ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 12 | December - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

# ANALYTICAL STUDY OF SURVIVAL OF PATIENTS OF TRAUMATIC ACUTE SUBDURAL HAEMATOMA (PROSPECTIVE STUDY)

Neurosurgery

**Dr. Nallabothula Prakash** Post Graduate, Dept Of Neurosurgery

**Dr. G. Ram Balaji Naik** M.S, M.CH, I/C Prof & HOD, Dept of Neurosurgery

## ABSTRACT

**Background:** Head injuries, encompassing damage to the head and brain, are a critical neurosurgical issue requiring intervention by specialized neurosurgeons. They remain a significant challenge for both the public and medical professionals due to high mortality and morbidity rates. A key study from the Journal of Neurotrauma, highlighted at a neurotrauma conference, found no improvement in outcomes for severe head injuries over the past 30 years. **Aims and Objectives:** To study the various Radiological findings and their significance of Acute SDH. To study the various modes of treatments and their significance in the survival of Acute SDH. **Conclusion:** This study underscores the critical role of initial neurological status (GCS), basal cistern effacement, and traumatic SAH in determining survival outcomes in patients with traumatic ASDH. The significant association of these factors with mortality emphasizes the importance of early assessment and intervention in the management of ASDH. The lack of significant associations with age, gender, mode of injury, and management modality suggests that these factors may have less prognostic weight in this cohort, possibly due to the universal presence of severe injury characteristics, such as midline shift. The findings reinforce the need for rapid diagnosis, aggressive management of intracranial pressure (ICP), and targeted neurosurgical interventions to mitigate the high mortality associated with ASDH.

## KEYWORDS

## INTRODUCTION

Traumatic acute subdural hematoma (ASDH) is a critical neurosurgical emergency characterized by a collection of blood in the subdural space following trauma, often associated with high morbidity and mortality. This discussion evaluates the findings from a prospective study of 80 patients with traumatic ASDH, analyzing factors influencing survival and comparing these results with relevant studies to provide a comprehensive understanding of prognostic factors, outcomes, and clinical implications.

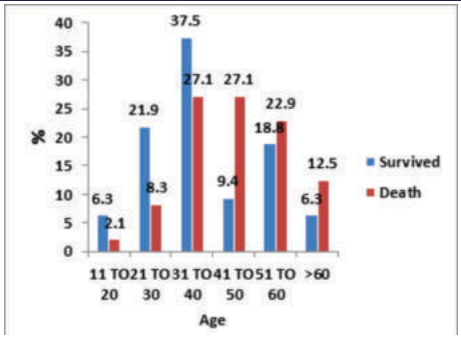
**Study Site:** This study was conducted in the Department neurosurgery, government general hospital, Kurnool Medical College.
**Study Population:** Patients with traumatic acute subdural hematoma getting admitted in Government General hospital Kurnool
**Study Design:** The current study was a prospective observational study.
**Sample Size:** 80 patients attending OPD of the department of neurosurgery, government general hospital, Kurnool medical college.
**Study Duration:** The present study was conducted during the period of 24 months from August 2023 to July 2025.

| Outcome | Frequency | Percentage |
|---|---|---|
| Survived | 32 | 40.0 |
| Death | 48 | 60.0 |
| Total | 80 | 100.0 |

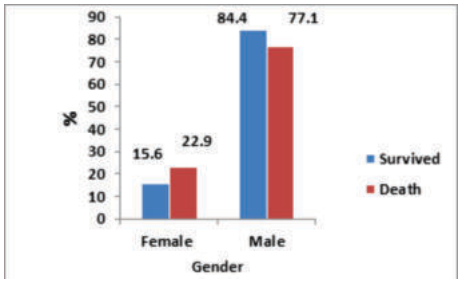
The table shows that out of 80 study participants, 32 (40.0%) survived, while 48 (60.0%) died.


