

# Penile Fracture In A 19-Year Old Nigerian Teenager – Report Of A Case

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## Abstract

**Background:** Penile fracture is a rare emergent urologic condition. Its occurrence in the teenage age group has not been previously reported in Nigeria. This case is reported as the first case of penile fracture in a teenager in Nigeria and the second case of penile fracture from our center.

**Case Report:** A case of a 19-year old teenager sustaining penile fracture during sexual intercourse with his girlfriend is reported. Early surgical intervention with hematoma evacuation, debridement and water-tight repair of the tunica albuginea was done using the Laubscher's subcoronal sleeve approach.

**Results:** The patient experienced spontaneous erection whilst in hospital and recovered well.

**Conclusion:** There is the need for early awareness creation of this condition among teenagers. Early repair is advised in all cases to forestall attending complications.

## INTRODUCTION

Penile fracture is rare occurring in 1 in 175,000 admissions<sup>1</sup>. It affects men who are in the sexually active group with age range of 18-41 years<sup>2,3,4</sup>. A common denominator in patients sustaining this relatively rare injury in a recent report indicates that extramarital affairs and out-of-the-ordinary locations appear to be an association<sup>5</sup>. The diagnosis is usually made from the classical history and clinical findings. Doppler ultrasound, carvanosography and magnetic resonance imaging (MRI) aid in confirming diagnosis where doubts exist. Early surgical intervention is advocated as conservative management is associated with more morbidity, bent penis and painful erections. There has been no previous report of penile fracture among teenagers in Nigeria. This forms the first case report of a penile fracture in a teenager in Nigeria and the second penile fracture case from our center

## CASE REPORT

A 19-year-old, healthy Nigerian teenager was having coitus with his girlfriend in a hotel with the patient coming from behind the girlfriend with both of them in the kneeling position. While being rigorous, he missed the vaginal target in one of the 'strokes' hitting his phallus on the perineum of the girlfriend. He heard a 'pop' sound from his penis, experienced an acute penile pain followed immediately by

detumescence. He rapidly developed swelling of his penis and pain in his penoscrotal region and presented in hospital within 1 hour afterwards. His penis was symmetrically swollen on examination, and there was no blood at the meatus (Figure 1). The penile shaft had a palpable defect on its left base and the 'rolling sign' was positive. His urinalysis was normal, with no evidence of microscopic hematuria. A retrograde urethrogram did not demonstrate any urethral injury. On the basis of his clinical presentation, a diagnosis of penile fracture was made. A urethral catheter was inserted to serve as a stent. He had a repair of the tunica albuginea done using the Laubscher's subcoronal sleeve approach. A 3.0cm tear of the left corpus carvanosa was found with blood clots (Figure 2). A water-tight repair was done using vicryl 2-0 after evacuation of the clots. He achieved full erection without angulations on third postoperative day. He recovered uneventfully and on follow up after one year, it was confirmed from both the patient and his girlfriend that he achieves painless straight erections and normal coitus.

**Figure 1**

A Case of penile fracture in a 19-year old Nigerian teenager.



**Figure 2**

A 3.0cm penile fracture during repair in a 19-year old Nigerian teenager.



## DISCUSSION

Penis fracture is a rare emergent urologic condition that affects all social strata. It has an incidence of 1 in 175,000 admissions and is commoner in countries where there is segregation of the sexes for social and religious reasons, where its aetiologic factor is mostly from self manipulation 1,6-9. As at 2002, a total of 1,642 cases had been reported in the world literature and the incidence is said to be rising 10.

Penile fracture refers specifically to a rupture of the corpus cavernosum caused by blunt trauma to the erect penis 11. Lacerations of the corpus cavernosa from gunshot and sporting injuries to the flaccid penis are not considered as penile fractures since they lack the fulcrum for snapping 12.

Penile fractures have been classified as simple and compound 10. Simple penile fractures are those with intact skin and urethra while those with urethral rupture are compound. Both patients reported above had simple penile fractures. The right carvanosa seem to have preponderance for fracture due to a postulated right-sided penile anatomical weakness<sup>6</sup>. Concomitant urethral injury occurs in about 10-58% of cases<sup>13,14</sup>. Associated urethral rupture is seen more in coital fractures than those following manipulations<sup>10</sup>. The predisposing factor to concomitant urethral injury in penile fracture is not clear but it is postulated to be due to a more vigorous force applied during coitus compared with the prolonged but lesser force involved in masturbation 10,15.

