

Interpersonal Violence related injury at St Luke Hospital, Oromia Region, Ethiopia.

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Background: Injuries and violence poses a major public health and development problem worldwide. The problem is recognized in Ethiopia but there are limited data that can guide public health action. The aim of our study was to investigate patterns of interpersonal violence related intentional injury.

Methods: This is a one year prospective study of intentional injuries as a result of interpersonal conflict handled at St. Luke Catholic Hospital between Jan 1st and Dec 31st 2009.

Results: A total of 386 new cases were analysed. The great majority of the victims were male (91%) and the age group of 21-30 were the most vulnerable (38%). Most were farmers (75%) who live in rural area (92%) and responsible for the family (76%). The three quarters of the injuries were occurred either on the road or at home. The principal motive of the conflict was land dispute (32%), their relation being either neighbour (56%) or family members (14%). In half of the incidents, at least one of the person involved in fighting were drunken. Blunt trauma accounted for 86%, usually resulted in fracture (67%). Hundred twenty seven were admitted and six died.

Conclusion: Interpersonal violence related injury is a common problem of our rural population which affect the individual, family and the country. Possible intervention methods will be discussed.

Introduction

Each year, at least three and a half million people die from unintentional injuries worldwide^{1,2} and many more are disabled³. In 1990, injuries were responsible for more Disability Adjusted Life Years (DALYs) lost than any other single health condition in sub-Saharan Africa⁴. DALYs due to injuries were projected to increase by 109% between 1990 and the year 2020⁶. Even though injury and violence as particularly significant emerging public health problems in the region, it has received limited attention and resources particularly in low-income countries⁷.

In 2000 nearly 520,000 people were died as a result of interpersonal violence around worldwide and 95% of homicides occurred in the low and middle income countries⁴. Global data on the burden of injury in 2002 reported that intentional injuries represent a significant component of DALYs among adolescents and young adults⁴. In South Africa 50% of all new cases of injuries seen in hospitals and the leading causes of fatal injures were Intentional injury⁸. In Ethiopia, the study in North Gonder Administrative Zone report that the commonest cause of injury were interpersonal conflict⁹, Other study in Addis Ababa found that interpersonal conflict was one of the commonest cause of injury after Road Traffic injuries (RTIs)¹⁰. The purpose of this study was to investigate the patterns of interpersonal violence related intentional injuries and identify the associated factors.

Patients and Methods

All subsequent new patients with intentional injury specifically interpersonal violence and arrived at St Luke Hospital between Jan 1st and Dec 31st 2009 were included. The exclusion criteria's were: intentionality is uncertain, not able to classify the type of injury; self inflicted injury, if the victim or offender is children age less than 12 years, complaint with no sign of injury. St Luke Hospital is regional referral hospital with 196 beds capacity, of which 55 beds are for surgical and orthopedics. It is located in Wolisso town, capital of the South West Showa Zone, Oromia region, Ethiopia.

Interpersonal violence is defined as injury inflicted by other person with the intent to injury or kill by any means excluding injury due to legal intervention, operation of war or terrorism¹¹.

This was a prospective descriptive, hospital based study, where all conflict injury victims data were collected using a structured questionnaire after getting informed consent from the patient by the authors. Data includes the socio demographic variables, injury circumstances, victim offender relationship, alleged reason behind the victim, use of alcohol, weapon used, site and type of injury occurred, and treatment modalities. The study was approved by the Management and ethical committee of the Hospital. The data was analyzed using EPI-INFO 2002 statistical software.

Results

A total of 386 patients visited the Hospital during the study period with a main complaint of interpersonal conflict. Of these 352 (91.2%) were male and 34(8.8%) female, giving a male to female ratio of 10:1. The mean age was 34.3 years (\pm S.D 14.1) and the age group of 21- 40 accounted for 61.8% of the victims (Table 1). The great majority 354 (92.0 %) were living in rural area and only 32 (8.0 %) from urban. The commonest occupation were farmers 290 (75.1%) followed by 41 (10.6%) students and 26 (6.7%) house wives (Table 2). Among the victims almost half had formal education and half never go to school, 48.0% and 47.0% respectively. Of the injured patients, 295 (76.0%) were responsible for household with a mean family member of 5.

