

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:

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

in case of primo-invasion

- Three cases of pernicious accesses were observed: one of them died, another one had neuropaludism, and the last one a serious anemia
- 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
- The mean parasitaemia was 2%, with one case at 17 and another at 25% (the last one died)
- 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
- 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

not correlated well with AVS ($r = 0.34$).

All of the patients felt better when they left the emergency room with an AVS from 20 to 30 points lower. The intervention time was 45 minutes for traumatic patients, and 81 minutes for patients with abdominal pain and visceral surgery. The effectiveness time on pain is 86 minutes on the average after admission: it has absolutely nothing to do with the initial pain intensity. It is linked directly with the initiating time of treatment.

Discussion: It is difficult to evaluate the levels of pain in an emergency room because: (1) it relies on different kinds of pains and pathologies, (2) treatment needs to be initiated quickly, and (3) it concerns numerous kinds of medical staffs with different backgrounds. If the AVS remains the reference, the use of a simple verbal scale is enough in an emergency room. This immediate evaluation should allow a quick initiation of analgesic treatments (analgesic drugs, physical means) with a short action time.

The current effort will concentrate on the simple, but immediate, evaluation of the pain, and on the analgesic treatment (pharmacological as well as physical).

Key words: analgesia; evaluation; nurses; pain; patients; physicians; treatment

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Principles of a Multilevel Preparation System for an Extreme Situation

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Disaster Medicine (DM) is a constituent of a state system emergency reaction in extreme situations (ES). In a complete approach to a disaster, DM is invoked to take preventive measures following the occurrence of a hazard that produces massive sanitary losses and for the prevention of negative medical consequences of accidents and failures. Training of the population is required for survival, with the population being responsible for rendering first medical care in ES.

For this difficult task (both for the state, and for the society), the Novosibirsk Regional Center for Disaster Medicine provided the following methodological principles for a multilevel system to prepare the population to be able to understand the psychology of conduct, the determinants of survival, and render first aid to themselves as important actions in ES.

This package approach to the training a population that may or may not have a medical education proved that the optimal approach is the combined programs of initial and a continuous process of training with gradual escalation of the information during life (up to school, the educational institutions, army, etc.). In addition, it also presents uniform criteria as algorithms of actions and also of a rating of knowledge of the population, and will facilitate the development of a continual skill set under the preset program.

The system examines the complex decision making of the tasks, and must be taken before a service, as it will be a required condition for the safety of vital activities and the

shaping of personal safety.

Key words: disasters; population; safety; self-care; survival; training

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A Simulation Model of Biological Hazard or Widespread Infectious/ Biological Disaster Focusing on the Characteristics of the Spread of Disease by the Percolation-Diffusion Theory

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Objective: The aim of this study is to create a simulation model of widespread biological hazard and to review its significance.

Methods: The simulation model is created by using the percolation-diffusion theory. The contagion rate, incubation period, infectious period, diseased period, and mortality are arbitrary. In this model, it is premised that no treatment is applied.

Results and Conclusions: This study is preliminary. The results are quite complex. However, parameters that result in an increase in the number of infected patients (infinitely) are a high contagion ratio and long infectious period. However, the number of infected patients will be depressed if mortality rate is high.

Key words: hazard, biological; computer; contagion rate; infection; incubation period; model; mortality; percolation-diffusion theory

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Stroke Patients in the Emergency Medical Services (EMS)

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Introduction: Stroke represents one of the major health care challenges in the world today. Early initiation of therapy can improve outcome. There is increasing interest in the role of the EMS in early stroke therapy, in view of the fact that time is one of the critical factors in stroke treatment. The aim of our study was to analyze time intervals of stroke treatment in the EMS.

Methods: First, all advanced life support units and basic ambulances of a German community EMS-system were equipped with questionnaires that were completed after prehospital treatment of patients with suspected stroke. Secondly, patients with suspected stroke were surveyed by a member of our group. The relevant time intervals and anamnestic and clinical data were documented.

Results: Data of 700 patients were obtained: 38% of patients suffered an acute ischemic stroke; in 12%, symptoms were due to intracranial hemorrhage. Thirty-eight percent were treated by an emergency physician at the scene; 50% received EMS treatment within 2 hours; and