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The effect of fresh frozen plasma in severe closed head injury

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Abstract

View references (27)

Objective: Traumatic brain injury (TBI) is one of the most common causes of morbidity and mortality. Coagulopathy, commonly occurring after severe TBI, is associated with poor outcome and secondary complications, especially delayed traumatic intracerebral hematoma (DTICH). In this study we evaluated the effect of fresh frozen plasma (FFP) on the reduction in the incidence of DTICH in severe closed head injury victims. Methods: This study was carried out as a double-blind randomized clinical trial. Ninety patients were entered in two parallel groups taking either FFP or normal saline (N/S). Patients' selection criteria for both groups were: severe closed head injury (Glasgow coma scale ≤8), no mass lesion required evacuation and no history of coagulopathy. The clinical findings, laboratory data, computed tomography (CT) scans and Glasgow outcome scale after 1 month were assessed and compared in two groups. Results: Out of 90 patients, 44 received FFP and 46 received N/S. The development of new intracerebral hematoma in follow-up CT scans were more common in the FFP group than the N/S group ($p = 0.012$). Both groups showed similar frequency of poor outcome ($p = 0.343$). The mortality was significantly more common in the FFP group than in the N/S group (63% versus 35%, $p = 0.006$). Conclusion: The result of this study revealed that early empirical infusion of FFP in patients with severe head injury may lead to adverse effects, such as an increase in the frequency of DTICH and an increase in the mortality.

Reaxys Database Information

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Author keywords

Coagulopathy; Delayed traumatic intracerebral hematoma; Fresh frozen plasma; Severe closed head injury; Traumatic brain injury

Indexed Keywords

EMTREE drug terms: fresh frozen plasma; mannitol; phenytoin; sodium chloride

EMTREE medical terms: abdominal injury; adolescent; adult; aged; article; brain damage; brain hematoma; child; clinical feature; clinical trial; computer assisted tomography; controlled clinical trial; controlled study; double blind procedure; drug effect; drug infusion; empiricism; female; follow up; gastrointestinal hemorrhage; Glasgow coma scale; Glasgow outcome scale; head injury; human; hypotension; kidney failure; laboratory; major clinical study; male; meningitis; morbidity; mortality; patient selection; randomized controlled trial; respiratory failure; sepsis; statistical significance; thorax injury; treatment outcome; victim

MeSH: Adolescent; Adult; Aged; Child; Child, Preschool; Double-Blind Method; Female; Follow-Up Studies; Glasgow Coma Scale; Glasgow Outcome Scale; Head Injuries, Closed; Humans; Intracranial Hemorrhage, Traumatic; Male; Middle Aged; Plasma; Survival Analysis; Tomography, X-Ray Computed

Medline is the source for the MeSH terms of this document.