Table 1. Age and sex Distribution of the Victims

Age groups	Sex		Total	Percentage
	Male	Female		
≤ 20	42	10	52	13.4
21-30	141	6	147	38.0
31-40	84	8	92	23.8
41-50	47	6	53	13.7
51-60	18	2	20	5.1
+60	20	2	22	5.6
Total	352	34	386	100.0

Table 2. Occupation of the Victims

Occupation	Frequency	Percent
Farmer	290	75.1
Student	41	10.6
House wife	26	6.7
Merchant	9	2.3
Laborer	7	1.8
Government employee	5	1.3
Driver/conductor	4	1.0
Others	4	1.0
Total	386	100.0

Table 3. The Motives of the conflict

Occupation	Frequency	Percent
Land conflict	123	31.9
Revenge	32	8.3
Robbery	32	8.3
Money	28	7.3
Women (Men fighting for women)	16	4.1
Not willing to tell	70	18.1
Others	85	22.0
Total	386	100.0

Table 4. Location of interpersonal conflict

Place	Frequency	Percent
Road	156	40.4
Home	129	33.4
Farm	75	19.4
Market place	11	2.8
Bar	3	0.8
Other	12	3.1
Total	386	100.0

Table 5. Types of injuries occurred

Type of injury	Frequency	Percentage
Fracture	257	66.6
Soft tissue	86	22.3
Head	20	5.2
Dislocation ± fracture	9	3.3
Abdomen	8	2.1
Chest	6	1.6
Total	386	100.0

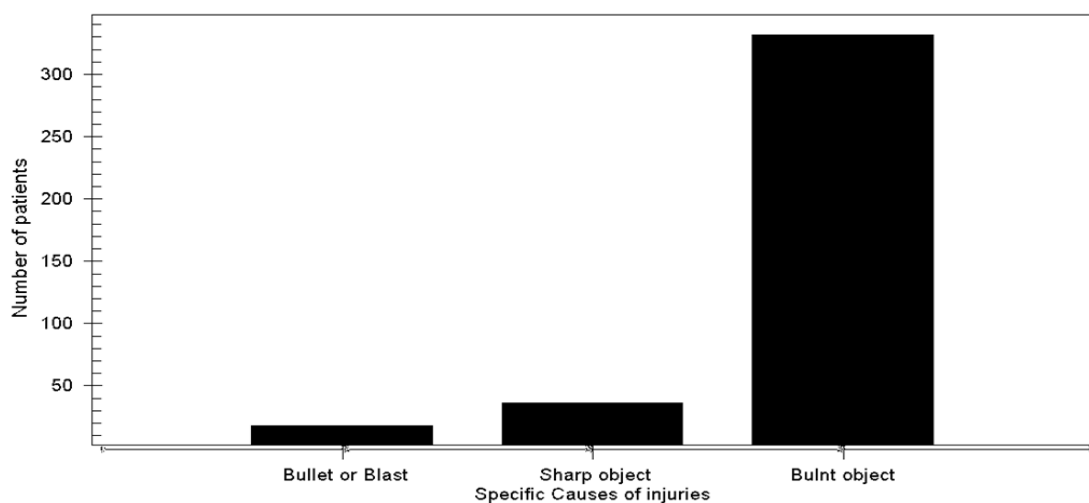


Figure 1. Instrument used in interpersonal conflict.

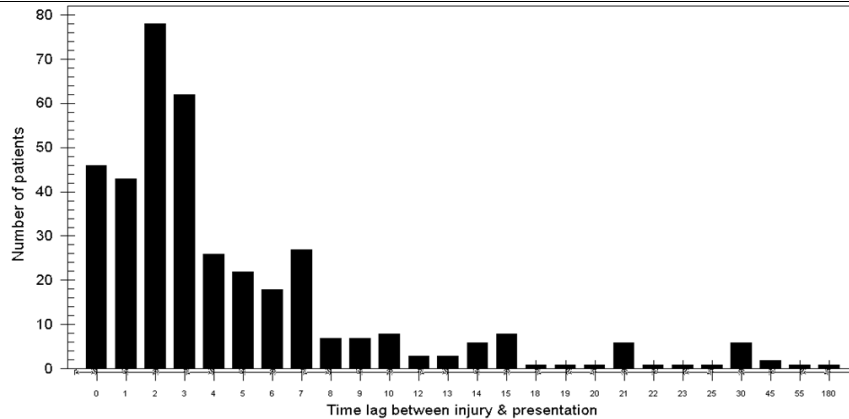


Figure 2. Duration Between injury and presentation in Days

The victim offender relationship were neighbors in 216 (56.0%), 54 (14.0%) family members and 21(5.4%) friends and 95 (24.6%) others. The commonest motives of the conflict were land dispute 123 (31.9%) but 70(18.1%) were not willing to tell their reason (Table 3). The interpersonal conflicts were mainly occurred on the street/village 156 (40.4%), followed by 129 (33.4%) at home and 75 (19.4%) in farm.

