and mortality associated with vascular injury 2.5% (N=8).
Conclusions: Extremity trauma predominates in wartime and the rate of vascular injury appears increased. Management of extremity vascular injury includes prompt Level II care, the use of temporary shunts and definitive vascular repair in theater. In this large contemporary experience, these strategies result in excellent limb salvage rates with remarkably low rates of infection and mortality.

FL6

SOME FORM OF STRESS ACTIVATES ENDOGENOUS MARIJUANA LIKE SYSTEM AND ELICITS POWERFUL ANALGESIA BY DESCENDING PATHWAYS VIA DORSOLATERAL FUNICULUS

Ahmet DOGRUL, Melik SEYREK, Özgür YEř‹LYURT, Serdar KAHRAMAN, TURKEY

The battlefield pain management drug, morphine's significant side-effect profile has limited its effectiveness in the current battlefield environment.. A critical need exists for medications that have analgesic potency comparable or superior to morphine but with an improved safety profile in battlefield analgesia. Scientists have long known that stress in gunshot victims gives a free of pain time called stress-induced analgesia (SIA). Because nonopioid mechanisms of SIA is centrally mediated and just as powerful as morphine, we may expect that elucidating the neurochemistry of nonopioid analgesia would lead to the development of analgesic drugs having the potency of opiates. In this study, we aimed to clarify the mechanism and neuroanatomical pathways of nonopioid SIA in swim stress model in mice.
Analgesia was measured by radiant tail-flick test in Bulb-C mice. Morphine, a opioid receptor agonist and WIN 55, 212-2, a cannabinoid agonist were given subcutaneously (s.c.). The dorsolateral funiculus (DLF) lesions were performed at Th10 or lower spinal root segments. Opioid and nonopioid SIA are induced by a forced swim in 32 0C and 20 0C for 2 min, respectively. After swim stress, analgesia was evaluated at 2, 5, 10, 30, 60 and 90 min by tail flick test. In a separate groups of animals were exposed for 8 days, a twice daily 2 min swim at 20 0C.
Morphine and WIN 55, 212-2 (1, 5 and 10 mg/kg, s.c.) produce dose dependently comparable analgesic effects. A forced swim in 32 0C induced analgesia (lasting 30 min) which was blocked with naloxone (5 mg/kg, s.c.) pretreatment. A forced swim in 20 0C produce long lasting analgesia (90 min) which was not blocked with naloxone (5 mg/kg, s.c.). Lesion of the spinal DLF significantly reduce both non-opioid forms of swim stress and WIN 55, 212-2-induced analgesia. Chronic exposure to repeated cold-water swims in 20 0C significantly reduces the analgesic response of mice to swim stress. While the analgesic effects of morphine was not changed, WIN 55, 212-2-induced analgesia was totally diminished in repetated cold-water swim exposured animals.
In conclusion, cold water swim stress manifests tolerance with repetition and cross-tolerance with cannabinoids, but nor morphine. Our study support the notion that stress activates endogenous cannabinoids system and elicit analgesic effect by descending pathways via dorsolateral funiculus. Thus, it is possible that endogenous cannabinoid system can be activated in stressful military condition. A marijuana-like drugs may be useful in battlefield analgesia.
SIA has subsequently been demonstrated in a wide variety of animals, including humans, and can be elicited by a wide range of stressors (see ref. 47 for reviews). There is considerable evidence that of the spinal cord contains descending pathways critical for both morphine analgesia and SIA.., an effect called stress-induced analgesia. In a new research offers the first evidence that the non-opioid form is produced by cannabinoid compounds. As well as increasing our understanding of intrinsic anti-nociceptive mechanisms in mammals, these results might point towards the use of MGL or FAAH inhibitors as possible therapeutic agents for the treatment of pain.
Researchers along the way found out
When you're under stress -- brief or lingering, mild or severe -- your body releases chemicals that change the way your brain senses pain.
Natural pain relievers
In the short term, stress can be a powerful painkiller. When the brain senses a serious threat or a traumatic injury, it releases a veritable pharmacy of chemicals to quickly dampen the pain. Called "stress-induced analgesia," this reaction explains why people often don't feel pain immediately following an injury. It enables a soldier in battle -- or, for that matter, a deer trying to outrun a mountain lion after escaping from its claws -- to focus on survival rather than pain. Some soldiers hit by enemy fire don't even realize that they've been injured until the battle is over. Interestingly, the painkillers released by the body during stress are very similar to chemicals found in illicit drugs. In addition to blocking pain, these chemicals trigger the release of dopamine, a compound that provides feelings of pleasure.
In 2005, researchers discovered that stress can also trigger the release It is well known that endogenous opioids act to suppress pain. New research reveals that endogenous cannabinoids likewise exist and function as stress-induced analgesics.1
The foot shock induced analgesia also shows cross tolerance to morphine, as would be expected from the discussion above.
Experts have long known that the brain has the ability to suspend the pain response in times of injury and great stress, even after traumatic incidents such as gunshot wounds.
Stress can provide a delayed pain reaction in certain situations, an effect called stress-induced analgesia. Previous research has identified two kinds of stress-induced analgesia mechanisms in the body -- opioid and non-opioid. This study is the first to offer evidence that the non-opioid form is produced by cannabinoid compounds
Because nonopioid mechanisms of SIA and SPA are centrally mediated and just as powerful as opioid mechanisms, one might expect that elucidating the neurochemistry of nonopioid analgesia would lead to the development of analgesic drugs having the potency of opiates but lacking their unwanted side effects. It might be especially important to develop potent, centrally active, nonopiate analgesics for managing pain in cancer patients who, for genetic or other reasons, either are unable to benefit from opiate drugs or have intolerable side effects from them. in an attempt to develop analgesic compounds that might not display the side effects associated with morphine-like drugs, we are at present investigating the neurochemical bases of nonopioid SIA; SPA manifests tolerance with repetition and cross-tolerance with morphine (68), meeting the three criteria for opioid mediation commonly used today. To be credible, a natural pain inhibitory system must have natural stimuli that activate it. Under emergency conditions of fight or flight, pain inhibition may be more adaptive to the organism than pain perception itself, allowing the animal to focus attention not on pain but on strategies for defense or aggression (57). Three different groups demonstrated in 1976 that, indeed, noxious and/or fear-provoking stimuli can produce stress-induced analgesia (SIA), suggesting that stress is an important trigger for activating endogenous analgesia substrates (3,38,93). SIA has subsequently been demonstrated in a wide variety of animals, including humans, and can be elicited by a wide range of stressors (see ref. 47 for reviews).

