

It is particularly useful where clinical signs appear in animals before the human population, allowing instigation of force protection measures; in simultaneous human/ animal disease, allowing early definitive diagnosis, for example, by post-mortem examination of dead and/or euthanized animals. The temporo-spatial distribution of disease within the animal population may contribute to the identification of the biological agent (BA), and may provide some indication of the persistence of the threat following delivery of the BA.

After an undetected BA attack the first sign of an event may be the appearance of casualties (military, civilian, human or animal). Epidemiological surveillance of both humans and animals would allow early recognition of a disease outbreak, thus allowing protection of troops who have not yet developed symptoms. Specific veterinary considerations that may point to BW attack include: post-munitions disease, time course of disease, spatial distribution of disease, host range, geographical range, predisposing conditions, route of infection, heterogeneity of infection, and background disease incidence. Confirmation of causative agent by etiological diagnosis is essential.

BioMedAC is developing a STANAG on Rapidly Deployable Outbreak Investigation Teams (RDOIT) that may incorporate appropriate specialists such as a veterinarian. The UK is developing a concept of animal surveillance for routine deployment.

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Keywords: animal surveillance; biological agents; Rapidly Deployable Outbreak Investigation Teams (RDOIT)
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Plenary Session

Training of Medical Staff in the Management of Biological/Chemical Warfare Psychological Casualties

Group Captain F.B. McManus

Biological/Chemical Warfare (BCW) agents are weapons of terror. Their psychological impact greatly outweighs their physical effects. Psychological casualties will greatly outnumber physical casualties, so effective triage is essential. The key element of medical management is in the differentiation between acute anxiety symptoms and poisoning from BCW agents. Psychological symptoms will range from low-grade, individual anxiety to mass panic. The best way of minimising psychological casualties is first class preparation and training. This is as true for medical staff as it is for combat troops. The next most important element in managing the psychological environment is the development and analysis of accurate information about the nature of any attack, and the rapid transmission of this information to relevant staff.

Management/treatment elements include: (1) The need for careful triage of casualties to distinguish psychological from physical problems; (2) The rapid transfer of patients with minor psychiatric symptomatology out of the triage arena with appropriate advice and self help material; and (3) The judicious use of appropriate medication when necessary and advice to commanders about the management of anxiety and panic.

Keywords: advice; anxiety; casualties; environment; injuries; management; medication; panic; poisoning; psychiatry; treatment; triage; weapons, biological and chemical
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Medical Counter-measures against Biological Warfare Agents

Tim Brooks

Director for Public Health Affairs, Health Protection Agency, Porton Down, UK

A range of medical countermeasures can be used as pre- and post-exposure prophylaxis or as treatment for biological warfare agents, including vaccines, antibiotics, anti-viral agents, and generic therapies designed to enhance the immune response. Vaccines can be given routinely to provide long-term protection, but only smallpox and anthrax vaccines are available widely. The risk of receiving a live vaccine such as smallpox, has to be considered very carefully against the likely threat, and mass vaccination in the absence of an overt threat is unlikely. There is a need for new and safe vaccines against other agents, and modern plague vaccines currently are undergoing trials in the UK and the US. Other vaccines are under development,

including tularemia, botulism, and brucellosis.

Antibiotics can be used both before exposure and immediately after exposure to prevent disease caused by sensitive bacteria, but are ineffective against organisms that are naturally or artificially resistant to them. Although using antibiotics for long-term prophylaxis is unrealistic because of the cost, logistic burden, and side effects, good results can be used if they are given shortly after exposure if an attack has been identified. Currently, quinolones such as ciprofloxacin are recommended widely for prophylaxis and therapy of plague and anthrax. There are very few useful antiviral agents, but cidofovir may be useful against smallpox. Generic immunomodulators can have a wide spectrum of activity, but are likely to be of limited utility because of side effects.

