

ABSTRACT

Changing demographic profiles of patients with Traumatic Brain Injury: Implications on Healthcare Planning

Background:

Trauma continues to be a common cause of mortality in Singapore. Understanding the epidemiology and incidence of Traumatic Brain Injury (TBI) in Singapore can better equip healthcare professionals to tackle the increasing socioeconomic burden of this disease, and adopt better strategies in healthcare planning.

Objective:

We hope to show a shift in demographics, etiologies and outcomes of Singaporean TBI cases, implying the need for an updated approach to TBI patient care in Singapore.

Design/Methods:

A retrospective review of 367 patients admitted to National University Hospital (NUH) with moderate to severe TBI from January to December 2014 was done, studying demographic profiles, injury details and outcomes. These patients were retrieved from the National Trauma Registry as well as the institution's patient database.

Results:

234 of the 367 patients included in this study fell into two age groups — 19 to 40 years and ≥ 65 years. 58% of patients were aged >60 . The predominant mechanism of injuries in these groups were road traffic accidents and unwitnessed falls respectively. 39% of the Elderly group were on antiplatelet/anticoagulant agents ($p < 0.001$). Though aggressive surgical intervention was more common in younger patients ($p < 0.001$), the elderly group tended to have poorer outcomes, with longer lengths of stay ($p < 0.001$). Though GOS scores at discharge were not significantly different between the two groups, elderly patients showed greater post-injury improvement on subsequent GOS scores. Differences in mortality were not as significant ($p = 0.175$).

Conclusion:

The overall TBI incidence has not changed significantly over the past 10 years. However, TBI demographics have shifted towards an older population with increased fall incidence, implying this group of TBI patients may form the basis for a stable health care model.

Impact:

A new health care model based on the findings of this study can determine the costs of TBI to the healthcare sector as well as aid future healthcare planning.