



Erectile Dysfunction and Long Term Sexual Satisfaction Following Penile Fracture

*** Dr Hebbulse Shivalingaiah Prakash**

Assistant Professor and Head, Department of Urology, K. R. Hospital, Mysore Medical College and Research Institute, Mysore, Karnataka, India* Corresponding author

Dr Ghat Vedamurthy Ravikumar

Associate Professor, Department of General Surgery, Mysore Medical College and Research Institute, Mysore, Karnataka, India

Dr Suyash Bajoria

Post Graduate Resident, Department of General Surgery, Mysore Medical College and Research Institute, Mysore, Karnataka, India

ABSTRACT

Background/Objectives: Penile Fracture (PF) is a rare urologic emergency which has been debated for years, be it regarding management of the condition or complications therein or post operative sexual satisfaction. Our aim in this study is to objectively assess the effect of surgical intervention of PF in relation to the presence or absence of Erectile Dysfunction (ED) and sexual satisfaction after surgical repair.

Methods: The six patients (n=6) with PF treated over two years, constituted the study. The patients were studied for the presence or absence of ED in the follow up period.

Results: There was no definite presence of ED in the average follow up period of 15.17 ± 6.4 months (m) for the patients with PF. The mean IIEF score for our study group was 20.83 ± 4.54 .

Conclusion: Surgical correction as a treatment choice for delayed presenters of PF is not definitely associated with complications. ED may be associated with delayed surgical correction of PF, but the domain of ED being very vast, other causes should be looked into before attributing it to the fracture. Sexual satisfaction is a subjective experience which cannot be judged on the basis of ED alone.

KEYWORDS

penile fracture, surgical repair, erectile dysfunction, sexual satisfaction

INTRODUCTION

Fracture of the penis, '*faux pas du coit*', is primarily a rupture of the corpus cavernosum that occurs when the penis is erect. The rupture may extend to affect the corpus spongiosum and the urethra. The condition is under-reported and is a urological emergency. Victims are often reluctant, from shame, to come forward for treatment and they may be reticent in their history¹⁻⁴. Although surgical management has been claimed to be the choice of management for PF, there have been claims of increased rate of hospital stay and occurrence of complications after delayed surgical repair⁴⁻⁸.

PATIENTS AND METHODS

Between 2014 and 2016 we have treated six patients with PF. All 6 patients (Mean \pm SD Age = 38.17 ± 5.6 yrs) presented to the emergency room beyond 24 hours (hrs) of sustaining the injury, (Min = 28 hrs; Max = 54 hrs). The mean duration between injury and presentation to our clinic was 41.17 ± 10.82 hrs. All patients presented with the complaints of a snapping sound while sexual intercourse with a palpable penile deformity on examination (Figure 2). The diagnosis in all patients was made clinically. Two patients had partial urethral injury (Figure 1B) along with the corporal tear (Figure 1A). Irrespective of the time of presentation, all the patients were surgically explored, evacuation of the hematoma was done and repair of the laceration done primarily with absorbable sutures (Figure 3). Watertight closure was confirmed and skin was approximated. Urethral Foley Catheters 16F were placed in all patients. All patients were advised to abstain from sexual activity for approximately 6 weeks following surgical correction.



Figure 1- Intra-operative photographs showing tear in the corpora cavernosa (A) and also tear in the urethra along with the corporal rupture in two of our patients (B).

RESULTS

All patients were operated beyond 24 hrs of sustaining the injury (Mean \pm SD hrs = 41.17 ± 10.82 hrs) which was considered in our study as delayed presentation. The dissection was not difficult in either of them. The tear size ranged from 1.0×0.25 cm to 2.0×1.0 cm. Mean post-operative hospital stay was 5.6 ± 1.5 days. Follow up included, apart from other parameters, any evidence of erectile dysfunction and/or poor sexual performance. This was based on the IIEF (International Index of Erectile Function) score⁹. The follow up period ranged from 6m to 24m (Mean = 15.17 m; SD = 6.4 m). The patients, who resumed sexual activity before 6 weeks, complained of occasional erectile dysfunction episode over the follow up period. However there was no evidence of ED in the other patients (Table 1).

Sl No.	Age	Etiology	Time to presentation (hrs)	Site of fracture	Post op. Hospital Stay (days)	ED in follow up period	IIEF-5 score
1.	40	SA	28	MS+U	7	A	24

2.	38	SA	50	MS	4	A	25
3.	37	SA	35	PS	5	O	13
4.	42	SA	48	MS	5	A	23
5.	28	SA	32	MS+U	8	A	22
6.	44	SA	54	MS	5	O	18

SA, sexual activity; MS, Mid-Shaft; PS, Proximal-Shaft; U, Urethral Injury; S, Surgical correction (emergency); A, Absent; O, Present occasionally; IIEF-5, International Index of Erectile Function Questionnaire.

