



OUTCOME OF SEVERE HEAD INJURY AT TERTIARY CENTRE

Surgery

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ABSTRACT

Head injury is the commonest presentation in neurological practice. Head injuries can range from relatively minor damage to scalp and face as lacerations, abrasions and bruising to more serious consequences involving damage to the brain.

Although outcome head injury depends on many factors such as age, pre existing illness etc., the most significant factors among them responsible for outcome are clinical status of the patients and its correlations with cranial CT findings.

KEYWORDS

Severe head injury, CT (Computed Tomographic scanning), Glasgow coma scale.

Introduction: The increase in number of head injury patients mainly due to industrialization mushrooming of the population, uncontrolled traffic, poorly constructed roads, and lack of civic sense in power part of country.

The patient of head injury are assessed clinically most commonly by Glasgow coma scale, which is accepted numerical scale to evaluate eye opening, verbal response and motor activity, the scale is used to follow the patients neurological status.

The expanded use of CT has made diagnosis easier and safer, since its advent in 1972 CT has become one of the principal diagnostic tools in the evaluation of head injuries and may have had the greatest positive effect on outcome of any single recent innovation. During the acute period, it permits the rapid and safe detection and precise localization of intracranial hematomas, brain contusion, edema and foreign bodies, and serial CT scans immeasurably aid the diagnosis of subsequent complications, particularly depressed and basilar ones. CT has now completely replaced plane X-ray skull and angiography in the diagnosis and treatment of head injury.

Increase industrial growth has lead many problems, one of them moral degradation and second is fast life leading to increase in accidents.

Objectives: The present study has following objectives-

1. To determine the incidence of age, sex distribution and mode of injury;
2. To study the clinical presentation of patients with severe head injury (GCS \leq 8);
3. To evaluate the neurological assessment of the patients;
4. To confirm type of lesions through CT and its correlation with clinical status;
5. To assess the mortality and morbidity in cases of severe head injury in term of clinical and type of intra cranial lesions.

Conclusion: After studying different cranial CT findings in patient of severe head injury, following conclusion is drawn regarding its correlation with the clinical status and its effects on outcome of patients-

S. no.	Mode of Head Injury	Number of patient	Incidence (%)
1.	Road traffic accident	59	62.1
2.	Fall from Height	23	24.2
3.	Non-fire arm assault	09	09.4
4.	Fire arm injury	03	03.1
5.	Sports injury	01	01.0

Majority of patients (62.1%) sustained head injury due to road traffic accidents. Male are prone to head injury than female (Male: female 2.1:1). When the cause of injury fall from height then the males are nearly equal to female (Male: female 1.09:1). Head injury is most common (53.12% in 20-40 years of age group. As the age advances mortality in head injury patients also increases). GCS is good indicator

of outcome of patients. Patients with low GCS (3) has got the highest mortality (84.6%). Pupillary reaction also gives an idea about the outcome of the patients. There is 66.6% expiry in patient having bilaterally impaired pupillary reaction. Long bone are pelvic bone are common (20.8%) in patient of severe head injury. Cerebral edema is more common (37.5%) among the patient of the head injury and most of the time associated with other lesions. Next common finding is contusion haematoma (36.4%).

Most of the patient of the extra dural haematoma are unconscious throughout their course (44.4%), these patients also has the highest mortality (54.4%). 60% of extra dural hematoma have evidence of local head trauma in the form of scalp swelling are laceration. In majority of patients acute subdural haematoma is associated with contusion (66.6%)



CT showing Large Extra Dural Haematoma in Left Temporo Parietal region



CT showing Large Chronic Subdural Haematoma in Left Fronto Temporo Parietal region with large conclusion with mass effect with mid line shift

REFERENCES

1. Andreas, Gerhard F., Outcome of severe head injury J Neurosurgeon 88; 809-816, 1998.
2. Dublin A.B., French B.N., Rennick J.M.: Computed tomography in head trauma Radiology 122:365-369, 1977.
3. Jemmet B., Bond M.R.: Assessment of outcome after severe brain damage a practical scale. Lancet 1:480-4, 1975.
4. Laura E.L. Teasdale G: Assessing morbidity of head injury with Glasgow Outcome Scale J. Neurosurg 89: 939-943, 1998.
5. Lipper M.H. Kishore P.R.S. Enas G. et al.: Computed tomography in the prediction of outcome in head injury AJR 144:483-486, 1985.