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Outcome of head injury in patients admitted as "unknown"

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KEYWORDS	

INTRODUCTION

Udaipur has a large population, which crosses 3million[1].We are working at a tertiary level Trauma centre of a developing country and a lot of severe head injury patients are being referred to us. Many such patients are brought by policemen and bystanders and their identities are not known at the time of admission. These patients present a unique challenge in management. What happens to these patients after admission is not reported in world literature.

AIMS AND OBJECTIVES

The main aim to conduct this study is to analyse data pertaining to traumatic brain injury patients admitted in the Department of Neurosurgery of Rabindranath Tagore Medical College as "unknowns" for understanding their:

mode of injury

presentation

 treatment and

outcome after head injury.

MATERIALS AND METHODS

This is a time bound retrospective study in which patients admitted as "unknown" to Neurosurgery Department of MB Govt. Hospital, RNT Medical College, Udaipur were studied from January 1, 2014 to December 31, 2015.Data was collected regarding demography, mode of injury, clinical presentation, condition at admission, treatment given, hospital stay and outcome of these patients.

All patients were clinically evaluated by a team comprising of doctors from surgical, medical and orthopedics specialties in the emergency department and subsequently admitted and treated at Neurosurgery.

RESULTS

We analyzed data pertaining to 107 such patients at our hospital. Out of 107 patients, 101(94.39%) were male, most were in the age group of 21-30 years 52(48.59%). The mean age was 29.89 years (range5-90 years). Mean duration of hospital stay was 5.47 days (range 1-33 days). Principal cause of head injury was road traffic accident seen in 84 patients (78.50%). 76 patients(71.02%) had Glasgow coma scale less than 8 on admission. 93(86.91%) patients were treated conservatively and 14(13.08%) patients needed surgery. . Intracerebral haemorrhage was the most common lesion noted on CT head of admitted patients and was seen in 37(34.58%) patients. Most common lesion seen in CT head of patients taken for surgery was Subdural haemorrhage , seen in 5 out of 14 patients operated. 51 (47.66%) died in hospital, 36 (33.64%) patients were discharged. During the course of treatment identity of 82 (76.63%) patients could be established. 25patients remained unknown out of which 1 on recovery was sent to destitute home

for rehabilitation. 51(47.66%) patients had a glasggow outcome score of 1 as compared to 10(9.35%) patients who had an outcome score of 5 at the time of leaving the institution.

Age	2014	2015	Total	Percentage out of total no of patients
0 – 10	2	0	2	1.86
10-20	2	3	5	4.67
20-30	24	28	52	48.59
30-40	12	12	24	22.43
40-50	7	7	14	13.08
50-60	0	5	5	4.67
60-70	2	1	3	2.80
70-80	0	1	1	0.93
80-90	0	1	1	0.93
90-100	0	0	0	0
Total	49	58	107	100
Average	30.72	29.22	29.89	

Sex	2014	2015	Total	Percentage of admissions
Male	48	53	101	94.39
Female	1	5	6	5.61
Total	49	58	107	

Mode of injury	No of patients	Percentage of total admissions
RTA	84	78.50
Assault	3	2.80
Fall	10	9.35
unknown	10	9.35
total	107	

Gcs score	No of patients	Percentage of admissions
3-4	34	31.78
5-6	17	15.89
7-8	25	23.36
9-13	29	27.10
14	1	0.93
15	1	0.93
total	107	

Associated injuries	No of patients	Percentage of admissions
None	81	75.70
Could not be assessed	12	11.22
Facial #	4	3.74
Upper limb #	5	4.67
Lower limb #	7	6.54
Total	107	

Management	No of patients	Percentage of admissions
Operative	14	13.08
Conservative	93	86.92
Total	107	

Outcome	No of patients	Percentage of admissions
Discharged	36	33.65
Expired	51	47.66
Left against medical advice	19	17.76
Sent to ashadham	1	0.93
	107	

Glasgow outcome score	No of patients	Percentage of admissions
1	51	47.66
2	7	6.54
3	9	8.41
4	30	28.04
5	10	9.35
Total	107	

Days of hospitalization	No of patients	Percentage of admissions
<7days	77	71.96
7-14	20	18.69
>14	10	9.35
Total	107	

Status of identity at discharge	No of patients	Percentage of admissions
Unknown	25	23.37
Known	82	76.63
Total	107	

DISCUSSION

In another study conducted by Deb Nath et al[2] it was found that males contributed to a major chunk of the fraction amongst the injured (98%), and most patients (36%) were in 3rd decade of their life. Ahmad FU et al [3] also showed majority of patients were in between 25 to 40 years of age group. The above fact is also evident in our study as majority of victims are males (94.38%) and mean age of 29.89 years.

Deb Nath also concluded that Road traffic accident was the most common cause of injury in 67% cases.50 %of the cases at the time of admission had a Glasgow Coma Scale (GCS) score of less than 8 and 40% had between 8-13 as compared to 71% and 27.10% respectively which was found in our study. This signifies severity of the injury at presentation and that more than half of the time the patients present with therapeutic challenges like threatened airway, difficult other system evaluation and inability to assess underlying co morbidities. The same study also showed that most injuries were cerebral contusion in 33 (47%) patients, 10 (14%) had EDH and 17 (24%) patients had SDH. Wanger et al, reported most of the injuries were cerebral contusions and/or subdural hematomas[4] with a high mortality rate [5,6]. This conclusion was supported by our study which showed Intracerebral haemorrhage and subdural hematomas were common lesions noted on CT head with a mortality of 47.66%.

Ahmad FU et al [3] studied 325 unidentified patients and of these, 193 (65%) could be identified during the hospital stay. An additional 40 (13%) patients were sent home after they regained memory of their addresses. In another study identity of 73% patients could be established. Comparing to our study 82 (76.63%) patients could be identified which reflects that in majority of cases it was able to identify the patients which aided to their recovery.In Ahmad's study 17 (6%) patients remained unknown and were sent to rehabilitation/poor homes with the help medical social workers. All pediatric patients were identified[6].

Liew BS et al[7] showed in their study that 61(85%) patients were discharged from hospital, with only 29(40%) having good outcome (GOS 4 and 5). Similar findings were observed in our study as only 40 (37.4%) of patients had a Glasgow outcome score of 4 and 5. Some other authors also have come across comparable observations which suggest that the overall cognitive recovery of the patients in this setting remain grim, and many patients suffer from a residual functional loss

at least for some duration after recovery.

These groups of patients with unknown identities present innumerable challenges in their management. They are usually found lying on road in unconscious state and brought to hospital by policemen who are ill equipped and often not knowing how to handle patients with severe injuries. Their prehospital management is usually improper and lack of proper transfer facilities, in ambulances, further aggravates their condition. Very often such patients are destitute and their injuries are compounded by presence of debility because of poor nutrition, other medical conditions like diabetes, hypertension, substance abuse and mental illnesses.

During their hospital stay, the role of paramedical staff is of paramount importance; their daily nursing care in absence of a relative is a difficult. It needs a team of trained and empathetic nursing staff along with a physiotherapist, dietician, psychologist, and social worker who can help and rehabilitate them. There is an urgent need to sensitize the general public and police about the transportation and prehospital management of such severe head injury patients. Our peripheral hospitals need to be well equipped for treatment of such patients. Treatment of such unknown patients can entail a huge expenditure and therefore, every hospital should allocate funds for the above purpose.

CONCLUSION

Outcome of these neglected patients is poorer in comparison to patients who are accompanied by their relatives. Their management from prehospital to treatment and discharge from hospital is fraught with challenges. They need special care for which staff should be well trained and hospital must have economic resources.

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