DISCUSSION

PF, though very rare, is a urologic emergency that needs appropriate management. The pathophysiology behind PF is the marked thinning of tunic albuginea⁵ on erection and associated increase in intra-cavernosal pressure which approach or exceed the tunica tensile strength during sudden traumatic injuries^{1,2}.

Vigorous sexual intercourse is the main cause of PF in the Western world whereas penile manipulation including masturbation is a major cause in the Eastern world^{4,5}.

Because of high energy trauma urethral rupture may be associated in up to 38% of PF⁵. Zargooshi reported urethral rupture in 3% of penile trauma³. Usually urethral rupture is partial, rarely complete³. In our study urethral rupture was seen in 2 out of 6 patients (33.33%) which co-relates with the data recorded by Jagodic *et al*⁵.

The most important presenting feature of patients with PF includes a sudden cracking sound in the erect penis associated with pain and detumescence⁴. Other less common complaints may include poor erection, post coital meatal bleeding, haematuria, incapacitating penile erectile deviation, urinary retention or poor urinary stream⁴. All our patients presented with complaints of a snapping sound while sexual intercourse with a palpable penile deformity on examination.



Figure 2- The deformity that one of our patients presented with, post PF.

Figure 3- Corpora repaired with absorbable suture during the surgery.

Isolated urethral rupture differs from PF by the absence of snapping sound, penile deformity or palpable penile defect^{4,3}. Although urethral bleeding, haematuria and difficulty voiding indicate an urethral rupture, the absence of these features do not exclude urethral rupture as also vice-versa^{3,4}.

Much has been debated about the time of presentation of penile fracture patients and the appropriate treatment meted out. Cummings *et al* defined delayed repair as more than 8 hours of injury⁶, but in our study we have considered a delay of more than 24 hours as significant. This was because of the social prejudices and stigmas associated with such a condition and consulting a surgeon. The mean presentation time of the patients to our clinic after sustaining the injury was 41.17 ± 10.82 hrs which is self explanatory.

Prompt surgical correction was the treatment of choice in our set-up irrespective of the time lag, although conservative management after a defined period have been proclaimed by many studies^{1,2}. Immediate surgical correction is recommended as it not only decreases

the length of post operative hospital stay but also reduces the risk of possible complications^{3,4}. The mean hospital stay post operatively for our patients after emergency surgical correction was only 5.6 days.

The patients were followed on an outpatient basis over a period of 6m to 24m following surgery. The follow up concentrated on the presence or absence of ED based on IIEF score⁹, apart from other possible complications. Some studies have shown that the most important factor leading to late complications was the delay between the injury and surgery⁷. Patients suffer from impotence after PF owing to traumatic corporeal veno-occlusive dysfunction⁸. However our series showed development of impotence/ED in only 2 out of 6 (33.33%) patients, as a part of the long term follow up.

Much has also been speculated regarding the period for which sexual abstinence is supposed to be observed. Eke proposes 6-8 weeks as the minimum abstinence time to be advised to the patients⁴. We offered our patients 6 weeks of complete abstinence from any form of sexual activity. However 2 out of 6 patients were not compliant with the same. These were the same 2 patients who reported to have occasional episodes of ED which was not seen in the remaining.

However our detailed questioning the patients with occasional ED episodes reported no decrease in sexual satisfaction post PF treatment. Erectile dysfunction as a sexual problem has a vast domain of etiology and causal factors and PF with delayed surgical correction alone cannot be solely held responsible for it. The psychological aspect of the patient and the post PF stress / fear the patient has is a major factor responsible for occasional sexual failures. Rust *et al*¹⁰ proposed the Golombok Rust Inventory for Sexual Satisfaction (GRISS) which is an important tool to evaluate sexual dissatisfaction due to sexual dysfunction or extraneous variables. All our patients stood out positive in the GRISS scoring.

CONCLUSION

ED is not a definite complication to be expected after delayed surgical correction of PF, which clarifies to say that surgical exploration is the treatment of choice. The stigma of increased possibility of complications associated with surgical repair in case of delayed presenters does not hold true. Abstinence from any form of sexual activity post operatively for a defined period may be considered beneficial in reducing the rate of complications. Patients can lead sexually satisfying and comfortable lives even after sustaining penile fractures.

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