

Original Research Paper

Trends of Maxillofacial Trauma at Tertiary Care Hospital in Rural Area of Southern Punjab

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Abstract

A four years retrospective study from was conducted to analyze the pattern and magnitude of maxillofacial trauma in medico-legal cases coming to the casualty of a rural hospital of Punjab. The study revealed that out of 1237 medico-legal cases 130 (10.5%) suffered maxillofacial trauma. The commonest age group prone to maxillofacial injury was between 16-30 years. Male preponderance was quiet evident (6:1). The commonest cause of such injuries was road traffic accident including 83.1% of the total cases. Soft tissue was the most common type of maxillofacial trauma (52.3%). Most common bones involved were nasal bone and mandible (18.5% each) and the commonest associated injury was involvement of limbs (30.0%). Most common weapon involved was blunt (90.8%). Drawing public attention and awareness towards the traffic rules especially use of helmets by the motorcyclists and separation of pedestrians from motor vehicles could possibly reduce the number of maxillofacial trauma cases.

Key Words: Medico-Legal Case, Maxillofacial Trauma, Road Traffic Accidents

Introduction:

Maxillofacial injuries occur in a significant proportion of medico-legal cases and pose a therapeutic challenges to trauma, maxillofacial and plastic surgeons practicing in developing countries [1]. Being the most exposed part of the body face is particularly vulnerable to traumatic injuries. In the rural area road traffic accidents are still the major cause of maxillofacial trauma. This may be due to the lack of enforcement of traffic laws by police and insufficient compliance of the population in obeying traffic rules [2, 3].

The present study is aimed at determining trends of maxillofacial trauma to create public awareness and help guide the development of its preventive measures.

Method:

The study was retrospective analysis from Apr 1st, 2007 to Mar 31st, 2011 of maxillofacial trauma in all medico-legal cases admitted in the emergency department of Adesh Institute of Medical Sciences and Research, Bathinda. The institute is situated in the rural area of South-West Punjab on the national highway (NH-64).

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Information regarding gender, age, demography, mode of occurrence, type of injury was confirmed from the hospital records, victim's attendants and police. The collected data were analysed, observations discussed and compared with other studies.

Objectives:

1. To analyse causative agents and pattern of cases.
2. To draw public attention and awareness towards facial trauma.
3. To suggest preventive measures, this possibly could reduce incidence of these cases.

Observations and Results:

Demographic profile: Maxillofacial trauma contributed for 10.5% (130/1237) of all medico-legal cases attending the emergency department of the institution during the study period of four years. The percentage of male victims (85.4%) was more than the females (14.6%), in the ratio of 6:1 and the commonest age group involved was between 16-30 years (54 cases; 44.6%) followed by 31-45 years (41 cases; 37.7%). (Table 1)

Rural victims (57.7%) were more than the urban which comprised 42.3% of the total cases. (Table-2)

Cause of injury: the most common cause of facial trauma was road traffic accident (108 cases; 83.1%) followed by assault (10 cases; 7.7%) as shown in Table 3. Motorcyclists formed the majority amongst road traffic accidents.

Type of Injury: Out of 130 patients, 68 cases (52.3%) had soft tissue injuries and 58 cases (44.6%) suffered from fracture of different facial bones. There were 3 cases that had fracture or extraction of teeth and one case had dislocation of temporo-mandibular joint (Table 4). Mandible and nasal bone fractures were the most common types of bony injuries comprising 24 cases each (18.5%) as shown in Table 5.

Associated Injuries: The most common associated injury was involvement of limbs (39 cases; 30.0%) followed by head (28 cases; 21.5%) as shown in Table 6.

Weapon Used: Most common weapon involved was blunt (118 cases; 90.8%). [Table 7]

Discussion:

During the period of four years the present study revealed that out of total 1237 medico-legal cases admitted in the emergency department 130 (10.5%) cases presented with maxillofacial trauma. The higher prevalence of males in maxillofacial trauma (6:1) is well documented. [1, 2, 4-7]

It is due to greater male exposure on roads, active social life and drug use. Majority of the victims were between the age group of 16-30 year 54 (44.6%).

This is possibly due to the fact that during this phase of life there is great personal independence, social excitement, intense mobility, careless driving and involvement in violence. [2, 8] Rural victims also outnumbered the urban 1.4:1, which probably is due to less awareness towards the traffic rules.

The most common cause of maxillofacial trauma was road traffic accident 108 (83.1%), consistent with other studies [1, 2, 7-8] and amongst them motorcyclists formed the majority which again signifies the importance of traffic rules and use of protection measures.

Most of the cases suffered from soft tissue injury 68 (52.3%) and fracture of facial bones 58 (44.6%) and the most common bones fractured were mandible and nasal bone 24 (18.5%) each.

This is consistent with other studies. [1, 2, 7, 8] Maximum associated injuries were involvement of limbs and head 39 (30.0%) and 28 (21.5%) respectively. Most common weapon involved in maxillofacial trauma was blunt 118 (90.8%) as face is most exposed part and prone to injuries especially in road traffic accidents.

Conclusion:

Management of injured patient should also be aimed at reducing the incidences of maxillofacial injuries by using preventive and interventional programs.

There is need to ensure strict compliance of traffic rules and regulations, implement improved safety devices in automobiles, use of helmets by motorcyclists, separation of pedestrians from motor vehicles and educating people to obey traffic rules especially at school level and in rural areas could reduce the number of maxillofacial trauma.

Table 1: Age and Gender Wise Distribution

Age Groups	Male	Female	Total	%
0-15	4	5	9	6.9
16-30	54	4	58	44.6
31-45	41	8	49	37.7
46-60	12	2	14	10.8
>60	0	0	0	0.0
Total	111	19	130	100.0

Table 2: Gender & Area Wise Distribution

Area	Male	Female	Total	%
Rural	67	8	75	57.7
Urban	44	11	55	42.3
Total	111	19	130	100.0

Table 3: Cause of Injury Wise Distribution

Cause of Injury	Number	%
RTA	108	83.1
Assault	10	7.7
FFH	5	3.8
Electric Burns	4	3.1
Burns	2	1.5
Railway Accident	1	0.8
Total	130	100.0

Table 4: Type of Injury

Type of Injury	Number	%
Soft Tissue	68	52.3
Facial Bones	58	44.6
Teeth	3	2.3
Joint	1	0.8
Total	130	100.0

Table 5: Type of Bone Involved

Type of Bone	Number	%
Nasal	24	18.5
Mandible	24	18.5
Maxilla	11	8.5
Zygomatic	4	3.1
Orbit	3	2.3
Total	66	50.8

Table 6: Associated Site of Injury

Associated Site	Number	%
Limbs	39	30.0
Head	28	21.5
Chest	14	10.8
Neck	5	3.8
Abdomen	1	0.8
Total	87	66.9

Table 7: Type of Weapon Involved

Weapon	Number	%
Blunt	118	90.8
Sharp	5	3.8
Electric Burns	4	3.1
Flame Burns	2	1.5
Firearm	1	0.8
Total	130	100.0

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