

Patterns and Severity of Injuries in Patients Following Physical Assault– A Medicolegal Aspects.

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Background and purpose: Physical assault (PA) is a common cause of mortality and morbidity throughout the world and the prevalence is still very high in underdeveloped and developing countries. With the objective to see the spectrum of injury following PA from the medico legal point of view, this study was design in a tertiary care centre at far eastern part of Nepal. **Material and method:** This is a prospective analytical study with non- probability consecutive sampling of physical assault cases presented in the emergency department over the duration of 4 months. All the patients who meet the inclusion criteria were collected in preformed proforma. Gender, types of weapons used for PA, location of external and internal injuries, various treatment strategies, and severity of injuries were presented in frequencies and percentage. Association of different age categories, gender and types of weapons used with severity of injuries were analysed using Chi square/ Fisher's exact test wherever applicable. **Result:** There were total 99 patients presented with physical assault during the study period with mean age of presentation 31.69 (SD 13.38) Years with male (70%) predominance. Among various types of weapons used for PA; punches/ kicks were used in 50% of assaults followed by blunt heavy objects (35%) and sharp heavy weapons (14%). Location of the external injuries were more common in head and neck area. Obvious internal injuries were seen in 14% of the assaulted patients. Among all the case of PA, 42% patients needed some sort of surgical intervention during hospital stay. There were 9% cases of grievous injury and 6% had life threatening injuries. **Conclusion:** Physical assault is a common mode of injuries in eastern Nepal, where young males are more prone to such injuries. Violence are commonly carried out using fists, kicks and blunt objects. Severity of injuries is similar with all the types of weapons used.

Key words: Domestic violence, Grievous, Head injury, Life threatening, Medico-legal, Physical assault.

Physical assault (PA) is a common type of domestic violence and is also a common cause of the morbidity and mortality throughout the world which are more common in underdeveloped and developing countries.¹⁻⁵ Among different weapons used in PA; punching, kicking, biting, beating, and attacks with broken glass, knife or gun were the more common.⁶⁻⁸ Majority of morbidity/mortality were due to head injuries followed by injuries to the trunk as mention in different literature.⁸ With the objective to see the pattern and severity of the injury following PA from the medico legal point of view, this study was design in a tertiary care centre at far eastern part of Nepal.

Material and Methods

Type of study: Prospective Analytical study

Sampling technique: Non- probability consecutive sampling

Sample size: 99 patients

Duration of study: 4 months (1st April, 2019 to 31st July, 2019)

Site of study: B&C Medical College Teaching Hospital and Research Centre

Inclusion criteria:

All the trauma patients admitted at the site of study due to PA.

Exclusion criteria

All the patients who were brought dead or died before detail evaluations were completed.

Data collection and analysis:

The data of all the patients who meet the inclusion criteria were collected in preformed proforma. Age, gender, different types of weapons used, site of external and internal injuries, management strategies, and severity of injury were noted in those proforma.

Age was presented in mean and standard deviation (SD). Gender, types of weapons used for PA, location of external and internal injuries, various treatment strategies, and severity of injuries were presented in frequencies and percentage. Association of different age categories, gender and types of weapons used with severity of injuries were done using Chi square/ Fisher’s exact test wherever applicable.

Results

There were total 99 patients presented with physical assault during the study period with mean age of presentation 31.69 (SD 13.38) Years where majority of them were between 20- 29 years of age (Figure 1). Males (70%) were predominance in the study sample (Figure 2).

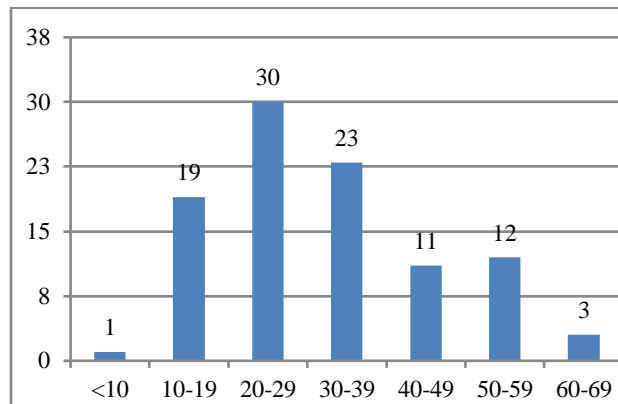


Figure 1: Distribution of different categories of age.

