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013.
The Effect of Rhubarb on Intestinal Permeability of Hemorrhagic Shock in Rats

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Introduction: Endotoxemia originating from the gut is a common pathophysiological process following hemorrhagic shock.
Objective: The goal of the current experiments was to determine whether Chinese traditional medicine rhubarb could decrease intestinal permeability and prevent endotoxin within the intestinal lumen from being absorbed.
Methods: The rhubarb (50 mg/kg) was administered to the experimental rats via oral-gastric tubes each time before shock was induced and at 4, and 12 hours after shock resuscitation.
Results: The plasma concentration of endotoxin did not change significantly in the sham-shocked rats following the operation. However, it increased significantly 4 hours following resuscitation in shocked rats ($p < 0.01$) . The rats treated with the rhubarb exhibited a lower degree of endotoxemia than did the shocked rats and the placebo-treated rats ($p < 0.01$). Histopathological damage of the jejunem of the rhubarb-treated rats was less than that of the shocked rats and of the placebo treated rats.
Conclusions: Rhubarb can protect the gut barrier from hemorrhagic shoch.

037.
Integration of Patient Outcome and System Management: An International System Model (CIEMS Model)

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Worldwide, different approaches exist to the delivery of emergency and disaster care. International projects involving the systematic comparison of data and experiences are limited in number. The search for internationally valid data is difficult, in part because of low levels of standardization of terminology, training, and technology. Another source of problems is the lack of models that can be used to find an acceptable compromise between "patient" issues and "system" priorities. The development and subsequent use of a system model could provide a means for further optimization of the international exchange of information regarding the planning, design, implementation, operation, and evaluation of both emergency and disaster care. It is accepted widely that emergency and disaster care are viewed as continuous "chains of events," starting from an incident towards stabilization and discharge. Delays and loss of information when victims go from one of the rescue chain elements to the next, are not consistent with "best possible" patient outcome. Final patient outcomes not only are a matter of well-timed and well-executed clinical action, but they also require a system approach aimed at an integration of all components of the overall emergency care system. The CIEMS model has been created as a tool towards the integration of patient-outcome and system management. The presentation will review the following elements:

activity cycle (from planning to evaluation);
categories (time-scale, elements, prevention/provision);
structure (matrix), and
interface (interdisciplinary).

An exercise in the application of the CIEMS model will be included with participation (in writing) by the audience.

042.
The "ABC-System": Automation, Barcodes, and Chaos

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In mass-casualty management, it is of utmost importance to register the victims in a unique and correct way. The National Center for Medical Toxicology and Emergency Medicine in the Netherlands is a cooperative effort between the Utrecht. University Hospital, the Armed Forces Hospital Organization, the National Institute for Public Health and Environmental Protection. Part of this center is a emergency hospital located at the basement of the University Hospital. Large groups of patients can be admitted immediately in this hospital. A computerized registration system (ABC-system) has been developed in order to have maximal control of the data flow during the admission of the victims. The objectives of the ABC-system are registration of: 1) patient identification; 2) first diagnosis or working hypothesis and urgency class; 3) localization of patients (e.g., triage area, operating theater, intensive care, low care, etc.). The team that is in charge of command and control by using this system has a continuous overview of the situation. The ABC-system works with bar codes and is interconnected with the hospital information system of the University Hospital. In comparison with manual registration, 25% more information could be entered within the same time while 25% less registration errors were made. Also, for evaluation afterwards, the ABC-system can be of great use.