ORIGINAL ARTICLE

Incidence of Bony Injuries among Medicolegal Cases at Forensic Medicine Department, Nishtar Medical College, Multan

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ABSTRACT

Aim: To evaluate the incidence of bony injuries & soft tissue injuries.
Methods: This retrospective study was carried out in the Forensic Medicine Department, Nishtar Medical College, Multan from October 2016 to December 2016. A total of 397 medico legal cases were examined during the period.
Results: It was observed that Male cases were dominant & cases of fight were also predominant & leading cause of injuries, while the second was Road side accidents. The bony injuries in the form of fractures were dominant on the skull & face, while the second commonest was the fractures of long bones, including tibia, fibula & radius, ulna.
Conclusion: The road side accidents are less in number & can be prevented by the awareness & obedience of traffic rules
Keywords: Evaluate the incidence, Bony injuries, Soft tissue injuries.

INTRODUCTION

A wound has been defined as a disruption in the continuity of any tissue of the body by injury. The purpose of examination of any wound can be summarized as an attempt to ascertain at the time of or after death that whether it was caused before, how it was caused, what caused it and what amount of force was required to produce it[1].

Factor governing the nature & extent of wound may be considered under following heading.

1. The nature of the object or instrument causing wound.
2. The amount of energy discharged during the impact.
3. The condition under which the energy is discharged.
4. The nature of the affected tissue.

The extent & degree of an injury to the skull & its contents is not necessarily proportional to the amount of force applied to the head. The application of the moderate force to the head may cause a severe intracranial hemorrhage, while a great force may produce no injury. Head injuries may be caused by sharp edge or sharp pointed weapons, but most injuries are due to application of blunt force. The application of blunt force to the head may result in injury to the contents of skull, either alone or in combination with the fracture of skull. Most of the wounds of the scalp are caused by the application of blunt force to the head, e.g. from fall or blows. Such wounds of the scalp take the form of Contusions or Lacerations[2].

In criminal and accidental injuries, the head is especially vulnerable and an understanding of the mechanism of head injuries is essential in forensic medicine. The head is the heaviest part of the body relative to its size and is raised to the spine in a rather unstable position being mainly secured by the tone of the neck muscles[3].

Wound caused by application of physical force can be divided into two main groups. Blunt force trauma & sharp force trauma. A third group of wound is caused by the application of other forces that do not require movements or motion to produce their effects e.g. thermal, electrical. Blunt force trauma may result in Abrasion, Contusion & Laceration, sharp force give incised wound[4].

Sharp force injuries add another dimension of evidentiary value when implements have markings on cartilage or bone. Such tool marks have been used to successfully identify causative weapons or may link prepators to crime[5].

Fracture is defined as break in the continuity of a bone. Fracture may result from direct violence such as blows or indirect violence such as fall or action of muscles. In children or young persons, the bone being more flexible than in the adults, partial fractures (green stick) are more common[6].

In many countries motor vehicles accidents rank first among all total accidents. These are almost 885000 deaths from road side accidents annually in the world. In every death there are as many as 30 to 40 minor injuries and 10 to 15 serious injuries, requiring long period of expensive care, nursing &treatment. The peak mortality & morbidity from road

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side accidents are seen in the 15--24 years age group of males[7].

The following are the kinds of Hurt:

Sec. 333. Itlaf-i-udw "whoever dismembers, amputates, severs any limb or organ of the body" will be punished as Qisas, Arsh & Tazir.

Sec.335. Itlaf-i-Salahyyat-i-udw. Whoever destroys or permanently impairs the functioning power or capacity of an organ of the body of another person or causes permanent disfigurement" will be punished as Qisas, Arsh & Tazir.

Sec.337 Shajjah. "whoever causes on the head or face of any person any hurt not amounting to Itlaf-i-udw or Itlaf-i-salahyyat-i-udw" The following are the kinds of Shajjah, namely:

Shajjah-i-Khafifah: without exposing the bone of victim.

Shajjah-i-mudihah: by exposing the bone without fracture.

Shajjah-i-Hashimah: by fracturing the bone without dislocating it.

Shajjah-i-munaqqilah: Fracture of the bone & bone is dislocated.

Shajjah-i-ammah: Fracture of the skull & wound touches the membrane of the brain.

Shajjah-i-damighah: Fracture of the skull & wound touches the membrane of the brain.

Sec. 337B. Jurh: whoever causes on any part of the body of a person, other than head & face, a hurt which leaves a mark of the wound, whether temporary or permanent, is said to cause Jurh. Jurh is of two kinds, namely: (a) Jaifah (b) Ghayr-Jaifah

Sec.337C. Jaifah: whoever causes jurh in which the injury extends to the body cavity of the trunk is said to cause Jaifah.

