

Operative Intervention for Traumatic Brain Injuries in the Elderly

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Purpose:

The management of traumatic brain injuries (TBI) in the elderly (age ≥ 65 years) is a constant dilemma in neurosurgery. The aim of this study is to investigate for factors which may predict outcome of operative treatment in elderly patients with severe head injuries.

Methods

A retrospective analysis was conducted on 68 elderly patients who had been operated on for TBI in a designated trauma center from 2006 to 2010. The impact of patients' age, pre-operative GCS, papillary responses, imaging findings, pre-existing medical conditions, and the use of anticoagulant/antiplatelet agents on patient outcomes were studied. Clinical outcome measures were hospital mortalities, GCS, and Glasgow Outcome Score (GOS) upon hospital discharge.

Result:

The overall mortality rate was 55.9%. Old age, abnormal papillary response, low pre-operative GCS, presence of midline shift and obliteration of cistern on CT were associated with poor survival. Upon further analysis, age was a prognostic factor but should not be a limiting factor for operation - patient aged 75 – 84 with normal bilateral papillary response still had a overall survival rate of 52.6% and good outcomes (GOS 4 or 5) in 36.8% of patients. Abnormal papillary response in at least one eye and pre-operative GCS < 13 were associated with very poor prognosis.

Conclusions:

Elderly TBI patients with normal bilateral papillary responses and GCS ≥ 13 were found to have a good chance of achieving good functional survival after aggressive operative intervention. The latter should not be withheld based on patients' age alone.