**Graph 1: Pie Graph Illustrating Distribution of Study Subjects According to Outcome:**

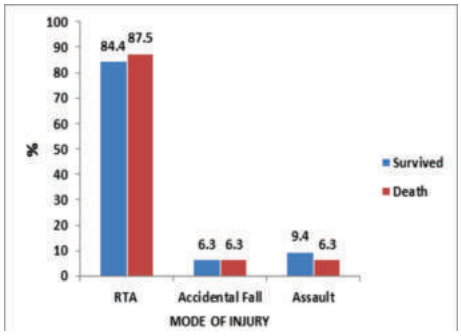
Groups have higher mortality rates (27.1% each respectively). Fisher's Exact test (value = 8.03, P = 0.1) indicates no statistically significant association between age and outcome, suggesting that age does not significantly influence survival in this study.




**Graph 2: Cluster Bar Graph Illustration of Association of Age and Outcome:**

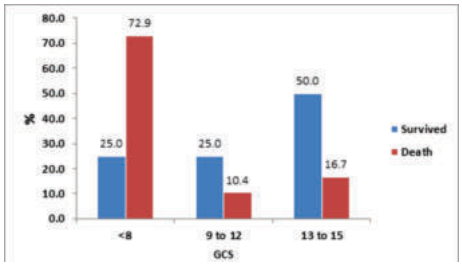



**Graph 3: Cluster Bar Graph Illustrating Association of Gender and Outcome:**

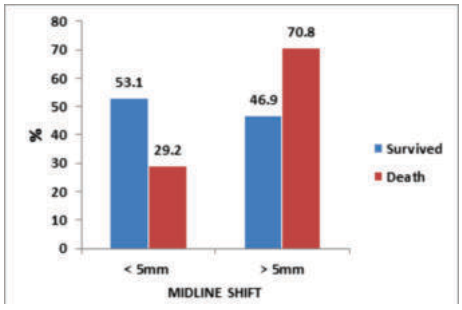



**Graph 4: Cluster Bar Graph Illustrating Association of Mode of Injury and Outcome:**

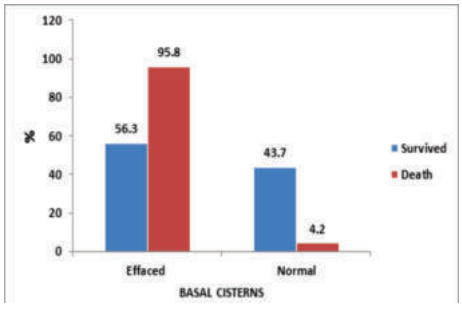
PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr



