International Surgery Journal
Kafle A et al. Int Surg J. 2026 Feb;13(2):203-206
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20260127

Original Research Article

Impact of COVID-19 on penile fracture

Awaj Kafle*, Rikesh J. Karkee

Department of General Surgery (Urology Division), B. P. Koirala Institute of Health Sciences, Dharan, Nepal

Received: 06 January 2026
Revised: 17 January 2026
Accepted: 19 January 2026

***Correspondence:**
Dr. Awaj Kafle,
E-mail: awaj.kafle.ak@gmail.com

ABSTRACT

Background: Penile fracture is an uncommon urological emergency. Before the era of the novel corona virus, we hardly dealt with one case per year. But with the imposition of lockdown due to COVID-19, there was a surge in penile fracture cases. The objective of this study was to investigate the relationship between COVID-19 and penile fracture.
Methods: From April 2020 to December 2020, when nationwide lockdown was imposed, all the patients presenting with penile fractures were enrolled in the study. The study was a retrospective study. Patients were also assessed for symptoms of COVID-19, and a nasal swab was taken for COVID-19 polymerase chain reaction (PCR).
Results: The study included 9 patients. The age range was 22-50 years with a mean of 31.2 years. Manual bending was the most common cause (66.7%). The mean time interval between trauma to hospital admission was 44 hours. While one patient had mild upper respiratory tract symptoms, none tested positive for COVID-19.
Conclusions: Though there was a surge in penile fracture cases, no association was found between the two. Neither patient tested positive for COVID-19, nor had developed upper respiratory tract symptoms. The reason for the sudden surge may be due to the lockdown itself, when people had to stay indoors and were involved in activities leading to penile fracture. The other reason may be the shutdown of other local hospitals when all the patients landed up in a tertiary care center like ours.

Keywords: COVID-19, Lockdown, Penile fracture, Urological emergency

INTRODUCTION

Penile fracture is an uncommon urological emergency. It is defined as a traumatic rupture of the tunica albuginea of corpus cavernosum due to bending of the penile shaft in the erect state.[1] It usually occurs during vigorous sexual intercourse and has also been described with masturbation, rolling over an erect penis, and forced flexion.

The diagnosis is made clinically with a history of the forceful bending of the penis in the erect state, accompanied by a cracking sound, leading to sudden detumescence, followed by rapid swelling, ecchymosis, and deformity.[2]

The fracture site is unilateral in most cases involving one corpus cavernosum (86.3%), whereas bilateral involvement is uncommon (13.7%). Associated urethral injuries can occur in 6-9% of cases.[3] Different studies have shown various incidences of penile fractures, with few focusing on the seasonal variability and the impact of the COVID-19 lockdown on the increased incidence of penile fractures at that time.[4-6]

In this paper, we highlight the increased incidence of penile fracture cases that had occurred after the imposition of lockdown due to the COVID-19 pandemic. The objective of this study was to investigate the relationship between COVID-19 and penile fracture.

To the best of our knowledge, this is among the few papers published till date highlighting the surge in the number of penile fracture cases that had occurred during the pandemic.

METHODS

This is a retrospective, cross-sectional descriptive study conducted at B. P. Koirala Institute of Health Sciences, Dharan, Nepal. During the period of lockdown imposed during the COVID-19 outbreak, from April 2020 to December 2020, all patients who presented with penile fracture were enrolled in the study. After the confirmation of penile fracture diagnosis, patients were assessed for symptoms of COVID-19, and a nasal swab was taken for COVID-19 PCR.

All the patients who were confirmed with the diagnosis of penile fracture and presented within the lockdown period were included in the study. The patients in whom the diagnosis changed intra-operatively and those who presented outside the lockdown period were excluded from the study. The sampling method used was all total sampling.

The study was approved by the Institutional Review Committee, and informed consent was obtained from the participants. A self-designed proforma was used to collect the relevant data (demographic profile, etiology of penile fracture, time to presentation to emergency, size and site of fracture, laterality of rupture, urethral injury if present, length of hospital stays, and post-operative complications). The data were entered in Microsoft Excel 2019. Descriptive statistics like frequency, percentage, and mean were calculated. The findings were presented as a table and figures.