In the Western Hemisphere, up to 50% of penile fracture occurs during vigorous sexual intercourse when the penis slips out of the vagina and strikes the perineum or the pubic symphysis 10,16. Other potential causes include industrial accidents, masturbation, gunshot wounds, or any other mechanical trauma that causes forcible breaking of an erect penis. In Middle Eastern countries, the injury is usually due to penile manipulation to achieve detumescence. Additional rare etiologies include turning over in bed, a direct blow, forced bending, or hastily removing or applying clothing when the penis is erect 10,15.

In Nigeria, varied etiology has been reported including masturbation, stuttering priapism, vigorous sexual intercourse, turning in bed, forcefully bending the erect penis, entrapment of the erect penis by a locally made bamboo bed 1,2,6,10,11,17-19. So far, no report has been made of penile fracture in the teenage age group in Nigeria. This is the first case to be reported in a teenager in Nigeria.

The age of patients with penile fracture quoted in literature ranges from 18 to 41 years with a peak incidence at 26-38 years 2-4. Recent findings indicate that penile fracture patients appear to be a unique population of men who are having sexual intercourse under stressful situations such that extramarital affairs and out-of-the-ordinary locations appear to be major predisposing factors 5. The case reported above was having coitus in a hotel in the same city where both partners reside.

The diagnosis of penile rupture may solely be made based on the history and clinical examination. Usually, the patient classically has a popping, cracking, or snapping sound with immediate detumescence with or without pain 20,21. Examination usually shows an 'eggplant deformity' of the

penis due to significant soft tissue swelling from penile haematoma formation and a deviation of the penis away from the side of hematoma formation (fracture) making the penis S-shaped 12,20,21. Occasionally, a "rolling sign" which is the palpation of localized blood clot over the site of rupture may be appreciated. If there is associated urethral injury, blood is present at the meatus 22.

There are various investigations have been used to aid in the diagnosis of penile fracture. Penile ultrasonography is cheap, non-invasive and readily available but highly operator-dependent tool with low sensitivity. The use of penile cavernosography remains debatable because of its low sensitivity, risk of contrast reactions, post-procedural priapism and increased corporeal fibrosis 16,23. Retrograde urethrography is done in those patients with penile fracture who present with voiding difficulty, hematuria, or blood at the meatus 20. Magnetic resonance imaging is indicated in patients presenting with severe painful swelling preventing examination. It demonstrates the site, size, and extent of the laceration with associated urethral injury, intracavernosal or extra-tunical hematoma 23,24.

Early surgical intervention and conservative modes of treatment have been advocated. Comparative studies between both treatment modalities favour immediate surgical exploration and reconstruction. Conservative management include the use of compression bandages, fibrinolytics, ice packs, urethral catheterization, anti-inflammatory agents, sedatives and anti-androgens 12,25-27. Commonly reported complications following conservative management include severe penile angulation, painful erections, arterial-venous fistulas, infected hematomas, abscess formation, and impotence 12. As a result of these complications, immediate surgical intervention is currently advocated since it is associated with shorter duration of hospital stay, higher levels of patient satisfaction, and improved outcomes including reduced incidence of deformity and erectile dysfunction 11,28,29.

Proper surgical repair of penile fractures requires evacuation of the hematoma, identification of the tunica injury, local corpora debridement, closure of the tunica lacerations, and ligation of any disrupted vasculature 10,12. The location and type of the incision is operator dependent. Three types of incision are generally used: incision directly over the defect, circumscribing-degloving incision (i.e. Laubscher subcoronal sleeve operation), and inguinal-scrotal incision 15. An incision directly over the identified defect in the corpus cavernosum allows minimal dissection of the

neurovascular bundles, less traumatic and it can be performed under local anesthesia as day-case surgery but does not allow complete evaluation of both corpora cavernosa and the corpus spongiosum 16,23. A sub-coronal circumferential degloving incision requires general anesthesia, extensive dissection and is said to provide excellent exposure but may be associated with impaired penile sensations or distal skin necrosis 23. The inguinoscrotal incision is used for lesions that involve the base of the penis. The sub-coronal incision appears to be more popular than inguinoscrotal or direct incision over the defect 30.

### CONCLUSION

Early surgical repair of the tunical tear appears to give excellent results in the short term and avoids erectile dysfunction. There is the need for increased awareness of this condition among teenagers on the need to be more careful during sexual maneuvers.

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