

## Correlation between serum albumin and initial GCS in patient with head injury in a tertiary hospital

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### ABSTRACT

**Introduction:** Traumatic brain injury(TBI) is a major cause of disability, death and economic burden to the society. Albumin is a major protein of human. Values fall as a component of metabolic response to injury or infection. Albumin being a negative phase reactant is consumed under states of stress such as TBI.

**Materials and Methods:** This is a descriptive observational study conducted at the Department of Surgery ,TUTH over a period of 1 year between 2014 and 2015. Albumin level at admission was correlated with severity of head injury, Glasgow Coma Scale at admission and duration of hospital stay.

**Results:** Among 59patients with isolated TBI patients from TUTH, 40(68%) were male and 19(32%) were female. 55% of head injuries occurred between the ages of 18-40 years. Out of total patients, fall was the major cause of head injury with 24 (41%) under this category. Nine (15%) had severe head injury; 22 (37%) had moderate and 28 (47.45%) patients had severe head injury at admission. Contusion 19 (28%) and subdural hematoma 17(26%) were the predominant computed tomography findings. Twenty four (40%) patients were managed conservatively, thirty five (60%) patients were operated. The average albumin level at admission for patients with mild, moderate and severe head injury were 41.46gm/dl , 33.76gm/dl , 31.1gm/dl respectively. There is a positive correlation between initial serum albumin and GCS at admission ( $p=0.01$ ,  $R= 0.747$ ).

**Conclusion:** There is a positive correlation between initial serum albumin and GCS at admission. Further research on this topic at multiple centres is warranted.

**Keywords:** albumin, GCS, head injury