Brief Report

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Patterns of Injury Among Assault Victims Presenting at the Accident Service Colombo South Teaching Hospital (CSTH)

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Abstract

Introduction: Injury patterns and the interpretation of injuries in assault victims are important bits of data that needs to be collected in an emergency department with a view of achieving two main goals. This includes, data for treatment purpose and a medico-legal workup. The objectives of this study are to describe the demographic data of the victims, the mechanism responsible for the injury, the regions of the body involved and the usage of intoxicants.

Method: The study was a retrospective cross-sectional study conducted at the accident service CSTH where 170 assault-injured respondents participated.

Results: The total sample of 170 assault-injured respondents, 128 (75.3%) were males. 49 (28.9%) of them belonged to the age group of 20-29 years. As per the legal classification; grievous hurt was identified among 55 (32.4%) victims. Blunt trauma occurred in 80 (47.06%). 76 (45.2%) were assaults involving the head, neck or face region. Most of these were superficial injuries. Majority of admissions following assaults occurred among young males, who were mostly victimized at night during weekends (Saturdays and Sundays). The assailants were friends or young acquaintances while they were under the influence of alcohol.

Conclusion: Implementing counselling programs, targeting vulnerable groups which includes the intoxicated young male population who are responsible for conflicts, especially during weekend nights. Encouraging gender equality to prevent home violence against women, these steps could be recommended to reduce the number of assault victims.

Keywords: *Assault, domestic violence, grievous injury, influence of alcohol.*

INTRODUCTION

An assault is an intentional act by one person that creates both apprehension in the mind of another, of an imminent harmful or offensive contact or leads to physical injuries such as bruises, bone fractures, wounds. The verbal component even puts the victim in fear of such harm or contact (1). In this study, only physical assaults were included, as people who were

threatened verbally won't get admitted due to absence of physical injuries.

PATIENTS AND METHOD

The study was a retrospective cross-sectional study of assault victims admitted to the Accident Service of Colombo South Teaching Hospital (CSTH) during the period of 21st of June to 21st of September 2016.

Those less than 18 years of age, patient's admitted with suspected non accidental injury and rape victims were excluded. Home violence which include wife battering by her legal partner mainly consist of physical and verbal abuse. Majority of those victims present with physical injuries, though minority of them may have had sexual harassment. Hence, almost all cases of wife battering (home violence) were counted, as they presented with form of physical injury or injuries. Further, they complained against their legal partner (Husband) as the assailant.

The data were obtained retrospectively on a preformed protocol-based questionnaire and collected from bed head tickets (BHT) which contained the history, examination findings, and imaging reports. Ethical clearance was obtained from Ethical clearance committee of CSTH.

RESULTS

From the total sample of 170 assault-injured respondents, who participated in the study, 128 (75.3%) were males. The majority of them, 49 (28.9%) belonged to the age group of 20-29 years whereas the least number of victims were represented in those above the age of 70 years. In this category, there were only 3 patients (1.8%). 90 (46.47%) of the victim's injuries happened during the night (8 pm – 2 am). Further, 75 (44.2%) participants were victimized during the weekend. 79 (46.2%) of assault victims identified a friend or an acquaintance as the dominant perpetrator. The home was the commonest location where incidents happened, which was noted by 81 (47.6%) victims followed by the street as a location (28.2%), working premises (7.6%), public area (5.9%), trade and service areas (4.7%), athletic and parking area (4.7%) and places like the beach or park the least (1.2%). Further 75 (44.1%) victims were under the influence of alcohol or illicit drugs or both, at the time of the assault. A significant association was noted between the victim and the tendency to be victimized by friends or acquaintances ($p < 0.001$). Further, a significant relationship was depicted as an assault victim and the influence of alcohol ($p < 0.001$).

As per legal classification; grievous hurt was identified among 55 (32.4%) victims. The commonest mode of injury, 80 (47.06%) was through a blunt instrument. Considering the regions of the body, the majority of assaults 76 (44.7%) involved in the regions

of the head, neck, or face followed by upper limb 33 (19.6%), trunk 19 (11.3%) and lower limb 12 (7.1%) as the least. Highest number of bodily force injuries (hit with mostly hands and legs) accounts for 34 victims (57.6%), targeted were the head, neck or face regions. Similarly, most of the superficial injuries 55 (59.14%) occurred in the same region. From the total superficial injuries, the majority were by bodily force, 47 (50.5%) victims, followed by injuries by blunt instruments in 37 (39.8%) victims. Fractures were most common among 26 (72.2%) victims who faced blunt instrumental assault, whereas majority of fractures 14 (38.9%) occurred in the upper limb region.

After the commonest type of injury (superficial injuries 54.7%), next common type of injury were fractures 21.2%, followed by open wounds 9.4% and damage to internal organs 4.12%. Dislocation/sprain/strain 3.53% burn injuries (male, $n=1$, female, $n=2$) 1.76% and injury to eye/ears which appeared in 1 case (0.6%) with an intracranial injury. When considering females, the majority, 19 female victims, out of 42 were assaulted by the spouse or domestic partner. Considering domestic violence, this trend was significantly higher among females compared to their male counterparts ($p < 0.001$). Consequently, female household battering commonly occurs at home compared to male assaults which occur commonly at out site of the home ($p < 0.001$) via intimidation with friends or acquaintances.

