Spectrum of non-fatal Inter personal violence cases

Dr. Sham Kishore K, Dr. Shishirkumar C Naik and Devaseelan

DOI: https://doi.org/10.33545/27074447.2020.v2.i2a.29

Abstract
A specific aim of this present study was to know the spectrum and epidemiology of non fatal interpersonal violence cases. During the study period 30 cases of assault who visited the casualty of Kanachur Institute of Medical Sciences and Srinivas institute of Medical Sciences Mangalore were studied from the records obtained. The results showed 505 of cases belonged to age group 21-40 years. 70 % of victims were male, 70 % of cases had single assailant, in 43.33% of cases the victim and assailant were acquaintances, 73.33% of injuries were due to blunt force, 48.64% of cases had limb injuries and fractures amounted to 40% of all injuries accounted.

Keywords: interpersonal violence, victim, assailant, fracture

Introduction
Violence amongst humankind is not new. It is ingrained in our evolutionary cycle. Inter personal violence cases are on the rise in recent years. According to the central government statistics, a total of 1050945 cases of offences affecting the human body were recorded in the year 2019 out of which maximum number of cases (545061) were causing simple or grievous hurt [1]. In the state of Karnataka a total of 120165 cases of offences against human body were recorded out of which 37097 cases were causing simple or grievous hurt [1]. Such cases of assault are initially examined by the duty doctors or casualty medical officers present at the emergency/casualty of the treating hospital. Recently many Medical college hospitals have set up clinical Forensic Medicine units to examine medico legal cases which arrive at the casualty. Assessment/classification and recording of injuries is very important legally. The very purpose of assessment and recording the injuries in assault cases is to establish how an injury or wound is caused [3]. It is very important to record history as how the injury was caused, type of weapon used, time of assault, relationship between the victim and the assailant etc. In this present research an attempt was made to study the spectrum of non fatal inter personal violence (Assault) cases in a tertiary care centre of Mangalore India.

Materials and Methods
The present retrospective study was done from the year of 2016 at the Department of Forensic Medicine and Toxicology at Kanachur Institute of Medical Sciences, Mangalore and continued in Srinivas Institute of Medical Sciences Mukka Mangalore. All the assault patients who visited the Casualty of Kanachur Institute of Medical Sciences and Srinivas Hospital for the period of study were included. Details of the age, sex, number of assailants, types of injuries, parts of the body involved, duration of hospitalisation were collected, tabulated and subjected to statistical analysis.

Observations & Results
In the present study, the age group of 21-40 years had the greatest number of patients (50%) followed by age group of 41-60 (33.33%). 6.66% of patients belonged to age group 0-20 years and 61-80 years each and 3.35 % of patients belonged to age group >80 years (Table 1) 70 % of patients belonged to male sex and 30% belonged to female sex. (Table 2) 70% of the cases had a single assailant. (Table 3) Out of the total 30 cases the assailant was an acquaintance in 13 cases (43.33%) and in 9 cases the assailant was a relative (Table 4) Out of the total 30 cases, blunt weapons/impact was the cause of injury in 22 cases (73.33%). In 8 cases sharp weapons produced the injuries in the victims (Table 5). Defence wounds were present in only 4 cases (Table 6)
Maximum number of cases (48.64%) of cases had limb injuries (Table 7). Upper limbs were predominantly involved in 11 cases (Table 8). 18 victims had multiple injuries. Fractures amounted to 40% of all injuries accounted for followed by contusion seen in 22% of cases and laceration in 20% of cases. (Table 9) 10 patients were discharged from hospital after treatment of 4-7 days, 9 patients were discharged after 8-14 days of admission. 7 cases needed only less than 3 days of admission and 4 cases required more than 14 days of treatment. (Table 10)

Table 1: Age of the patients

| Age range (Years) | Number of cases | Percentage |
|-------------------|-----------------|------------|
| 0-20              | 2               | 6.66       |
| 21-40             | 15              | 50         |
| 41-60             | 10              | 33.33      |
| 61-80             | 2               | 6.66       |
| >80               | 1               | 3.35       |

Table 2: Sex distribution

| Sex     | Number of cases | Percentage |
|---------|-----------------|------------|
| Male    | 21              | 70         |
| Female  | 9               | 30         |

