A Review of Intraparenchymal Hemorrhage and Contusion Progression in Traumatic Brain Injury

Shahrokh Yousefzadeh Chabok, Anosh Dehnadi Moghadam, Shahrokh Ebrahimi, Mohhammad Safaei, Haniyeh Mohammadi Melksari

ABSTRACT

Background: Delayed brain injury can be predicted within hours of trauma based on clinical and laboratory findings. This study was undertaken to determine the early progression of traumatic intraparenchymal hemorrhages (IPHs) and contusions, and some associated factors in traumatic brain injuries.

Methods: From October 2005 to July 2006, all trauma patients with moderate and severe head injury who were admitted at Poursina hospital were enrolled. Their computerized tomography results, demographic data, intubation before and after admission, blood pressure, temperature and GCS, and brain computerized tomography scan findings were reviewed.

Results: Thirty-five out of 361 patients exhibited radiologic evidences of delayed IPHs and contusions with a male to female ratio of 9:1. The mean age was 41.2±21.9 and the principal mechanism of trauma was accident (81.3%). Three patients were intubated before admission. Contusion was the most common initial and delayed lesion. Thirty-eight percent of patients were hypertensive and the most common electrolyte imbalance was hypernatremia. Thirty-two percent of the patients were hyperglycemic; PT and PTT disturbance occurred in 53% and 31% of them, respectively.

Conclusion: Focusing on risk factors of progression and development of IPHS and contusions is useful to predict and prevent such cases.