

Management of Disaster Medicine Service

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Due to the increasing number of emergencies and severity of their medical aftermath, one of the most urgent problems in the efficiency of achievement for a Disaster Medicine service remains the problem of adequate formation of a structure and the mechanisms used for management. In this context, it is important to consider, on one hand, the experience accumulated in the course of practical management directly in emergencies from previous tasks. On the other hand, the task of developing such a model with its national (or federal) structure remains rather complicated. It should provide the optimal level of its emergency preparedness and sufficiency of resources and manpower as some certain basic factors for adequate emergency responses.

The objectives of this presentation are: (1) to demonstrate the chief practical lessons learned by the All-Russian Disaster Medicine Service (ARSDM), and (2) to examine the All-Russian Centre for Disaster Medicine (ARCDM), the research arm of the scientific and practical Centre, that provides the main terms of reference and hierarchy of management.

The primary echelons of ARCDM management and the five levels of its organization are given— federal, regional, territorial, local, and on-site—as well as the mechanisms of vertical taxonomy and horizontal cooperation. Technologies of coordination of ARCDM subsystems, beginning from international cooperation and up to interdepartmental relations in the practice of medical care delivery in emergency, are discussed. Quantitative indices or parameters of the Service's activity in emergencies are proposed as a pattern of criteria for evaluating its efficiency. The guidelines of the concept of civil and military cooperation are considered as the most technological and adequate components of management processing for different types of medical care delivery in emergencies. It is stated that the adequate model of ARSDM's structural and functional organization includes mechanisms of management employed in international practice under the auspices of EHA/WHO, OCHA/UN, but taking into account, the national characteristics typical for our various regions. An example of cooperation of Disaster Medicine services in CIS countries is provided as one of the most efficient tools of interaction in transboundary and national major emergencies in the Eurasian region. The possibility of using the Russian experience in formation of similar Disaster Medicine services in the regions (countries) prone to emergency impact is discussed.

Key words: disaster management; emergencies; experiences; model; organization

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Teaching Disaster Medicine in Lublin, Poland

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The first course on Disaster Medicine in Lublin, Poland started in February 1992. The curriculum for Disaster Medicine was developed by the president of The Polish Emergency Medicine and Disaster Society and was based on the Curriculum for Education and Training of the Scientific Committee of the International Society of Disaster Medicine (ISDM). The accomplishment of the curriculum of Disaster Medicine belongs to the interfaculty chair and The Department of Public Health at the Medical University of Lublin. The aim of the study was to disseminate our ten years of experience in teaching Disaster Medicine. The curriculum includes 30 hours of theoretical lectures, and 45 hours of practical training. High tech medical equipment has been used in teaching the course. The medical students avail themselves of interactive computer programs to obtain knowledge relative to triage. Use of a videotape training program is a way to analyze and evaluate every major accident or disaster. Our intention was to introduce flexibility into Disaster Medicine education, and to present actual needs (postgraduate training) in Disaster Medicine in Poland.

Key words: course; curriculum; disaster medicine; education; ISDM; medical students; training

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Field Evacuation Patterns of Humanitarian Relief Workers

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Objective: Emergency evacuation of humanitarian relief workers from field operations not only may be detrimental to the workers themselves, but for the nongovernmental organizations (NGOs), which depend upon their work. Several studies to date, have examined causes of mortality in humanitarian relief workers, yet none so far, have looked at causes of morbidity prompting evacuation. A study that delineates risk factors for emergency evacuation would allow NGOs to plan preventive strategies designed to protect their workers, and keep their operations cost-effective. **Methods:** We surveyed 30 large NGOs for personnel records documenting reasons for emergent evacuation of their humanitarian workers from the field during the interval 1990–2000.

Results: Preliminary data demonstrate that over three-quarters of evacuations occur due to infectious diseases, notably malaria and dengue, while a significant percentage of the remainder of the evacuations are due to trauma-related injury.

Discussion and Conclusion: By knowing risk factors for emergent evacuation, NGOs can better educate prospective workers as part of the orientation process as well as initiate preventive approaches for personnel already in the

field. Such interventions could include preventive measures for infectious diseases, personal protection measures, and surveillance of personnel health markers.