DISCUSSION

In the present study, (28.9%) the highest number of victims belonged to the age group of 20-29 yrs: ($n=170$). Significantly high male dominance was seen in this study where 128 were males (75.3%). According to a compatible study conducted in the African region, similar results were shown with higher male dominance, approximately 87.3 % ($n=354$) (2). Higher percentage of male assault analogue to female might be due to social, cultural, biological factors and lower level of self-control among male population.

19 female victims out of 20, (95%) were assaulted by the spouse or domestic partner. Therefore, it is a fact that Sri Lankan women are more likely to be assaulted by their spouse or partner. Interestingly, only one case reported as husband battering.

The home was the commonest location where incidents happened, which was noted by 81 (47.6%)

victims. In contrast in Australia, the streets and footpaths being the commonest locations accounting for 44% of cases. (3)

A study done in the United Kingdom revealed that 84% of severe injuries occurred while intoxicated at the time of the assault. This might be a reason that defence is impaired when the victim is intoxicated. (4).

The commonest body region involved was head, neck or face 55 (59.8%) and the least common site was lower limb (7.1%). In a similar study done in Anuradhapura, Sri Lanka, the head and neck region was the commonest region >65% . (5) Another study conducted in the United Kingdom revealed most superficial injuries occurred on the region of the face accounting for about 60%. (4). Therefore in both studies, the most common region involved as a result of assault was head and face region.

All burn injuries were caused by chemical acid assaults which accounted for 3 victims. In developing countries, chemical acid burns are increasing in prevalence, mostly due to the use of sulphuric acid. Females are those most affected (7). Further burn injury on the face is usually severe enough to cause permanent disfigurement, it is accounted as a grievous hurt in Sri Lanka (5).

CONCLUSION AND RECOMMENDATION

Study recommends a focused psychological counselling of the vulnerable groups (i.e. young males) to control their emotions and behaviour as well as to implement educational programs on adverse effects of alcohol and illicit drugs. Considering the high frequency of domestic violence, the study suggested implementing a mechanism to promote gender equality to curtail this type of behaviour occurring in Sri Lanka.

Author declarations

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Author contributions

MFMS was involved in writing proposal, designing questionnaire, data collection, analysis and final report drafting. MDA was involved in proposal, designing questionnaire, provision of ground base to conduct the research in the unit.

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Availability of data and materials

Data will be available from corresponding author on request

Ethics approval and consent to participate

Ethical clearance was obtained from Ethical clearance committee of Colombo South Teaching Hospital

Competing interests

Authors declare no conflict of interest

REFERENCES

1. Pittman DJ, Handy W. Patterns in criminal aggravated assault. *The Journal of Criminal Law, Criminology, and Police Science*. 1964 Dec 1;55(4):462-70. [doi/10.2307/1140897](https://doi.org/10.2307/1140897)
2. Samuel JC, Akinkuotu A, Villaveces A, Charles AG, Lee CN, Hoffman IF, Miller WC, Baloyi P, Hoffman M, Brown LB, Muyco AP. Epidemiology of injuries at a tertiary care center in Malawi. *World journal of surgery*. 2009 Sep 1;33(9):1836-41. DOI: <https://doi.org/10.1007/s00268-009-0113-4>
3. Cassell E, Reid N, Clapperton A, Houy-Prang K, Kerr E. Assault-related injury among young people aged 15-34 years that occurred in public places: deaths and hospital-treated injury. *Hazard*. 2011;73:1-24. https://www.monash.edu/__data/assets/pdf_file/0010/1213759/-Hazard_iss83_dec17.pdf
4. Shepherd J, Irish M, Scully C, Leslie I. Alcohol intoxication and severity of injury in victims of assault. *British medical journal (Clinical research ed.)*. 1988 May 7;296(6632):1299. DOI: <https://doi.org/10.1136/bmj.296.6632.1299>
5. Senanayake SM. Where is the legal concept of "Injuries likely to cause death found in Sri Lanka" Medico-legal classification of injuries". *Sri Lanka Journal of Forensic Medicine, Science & Law*. 2016 Feb 6;6(2). DOI: <http://doi.org/10.4038/sljfmsl.v6i2.7764>
6. Schmidt U, Pollak S. Sharp force injuries in clinical forensic medicine—findings in victims and perpetrators. *Forensic science international*. 2006 Jun 2;159(2-3):113-8. DOI: <https://doi.org/10.1016/j.forsciint.2005.07.003>

7. Mannan A, Ghani S, Clarke A, Butler PE. Cases of chemical assault worldwide: a literature review. *Burns*. 2007 Mar 1;33(2):149-54.
DOI: <https://doi.org/10.1016/j.burns.2006.05.002>