Keywords: anthrax; antibiotics; antiviral agents; attack; bacteria; brucellosis; botulism; cost; immunomodulators; plague; smallpox; terrorism; tularemia; vaccination; vaccines; viral; warfare, biological

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Free Topics

The International Health Specialist Program

Lieut. Col. Eugene Bonventre
United States Air Force

International security challenges have changed significantly in the past decade. The bipolar world no longer exists; threats present themselves from many different sources, often as a result of a clash between different cultures. According to the Chief of Staff of the United States (U.S.) Air Force, "our expeditionary force requires airmen with international insight, foreign language proficiency, and cultural understanding."

The International Health Specialist (IHS) Program was created in 2001 as a cadre of medical professionals who possess language and cultural skills matched to military needs, to facilitate relationships with international civilian and military partners. The IHS personnel establish contacts with the Red Cross Movement and key United Nations agencies. They coordinate their efforts with non-governmental organizations (NGOs), being careful not to violate the NGO's neutrality. They coordinate U.S. participation in exercises, such as MEDCEUR in the Baltics and Central and Eastern Europe, and MEDFLAG in Africa. The IHS program accepts all medical specialties, but members must maintain currency and competency in their primary medical specialty.

The European IHS team is based at the Ramstein Air Base in Germany. Two recent missions will be discussed. In Uganda, IHS interfaced with UNAIDS and the World Health Organization (WHO) to provide medical care in remote villages, and organized outcome studies to demonstrate their efficacy. In Sierra Leone, the IHS helped to rebuild a medical system ravaged by civil war. Both missions required situation-specific cultural knowledge, training, and experience.

Cultural skills are critical in shaping world events. It is hoped that such "medical diplomats" will facilitate regional

cooperation in potential conflict zones.

Keywords: culture; efficacy; exercises; International Health Specialists; language; non-governmental organizations; Red Cross; security; U.S. Air Force; war, civil; World Health Organization

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E-mail: eugene.bonventre@ramstein.af.mil

Organization-Methodic Problems of Established Medical-Diagnostic Standards in Trans-Border Situations

Prof. Victor N. Preobrazhensky

All-Russian Centre for Disaster Medicine ("Zaschita"), Moscow, Russia

Russia's experience in emergency health relief, including at the international level (Turkey, Colombia, Afghanistan) shows the necessity of developing international standards to increase efficiency in rendering medical assistance. At the same time, analysis of the existing standards of medical provision at the prehospital stage in some European countries in chemical accidents relief shows the need for detailed consideration and comparison of main indices for the provision of medical evacuation. Thus, it is necessary to analyze the existing approaches to the provision of medical evacuation in trans-border emergencies using the following main trends: (1) principles of medical triage of the injured; (2) amount of medical assistance provided at the prehospital stage; and (3) principles of evacuation of the injured.

The international experience of ARCDM "Zaschita" in health relief following earthquakes shows that it is necessary to unify medical diagnostic tactics in field medical institutions on the diagnosis and treatment of post-traumatic shock, crush syndrome, etc., to form a complex of medical-preventive measures during evacuation of the injured with the given pathology, etc. Thus, for the provision of medical evacuation in emergency trans-border relief, it is necessary to form a working group with representatives from different countries to analyze existing experience and establish unified standards.

Keywords: aid; ARCDM; assistance; chemical events; diagnosis; earthquakes; evacuation; experience; organization; prevention; relief; standards; trans-border; triage; "Zaschita"

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E-mail: rcdm.org@ru.net

Emergency Medical Care in Mass Trauma and Methodology for Its Realization

Dr. George Orakhelashvili

Tbilisi State Medical University, Tbilisi, Georgia

Forecasting and prevention of catastrophic events and elimination of their consequences have become one of the major problems in the world. One of the most devastating events, the place and time of which is practically impossible to forecast, is an earthquake. However, the practice of organizing emergency medical care for the victims of an earthquake indicates that such care, as a rule, is improvised, delayed, and inefficient. Thus, the development of new complex strategies for organizing and improving intra- and inter-state systems for emergency medical care during disasters is essential.

Therefore, in the Department of Disaster Medicine, a