Key words: diseases; evacuation; field workers; humanitarian; nongovernmental organizations (NGOs); patterns; preventive strategies; relief; trauma

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Acute Hemolytic Crises in Patients with G6PD Deficiency: A Case Series

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Glucose-6-phosphate dehydrogenase deficiency is the most common human enzyme deficiency. It affects approximately 400 million people worldwide. Acute hemolytic crises are well-described, but uncommon presentations for patients seen in emergency departments have not been described. This paper presents a case series of five pediatric patients, four males and one female, aged from seven months to two years and ten months, who presented acutely ill and jaundiced in a general emergency department over a period of one year.

The patients' hemoglobin concentrations on presentation ranged between 37 and 50 g/L, all had evidence of acute hemolysis, and all received transfusions as part of the treatment. Ingestion of fava beans were implicated in each episode.

Key words: acute hemolytic crisis; children; clinical manifestations; emergency department; glucose-6-phosphate dehydrogenase deficiency; hemolysis; incidence

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Malaria in the Emergency Room

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We observed 38 patients with 44 cases of malaria seen in the emergency room between 1997 and 1999:

1. 36 came from subsaharian Africa, only one from Asia, and one from Arabia
2. 13 were residents in their country, and 25 were back from a trip that lasted from 1 to 13 weeks
3. Half of them had taken appropriate chemoprophylaxis: most of them by chloroquine-proguanil combination
4. Symptoms appeared between 1 and 120 days after leaving the endemic area, usually within two weeks
5. Nevertheless in 25% of the cases, they appeared after more than 2 months later
6. Those patients with late reviviscence had previously taken medicine: quinine or halofantrine
7. The classic rhythmic accesses usually did not appear
8. Splenomegaly was present in 38.6 % of the cases, even

in case of primo-invasion

9. Three cases of pernicious accesses were observed: one of them died, another one had neuropaludism, and the last one a serious anemia
10. The diagnosis was made by blood smear examination in 38/44 cases and by searching parasitic antigen (HRP) in 3 cases. It was only presumptive in the last three cases
11. The mean parasitaemia was 2%, with one case at 17 and another at 25% (the last one died)
12. All patients (except for the one who died) recovered quickly with quinine or halofantrine in less than 36 hours in _ of the cases, but never more than 4 days
13. Six patients suffered a reviviscence after treatment

The main original observations concern: (1) the poor preventive activity of correct chemoprophylaxis, (2) the late apparition of symptoms, possibly until four months after leaving endemic area, particularly after previous treatment, (3) the frequency of splenomegaly in primo-invasion accesses, contrasting with the rareness of classic rhythmic accesses, and (4) the dramatic importance of rapid blood smear diagnosis.

Importance should be accorded to the single equation: «fever after leaving an endemic area = malaria = immediate blood smear examination» so that death by severe malaria can be avoided.

Key words: chemoprophylaxis; diagnosis; emergency department; malaria; presentation; reviviscence

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Pain in Adults Presenting to the Emergency Room: Evaluation and Treatment

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Objective: Our objective was to measure the frequency and the intensity of pain in patients in an emergency room, to validate different methods of measuring pain for emergencies, and to evaluate the treatment of pain in this service.

Methods: The survey was conducted over 21 days on 983 consecutive patients. The questionnaire queried: (1) demographic data, (2) patient's own pain evaluation, (3) nurse's evaluation of the patient's pain, (4) the doctor's evaluation, (5) diagnosis classification, and (6) the nature, time, and effectiveness of the intervention against pain.

Results: The panel is similar to the usual population of this emergency room concerning the number of patients, age, gender, arrival time, and kinds of diseases. 60.3% of the patients experience pain. Medical patients and nonpainful patients are older than are surgical patients (trauma).

Using an analog visual scale (AVS), the pain reaches an average evaluation by the patients of 52.7/100; 41.7/100 by the nurses; and 37.2 by the doctors. The difference between these three evaluators is highly significant statistically, but they all correlate ($r > 0.60$). Using a simple verbal scale, the average was 4.1/7. It correlated with the AVS ($r = 0.61$). The average score of the objective signs was 1.28/18. It did