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Original Research Article

Penile emergencies: two years experience at our centre

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ABSTRACT

Background: Many men with penile injuries opt out of medical treatment for ethical or psychological reasons, which means the true incidence is likely substantially lower than reported. Urgent medical attention is usually required for acute penile illnesses, which are rare but serious. A vascular, viral, or trauma-related event is usually to blame.
Methods: The study was carried out at Narayana medical college in Nellore for a duration of two years, from January 2022 to April 2024.There were four groups vascular group with priapism and spontaneous penile gangrene (n=9) and those with penile fractures, degloving injuries, amputations, and entrapment (n=16) were part of the infected group, whereas patients with penile myiasis were part of the trauma group. The last group consisted of four patients who had paraphimosis.
Results: The results showed that 60% of patients who had penile fractures within 6 hours presented for treatment. Every single patient has a torn tunica and one of them even has urethral involvement. Idiopathic causes 62.5% of the eight cases of priapism, and 37.5% of patients presented within six hours. Aspiration with intra-cavernous phenylephrine was the. If they fail to respond, employ the grey hack and water shunt techniques.
Conclusions: The incidence of penile injuries is underreported; patients may appear to healthcare providers far later than necessary, and this is largely attributable to psychological and ethical factors, such as shame and fear. However, early and rapid management led to better outcomes.

Keywords: Penile injuries, Fracture penis, Priapism, Spontaneous penile gangrene, Myiasis

INTRODUCTION

The incidence of penile injuries is underestimated because a significant number of patients choose not to seek medical attention for moral or psychological reasons.[1] Acute penile illnesses are rare and often need prompt medical assessment. These causes are usually related to trauma, blood vessel issues, or infections. Imaging test results are often vital in the treatment of penile crises, which may be managed either by conservative or surgical approaches. Due to the exponential rise in internal pressures when bent, an erect penis is more susceptible to damage.[2] Penile fractures often result during vigorous sexual intercourse, however, masturbation has also been associated with this disorder. Additional unusual lesions may be caused by a partial rollover or a nocturnal erection.[3] Penile soft tissue injuries may occur due to a variety of causes, including burns, bites from people or animals, and degloving injuries produced by equipment.[4] The most prevalent soft tissue injury in children is when uncircumcised young boys accidentally catch their foreskin in the zipper due to fastening their trousers too hastily. Priapism refers to a pathological condition characterized by a prolonged and painful erection of the penis that does not subside with sexual stimulation. It may be classified into two categories: high-flow (arterial or non-ischemic) or low-flow (ischemic).[5] Prompt examination is often vital to

provide a fair and satisfactory outcome to critical crises. The objectives were to examine different penile crises and evaluate the overall consequences they produced.[6]

METHODS

The study was conducted at Narayana medical college, Nellore over 2 years between January 2022 and January 2024. All patients provided written informed consent to be photographed, recorded, and used for scientific and medical educational purposes. This is prospective observational study that involves all male patients experiencing urgent penile problems. Cases with isolated acute scrotal or inguino-scrotal regions were not included in investigation. Age distribution, type of penile emergency, etiology of penile trauma, surgical intervention type, timing of surgical intervention, and postop outcome are among variables. A physical examination and clinical history were part of the primary assessment. When it comes to early assessment of penile emergencies, USG is preferred imaging modality. Vascularity can be assessed using Doppler USG. MRI can be used to further assess cases that are not conclusive. Every patient had urinalysis to rule out urethral damage and those who had microhematuria underwent retrograde urethrocystogram. Thirty patients were split up into four groups: Infected group (n=1), which included penile myiasis; trauma group (n=16), which included patients with penile fractures, degloving injuries, amputation, and penile entrapment; vascular group (n=9) with patients with priapism and spontaneous penile gangrene. Finally, group (n=4) included patients with paraphimosis. SPSS software version 23 was used to analyze data, which were shown in tables and figures. Depending on kind and severity of damage, therapy needed a wide range of surgical procedures.

RESULTS

There was a total of 30 patients with penile emergencies during the period under review. Peak incidence occurred within age group <30 (33.3%)

Table 1: Type of penile emergencies, (n=30).

