

Oxidative Stress in the Development and Complications of Liver Cirrhosis

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Abstract

End stage-liver cirrhosis is associated with complications such as spontaneous bacterial peritonitis and hepatorenal syndrome. The generation of free radicals and biochemical alterations at the cellular and subcellular level in the intestine and kidney has been suggested to play an important role in these complications of cirrhosis. In addition, oxidative stress induced alterations in the intestinal cell surface glycosylation and qualitative, quantitative changes in the luminal bacterial flora might result in damage to the intestinal barrier and enhance bacterial adherence, resulting in translocation of bacteria into ascitic fluid leading to bacterial peritonitis. This review highlights the important role of oxygen free radicals involved in the different organ damage during and after development of experimental model of liver cirrhosis.

Key words: Spontaneous bacterial peritonitis, oxidative stress, ascites, carbon tetrachloride and thioacetamide

Disaster Management

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Abstract

Disasters are a matter of global concern. The death toll from natural disasters is about 250,000 per year. In India too, loss of life due to floods and earthquakes is considerably high. The term disaster refers to a natural or a man made event in combination with its damaging effects, which results in affecting a number of people large enough to disrupt the normal course of emergency and healthcare services. The common denominators are hazard, risk and vulnerability. A large number of classifications are available based on origin/ cause, whether natural or man made. Disaster planning cannot prevent disasters but the effects can be minimized by appropriate plans and preparedness. Disaster management is an intensive exercise involving inputs from local, national and international sources, requiring coordination in the management of a disaster preparedness plan and public participation in restoring normalcy with good speed.

Key words: Disaster management, natural disasters, man made disasters, disaster response, disaster prediction.

Networking in Disaster Management

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Abstract

Effective health relief management depends on anticipating disasters before they arise and identifying likely problems. Disaster preparedness must be undertaken long ahead through situational analysis, operational planning, training and networking. Networking is essential for effective and efficient disaster management. The main requisites and components of networking and the essentials for the effective networking are discussed. Networking helps in inventory analysis of existing resources, knowledge augmentation of involved agencies and optimal utilization of resources. For efficient networking, the essential prerequisites are well established Standing Operative Procedures (SOP), predetermined allocation of resources and duties under various contingencies, regular training and rehearsals and efficient network linkages for communication, transport, materials and manpower.

Key words: disaster management, networking, communication, tele-medicine, mobile teams, systems approach.

Nuclear, Biological and Chemical Warfare/Terrorism - Medical Preparedness for Effective Planning

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Abstract

The threat of nuclear, biological and chemical (NBC) warfare, as a full- fledged warfare or as a localized terrorist attack, is a distinct possibility in the current international political and military scenario. Dissemination of information and training of all concerned i.e. army, general public, fire brigade, police and other organizations must be carried out before a NBC disaster occurs. Comprehensive planning is required for the protection and management of the resulting casualties and the complex nature of the injuries sustained.

Key words: nuclear warfare, chemical warfare, biological warfare, nuclear medicine, bioterrorism.

Stem Cell Therapy In Stroke

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Abstract

The ultimate aim of any therapeutic strategy is the maximum functional restoration possible and eventual complete normalcy of function. The non – regenerative capability of the injured adult brain has been challenged in recent years and neural plasticity has been observed experimentally in both global and focal brain ischemia in animal models. Whether neuro - genesis increases in response to brain lesions and whether stem cells can be used for transplantation are potential questions to be answered. Functional recovery may occur in a small or localized brain injury using rehabilitation measures, but for large ischaemic strokes, the restoration may require new synaptic connections within and away from the damaged tissue. In an infarcted area, the ischemic core may not respond to any pharmacological or rehabilitative intervention. For these reasons, the prospects of repairing the neuron system, using cell transplantation, seems promising and may offer a unique approach for brain repair and restoration of function. On-going animal and human trials have largely helped in burgeoning our hopes on this method of restorative therapy after stroke.

Key words: stem cells, stroke, neuroregeneration, brain plasticity, restorative therapies