RESULTS

With the outbreak of COVID-19 and the imposition of lockdown between April 2020 to December 2020, 9 patients with the clinical diagnosis of penile fracture were admitted to our center. The medical reports were reviewed for epidemiological data, history and clinical presentation, etiology, and operative findings. The diagnosis was made by clinical history and physical examination.

Additional imaging methods were not used. Retrograde urethrogram was reserved for cases with per-urethral bleed and suspected urethral injury. However, none of our patients had urethral bleeding or urinary symptoms, hence the procedure was not needed.

The patient's age ranged from 22 to 50 years, with a mean age of 31.2 years. The time elapsed between trauma and hospital admission ranged from 3 to 96 hours (mean 44 hours). Manual bending of the penis while in the erect state was the causative factor in most of our cases (66.7%). In 2 (22.2%) patients, the cause was rolling over in bed, and 1 (11.1%) had a fracture during sexual intercourse (Table 1).

Clinically, all patients had a typical history of sudden detumescence, with or without, associated snapping sound. All had penile ecchymosis and penile swelling (Figure 1).

After the diagnosis of penile fracture was made, all patients underwent surgical exploration. Circular sub-coronal incision with degloving of the penile skin was the technique followed for all the cases. The defect site was located and repaired with Prolene 2-0 suture in a simple interrupted fashion. Debridement of the unhealthy margin was done as required. Hemostasis was achieved after closure, and a 16 French per-urethral catheter (PUC) was placed. Buck's fascia was closed with Vicryl 3-0 suture. The circumcising incision was closed with an interrupted 3-0 chromic suture. PUC was removed at the time of discharge, and patients were followed up after 1 month.

Table 1: Demographic data, intra-operative findings and post-operative complications.

Characteristics	Frequency
Age (years)	
Minimum	22
Maximum	50
Mean	31.2
Etiology	
Penile manipulation (forceful bending)	6
Rolling in bed	2
Sexual intercourse	1
Time of presentation to ER (hours)	
Minimum	3
Maximum	96
Mean	44
Defect size (mm)	
Minimum	10
Maximum	50
Mean	16
Defect site	
Right ventro-lateral	6
Left ventro-lateral	2
Bilateral	1
Rupture of tunica albuginea	
Unilateral	8
Bilateral	1
Urethral injury	None
Length of hospital stay (days)	
Minimum	2
Maximum	4
Mean	2.5
Post-operative complications	
Necrosis of skin	1
Excess foreskin	2

During surgical exploration, all patients had their defect site located near the base (Figure 2). Most were unilateral injuries, accounting for 8 out of 9 cases. One patient had a tear in the bilateral tunica albuginea; luckily, his urethra was not injured. In that case, his urethra was mobilized for complete closure of the defect. The defect was on the right side in 6 patients (66.7%), on the left side in 2 patients (22.2%) and 1 (11.1%) had bilateral injury. The mean

length of the tunica albuginea defect was 16 mm. The mean length of hospital stay for the patients was 2.5 days.

Figure 1: Penile ecchymosis and penile swelling associated with penile fracture.

Figure 2: Defect site located near the base of penis.

In post-operative follow-up, 2 patients had excess foreskin, which was managed subsequently with circumcision. One patient had necrosis of penile skin, which was managed with skin grafting (Table 1). At 1-month follow-up all patients had their erectile function preserved.

DISCUSSION

Social isolation, as during the lockdown period of COVID-19, had a significant impact on the physical and psychological health of individuals.[7] During COVID-19, although sexual intercourse decreased in many couples, the frequency of masturbation increased in many.[8]

With the imposition of lockdown in our nation towards the end of March, we started to encounter the cases of penile fracture on a regular basis, specifically, one case per month. Before the movement restriction imposed by the government of Nepal, we could hardly see one case per year. The reason for the sudden increase in the cases of penile fracture in our group might be due to the couples spending more time together and the increased use of pornographic content; as we can see, the most common cause was the forceful manual bending of the penis (66.6%).

