

Study on Penoscrotal Trauma Cases in North Bengal Medical College

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ABSTRACT

Background: There is very little documentation of Penoscrotal Trauma cases are reported worldwide. The present study was plan to study the incidences of Penoscrotal Trauma related and its related mortality in the North Bengal region. **Material & Methods:** the cases of Penoscrotal Trauma brought between two years (2009-10) to the General Emergency and Department of Forensic Medicine, North Bengal Medical College, was included. The details about the nature, manner etc. were recorded in pre-designed proforma. **Results:** The cases were classified according to their etiology into Occupational, Road Traffic, Coital Injuries, Physical Assault and Animal Attack. The Penile Fracture and frenular tear were more commonly injured during coitus. Avulsion scrotal skin, penile skin and crush injury of scrotum were mostly seen in road traffic accident, while Penile Amputation is found in cases of physical assault as well as Occupational injuries. Amongst all the type of penoscrotal injuries, majority of the victim were died due to avulsion of the scrotum. Amongst the cases admitted to hospital, no patient died when they admitted with penile fracture or frenulum tear. Number of cases comes to postmortem is more than the case admitted to the Hospital. **Conclusion:** Person sustained penoscrotal injuries have high mortality rate.

Key words: Penoscrotum, Penile Fracture, Penile Amputation, Penetrating Injury to Penis, Frenular Tear, Avulsion of Penile & Scrotal Skin, Penoscrotal Crush Injury.

INTRODUCTION

Penoscrotal Trauma cases may not be commonly found in the Emergency as well as Post Mortem Centres. This is due to the well protected position of the penoscrotum in between the Pubic Bones and thighs, though Injury may occur in blunt force and penetrating injuries.¹ Though the major blunt penile injury cases include penile rupture and skin loss from

strangulation and degloving, cases of penetrating penile injury due to stab or gunshot injuries are also seen.¹ Self inflicted wounds and bites are also causes of penoscrotal injuries.¹

Penile fracture is the traumatic rupture of the corpus cavernosum. Traumatic rupture of the penis is relatively uncommon and is considered a urologic emergency.² Traumatic rupture of the corpus cavernosum is a relatively rare event; only 110 cases have been reported worldwide.³ Penile amputation involves the complete or partial severing of the penis. A complete transection comprises severing of both corpora cavernosa and the urethra.² Penetrating injury is the result of ballistic weapons, shrapnel, or stab injuries to the penis. Penetrating injuries are most commonly seen in wartime conflicts and are less common in civilian medicine.² Penile soft tissue injury can result through multiple mechanisms,

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including infection, burns, human or animal bites, and degloving injuries that involve machinery.² Penile amputation is rare, with most cases being reported sporadically. This study was undertaken to find out pattern of penoscrotal injuries in relation to its cause.

MATERIAL AND METHODS

In the present demographic study, the Penoscrotal Trauma cases being brought to the General Emergency at North Bengal Medical College & Hospital (NBMC&H) and Department of Forensic Medicine, North Bengal Medical College, in the last two years (2009-2010) are taken into account. The cases were broadly classified into penile fracture, penile amputation, penetrating injury and penile soft tissue injury as per nature of injury. Penile soft tissue injury was further sub-classified into frenular tear, avulsion of penile skin, avulsion of scrotal skin, and penoscrotal crush injury. The cases were further classified according to their etiology into Occupational, Road Traffic, Coital Injuries, Physical Assault and Animal Attack. The information regarding cause of injury is obtained by reviewing case sheet, postmortem records and by interviewing the patient in living cases and from the relative or friends in fatal cases. Study adhered to ethical guidelines of biomedical research. All the cases in which penoscrotal injury is associated with other fatal injuries were excluded from the study.

RESULTS

In the period of two years (2009-10), the number of penoscrotal injury cases admitted in the General Emergency of NBMC&H was 55 out of a total 15843 trauma cases. The total number of cases brought for Post Mortem Examination in the same period was 3567 out of which 102 cases were due to penoscrotal trauma. While the incidence of penoscrotal trauma cases admitted in the hospital was 0.35%, the incidence of cases during Post Mortem Examination was higher (2.8%). Table 1 shows that avulsion of scrotal skin

was the most common type of penoscrotal injury, accounting for 26.75%, followed by avulsion of penile skin (21.02%). Table 2 shows the etiology of Penoscrotal Injuries, where Road Traffic Injury is the main contributory factor (46.50%). Table 3 shows avulsion of scrotal skin being the most fatal type injury.