At the time of the conflict at least one of the victim were drunken (intoxicated with alcohol) in 190 (49.2%), (Table 4). The instruments used to fight were blunt object like stick in 332 (86.0%), 36 (9.3%) sharp objects and 18 (4.7%) gunshots. (Figure 1).

Only 89 (23.1%) of the victims presented to the Hospital with in the first 24hrs of the injury and 319 (82.6%) with in the first week. Seventy three patients (18.9%) has visited traditional healer (bonesetter) before presenting to the hospital. The main reason of visiting the hospital were seek medical care in 209 (54.1%), 127 (32.9%) for certificate and 50 (13.0%) to have x-ray examination.

Left side of the body was mostly injured, accounting for 54.1%, 35.2% right and 10.6% both side. Specifically limbs were the commonest body part injured 305 (79.1%), followed by head & neck 48(12.4%), 12(3.1%) abdomen, 7(1.8%) chest and 14(3.6%) combination of the above (poly trauma). The common diagnosis were fracture 257 (66.6%), 82 (21.2%) extensive soft tissue injury, and 20 (5.2%) head injury (Table 5).

Two hundred and fifty seven (66.6%) were managed at outpatient level, 126 (32.6%) patients were admitted and 3(0.8%) were referred. Regarding the management modalities, 291(75.4%) patients were managed conservatively, 49(12.7%) patients treated by open reduction and internal fixation of fracture, 22(5.7%) patients treated with external fixation, 13(3.4%) patients needed exploration like laparotomy, chest tube, burr hole etc.,. The mean hospital stay for the admitted patient was 10.9 days (S.D± 7.3). Of the 126 admissions, seven were died, giving case fatality rate of 1.8%.

Most of severe injuries (115/129, 90.6% those require admission or refer to higher facility), all poly trauma and all deaths were occurred in young (age 21-40) male, also farmer victims were more likely to be intoxicated than others which is statistically significant (p<0.05). Early hospital presentation and their reason of visiting hospital were not related with either occupation or educational level (p>0.05).

Discussion

Violence is a common cause of mortality and morbidity in Africa but the extent of violence is not well addressed¹². World Health Organization (WHO) estimates Africa's youth homicides at double the global average. In Ethiopia, there are no studies which focused on interpersonal violence or

intentional (homicide) injuries but there are some studies which shows only the magnitude, these were the studies done in Black lion hospital shows homicide injury with major limb trauma accounted for 14% of orthopedic emergency visits and 11% of admission^{13,14}, in Addis Ababa 22% of all injury related emergency visits and 7% of injury admissions¹⁵ but it is the leading cause of injury in northern part of the country⁹, seventy four percent of chest injuries in Harari region¹⁶ and It also accounts for 30% of fatal injuries¹⁷.

You can see the effect of this intentional injuries because the vulnerable groups were productive young male (mean age of 34 years and M:F 10:1) who occupied in farming and majority (76%) of these peoples were responsible for bread earning for an average of five family holds, which coincides with the studies in other country¹⁸⁻²³.

The interesting finding was the main motive of the conflict were land dispute, Revenge, money and women, the victim had identifiable relationship with their assailant, their relation being neighbors, family members or friends. Probably the dispute could have been solved by local social association or by community leaders or even they could have gone to local courts than involved in fighting. Alcohol intoxication contributes for the involvement in fighting which is also shown in other studies²⁴⁻²⁵. The instruments used during fighting were mainly local traditional tools "stick" which a rural people carry to defend themselves, even they brought to the town, which could have been forbidden to carry especially for drunken people.

The effect of interpersonal conflict are probably more than expect because of some do not attend proper treatment and others come late, compared with others studies (in Kampala two third of the patients present in 30 minute)²⁶, which increase the risk of developing complication. It affects not only the victim but also offender suffer from the consequence of their crime.

Conclusion and Recommendations

In Conclusion all our findings shows interpersonal violence related injury is a major health problem especially for rural farmer population which accounts 80% of our population. It consume our limited resource of the hospital as shown in other study²⁷ and affects individual, family and the country as a whole.

Therefore we recommend:

1. There should be health education of the population on violence, farmer who are living in rural area should be targeted for special attention.
2. Rapid and strong legal measure for violence
3. Prevent carrying stick with out reason special for drunken people
4. Recommend community based National study

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