The incidence of penile fracture in the non-COVID era has been reported differently. Its incidence in the United States has been reported as 1 in 175,000 male population. However, the incidence is higher in some Middle Eastern countries.[9] In South Asian nations, the incidence has been reported variably, with one study showing 36 cases over a period of 6 years, while another study showed 14 cases over a period of 4 years.[10,11] According to our hospital data, we had seen a single case per year during non-COVID times; whereas, the incidence increased dramatically during the COVID era.

The direct association between penile fracture and COVID-19 was sought. All the patients were asked about the presence of upper respiratory tract symptoms and were tested with a nasal swab for COVID-19 PCR. None of the patients tested positive for COVID-19 PCR; hence, the sudden surge in cases could be attributed to the increased isolation of patients leading to physical and sexual changes during the isolation period, rather than the direct association with the COVID virus.

Limitations

The primary limitation of the study is its small sample size. Since penile fracture is in itself a rare urological emergency, and given the small population size of Nepal, this small sample size could be justified. However, a larger sample size is required to justify the statement during the quarantine period.

CONCLUSION

There was a rise in cases of penile fracture during the lockdown period imposed during COVID-19. This rise could be due to the change in sexual preferences of patients when they lived in isolation during that period. The lack of upper respiratory tract symptoms attributable to COVID-19, combined with a negative PCR test, further strengthens the finding.

ACKNOWLEDGEMENTS

The authors would like to thank Dr. Pragya Regmee for critically reviewing the paper

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Amer T, Wilson R, Chlosta P, AlBuheissi S, Qazi H, Fraser M, et al. Penile Fracture: A Meta-Analysis. Urol Int. 2016;96(3):315-29.

2. Zargooshi J. Penile fracture in Kermanshah, Iran: report of 172 cases. J Urol. 2000;164(2):364-6.
3. Al Ansari A, Talib RA, Shamsodini A, Hayati A, Canguven O, Al Naimi A. Which is guilty in self-induced penile fractures: marital status, culture or geographic region? A case series and literature review. Int J Impot Res. 2013;25(6):221-3.
4. Pyrgidis N, Chaloupka M, Volz Y, Pfitzinger P, Apfelbeck M, Weinhold P, et al. Penile fractures: the price of a merry Christmas. BJU Int. 2023;132(6):651-5.
5. Ariman A, Merder E, Kutlutürk EG. Frequency of Penile Fractures During the COVID-19 Pandemic. J Reconstruct Urol. 2021;11(1).
6. Pyrgidis N, Chaloupka M, Volz Y, Pfitzinger P, Apfelbeck M, Weinhold P, et al. MP76-18 The seasonality of penile fractures: results from the grand study. J Urol. 2024;211(5S):e1249.
7. Micelli E, Cito G, Cocci A, Polloni G, Russo GI, Minervini A, et al. Desire for parenthood at the time of COVID-19 pandemic: an insight into the Italian situation. J Psychosomatic Obstet Gynecol. 2020;41(3):183-90.
8. Li G, Tang D, Song B, Wang C, Qunshan S, Xu C, et al. Impact of the COVID-19 pandemic on partner relationships and sexual and reproductive health: cross-sectional, online survey study. J Med Internet Res. 2020;22(8):e20961.
9. Mirzazadeh M, Fallahkarkan M, Hosseini J. Penile fracture epidemiology, diagnosis and management in Iran: a narrative review. Translational Androl Urol. 2017;6(2):158.
10. Bali RS, Rashid A, Mushtaque M, Nabi S, Thakur SA, Bhat RA. Penile fracture: experience from a third world country. Adv Urol. 2013;2013(1):708362.
11. Shimpi RK, Patel PJ, Bhondave ST. Penile fracture: Institutional experience of 14 cases. Urol Ann. 2021;13(4):351-5.

Cite this article as: Kafle A, Karkee RJ. Impact of COVID-19 on penile fracture. Int Surg J 2026;13:203-6.