SEC.337E. Ghayr-Jaifah: (1) whoever causes jurh which does not amount to Jaifah, is said to cause Ghayr-Jaifah. (2) The following are the kinds of Ghayr-Jaifah, namely:

- Damiah: In which skin ruptured and bleeding occurs,
- Badiah: cutting or incising the flesh without exposing the bone.
- Mutalahimah: By lacerating the flesh
- Mudihah: by exposing the bone
- Hashimah: bycausing fracture of a bone without dislocating it.
- Munaqqilah: by fracturing and dislocating the bone[8].

This indicates that the severity of punishment depends upon the type of wound and involvement of bony tissues or soft tissues.

MATERIAL & METHOD

The study was carried out to know the incidence of bony injuries during the months of October, November & December, 2016. 397 medicolegal cases were examined & medicolegal certificates were issued in the department of Forensic Medicine, Nishtar Medical College Multan, for trauma in various aspects & following parameters were noted for study. Age, Sex, Manner of inflicting injuries, Time of sustaining injuries, Region of body receiving injuries, Fractures site & type of injuries.

RESULTS

Out of 397 cases, 347(87.4%) were male and the remaining 50(12.6%) were female cases (Table-1). Majority of the cases i.e., 169(42.6%) were found in the age group 20-30 years (Table-2). Most of the cases i.e. 390(98.2%) were injured in the fight (Table-3). Out of 397 cases 220(55.4%) sustained injuries at 12 to 24 hours as shown in table-4.

Table 1: Sex distribution (n=397)

Sex	n	%age
Male	347	87.4
Female	50	12.6

Table-2: Age distribution (n=397)

Age (years)	n	%age
0-5	-	-
05–10	05	01.2
10–20	69	17.4
20–30	169	42.6
30–40	81	20.4
40–50	40	10.1
50–60	20	05.0
Above 60	13	03.3

Table 3: Manner of Injuries (n=397)

Manner	n	%age
R.S.A	07	01.8
Fight	390	98.2
Miscellaneous	-	-

Table 4: Time of injuries sustained (n=397)

Time	n	%age
00:00 – 12:00	177	44.6
12:00 – 24:00	220	55.4

Table 5: Regional distribution of injuries (n=397)

Site	n	%age
Head & Neck	277	69.8
Body	120	30.2

Table 6: Types of injuries (n=397)

Type	n	%age
Bony	34	08.6
Soft Tissue	363	91.4

Table 7: Sites of injuries (fractures)

Fracture Site	n	%age
Skull & Face	18	52.9
Long Bones	16	47.1
Ribs	-	-
Spine	-	-
Hip Bone	-	-
Total	34	100.0

DISCUSSION

It was observed from the study that 397 injured were examined in the Forensic Medicine Department, Nishtar Medical College, Multan during the months of October, November & December 2016. Out of these 347 (87.40%) were males & 50 cases (12.6%) were females. 34 cases sustained bony injuries. Out of these 34, 18 cases (52.9%) showed the fractures of the skull & facial bones (linear & depressed fractures) the linear fractures were mostly of the occipital bone & 16 cases (47.1%) showed fractures of the long bones. The most common were the tibia, fibula, and radius & ulna bone. There was no case of fractured ribs, spines & hip bone. The fracture of skull & facial bones may lead to serious complications like infections, epilepsy, concussion, resulting in neurological deficit during the late period of life. Most of the injuries were belonging to the age group of 20-30 years, 169 cases (42.6%). The second group was 30-40 years, 81 cases (20.4%). Table no: 2. the age between 20-30 & 30-40 years is most active socioeconomically and males are dominant, because they are the active members of our society. This leads to the loss of earning capacity of that individual family.

The fracture of the long bones may add into the number of morbidity & mortality especially in old age. The fracture of long bones may show complications like nonunion, mal-union, osteomyelitis, and loss of normal movements. The surgical treatment is very expensive & every individual cannot afford, because of financial constraints. This leads to burden to the society & increase in the hospital budget. Residual damage after the healing of fracture leads to loss of earning capacity or damage to profession, resulting in socio-economic problems.

The most of the injuries were in the region of head & neck i.e., 277(69.8%) & on rest of the body was 120(30.2%). The bony injuries in the form of fractures were 34 cases (8.6%) & soft tissue trauma were 363 cases (91.4%). The commonest manner of infliction of injuries was fight, as 390 cases (98.2%) & the road side accidents were 7 cases (1.8%). Table 3 indicats that the head & face is the most vulnerable part during the fight. the increasing number of soft tissue injuries on head & face, gives an impression of false nature of hurt i.e. "Shajjah Mudihah" which is the soft tissue injury of the head & without any morbidity, mortality & disfigurement of the victim. The punishment for such offence is under Sec.337Aii, five year imprisonment as tazir, Arsh & Damman. this kind of hurt is only the discretion of the first examining Medical Officer, because once the wound has been stitched or healed, no comments can be given.

CONCLUSION

The road side accidents are less in number & can be prevented by the awareness & obedience of traffic rules.

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