Original Article

Management Outcome after Head Injuries among Assault Patients

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ABSTRACT

Objective: To determine the management outcome after head injuries among assault patients.
Study Design: Cross-section study
Place and Duration of Study: This study was conducted at the Neurosurgery department of Peoples University of Medical and Health Science. One year from February 2015 to January 2016.
Materials and Methods: All the assault patients presented with head injuries either of gender were included in the study. Complete medical history, clinical examination and routine laboratory investigation including CT brain were done. Patients were followed during Hospital stay till the discharge. All the data regarding demographic information, CT diagnosis, type of treatment and outcome were recorded in the self-made proforma.
Results: Total 56 patients were studied; their mean age was 31.82±13.58 years. Male ration was markedly higher 91.9%. Mostly patients were farmer and laborer. Headache, vomiting and nausea were the most common clinical presentations. 66.0% underwent surgical treatment and remaining underwent conservative treatment. 92.9% were normally recovered, 05.4% were shifted to the ICU and one patient was died.
Conclusion: It was concluded that young males were assaulted and mostly recovered. Quick and proper treatment may reduce the morbidity and mortality.
Key Words: Assault, head injury, treatment

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INTRODUCTION

Head injury is regarded as a key health issue, which is a common cause of mortality or disability and puts tremendous pressures on healthcare services.[1] Accident rates are raising in developing nations in particular and brain injury due to trauma specifically as traffic is increasing in regardless of other factors such as industrialization, ballistic trauma and falling. Head injuries constitute 1/4th or 1/3rd of all deaths due to accident, and 2/3rd of mortalities in hospital due to trauma.[1]Traumatic brain injuries (TBIs) have been termed as 'silent epidemics' of current times, as well as is a leading factor of morbidity and mortality among young adults and children in both underdeveloped and developed nations globally.[2]

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Majority of TBI victims survive with major disabilities, likely to result in a significant financial burden for both subjects and their relatives. TBI's financial burden is overwhelming.[2] Closed-head injury occurs due to a number of causes, like automobile and motorcycle collisions, assaults, height falls, and pedestrians colliding motor vehicle.[1] Due to assault, the international rate of serious head injuries is higher than the sum of non-fatal incidents.[3] The significant factors, which determine the consequence of these head injuries subjected to survival involve the weapon used, skull fracture site and type, brain injury, and intracranial haemorrhage.[3] At local level it was exposed that 66.4% deaths occurred due to head injuries.[4] In another local study stated that most intentional traumatic brain injuries were assaults. In behavioral domain, they mainly suffer from disturbances related to aggression and impulsivity which not only affects patients but also the family and friends. Patients who suffered TBI may have irritability, aggressive behavior, and agitation.[5] Aggression can range from irritability to outbursts that would result in the destruction of property or assaults on others.[5] Irritability or bad temper is very common in patients after the acute phase of TBI. Injuries and wounds are of various types, they mostly result from assaults, by interpretation one can grasp the concept of assault that involves posing a threat and applying force to another's body in aggressive and

violent situations, whereas when assaults are complete, the it is termed battery, which implies that somebody has truly applied force to another's body.[6] TBIs, explained as the disruption of brain function due to the sudden, unforeseen, unbearable use of mechanical force, are rather frequent and often involve specialized emergency treatment.[7] Domestic violence (DV) in domestic violence victims is a frequent cause of brain injury. Face and head are frequent targets in family violence assaults and survivors also suffer an injury to the head, face and neck. Interpersonal violence has a particularly significant emotional context, which can aggravate TBI's burden. Previous studies have found that assault related TBI patients recover from worse effects, are more severely affected, less active, have a greater burden on families, have less resettlement in the family, and benefit very little from inpatient therapies.[8,9] Nevertheless, the evidence is combined with some studies that find no significant impact on practical or behavioral effects of the trauma mechanism[8,10,11].

MATERIALS AND METHODS

This cross study was conducted was conducted at Neurosurgery department of Peoples University of Medical and Health Science. All the assault patients presented with head injuries either of gender were included in the study. All the patients those were not willing to participate in the study, referred to other Hospitals and died at emergency before shifting in the ward were excluded for study. Complete medical history, clinical examination and routine laboratory investigation including CT brain were done. All the patients underwent conservative and surgical management according to patient's situation and neurosurgeon/physician decisions. Patients were followed during Hospital stay till the discharge. All the data regarding demographic information, CT diagnosis, type of treatment and outcome were recorded in the self-made proforma. Data was analyzed by using SPSS version 20.

