Clinico- Epidemiological profile of assault cases at a tertiary centre in Indore

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Abstract
Assault cases coming to casualty of a hospital primarily reflects the intensity of the crime of that region. The present study was conducted in the casualty of Sri Aurobindo Medical College and Post Graduate Institute, Indore. Duration of study was 2 years from 1 July 2015 to 30 June 2017 during which 194 cases were studied. Out of all the cases male victims were 163(84.02%) and females were 31(15.98%). Adult age group from 21- 30 years was most commonly affected with a sum total of 72(37.11%) victims. Commonest injury was laceration in 76(32.07%) cases followed by swelling in 55(23.20%) cases present over different parts of body. Surgery department was called for intervention in 133(68.56%) of cases than orthopedics department in 71(36.60%) cases. All the victims were examined meticulously, treated and injury report was made and further informed to police for investigation and judicial proceedings.

Keywords: Assault, Injuries, Casualty, Medicolegal**.**

Introduction
According to Section 351 of the IPC 'assault' is defined as "every attack or threat or attempt to apply force on the body of another in a hostile manner".[1] Casualty department of any healthcare centre deals with assault cases. Victims comes by self or is being brought by other persons to casualty, where it is duty of casualty medical officer primarily to treat the patient and after stabilizing the patient to prepare an injury report, noting down all the injuries along with a short history of incidence, size, site and duration of the injuries inflicted.

Material and Methods
This is a retrospective study of assault cases registered in medico-legal register in casualty of Sri Aurobindo Medical College, Indore from 1st July 2015 to 30th June 2017 for a period of 2 years. During this study period a total of 194 assault cases were registered in the casualty. The collected data was analyzed and presented in tables, graphs and pie charts by using various parameters and compared with other studies**.**

Observations and Results
In this two year retrospective study, a total number of 194 medico-legal cases were reported and studied. Out of total cases male predominance was noted with 84.02% of cases (Fig. 1). Maximum patients coming to casualty were from the age group of 21-30 years i.e. 37.11% followed by 27.32% cases from 31-40 years age group, whereas least number of patients were from age group of 1-10 years i.e. 1.03% (Table 1). While the majority of male (46.3%) were from 21-30 years age group and female (6.18%) victims were from 31-40 years age group.

Taking religion into consideration majority of the patients belonged to Hindu religion i.e. 187(96.39%), patients from Muslim community were 6 (3.09%) and remaining 1(0.51%) was from Christian community (Fig. no.2). Most of the patients coming to the casualty were from urban areas accounting to be 127(65.46%) and remaining 67(34.54%) patients came from rural areas. (Fig. 3)

Total 237 different injuries were noted to have caused all over victim's body, maximum 76(32.07%) injuries were lacerations followed by swelling in 55(23.20%) cases. Contusions and incised wound accounted for 28(11.81%) and 25(10.55%) respectively. Gunshot injury, injury by flame, broken tooth and amputation of penis were seen in only one cases each. (Table 2)

Surgery department was called for intervention in 133(68.56%) of cases than orthopedics department in 71(36.60%) cases and other departments were also referred as shown in (Table 3).

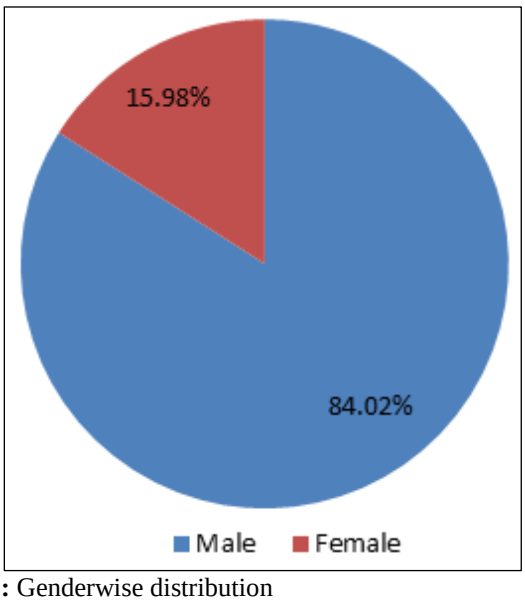

Fig. 1: Genderwise distribution

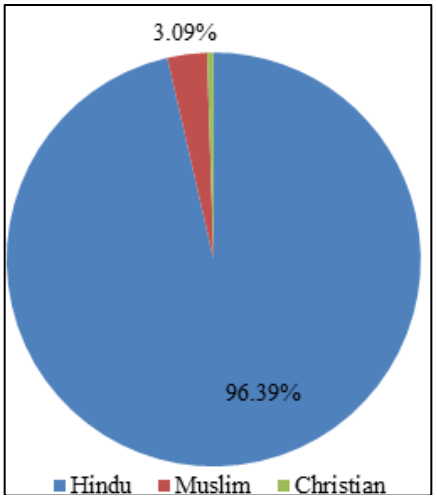

Fig. 2: Religionwise distribution.

