Author’s response to reviews

Title: Traumatic Brain Injury (TBI) outcomes in an LMIC tertiary care centre and performance of trauma scores

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Author’s response to reviews:

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Traumatic Brain Injury (TBI) outcomes in an LMIC tertiary care centre and performance of trauma scores

Thank you for reviewing our manuscript. We have responded to the comments point-by-point as below.

Reviewer reports:

Chiara Lazzeri (Reviewer 1): It is an interesting well written investigation. We suggest to shorten the discussion section, especially deleting repetitions.

Thank you. The discussion has been revised, removing repetition, also taking into consideration the comments from reviewer 2.

Limitations of the study are well explained. The Authors should also discussed the results themselves (i.e. mortality rate) in respect to results from other countries.

Thank you. This was inserted in the discussion at line 228.

Outcomes for moderate TBI are poorer than those reported in a study carried out in several LMICs, although outcomes for severe TBI in this dataset are similar to those reported in the same study [6]. However, mortality rates, both pre and post discharge, for severe TBI are poor when compared with mortality rates from studies carried out in other LMICs [32, 33]

Dhaval Shukla (Reviewer 2): The authors describe a study of 100 patients admitted in 14 bedded ICU over a period of 70 days. The intention of the study is to gather data of outcome of patients discharged from ICU after treatment of TBI, as such a data from country of origin of this study is lacking. However, there is no lack of data from neighboring LMICs, which authors should have discussed and compared their results with these data. Following are two examples of similar studies from LMICs.
Guideline Adherence and Outcomes in Severe Adult Traumatic Brain Injury for the CHIRAG (Collaborative Head Injury and Guidelines) Study.


Deepika A1, Devi B12, Shukla D2.

This was inserted in the discussion at line 228.

Outcomes for moderate TBI are poorer than those reported in a study carried out in several LMICs, although outcomes for severe TBI in this dataset are similar to those reported in the same study [6]. However, mortality rates, both pre and post discharge, for severe TBI are poor when compared with mortality rates from studies carried out in other LMICs [32, 33]

It is surprising that the authors did not find any difference between outcome of patients with moderate vs severe TBI, which is counterintuitive.

The authors have not given any explanation about the same. The possible reason could be associated major extra cranial injury, but the trauma scores were low, and this may not be reason.

Thank you for your comment. The following statement was inserted into the discussion at line 275.

However, this lack of predictive power of the GCS score has been reported in other studies. Possible explanations include the influence of more aggressive pre hospital treatment obscuring GCS and causing difficulties in obtaining a valid neurological assessment during the first 24 hours after trauma [34, 35].

This paper also reports only mild correlation between GCS scores and outcome.

In table the ISS is mentioned as about 6. All patients with severe TBI will have ISS>15. This error in computation of ISS may be responsible for lack of value of ISS in predicting outcome.

Thank you.

Severe TBI in this study was defined as a GCS score of 3-8 [1]. The ISS score is based on the Abbreviated Injury Scale (AIS), which classifies an individual injury by body region according to its relative severity on a 6 point scale [2]. One definition of severe TBI is an AIS score of >3 in the ‘head or neck’ area, which results in an ISS score >15 [3].

However, the two definitions are not interchangeable as a GCS <9 does not necessitate an AIS score >3 in the head or neck area.


Thanking you,

Yours sincerely,

Dr. Rashan Haniffa