

Understanding Trauma: An Intervention Model for Treating Resistant Cases of Post-Traumatic Stress Disorder

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Psychological trauma is a significant portion of all medical casualties in combat and peacekeeping operations. Significant resources are dedicated to its prevention and treatment, and yet, rates for incidence and recovery basically have remained unchanged over the years. This is particularly evident in chronic, treatment-resistant patients. One of the major difficulties in managing post-traumatic stress disorder (PTSD) is the failure to grasp the meaning of “trauma” for the patient.

Practitioners have assumed that the trauma the wounded experiences is the direct effect of the “traumatic event” and no further inquiry is necessary or warranted. Evidence however, points to the contrary, as not all individuals exposed to a traumatic event develop PTSD, and the majority of those who develop symptoms will recover within a relatively short period of time.

But what about those who do not respond to treatment? There is no clear understanding of the reasons or conditions that adequately explain this outcome. However, it is the author’s experience, that individual factors in the context of a specific socio-cultural context set the stage from where the trauma is experienced and lived. Efforts at treatment focusing in targeting symptom relief only will have limited impact. The author will present a review of the literature, his experience treating chronic PTSD patients from various countries including Colombia, Argentina, and the US, and will argue for the need to develop a comprehensive model for its understanding and treatment.

Keywords: factors; post-traumatic stress disorder; trauma
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Hypertonic Saline to Treat Intracranial Hypertension after Traumatic Brain Injury: Why Not?

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Primary lesions after traumatic brain injury (TBI) (i.e., epidural, subdural, or intra-parenchymal hematoma) evolve through parenchymal edema then intracranial hypertension (ICHT), which is particularly deleterious (death or neurological sequelae).

Before neurosurgical evacuation, osmotherapy should be used in case of clinical signs of ICHT (e.g., uni- or bilateral pupillary dilation). Even though mannitol is effective, it induces hyperdiuresis, then hypovolemia and hypotension. It requires compensation of urinary losses to avoid hemodynamics side effects. One alternative is hypertonic saline (HS) (alone or associated to hydroxyethylamidon (HEA) to prolong its effect).

An experimental study in rats indicated superiority of HS compared to mannitol on neuronal apoptosis and secondary brain damages. Clinically, efficacy of HS on ICHT is longer than mannitol. A review by the Cochrane database showed a tendency to a decreased mortality when using HS compared to mannitol in TBI. In the field, HS is

used for hemorrhagic shock (Small volume resuscitation). So, HS associated to HEA appears interesting for prehospital treatment of ICHT after TBI. It is effective and easy to transport. A study to compare effects of HS compared to mannitol on cerebral biochemical markers of ischemia and metabolic crisis in TBI will be conducted. The aim is to prove non-inferiority of HS compared to mannitol on lactate/pyruvate ratio (a marker of ischemia), and then, to promote the utilization of HS not only for hemorrhagic shock, but also for combat TBI.

Keywords: hypertonic saline; intercranial hypertension; mannitol
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Mass Accident Victims—Disaster Medicine

The Method of Blood Crisis Policy in the Czech Republic

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In the Czech Republic (10,000,000 inhabitants) 450,000 Red Blood Cell (RBC) units/year are collected and transfused. The blood collection and processing are performed on 65 small blood centers.

In 2008, the Ministry of Health and Ministry of Defense was entrusted with the enforcement of the blood crisis policy. This was to guarantee sufficient and efficient blood supply during any crisis situation.

The system ensures seven state “blood crisis centers” (BCC) (one military and six civilian). The central role was designated to the military blood bank in the Central Military Hospital Prague (CMH), which houses the Central Information and Logistic Center (CILC). Each BCC is responsible for supplying blood to a defined territory. In case of the transport troubles, BCCs can ask for help from the Ministry of Health. The BCC must keep at least 200 RBCs and 200 plasma units and 2,000 g of albumin. The CILC collects daily updated information from each BCC about available blood and plasma units. Each BCC must have the emergency disposable and tests stock for 2,000–2,500 blood collection units.

A crisis may be proclaimed by central or local health care authority or government. Any crisis status is coordinated by CILC.

The first experience with the real functionality of the policy was in September 2008, when humanitarian blood was supplied to Georgia.

The method represents the unique system of joint cooperation between civilian and military health services.

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Some Educational Strategies for Disaster Medical Preparedness and Response

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Introduction: In the world of multiple threats, including disasters due to natural or technological hazards, preparedness is an essential premise of a successful disaster response.