

An audit of patients with moderate to severe head injuries in Lerating regional hospital

ABSTRACT

The aim of this study was to review the clinical presentation, underlying brain injury and clinical outcomes of moderate and severe traumatic brain injuries (TBI) patients managed in a regional hospital setting.

The records of 95 patients with moderate and severe traumatic brain injury who were treated at Leratong hospital from 01 January to 31 December 2009 were studied. Demographic data, referral criteria to neurosurgeon, criteria for computerized tomography (CT) scan and their findings were reviewed. Outcomes were death, alive with and without complication/ disability. The relationships between outcomes, age, blood pressure, pulse, Glasgow coma scales (GCS) score, abnormal pupil and CT scan findings were analyzed.

The following variables were statistically significant in showing a strong association with mortality; subdural haematoma (46%), lower GCS (5.8 ± 2.7), bradycardia (76.4 ± 29.7) and abnormal pupil characteristics (54%). All patients with perforating gunshot wounds to head died. However, 88% patients with brain contusions lived. Patients with a lower GCS (7.3 ± 3.3), hypotension (69.1 ± 25.7) and contusion (48%) had a strong association with development of complications and disability. In contrast, those with facial fractures (92%) were less likely to develop complications or die. Computerized tomography (CT) scan referrals had a poor outcome as result of delays in transfer. Moderate TBI patients treated in this setting did not experience a higher mortality when compared to figures in the literature. It was found that majority of patients (95%) required conservative management instead of craniotomies. Taking into account 46% of missing records regional hospitals might be appropriate facilities for triaging and a supervised conservative management of TBI.

However, a need arise to review triage criteria to neurosurgeon while being specific to our South African hospital setting. Lastly, a conduction of a multicenter prospective study in regional hospitals will enable a more comprehensive understanding of head trauma at this level of care.