FL7

MODERN ASPECTS FOR THERAPY OF NERVE AGENT POISONING

Col Dr. H. Thiermann1, Prof. Eyer2, Prof Zilker3, LtCol Dr. Worek1
1 Bundeswehr Institute of Pharmacology and Toxicology, Munich,
2 Walther-Straub-Institute of Pharmacology and Toxicology, Munich
3Toxicological Department of 2nd Medical Clinic, Technical University, Munich, Germany

The pertinent threat of nerve agent (NA) use calls for effective therapeutic preparedness. The most important toxic mechanism of NA poisoning is inhibition of acetylcholinesterase (AChE), leading finally to death due to respiratory arrest. Antidote therapy of NA-poisoning is based on administration of atropine, for treatment of muscarinic signs and symptoms, and oximes to counteract nicotinic impairment, mainly disturbance of neuromuscular transmission, where atropine is ineffective. To this end autoinjectors containing atropine and an oxime are introduced in most forces for self and buddy aid. However, the use of the antidotes in further treatment by physicians is a matter of uncertainty. Here, monitoring of intoxications with organophosphorus (OP) pesticides may be of help, since their actions are closely related to those of NA and poisoning as well as therapy follow the same principles. The course of poisoning was analysed in patients with need of artificial ventilation being treated with atropine and obidoxime. To achieve valuable information for military purposes, courses of intoxication resembling situations in NA poisoning had to be identified and analysed: a) intoxication with OPs forming reactivatable OP-AChE-complexes with short persistence of the OP in the body resembling inhalational sarin intoxication; b) intoxication with OPs resulting rapidly in an aged OP-AChE-complex resembling inhalational soman intoxication; c) intoxications with OPs forming a reactivatable AChE-OP complex with prolonged persistence of the OP in the body resembling percutaneous VX intoxication. The results revealed that sufficient reactivation of NA inhibited non-aged AChE should be possible, if the poison load was not too high and the effective oximes were administered early and long enough. When RBC-AChE activity was higher than some 30%, neuromuscular transmission was essentially undisturbed pointing to the fact that artificial ventilation might be omitted at higher RBC-AChE levels. A laboratory test system of the cholinesterase status (RBC-AChE activity, plasma cholinesterase activity, reactivatability of RBC-AChE, persistence of inhibitory material) in combination with investigation of the neuromuscular transmission provides the physician in action with the information on the necessity to continue oxime therapy and to maintain artificial ventilation. Furthermore, it was concluded that in most cases relatively low atropine doses (several milligrams) should be sufficient to cope with muscarinic symptoms during oxime therapy.

FL8

ITALIAN AIR FORCE (ITAF) MEDICAL TRAINING IN SPACE MEDICINE AT GAGARIN COSMONAUT TRAINING CENTER

Torchia F.*, Verde P.*, Landolfi A.*, Tomao E.*.
* Italian Air Force, Medical Corps, Flight Experimental Center, Aerospace Medicine Department (Rome, Italy).

Understanding biomedical responses to microgravity and space environment and successfully implementing reliable countermeasures, remains challenges to be answered in the future. Physicians supporting manned space flights usually receive education as flight surgeons, rarely attending standardized training in space medicine.
In coincidence with ESA astronaut and ITAF test pilot Roberto Vittori participation to Soyuz 10 – International Space Station (ISS) mission, the Gagarin Cosmonaut Training Center (GCTC) developed a dedicated program for 3 ITAF Medical Officers. This program, lasting 40 training days (312,5 hours), includes lectures, practical sessions and familiarization with medical and life support systems onboard both Soyuz spacecraft and ISS.
After introductory activities, 47 hrs are dedicated to the Soyuz-TMA spacecraft and its medical and life support systems (including familiarization with SOKOL spacesuit). 86 hrs are dedicated to the ISS including: medical support, Russian segment design, onboard health protection, countermeasure systems and environmental monitoring. Other training phases (20.5 hrs.) include Search and Rescue operations and Extra Vehicular Activities (EVA). The final phase is dedicated to medical support of Russian Cosmonaut activities during training (141 hrs.), including physical and psychological preparation and practical sessions (centrifuge rotation, hypoxia training, Kepler's parabola flight). The program is concluded visiting Baikonur Cosmodrome, to attend the final stage of cosmonaut preparation before flight.
As ISS assembly will be completed and facing longer missions such that delivering man to Mars, physicians will continue to play a leading role in man's exploration of space and a standardized training for flight surgeons is paramount in supporting future space activities.