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# Fracture of the penis - diagnosis and management

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**Summary**
Fracture of the penis is an uncommon injury, but it occurs most commonly during over enthusiastic sexual intercourse. Diagnosis is not difficult but serious complications such as urethral rupture and corporo-urethral fistula may occur. Management should be by early surgical exploration, with evacuation of the haematoma and repair of the tear in the tunica albuginea in order to minimize the length of patient's stay in hospital and avoid complications such as penile deformity and painful penile erections.

**Keywords**: *Fracture, penis, repair*

**Résumé**
La fracture du penis est un accident pas ties commun mois il survient le plus rouvant pendent des relations sexuelles anthoussatique. Le Diagnostique riest pas difficite, mois sentement des complications serievres commue la rupture urethral et corporo-urethral fistula pervent survenir.Le traitement devvrait re faire par une exploration chinigoculerap, avec evacuation des hematounes et reparation de la dechiure dans le tunica albuginea la chirurgie precoce perment quiro de minimise la duice du patient a l'hopitate, et aussi eviter ldes complication telsque la de formation du penis et des erection douloureuse de penis.

**Introduction**
Fracture of the penis is an uncommon urological condition. Fewer than 500 cases have been reported in the English literature up to 1996[1]. It is probable however, that many more cases go unreported as patients may be reluctant to present in the hospital because of the embarrassment that may be associated with being seen with this condition. Due to uncommon nature of penile fracture, misdiagnosis is not unusual. Two cases of penile fracture were recently managed in our unit, one of whom was referred with a diagnosis of 'a resolving priapism'. These cases form the basis of this report and to our knowledge are the first two documented cases of penile fracture from our institution.

*Case report*
*Case 1*: A.R. was a 22-year-old male student who presented with an eight-day history of pain and swelling in the penis after he rolled over an erect penis while asleep. There was no history of haematuria or bloody urethral discharge. Examination revealed a healthy-looking young man. The phallus was enormously swollen particularly to the right of the midline, and was also bent to the left and tender over the site of the swelling on the right side. The phallus was also oedematous all over. There was no palpable defect in the swelling.

Penile exploration was done through a longitudinal incision over the swelling on the 9th day post trauma. Findings at surgery were: a larger harmatoma over a 2 cm longitudinal rent in the tunica albuginea. The haematoma was evacuated and the tear was repaired using vicryl suture. The skin was closed with subcuticular stitches. A 14F Foley urethral catheter was left in situ. The catheter was removed two days later. Postoperative courses were essentially uneventful and he is still able to achieve and maintain penile erections. There is a slight residual curvature of the penis, which does not interfere with coitus.

*Case 2:* F.A. was a 35-year-old businessman who presented with an 8-hour history of sudden penile pain during coitus associated with immediate detumescence. The penis became swollen shortly after the event. There was no history of haematurial, bloody urethral discharge or urinary retention.

On examination he was a healthy-looking young man. The phallus was oedematous, swollen on the right side, bent to the left and tender. There was no palpable defect. The right hemiscrotum was swollen but not tender. Penile exploration with a longitudinal incision over the swelling on the right side was done. Findings at operation included a heamatoma over a tunica albuginea rupture at about the middle of the phallus. The haematoma was evacuated and the rent in the tunica was repaired with vicryl suture.

Post-operative occurs was satisfactory. He is still able to achieve and sustain an erection. There is no abnormal curvature of the penis.

**Discussion**
Injuries to the penis are uncommon because of its well-protected location and a high degree of genital mobility. The erect penis is however, prone to blunt trauma that bends the organ abnormally.

In the flaccid organ, the tunica albuginea of the penis is about 2 mm thick, but during erection, it thins down to between 0.5 and 0.25 mm and this weakens this coat making injury possible if abnormal forces are applied [2].

The mechanism of injury is usually a direct blunt force and sudden bending of the penis [3,4] and the fracture manifests when the tunica albuginea of the corpus cavernosum ruptures due to the blunt trauma.

Fracture of the penis may occur during sexual intercourse as in one of our patients, but it may also occur during masturbation, rolling over in bed, unconscious nocturnal manipulation or forceful bending of an erect penis into underpants [1,5].

Other documented modes of fractures of the penis are bumping into furniture in the dark, a kick from a horse or

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deliberate forceful bending by an unwilling partner.

However, sexual intercourse is the most common etiology [5,6] and this usually happens when the erect penis slips out of the vagina and is thrust against the perineum or symphysis pubis, particularly during over enthusiastic or athletic coitus as was admitted by our patient (F.A.).

Typical symptoms are cracking sound, sudden detumescence, rapid swelling, discoloration and distortion [1]. Haematuria or bloody urethral discharge may indicate associated urethral rupture [7]. The site of the tear in the tunica albuginean is sometimes apparent from the overlying haematoma, focal tenderness or a palpable defect [8]. Ultrasonography of the penis can demonstrate the site of a tear in the tunica as well as define the extent of the injury as shown by Koga *et al.* [9].

Corpus cavernosography as advocated by Grossman *et al.* [10] can be used to demonstrate the rupture in the corpora, but this may be harmful in patients who are allergic to iodide and there may also be a false negative result when blood clot temporarily seals the tear in the tunica albuginea. The investigation can however, be quite useful to rule out other possible causes of acute penis such as rupture of the superficial or deep dorsal vein of the penis [1]. Urethral injury can be excluded by retrograde urethrogram [11], but we would advise that this investigation is limited only to cases with history that suggest urethral injury such as bloody urethral discharge or haematuria.

The events that may lead to penile fracture as well as some of the physical findings can also be seen in patient with rupture of the superficial dorsal vein and deep dorsal vein of the penis but, while rupture of the superficial dorsal vein spreads through the subcutaneous tissue of the genitalia resulting in scrotal ecchymosis, the resultant haematoma of the deep dorsal vein rupture, as in cavernosal rupture is confined to the space beneath Buck's fascia, and thus remains within the penile shaft [12].

Fracture of the penis may be managed either conservatively [13,14] or by early surgical exploration [5,6,15]. However, complications such as penile abscess, missed urethral injury, persistent haematoma, delayed exploration and penile deformity are commoner with conservative management [6]. Also, corporo-urethral fistula may occur when there is laceration of the urethra along with the rupture of the tunica albuginea [16,17,18], and this may be missed with conservative management. We advise prompt surgical exploration as done in our two patients. The approach may be through a circumferential subcoronal incision [1] or through a longitudinal incision over the suspected site of rupture as done by us. The haematoma should be evacuated and the tear in the tunica albuginea sutured with an absorbable suture such as vicryl [6,15].

Penile erection is usually preserved after adequate treatment for penile fracture and deformity should be rare after surgical treatment except in-patients who present very late to the hospital [5,6,19].

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