

## Epidemiology of Penile Fracture in Local Population

Mohammed Suhaib Subhi Al.Mufti\*

Mazen Yones Muhammed\*\*

### ABSTRACT

**Background and Objectives:** Penile fracture has been reported with sexual intercourse, masturbation, rolling over or falling on to the erect penis.

**Patients and Methods:** between August 2005 to August 2009 we prospectively prepare 21 patients with diagnosis of 'fractured' penis. Recording details age, time of attendance, cause, symptoms, signs, site of rupture, operative findings, and final outcome.

**Results:** A total of 21 patients were identified. The mean age was 29 years (range, 22-49 years). The interval between time of injury and presentation ranged from 50 minutes to 8 days. Ten (48%) cases were attributed to sexual intercourse, 6 (28%) to penile manipulation, 2 (10%) to rolling over the erect penis during sleep, and 3(14%) falling on to the erect penis. Nineteen patients underwent surgery; all had primary suturing of the tunica tear, while two also required primary urethral repair. At follow-up, 3 patients had erectile dysfunction, 3 had mild penile deformity and one had a mild urethral stricture.

**Conclusions:** early surgical repair ensure a successful outcome with minimal complications. The public should be educated about that condition to seek medical attention immediately, as delay may result in permanent complication that could be avoided.

**Key words:** Penile fracture, penile trauma.

### INTRODUCTION:

Traumatic injuries to the genitalia are not common in men, because of the mobility of the penis and scrotum<sup>1</sup>. Penile fracture, or penile rupture, is the most common blunt injury to the erect penis and is caused by tearing or cracking of the corporal cavernosal bodies<sup>2</sup>. It can be accompanied by urethral rupture or by injury of the dorsal nerve and vessels. Although it has been reported most commonly with sexual intercourse, it has also been described with masturbation, rolling over or falling on to the erect penis<sup>1-3</sup>. While in the Middle East, self-inflicted fractures predominate; the erect penis is forcibly bent during masturbation or as a means to achieve rapid detumescence<sup>2</sup>.

Penile 'fracture' is probably underreported due to fear and embarrassment that may have devastating physical, functional, and psychological consequences<sup>4,5</sup>. This study

formed to explain the epidemiology of penile 'fracture' and its presenting characteristics in the local population.

### PATIENTS METHODS:

The study included 21 adult patients (22-49) years presented to primary care complaining of Pain, Swelling, Sudden snapping sound, and some have Urethral bleeding, Voiding difficulty, Gross haematuria all patients give significant sexual or trauma history. Physical examination revealed swollen, ecchymotic, and deviated penis all these patients give typical history and clinical presentation of fractured penis usually make adjunctive imaging studies unnecessary<sup>2</sup> surgery done with distal circumcising incision for 19 patients. the corpora exposed, site and length of tear identified tear repaired with vicryl, 2.0 interrupted. Hematoma drained, wound washed with saline 0.9%, after good haemostasis, skin closed with

\*FICMS, senior lecturer. Hawler Medical University

\*\*FICMS, College of Medicine, Hawler Medical University

Day of operation patient sedate with tricyclic antidepressant or progesterone injection to prevent nocturnal tumescence and prevent wound disruption. Post operative antibiotic cover for 7days, patient discharge after 1-2 days, wound inspected after 5days for resolution of skin ecchymoses or identification of early complication. Catheter removed after 3-5 days or after 21days for the patient with complete tear of urethra. Two patients come late and advised conservative as they refuse operation and operation is not indicated after 3-5 days of trauma. Patients were followed for 3months for any early or

### RESULT:

late complication.

A total of 21 patients the mean age are 35 years (range, 22-49 years). The interval between time of injury and presentation ranged from 50 minutes to 8 days. 10 cases were attributed to sexual intercourse, 6 to penile manipulation, 3 falling on to the erect penis, and 2 to rolling over the erect penis during sleep. (Table1).

**Table 1:** Distribution of patients by

mechanism of injury	No.	%
sexual intercourse	10	48%
penile manipulation	6	28%
falling on to the erect penis	3	14%
rolling over penis during sleep	2	10%
Total	21	100%

mechanism of injury.

All patients complained of penile swelling, 90% of them complained of pain, while around 50% of them hear Sudden snapping sound Clinical features are summarized in (Table 2).

**Table 2:** Distribution of patients by Clinical presentation.

Clinical feature	No. of Patients &percentage
Swelling	21 100% Total
Pain	19 90%
Penile angulation	14 67%
Sudden snapping sound	10 48%
Voiding difficulty	2 10%
Urethral bleeding	2 10%

Two patients with urethral bleeding also had difficulty voiding and subsequently required urethroplasty. Two patients who presented after 7days refused to do operation and they informed about conservative treatment and possibility of complication. In the remainder who underwent surgery, 14 had rupture of one corpus cavernosum only, 10 on the right side and 4 on left side. 3 had rupture of one corpus cavernosum plus the corpus spongiosum, two on the right side, the other on the left. The remaining two patients had rupture of both corpora cavernosa and the corpus spongiosum one with complete urethral rupture and other with partial urethral tear. (Table3)Ten of the 'fractures' occurred at the base, 5 at the mid-shaft, and the remaining 4 in the distal third. (Table 4) The duration of hospitalization ranged from 1 to 2 days. Two patients were lost to follow-up; and in the remainder follow up period ranged from

**Table 3:** Distribution of patients by kind of intra operative repair.

Operation	Number of patients	%
repair of right corpus cavernosum tear	10	47,6
repair of left corpus cavernosum tear	4	19
repair corpus cavernosum plus the corpus spongiosum	3	14,3
both corpora cavernosa and urethral repair	2	9,5
Conservative	2	9,5
<b>Total</b>	<b>21</b>	<b>100</b>

**Table 4 :** Site of injury

Site of injury	Number of patients	%
Base	10	47,6
mid-shaft	5	23,8
distal third	4	19
Unknown	2	9,5
<b>Total</b>	<b>21</b>	<b>100</b>

Three patients had erectile dysfunction which easily treated by sildenafil, three had a mild penile curvature which does not affect sexual performance, and one a mild urethral stricture diagnosed by retrograde urethrography (Table 5) .