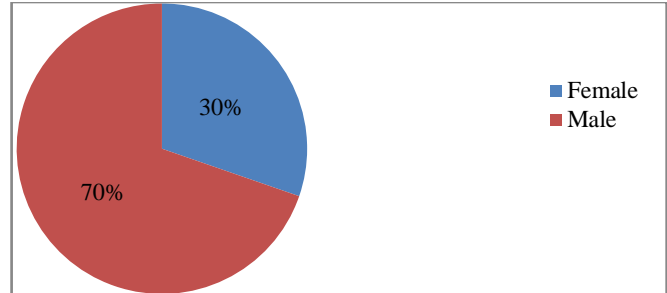


Figure 2: Gender distribution

Among various types of weapons used for PA; punches/ kicks were used in 50% of assaults followed by blunt heavy objects (35%) and sharp heavy weapons (14%) (Figure 3).

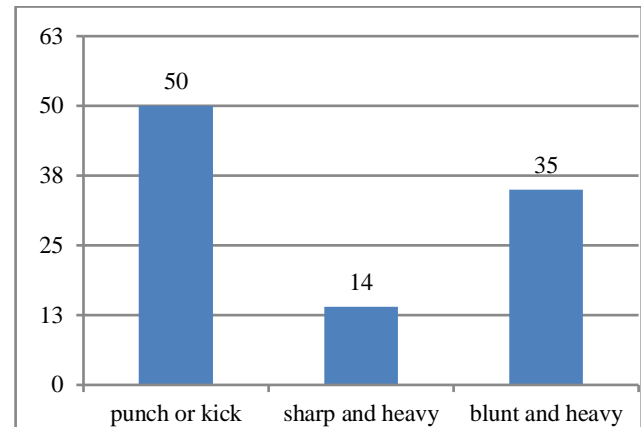


Figure 3: Weapons used for physical assault

Location of the external injuries were more common in head and neck area (67/ 99) followed by limbs (25/ 99) and trunk area (11/99) (Figure 4). Obvious internal injuries were seen in 14% of the assaulted patients where 3% each were head injury and spinal injury (Figure 5). All the external findings were consistent with the type of weapons used in our study.

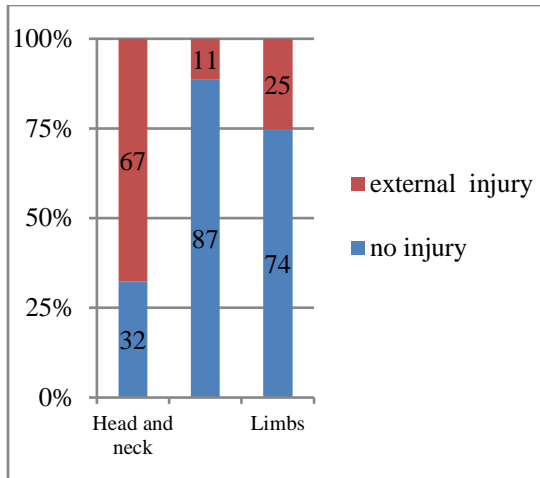


Figure 4: Frequency of external injury in the different parts of body due to physical assault

Among all the case of PA, 42% patients needed some sort of surgical intervention during hospital stay, where 6% underwent major surgical intervention (Figure 6).

Medico-legally, all these patients were grouped into simple, grievous, and life threatening injuries. Although, majority of them were simple type of injuries; however, there were 9% cases of grievous injury and 6% had life threatening injuries (Table 1). Different categories of age were significantly associated with severity of injury, where age between 20-39 years were more prone to grievous or life threatening injury. Both the genders were equally associated with the different severity of injuries, as the P value was not significant. Similarly, either of the weapons used during physical assault seems to have similar severity of injuries (Table 2).

Table 1: Distribution of various types of injury as per medico-legal aspects

	Frequency	Percent
simple	84	84.8
grievous	9	9.1
life threatening	6	6.1
Total	99	100.0