RESULTS

Total 56 patients were studied; their mean age was 31.82±13.58 years. Male ration was markedly higher 91.9% and female were only 8.9%. Most of the patients were farmer 55.4%, laborer were 21.4%, 14.3% were students and 8.9% were house wives. According to clinical presentation, 33.9% patients had headache and vomiting, 23.2% had headache and nausea, 12.5% patients had headache and nasal bleeding, 5.4% were drowsy and having headache, 12.5% had open head injury and headache and 8.9% patients had headache and ear bleeding and fracture. Table: No. 1

Most of the patients 66.0% underwent surgical treatment and 34.0% underwent conservative treatment. Fig. no. 1 Most of the patients 92.9% were normally recovered, 05.4% were shifted to the ICU and one patient was died. Table: No. 2

Table No.1: Demographic information of the patients n=56

Demographic variables		Frequency	Percent
Gender	Male	51	91.1%
	Female	05	08.9%
Occupation	Farmer	31	55.4%
	House wife	05	08.9%
	Student	08	14.3%
	Lab our	12	21.4%
Clinical presentation	1+2	07	12.5%
	1+2+5+8	02	03.6%
	2+3+9	19	33.9%
	2+7	13	23.2%
	2+4	07	12.5%
	2+5+9	03	05.4%
	2+6	05	08.9%
	Total	56	100.0%

1= open head injury, 2= headache, 3=vomiting, 7=nausea 4=Nasal bleeding, 5 =drowsy, 6= ear bleeding, 8=EDH, 9= Fracture

Table No.2: Outcome of the patients n=56

Outcome	Frequency	Percent
Recovered	52	92.9%
Shift to ICU	03	05.4%
Death	01	01.8%
Total	56	100.0%

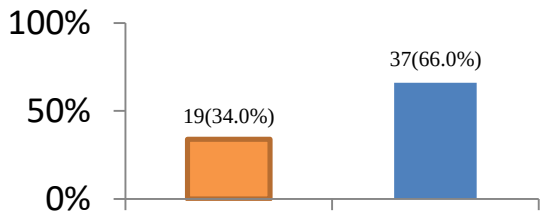

Figure No.1: Type of the treatment n=56.

DISCUSSION

Head injuries are normally associated to trauma to the head (scalp, skull and brain). It is main cause of morbidity and mortality around the world and most of the patients below the age of 44 years.[12,13] In this study mostly young patients were seen as their mean age was 31.82±13.58 years. Whereas others have reported that 69% cases were in age group of 15-35 years.[14] Korley FK et al[15] reported that TBI were found predominantly

among 20 years or older adults. Young male are commonly affected population in brain injuries.[16,17] similarly in this study male ration was markedly higher 91.9% and female were only 8.9%. In the comparison of this study Bhatti JA et al[7] stated that most of the patients 79% were males and having age <25 years. Hemalatha N et al[18] also found similar findings regarding age and gender. Hassan N et al[19] stated that mean age of patients was 40 ±9.65 years and males were most common. In this study according to clinical presentation headache, vomiting and nausea were commonest. On other hand it is stated that after head injuries, different headache symptoms occurred without exact location, frequency, duration and severity with associated symptoms like vomiting nausea phonophobia, photophobia or aura presentation.[20] Murtaza M et al[21] demonstrated comparable findings. We found few patients had fracture and EDH, these findings were similar to the study of Junaid M et al[22] and Bhole AM et al.[23]

In this study most of the patients 66.0% underwent surgical treatment and 34.0% underwent conservative treatment. On other hand Junaid M et al[23] reported that most of the patients 63.9% underwent conservative treatment and remaining were treated surgically. In this study 92.9% were normally recovered, 05.4% were shifted to the ICU, while one patient was died. Alshaimaa MT et al[24] reported that out of all patients mostly 71.6% were treated conservatively and 28.3% were treated surgically. While in other studies mortality rate was higher among patients with brain injuries. Zaidi SS et al[25] reported that mortality rate was 31.1% due to head injury. Mendelow AD et al[26] stated that 15% mortality was among conservative treatment patients and 33% mortality was among surgically treated patients. Emejulu JK et al[27] reported that mortality rate was 19.8% and this higher rate of mortality due to lack of CT scanning facilities. Above mentioned studies showed higher mortality rates as compared to our study, this may because small sample size of our study and in this study only assault patients were studied and most of patients were with less severity and almost all were young males, and patients were also treated immediately with well experienced neurosurgeons**.**

CONCLUSION

It was concluded that young males were assaulted and mostly were recovered. Quick and proper diagnosis and treatment may reduce the morbidity and mortality**.**

Author's Contribution:

Concept & Design of Study:	Abdul Razaque Mari
Drafting:	Asiya Parveen Shaikh Pardeep Kumar
Data Analysis:	Muzamil Dilbar, Shams Raza Brohi, Hari Ram
Revisiting Critically:	Abdul Razaque Mari Asiya Parveen Shaikh
Final Approval of version:	Abdul Razaque Mari

Conflict of Interest: The study has no conflict of interest to declare by any author.

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