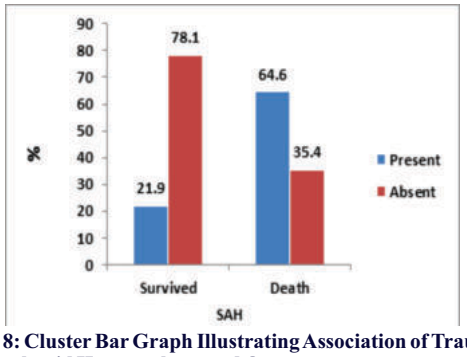

**Graph 5: Cluster Bar Graph Illustrating Association of GCS and Outcome:**



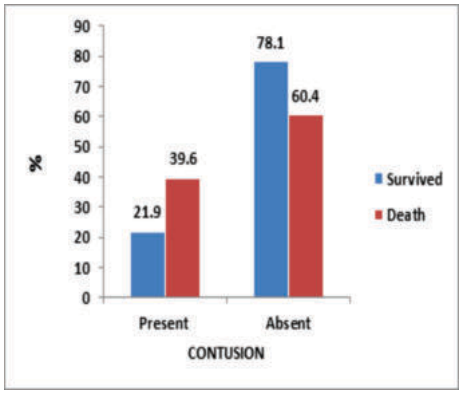

**Graph 6: Cluster Bar Graph Illustrating Association of Midline Shift and Outcome:**



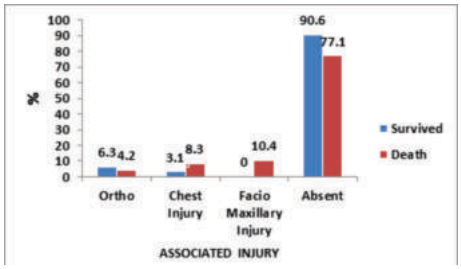

**Graph 7: Cluster Bar Graph Illustrating Association of Status of Basal Citerns and Outcome:**



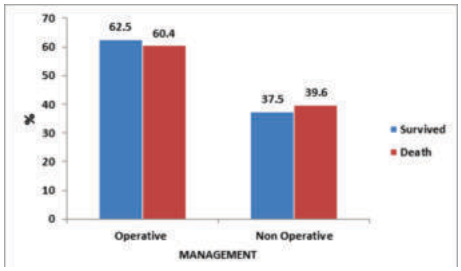

**Graph 8: Cluster Bar Graph Illustrating Association of Traumatic Sub Arachnoid Haemorrhage and Outcome:**




**Graph 9: Cluster Bar Graph Illustrating Association of Cerebral Contusion and Outcome:**




**Graph 10: Cluster bar graph illustrating association of associated injuries and outcomes:**




**Graph 11: Cluster Bar Graph Illustrating Association of Management Modality and Outcome:**

## CONCLUSION

This study underscores the critical role of initial neurological status (GCS), basal cistern effacement, and traumatic SAH in determining survival outcomes in patients with traumatic ASDH. The significant association of these factors with mortality emphasizes the importance of early assessment and intervention in the management of ASDH. The lack of significant associations with age, gender, mode of injury, and management modality suggests that these factors may have less prognostic weight in this cohort, possibly due to the universal presence of severe injury characteristics, such as midline shift. The findings reinforce the need for rapid diagnosis, aggressive management of intracranial pressure (ICP), and targeted neurosurgical interventions to mitigate the high mortality associated with ASDH. Comparative analysis with existing literature highlights both consistencies and variations, suggesting that local factors, such as trauma care infrastructure and patient demographics, may influence outcomes.

## REFERENCES

1. Bullock MR, Povlishock JT. Guidelines for the management of severe traumatic brain injury. J Neurotrauma. 2007;24(Suppl 1):S1-S106.
2. Maas AI, Dearden M, Teasdale GM, et al. EBIC-guidelines for management of severe head injury in adults. European Brain Injury Consortium. Acta Neurochir (Wien). 1997;139(4):286-294.
3. Gururaj G. Epidemiology of traumatic brain injuries: Indian scenario. Neurol Res. 2002;24(1):24-28.
4. Hyder AA, Wunderlich CA, Puvanachandra P, Gururaj G, Kobusingye OC. The impact of traumatic brain injuries: A global perspective. NeuroRehabilitation. 2007;22(5):341-353.
5. Mahapatra AK, Kumar R. Traumatic brain injury in India: An overview. Indian J Neurotrauma. 2009;6(1):3-8.
6. Gururaj G, Kolluri SVR, Chandramouli BA, Subbakrishna DK, Kraus JF. Traumatic brain injury. In: National Institute of Mental Health and Neurosciences, Bangalore. Bangalore: NIMHANS; 2005.
7. Mohan D. The road ahead: Traffic injuries and fatalities in India. Transportation Research and Injury Prevention Programme. New Delhi: Indian Institute of Technology Delhi; 2004.
8. Jennett B, Teasdale G. Management of head injuries. Philadelphia: FA Davis; 1981.
9. Teasdale GM, Nicoll JA, Murray G, Fiddes M. Association of apolipoprotein E polymorphism with outcome after head injury. Lancet. 1997;350(9084):1069-1071.
10. Bullock MR, Chesnut R, Ghajar J, et al. Surgical management of acute subdural hematoma. Neurosurgery. 2006;58(3 Suppl):S16-S24.