Variables	N	Percentage (%)
Trauma group, (n=16)		
Fracture penis	6	20
Degloving penis	4	13.3
amputation	2	6.6
Penile entrapment	4	13.3
Vascular group, (n=9)		
Priapism	8	26.6
Spontaneous penile gangrene	1	3.3
Infected group, (n=1)		
Maggots	1	6.6
Others, (n=4)		
Paraphimosis	4	13.3

Trauma group

Out of 5 penile fracture cases 60% patients presented within 6hours. All patients have tunica tear and none have urethral involvement, 60% patients immediate repair is done and 1 patient presented with erectile dysfunction on follow up. presented within 6 hours had classical surgical technique consisting of sub-coronal incision with penile degloving and exposure of corpora cavernosum and urethra; their corpora cavernosum lesions were identified and treated with interrupted vicryl 3-0 sutures. penile fracture injuries with delayed presentation were treated with different surgical technique with longitudinal incision instead of classical circumferential degloving incision of affected area; their lesions were proximal and felt as a gap which was visualized and the extension of the defect was seen after clot evacuation. Cavity was exposed and cavernosa lesions repaired with 3 interrupted 3-0 vicryl sutures. Two penile amputations cases refashioning of stump was done after hemostasis and urethral catheter was retained for 1 week. Postoperatively, these patients were put on 3rd generation cephalosporines, anti-inflammatory drugs, analgesics, and pressure dressing. In the patients with the degloving injury, primary repair was done. Preputial zipper entrapment managed by emergency circumcision.

Table 2: Penile fracture cases.

Variables		N (%)
Mean age	34 years	
Duration before presentation	Less than 6 hours	3 (60)
	More than 6 hours	2 (40)
Etiology	Forceful coitus	3 (60)
	Coitus with woman on top	1 (20)
	Masturbation	1 (20)
Clinical presentation	Pain and swelling	1 (20)
	Deformity	4 (80)
Operative findings	Tunica tear	5 (100)
	Urethral involvement	Nill
Management	Immediate repair	3 (60)
	Delayed repair	2 (40)
Follow up	Erectile dysfunction	1 (20)
	Wound infection	1 (20)

Figure 1 (A and B): Hematoma in the corpora.

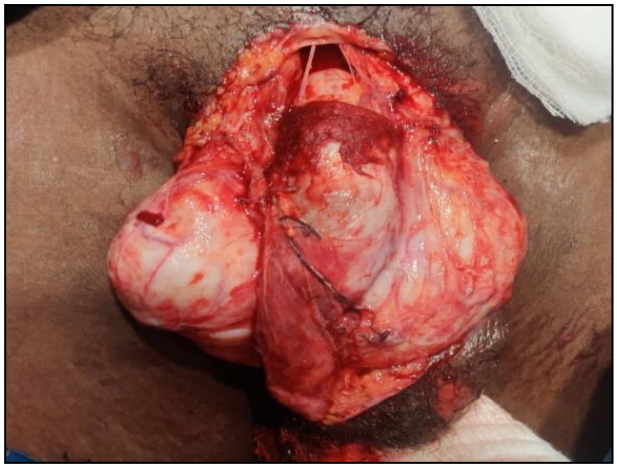

Figure 2: Degloving penis.

Figure 3: Urethral involvement.

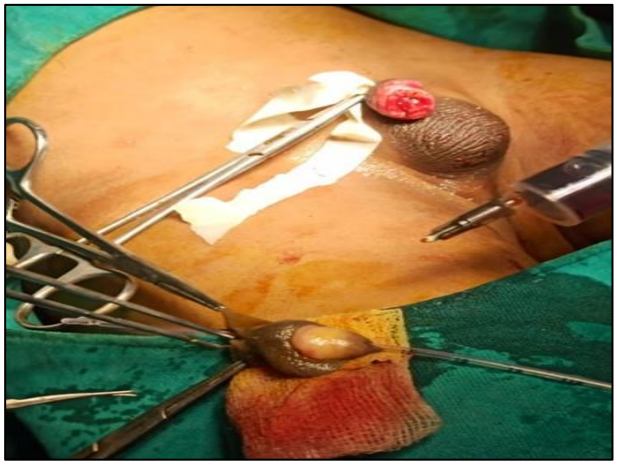

Figure 4: Penile amputation.

