



Compliance with Brain Trauma Foundation (BTF) Guidelines for Management of Traumatic Brain Injury (TBI) Patients: Systematic Review

Yahya H Khormi MD

Introduction

TBI is a leading cause of death and disability. Management based on the BTF guidelines is widely disseminated and thought to improve outcome. The objectives of this study were: 1) to review the rate of adherence to in-hospital BTF guidelines; 2) to identify factors influencing adherence; and 3) to determine the effect of guideline-based management on outcome.

Methods

We searched the following electronic bibliographic databases: Medline, EMBASE, SCOPUS, NHS, CINAHL, Cochrane Database, Proquest Dissertations and Theses. Two independent investigators screened titles, abstracts and articles to select appropriate studies reporting compliance rate to BTF guidelines, factors influencing compliance, and adjusted mortality or morbidity. Data extraction and assessment of bias risk were performed independently by both investigators. We excluded pediatric and military-related TBI studies.

Results

A total of 22 articles met inclusion/exclusion criteria out of 676 papers screened. All are observational studies: 17 were cohort studies (3 prospective and 14 retrospective) and 5 were surveys. We found considerable variation in median adherence with BTF guidelines ranging from 17.4-100%. Compliance with intracranial pressure (ICP) monitoring was addressed by 14 studies; median adherence was 44.71% (range 0-82.90%), which did explain most of the variability in adherence across recommendations. Recommendations for target oxygenation, SBP, steroid use, and DVT prophylaxis had median adherence more than 90%. Hyperventilation, nutrition and seizure prophylaxis recommendation had relatively lower median adherence percentages (50-70%). Eight studies identified patient and hospital factors influencing adherence; age, severity of injury, level of trauma center, protocol based management and country economics status were a consistent factors across most of studies.

Conclusions

Variation in the care of TBI patients persists across the world. Heterogeneity of articles assessing compliance with BTF guidelines for

Learning Objectives

Well-conducted studies are necessary to establish the true benefit of adherence to current guidelines, particularly for ICP monitoring.

References

[Default Poster]