**Table 5:** Distribution of patient via Complications.

Complication	No	%
erectile dysfunction	3	14,3
Mild curvature	3	14,3
urethral stricture	1	4,7

Eight of patients we do surgery with 6hour after injury and others within 48 hours 2patients come late and refuse to do operation. All patients that they do operation in the first six hour after trauma they don't have any complication and the seven patients that develop complication those that the operation delay more than six hour Table (6).

**Table 6** .distribution of patients via time of surgery and complication.

instant of surgery after trauma	No of patient	No of complication
Within 6 hour	8	No complication
Between 6 to 24 hour	5	4 patient
Between 24 to 48 hour	6	3patient
<b>Total</b>	<b>19</b>	<b>7patient</b>

#### DISCUSSION:

Penile 'fracture' involves rupture of the tunica albuginea of the corpus cavernosum, typically in the erect state. The tunica albuginea measures about 2 mm in thickness, thinning to about 0.25 mm during erection.<sup>5</sup> The most frequently reported mechanism of injury is blunt trauma during sexual intercourse or penile manipulation, especially masturbation, including forcibly bending the erect penis ,

or rolling onto the erect penis<sup>3,4</sup> The two most common causes relate largely to the geographical area; vigorous vaginal intercourse and penile manipulation being the predominant causes in the western hemisphere and the Middle East, respectively<sup>3</sup> In Philadelphia, Pennsylvania reported that 94% of fracture penis was a result of sexual intercourse and these cases the site of injury is mostly the base and mid shaft of penis while in our study due to elevated number of cases due to penile manipulation the distal shaft of penis is also common part of injury<sup>6</sup> in Kermanshah, Iran, as being described 69% of fractures is due to self-manipulation<sup>7</sup> our results 48% of cases due to sexual intercourse and 28% due to self manipulation this may be due to abnormal habit of penile manipulation in Iran. There have been no reports of the injury arising from anal intercourse and this may be due to religious believed about sexual deviation. Corpus spongiosum and urethral injury have been reported more frequently in association with sexual intercourse than penile manipulation<sup>3</sup> In our series, the five patients with corpus spongiosum injury were engaged in sexual intercourse at the time of injury and this give us that the severe form of penile fracture is that associated with sex. The 'fracture' occurs more often in the proximal shaft, as in our cases, and is located ventrally in coital injuries. Likewise, the right side is more often affected than the left. Typically the penis deviates to the side opposite the injury; and these results same as the study from Philadelphia<sup>6</sup>, Blood at the external urethral meatus suggests urethral injury<sup>8</sup> in our study history and physical finding is enough for surgical decision as in other studies additional diagnostic procedures will unnecessarily delay surgery<sup>9</sup> in atypical or equivocal cases Magnetic resonance imaging may be advised<sup>5,10</sup> also we report that early surgery specially first six hour after injury there is no complication and these may need another study for evaluate.

## CONCLUSION:

Early surgical repair of Penile 'fracture' are essential to ensure a successful outcome with minimal complications. Privacy, empathy, tact, and persistence are needed to obtain an accurate history in suspected cases, as patients may be embarrassed and hesitant to reveal the true mechanism of injury. The public should also be educated to seek medical attention immediately, as delay may result in permanent complication that is potentially preventable.

## REFERENCES:

1. Mydlo J. Blunt and penetrating trauma to the penis. In: Wessells H, McAninch JW, Totowa NJ, editors. Urological Emergencies, a practical guide. 1. Humana Press; 2005. pp. 95–112.
2. Morey AF, Rozanski TH. Genital and lower urinary tract trauma. In: Wein AJ, editor. Campbell-Walsh Urology. 9. Vol. 3. Vol. 26. Philadelphia, PA: Saunders; 2007. pp. 49–50.
3. Eke N. Fracture of the penis. *Br J Surg*. 2002; 89(5):555–565.
- 4.. Muentener M, Suter S, Hauri D, Sulser T. Long-term experience with surgical and conservative treatment of penile fracture. *J Urol* 2004; 172:576–9.
- 5.. Choe JM, Heiland M. Penile fracture and trauma. Emedicine website:www.emedicine.com/med/topic3415.htm. Accessed 24 Aug 2009.
6. Mydlo JH: Surgeon experience with penile fracture. *J Urol* 2001; 166:526-529.
7. Zargooshi J: Penile fracture in Kermanshah, Iran: Report of 172 cases. *J Urol* 2000; 164:364-366.
8. Martinez Portillo FJ, Seif C, Braun PM, Spahn M, Alken P, Junemann KP. Penile fractures: controversy of surgical vs. conservative treatment. *Aktuelle Urol* 2003; 34:33-6.
9. Fedel M, Venz S, Andreessen R, Sudhoff F, Loening SA. The value of magnetic resonance imaging in the diagnosis of suspected penile fracture with atypical clinical findings. *J Urol* 1996;155:1924-7
10. Koifman L, Cavalcanti AG, Manes CH, Filho DR, Favorito LA. Penile fracture—experience in 56 cases. *Int Braz J Urol* 2003; 29: 35-9.