Vascular group

Out of 8 praipism cases 37.5% patients presented within 6hours with Idiopathic being the most common etiology in 62.5%. All patients had ABG analysis with pH<7.25, PO_2 <30, and PCO_2 >60. All patients were initially treated with aspiration f/b intra-cavernous phenylephrine if not responding f/b irrigation with normal saline. If not responding then chose with water shunt and grey hack procedure. One patient had erectile dysfunction and recurrence on follow up.

Table 3: Priapism cases.

Variables		N (%)
Mean age (in years)	41	
Duration before presentation	Less than 6 hours	3 (37.5)
	More than 6 hours	5 (62.5
Etiology	Idiopathic	5 (62.5
	Sildenafil	1 (12.5)
	Following coitus	2 (25)
Management	Aspiration	3 (37.5)
	Aspiration + ICI	2 (25)
	Aspiration + ICI + WS	2 (25)
	Aspiration + ICI + WS + GHS	1 (12.5)
Follow up	Erectile dysfunction	1 (12.5)
	Recurrence	1 (12.5)
	Wound infection	1 (12.5)

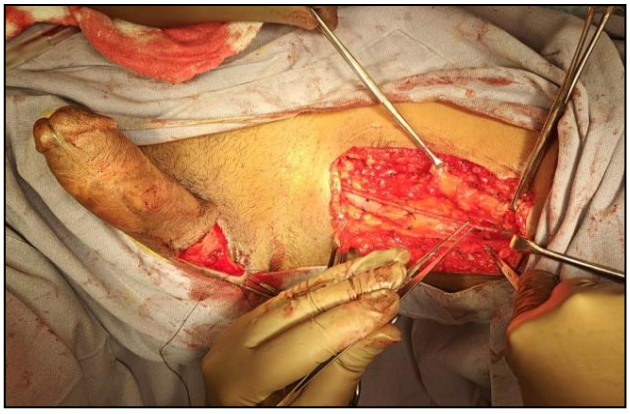

Figure 5: Grey hack shunt.

Figure 6: Spontaneous preputial gangrene.

A 38-year-old male presented with history of sudden onset of painful penile swelling, on examination an irregular ulcer of size 5 cm occupying whole of the circumference of the penis, more of the ventral aspect of the shaft of penis, covered with slough and granulation tissue. Biopsy of the ulcer was negative for malignancy and pus culture was positive for *E. coli*. The ulcer was debrided under antibiotic coverage and discharged him after 5 days advising daily dressings

Infected group and others

The patients presenting with paraphimosis were managed by emergency circumcision. mechanical removal of all larvae, copious irrigation, debridement of all necrotic tissue was done in myiasis case.

Figure 7: Myasis.

DISCUSSION

There are not enough reports of severe penile injuries. The extent of damage to the relevant penile entities, as well as the local and penile tissues, determines how the wounded penis should be managed. The first challenge in treatment is attempting to limit complications by choosing individuals who are suitable and doing operations that will reduce complications. The best course of action is to start therapy right away to avoid difficulties later. Regretfully, all of the patients in this series came to us after a lengthy period following their original operation. The biggest challenge in categorizing penile injuries is the wide range of variances in what exactly constitutes an injured penis. The traditional division of injuries into avulsion, penetrating, and amputating is broad and inadequate to accurately characterize every scenario. Treatment for serious penile injuries is a complicated and multidimensional topic with no set standards. These kinds of injuries ought to be handled individually, using various methods. Optimizing the long-term results for voiding, cosmetics, and sexuality must be the main objective. We have discovered that the majority of our patients are content with this focus on treatment, experiencing painless sex and unhindered voiding. Penile curvature, erectile dysfunction, pain during sexual activity, high-flow priapism, pseudodiverticulum, and fistula are among the complications associated with penile fractures. According to Mansi and colleagues, there is a significant chance of complications such as sub-coronal skin necrosis, abscess formation, and wound infection with substantial degloving.[7] Van Der Horst claims that up to 59% of people may suffer from erectile dysfunction altogether.[8] Only 43% of El-Bahnasawy and colleagues' patients experienced an erection following a protracted episode of priapism.[9] Considering the frequent occurrence of urethral laceration in cases with bilateral corporeal ventral penile fracture, Fergany et al recommend the examination of the corpus spongiosum.[10] The need for catheterization should be carefully evaluated in order to minimize the risk of infection and further damage to the urethra.[11] Equal care should be used while using drains. When applying dressings for the treatment of a penile fracture, it is important to ensure that they are loose and allow the glans to be exposed. This is done in order to prevent or identify early signs of ischemia.[12] To prevent the occurrence of spongio-cavernous fistula, it is necessary to separate the spongiosum from the cavernosum during the repair.[13] While many authors recommend abstaining from sexual intercourse and penile manipulation for 6-8 weeks after an incident of open penile fracture to avoid re-fracture, Uygur et al. observed no recurrence up to 3 years of follow-up in 32 patients, some of whom resumed sexual activity within 2 weeks after therapy.[14] Delayed manifestation of vascular damage might result in erectile dysfunction, at which point therapy is often ineffective.[15]