DISCUSSION

There is not much literature available about Penoscrotal Trauma. It is seen that there is a steady rise in the number of penoscrotal injury cases which might be due to underreporting of cases earlier on. In the study conducted between April 1995 to October 2002 in Saudi Arabia, 19 cases of penile fracture were reported which was 12 in the previous years, an increase of 58%⁵. In the present study, 14 cases of penile fracture was seen which accounted for 8.92% of the penoscrotal injuries of which coital injury was the main contributing factor.

The frequency of penile fracture is likely underreported in the published literature. Trauma during sexual relations is responsible for approximately one third of all cases; the female-dominant position is most commonly reported. The mechanism of action may lead to embarrassment, causing patients to avoid seeking treatment and contributing to late presentation. As of 2001, 1331 cases were reported in the literature. The incidence of concomitant urethral injury in reported cases is 10-58%.²

Penile Amputation also contributing to 8.92% of the cases in this study was mainly seen in occupational injuries, road traffic accidents and animal attacks. In the present study, avulsion of the scrotal skin and penis were the main types of penoscrotal injury amounting to 47.78% of the total cases. This is in contrast to the earlier studies where soft tissue injury or loss is rare.² Penoscrotal crush injury was found to be found in 17.20% of the cases, of which 66.67% was due to Road Traffic Accidents, mainly two wheelers, which is an indication of the lack of safety in two wheelers, especially to the penoscrotal region. In another study in South Korea of 156 patients, trauma to external genitalia, it shows assault is

the most common cause In this study, penetrating injury of the penis and scrotum accounting for only 4.46% of the cases was mainly seen in occupational injuries which tell about the unorganized small scale industry mushrooming in this region where work condition is deplorable.

In the North Bengal Region, due to deforestation, we find human wild animal contact is rising every year, which accounts for the 11.46% of the penoscrotal injury cases caused by animal attack (elephants) and penetrating injury by animal horn.

In the study conducted in 1997 it was found there is a correlation between the frequency of penile trauma of any kind which was found to

be significantly greater in both Peyronie’s disease (40%) and Impotence (37%) patients than in the controls (11%).⁴ The reported cases of Impotence was also seen to be rising in a study conducted by the same authors where a case of erectile dysfunction had trauma to the penis as a contributing factor.

The incidence of penoscrotal injury cases brought for Post Mortem Examination being nearly 3.65 times that of the of penoscrotal injury cases admitted to the General Emergency shows the high fatality of this trauma. The fatal outcome of the penoscrotal trauma cases admitted was also seen to be 5.45% which is also significant. These indicate that penoscrotal trauma is as fatal as injuries caused to other body parts.

Table 1: Showing types of incidences of Penoscrotal Injury

S. No.	Type of Penoscrotal Injury	No. of cases admitted in Hospital	No. of cases brought for Autopsy	Total	Percentage of Cases
01.	Penile Fracture	14	-	14	8.92%
02.	Penile Amputation	02	12	14	8.92%
03.	Penetration Injury	04	03	07	4.46%
04.	Frenular Tear	20	-	20	12.74%
05.	Avulsion of Penile Skin	03	30	33	21.02%
06.	Avulsion of Scrotal Skin	12	30	42	26.75%
07.	Penoscrotal Crush Injury	-	27	27	17.20%
	Total	55	102	157	

Table 2: Showing types of Etiology of Penoscrotal Injury

S. No.	Type of Penoscrotal Injury	No. of cases admitted in the Hospital and brought for Autopsy (2009-2010)				
		Occupational Injury	Road Traffic Injury	Coital Injury	Physical Assault	Attack by Animal
01.	Penile Fracture	-	-	12	2	-
02.	Penile Amputation	7	2	-	5	-
03.	Penetrating Injury	3	2	-	-	2
04.	Frenular Tear	-	-	20	-	-
05.	Avulsion of Penile Skin	3	28	-	2	-
06.	Avulsion of Scrotal Skin	7	23	-	5	7
07.	Penoscrotal Crush Injury	-	18	-	-	9
	Total	20	73	32	14	18
	Percentage	12.74%	46.50%	20.38%	8.92%	11.46%

Table 3: Comparison between cases Admitted and Fatality of Penoscrotal Injury

S. No.	Type of Penoscrotal Injury	Cases admitted in the Hospital	Fatal cases after admission	Cases brought for Autopsy	Fatal cases	Percentage of fatal cases
01.	Penile Fracture	14	-	-	00	-
02.	Penile Amputation	02	-	12	12	7.64%
03.	Penetration Injury	04	1	03	04	2.54%
04.	Frenular Tear	20	-	-	00	-
05.	Avulsion of Penile Skin	03	-	30	30	19.11%
06.	Avulsion of Scrotal Skin	12	2	30	32	20.38%
07.	Penoscrotal Crush Injury	-	-	27	27	17.20%
	Total	55		102	75	47.77%

Fig 1: Photograph showing Fracture of Penis

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