Table 3: Number of Assailants

| Assailants | Number of cases |
|------------|-----------------|
| 1          | 21              |
| 2          | 3               |
| 3          | 2               |
| 4          | 1               |
| Unknown    | 3               |

Table 4: Nature of relationship of victim with assailant

| Relationship | Number of cases |
|--------------|-----------------|
| Relative     | 9               |
| Acquaintance | 13              |
| Unknown      | 8               |

Table 5: Type of weapon

| Weapon | Number of cases | Percentage |
|--------|-----------------|------------|
| Blunt  | 22              | 73.33      |
| Sharp  | 8               | 26.67      |

Table 6: Defence wound

| Defence wound | Number of cases |
|---------------|-----------------|
| Present       | 4               |
| Absent        | 26              |

Table 7: Site of injury (6 cases had multiple sites of injury)

| Site     | Number | Percentage |
|----------|--------|------------|
| Limbs    | 18     | 48.64      |
| Chest    | 8      | 21.62      |
| Abdomen  | 2      | 5.42       |
| Head     | 9      | 24.32      |

Table 8: Limb injuries (2 cases had both upper and lower limb injuries)

| Limb | Number of cases |
|------|-----------------|
| Upper| 11              |
| Lower| 7               |

Table 9: Type of Injury (18 cases had multiple types of injury)

| Injury Type   | Number | Percentage |
|---------------|--------|------------|
| Abrasion      | 3      | 6          |
| Contusion     | 11     | 22         |
| Laceration    | 10     | 20         |
| Incised Wound | 2      | 4          |
| Stab          | 2      | 4          |
| Chop          | 2      | 4          |
| Fracture/Dislocation | 20 | 40 |

Table 10: Duration of Hospitalization

| Duration | Number of cases |
|----------|-----------------|
| < 3 days | 7               |
| 4-7 days | 10              |
| 8-14 days| 9               |
| >14 days | 4               |

Discussion

Study done by a group of researchers in Bristol UK showed that majority of injuries were as a result of blunt force trauma, this finding is in agreement with our present study. Most injuries recorded by them were seen in face the finding is in contrast with the present study [3]. In a study done by Vij et al. in Mangalore Karnataka maximum number of victims was male, the finding is similar in the present study [4]. A similar study done on physical assault related injuries done in Nepal showed most number of victims studied were males and blunt force trauma was the cause for majority of injuries. These findings were similar to the present study [3]. A study on homicide done by SS Oberoi Et al. in Patiala India showed 2/3rd of all cases studied were male and the age group of 21-30 years was involved in majority of cases which was similar to the present study [6]. A similar male preponderance like the present study in victims of assault was seen in a study done in Haryana India by a group of researchers. The study also showed that the age group of 21-30 years was involved in majority of cases which was similar to the present study [7]. Study done by group of researchers in South Africa on non fatal injuries of inter personal violence cases showed 64% of victims were males and blunt injuries were the most common type of injuries. These finding were similar to the present study [8]. Study done on assault cases At Nagpur India showed Majority of the victims 74.53% of victims were males. The age group of 21-30 years constituted the majority of victims. Blunt force injuries were seen in majority of cases. These findings are in agreement with the present study. The study showed that head and neck were the area commonly involved 41.29% of cases followed by upper limbs in 31.09% of cases. This finding was in contrast with the present study [9]. A similar study done in Indore Madhya Pradesh India by a group of researchers showed 84.02% of victims were males, most common age group affected was 21-30 years, and most common injuries were laceration and contusion. The findings were similar to the present study [10]. A similar study done by group of researchers from Jhapa Nepal showed 70% of total cases studied belonged to male sex and blunt force injuries were common these findings were similar to present study. But the site of injury reported by those researchers was that head and neck area was more involved which was in contrast with the present study [11].
Almost all of the findings in the present study were in line with the findings of studies done by the peers.

**Conclusion**

The present study shows that males are more prone to interpersonal violence. The age group of 21-40 years are mostly involved as they venture out in the society the most. Limbs are most commonly injured in violence; the reason for the same may be limbs are used in defence against assault. Blunt force injuries are more common in victims because the ready availability of blunt objects in the surroundings.

**Acknowledgement**

My sincere thanks to Dr Shishirkumar C Naik who was working previously in Kanachur Institute of Medical Sciences, Mangalore, helped in designing the study, helped me to collect the materials and also did the statistical analysis.

**Conflict of Interest**

NIL

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