Effect of First GCS Score on Discharge Disposition for Head Trauma Patients at LAC+USC

Phillip A Bonney MD; Arati Patel; Tatsuhiro Fujii; Justin Lee MD; Joshua Bakhsheshian MD; Ki-Eun Chang MD; Ben Allen Strickland MD; Patrick Reid MD; Martin H. Pham MD; Peter Gruen MD

Department of Neurological Surgery, USC Keck School of Medicine

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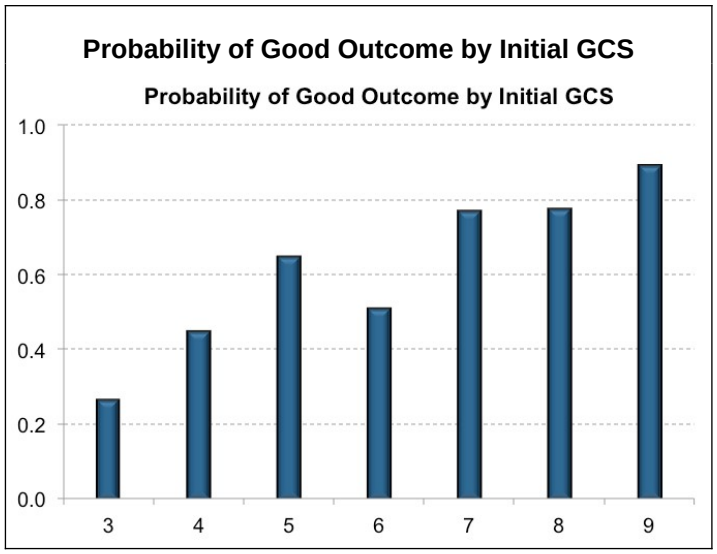
Introduction

We sought to investigate discharge disposition of traumatic brain injury patients with the purpose of better understanding the spectrum of outcomes based on initial Glasgow Coma Scale (GCS) score.

Methods

The LAC+USC Trauma Registry was queried between 01/2015 and 06/2016 for discharge disposition of patients with initial GCS 3-9. GCS score was obtained from physician documentation in the emergency department. Patients were categorized into one of 11 dispositions ranging from Home to Morgue. Good, intermediate, and poor outcomes were defined home/home equivalent/rehab, long-term care facility, and death, respectively. Patients transferred to another acute facility were not included in the analysis.



Results

A total of 587 patients were studied, of whom 244 (42%) presented with GCS 3, 48 (8%) with GCS 4-5, 126 (22%) with GCS 6-7, and 171 (29%) with GCS 8-9. The most common dispositions were Home (44%) and Morgue (39%). Three hundred twelve patients (53%) had a good outcome, 44 patients (7%) had an intermediate outcome, and 231 patients (39%) had a poor outcome. Good outcomes were seen in 27% of GCS 3, 52% of GCS 4-5, 64% of GCS 6-7, and 83% of GCS 8-9 patients. Poor outcomes were seen in 68% of GCS 3, 41% of GCS 4-5, 25% of GCS 6-7, and 9% of GCS 8-9 patients.

Conclusions

In this patient population, initial GCS was predictive of discharge disposition. However, while the majority of patients with GCS 3 died, a significant minority experienced a good outcome. These data may better help stratify patient risk profiles at presentation for the purpose of counseling families. Further work is needed to better characterize neurologic salvageability at the time of presentation.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) cite rates of good and bad outcome for TBI patients in the study, 2) understand the relationship between increasing admission GCS and improved outcome at discharge