Limitations

There are some limitations of this study. This study was a single center study and an observational type. Sample size was small. But the results can be used for a multi centered based larger randomized control study in the future.

CONCLUSION

Penile injuries are often underreported owing to ethical and psychological reasons, as well as fear and humiliation. This may result in considerable delays in patients seeking medical attention. However, the intervention was initiated rapidly and at the earliest feasible time, which was correlated with a reduced length of hospitalization, increased levels of patient contentment, and enhanced results, including a satisfactory range of erectile dysfunction.

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REFERENCES

1. Eke N. Fracture of penis. Br J Surg. 2002;89:555-65.
2. Penson DF, Seftel AD, Krane RJ, Frohrib D, Goldstein I. The hemodynamic pathophysiology of impotence following blunt trauma to the erect penis. J Urol. 1992;148:1171-80.
3. Reddy SVK, Shaik AB, Sreenivas K. Penileinjuries: a 10-year experience. Can Urol Assoc J. 2014;8:626-31.
4. Perovic SV, Djinovic RP, Bumbasirevic MZ, Santucci RA, Djordjevic ML, Kourbatov D. Severe penile injuries: a problem of severity and reconstruction. BJU Int. 2009;104(5):676-87.
5. Tay YK, Spernat D, Rzetelski-West K, Appu S, Love C. Acute management of priapism in men. BJU Int. 2012;109(3):15-21.
6. Nicolaisen GS, Melamud A, Williams RD, McAninc JW. Rupture of the corpus cavernosum: Surgical management. J Urol. 1983;130(5):917-9.
7. Mansi MK, Emran M, El-Mahrouky A, El-Mateet MS. Experience with penile fractures in Egypt: Long-term results of immediate surgical repair. J Trauma. 1993;35(1):67-70.
8. Van der Horst C, Stuebinger H, Seif C, Melchior D, Martenez-Portillo FJ, Juenemann KP. Priapism-etiology, pathophysiology and management. Int Braz J Urol. 2003;29:301-400.
9. El-Bahnasawy MS, Dawood A, Farouk A. Low-flow priapism: risk factors for erectile dysfunction. BJU Int. 2002;89:285-90.
10. Fergany AF, Angermeier KW, Montague DK. Review of Cleveland Clinic experience with penile fracture. Urology. 1999;54(2):352-5.
11. El-Sherif AE, Dauleh M, Allowneh N, Vijayan P. Management of fracture of the penis in Qatar. Br J Urol. 1991;68(6):622-5.
12. Orvis BR, McAninch JW. Penile rupture. Urol Clin North Am. 1989;16(2):369-75.
13. De Stefani S, Stubinski R, Ferneti F, Simonato A, Carmignani G. Penile fracture and associated urethral injury. Scientific World J. 2004;4(1):92-9.
14. Uygur MC, Gülerkaya B, Altuğ U, Germiyanoğlu C, Erol D. 13 years' experience of penile fracture. Scand J Urol Nephrol. 1997;31(3):265-6.
15. Moriel EZ, Mehringer CM, Schwartz M, Rajfer J. Cavernous artery obstruction following blunt trauma to the penis. J Urol. 1993;149(3):599-601.

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