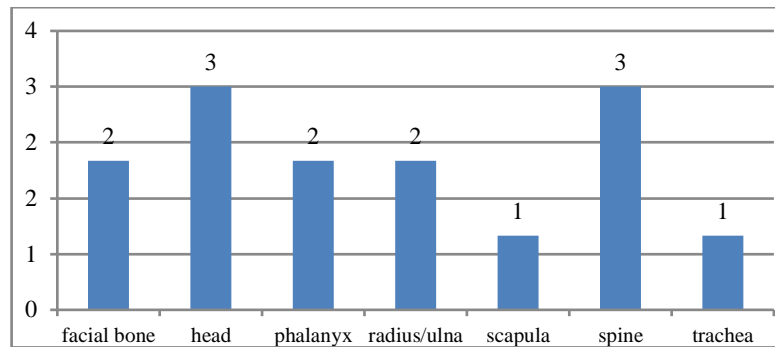


Figure 5: Frequency of major internal injuries following physical assault

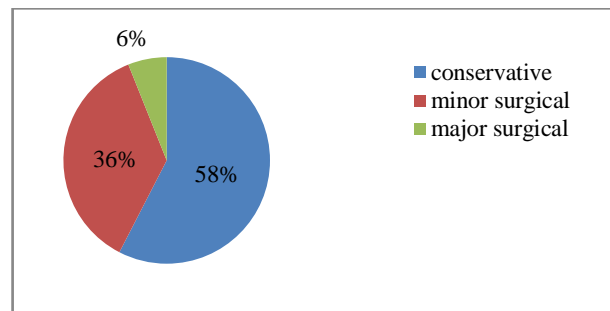


Figure 6: Various treatment provide to the patients

Discussion:

Physical assault is a manifestation of aggressive mood, and people usually use nearby objects during such violence.^{8,9} Weapons like fist, kicks are usually the most common in early stage followed by blunt objects like stones, bamboo, woods, heavy pots which are easily available in surrounding; hence, are most commonly used weapons.⁸ This seems true in our study as well. Objects like knife,

khukuri, sickle, are sharp objects commonly found in Nepal and these were the objects commonly found in our study as well.^{10,11}

Table 2: Association of different categories with types of injuries

Different categories		Severity of injury			Total	P Value
		simple	grievous	life threatening		
age categories	<10	0	0	1	1	.031*
	10-19	16	1	2	19	
	20-29	26	4	0	30	
	30-39	19	1	3	23	
	40-49	10	1	0	11	
	50-59	11	1	0	12	
	60-69	2	1	0	3	
gender	Female	25	3	2	30	1.000
	Male	59	6	4	69	
weapon used	punch or kick	45	3	2	50	.074
	sharp and heavy	9	2	3	14	
	blunt and heavy	30	4	1	35	

People aged between 20-40 years are common age group involved in the physical violence and other trauma throughout the world.^{8,12} This might be due to their involvement in outdoor activities where they have to deal with other people of similar age groups.^{4,5} These age groups also seem to get more involved in substance abuse, alcohol abuse, and so the conflicts.^{1,2} In this study, these were same age groups involved in physical assault. Beside them being more common, the nature of injuries were also more significantly associated with more grievous and life threatening in nature.

In physical violence, head is one of the common locations involved and might be due to its easy approach.^{8,10,11} This might also be associated with the intention of assailant. Followed by head, upper

limb seems to be the more involved area which might be due to its use in defensive act.¹⁰

Though most of the external injuries were simple in nature, there was still large number of patients having internal injuries. Among patients having internal injuries around half of them actually required major life saving, or disability preventing surgical intervention. Although, this might be less compared to the road traffic accidents, a significant amount still seems to be affected from physical assault.^{13,14}

Medico- legally, the injuries were classified based on severity as simple, grievous, and life threatening. Grievous injuries as classified in the national penal code act 2017 of Nepal includes:¹⁵

- a. privation of the sight of either eye,
- b. privation of smelling power of nose,
- c. privation of hearing power of either ear,
- d. privation of speaking power of the tongue,
- e. cutting of woman's breast
- f. emasculation of man and woman (making woman infertile or man impotent).
- g. privation of the backbone, hand, leg, or joint of such organ by breaking, fracturing dislocating it.
- h. any injury which cause the sufferer to be unable to perform his/ her professional work.

Life threatening injuries are not well described in the national penal code act 2017 of Nepal but as described in previous literatures are those injuries with eminent risk of the death if treatment is not received promptly.¹⁶ Which includes the cases like traumatic brain injuries, skull fractures, and so on.

Though simple injuries were common in our study, there was still significant population having grievous or life threatening injuries. Males were common in this study; however, in either of the gender the severity of injuries were similar. Similarly, either of the weapons like punch, or kicks, blunt heavy object and sharp heavy object have similar severity of injuries in terms of simple, grievous or life threatening.

Conclusion:

Physical assault is a common mode of injuries in eastern Nepal, where young males are more prone to such injuries. Violence are commonly carried out using fists, kicks, blunted heavy objects and sharp heavy objects. Severity of injuries were similar with all the types of weapons used. Administration of justice will be prevailed if detailed examination and its interpretation is performed in cases of physical assault in medicolegal terms.

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