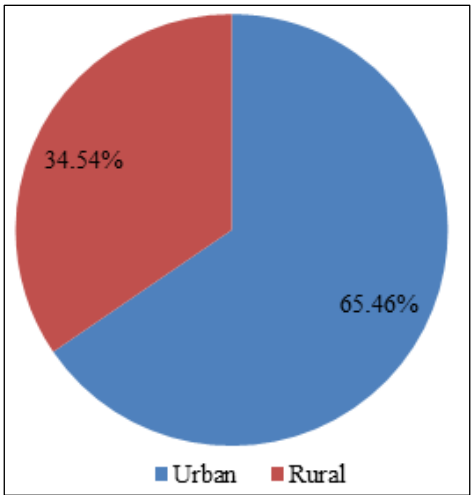

Fig. 3: Region wise distribution

Table 1: Age and sexwise distribution

Age group	Male	Female	Total
0-10	2(1.03%)	0(0%)	2(1.03%)
11-20	27(13.92%)	1(0.51%)	28(14.43%)
21-30	62(31.96%)	10(5.15%)	72(37.11%)
31-40	41(21.13%)	12(6.18%)	53(27.32%)
41-50	22(11.34%)	5(2.58%)	27(13.92%)
>50	9(4.64%)	3(1.54%)	12(6.18%)
Total	163(84.02%)	31(15.98%)	194(100%)

Table 2: Types of injuries

Type	Frequency	Percentage
Abrasion	26	10.97%
Swelling	55	23.20%
Stab	9	3.80%
Lacerated Wound	76	32.07%
Contusion	28	11.81%
Incised	25	10.55%
Fracture	12	5.06%
Nail marks	1	0.42%
Bite marks	1	0.42%
Broken tooth	1	0.42%
Gunshot	1	0.42%
Amputation of penis	1	0.42%
Burn	1	0.42%

Table 3: Departmentwise distribution of cases

Department	Total (percentage)
Surgery	133(68.56%)
Orthopedics	71(36.60%)
OMFS	15(7.73%)
ENT	9(4.64%)
Medicine	3(1.55%)
Obstretics and Gynaecology	2(1.03%)
Neurosurgery	2(1.03%)
Ophthalmology	1(0.51%)
Pediatric surgery	1(0.51%)
Pediatrics	1(0.51%)

Discussion

During our study it was found that males outnumbered females as victims with 163 males (84.02%) and 31 females (15.98%). This is in comparison with the study conducted by Mittal S et al[2] which showed males were 82.5% and rest were females. A study done at Mangalore by Vij A et al[3] also showed consistent findings with males forming the major case load i.e. 79.77%. Similar male predominance was observed in other studies by Malik Y et al.[4] This is because males are more involved in outdoor activities and are more aggressive in compared to females involved in fights, so this makes them more vulnerable to any injury.

Our study showed that the most commonly affected age group was 21-30 years (37.11%) while the least commonly affected age groups were 0-10 years with 1.02% cases. A study done by Bhullar DS and Aggarwal KK [5] showed that most commonly affected age group was 21-40 years in 58% cases. Studies done by Mittal S et al[2] and Garg V and Verma S.K.[6] also showed that maximum number of victims belonged to the age group 21-30 years age group and the least affected were those in the 0-10 years age group.

This study found that the urban population was mainly affected with 127(65.46%) victims. This is in contrast with the studies by Mittal S et al and Oberoi SS et al which showed the rural population was mainly affected.[2,7] this may be because of the reason that our medical college serves urban population.

In our study maximum 76(32.07%) injuries were lacerations followed by swelling in 55(23.20%) cases. Contusions and incised wound accounted for 28(11.81%) and 25(10.55%) respectively. Similar findings with lacerations most commonly noted 646(32.28%) was seen in study done by Thube HR et al[8] and Howe et al[10] having most common injuries as laceration in 21% cases. However these findings were inconsistent with study done by Fothergill et al[9] having major injuries were contusions in 53% of cases.

In our study Surgery department was called for intervention in 133(68.56%) of cases followed by orthopedics department in 71(36.60%) cases. This observation is concurrent with the study done by Timsinha S et al[11] who studied all medicolegal cases in casualty and found involvement of department of surgery in 58.80% cases followed by orthopedics department in 16.69% cases.

Conclusion

It was also found that males were the victims in a majority of cases belonged to the younger age group i.e. 21-30 years from urban population. Lacerations were the most common injury observed which implicates use of blunt weapons. In the present society various discrepancies, maladjustments, disharmony etc. are responsible for constant rise in the crime. Effective policing, well aware and educated society can be among various tools to cope up with current scenario. Similar studies over different periods of time will help in providing a background for an effective, multifaceted crime control policy.

Conflict of Interest: None.

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How to cite this article: Tomar JS, Soni S, Singh BK, Agrawal R. Clinico- Epidemiological profile of assault cases at a tertiary centre in Indore. *Int J Forensic Med Toxicol Sci* 2019;4(2):39-41.