

Fracture of the Penis

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Fracture of the penis can be defined as injuries to the penile corporeal bodies sustained in a state of tumescence. Such a definition excludes blunt or penetrating injuries to the flaccid penis, as well as the rare traumatic disruption of the penile suspensory ligament reported by Pryor and Hill,¹ because of their distinctly different anatomic extent, clinical manifestations, and management.

Although only sporadically reported in the literature, fracture of the penis is not rare. Redman and Miedema,² surveying local urologists in Arkansas, found at least 25 unreported cases in that state alone. Moreover, relatively minor fractures of the penis often pass undiagnosed or are diagnosed at a later date in conjunction with manifestations of Peyronie's disease, chordee, or impotence.³ Cognizance of the clinical features, pathogenesis, and management of fracture of the penis would therefore help to establish the diagnosis and institute proper treatment, leading to uneventful sexual rehabilitation of patients with fracture.

CASE REPORTS

Case 1. A 32-year-old male patient sustained coital trauma as his penis slipped from the vagina and struck the pubis of his partner. He experienced acute local pain and detumescence and noticed bleeding from the urethra. At examination, a small area of ecchymosis was noted on the ventral aspect of the midshaft of the penis. A retrograde urethrogram showed a small tear with extravasation on the floor of the penile urethra. Corpus cavernosography did not reveal any extravasation. At exploration the tunica albuginea was found to be intact. The patient was treated with urethral catheter drainage for two weeks. A subsequent urethrogram showed no abnormalities and his erectile function was normal.

Case 2. A 26-year-old male patient experienced sudden acute pain and prompt detumescence during vigorous coital activity. The episode was associated with an audible cracking sound. His penis became grossly swollen and ecchymotic. At emergency exploration a

2-cm rent in the tunica albuginea over the right corpus cavernosum was found, which was repaired with continuous polyglycolic acid suturing. Postoperative sexual function was unimpaired.

DISCUSSION

Fractures of the penis have been reported to result from a variety of direct and indirect injuries to the erect phallus. Earlier reviewers⁴ have mentioned that coital injuries, so-called *faux pas de coit*, accounted for about 21 percent of cases. This review, however, indicates that at least one half of these injuries occurred from coital sexual athleticism.

The types or extent of the injuries occur in three categories: (1) rupture of the corpora cavernosa only, (2) rupture of the corpora cavernosa and the urethra, and (3) isolated rupture of the urethra.

MECHANISM OF INJURY

Although penile corporal injuries have been reported from blunt trauma to a flaccid penis, the classic clinical manifestation of fracture of the penis occurs exclusively in an erect phallus. Tumescence and turgidity cause marked stretching and thinning of the ensheathing tunica albuginea, which is thereby rendered vulnerable to tear and "pop" from a direct blow or bending force.

Mechanisms of injury to the urethra, especially isolated injuries like those in the first patient, are somewhat more difficult to comprehend. The urethra and its ensheathing corpus spongiosum are relatively fixed between the glans penis and the urogenital diaphragm. During tumescence, the urethra becomes stretched, extended, and elongated like a bowstring by the expanding corpora cavernosa. Engorgement of the corpus spongiosum also adds turgidity to this bowstring effect. A dorsally bending force is more likely to overstretch and snap or tear the urethra. Associated factors such as periurethral fibrosis or urethral stricture disease may predispose to urethral tear by rendering the urethra less compliant to bending forces. Bana and Reif⁵ reported one patient who sustained a second fracture of the penis with urethral rupture about seven years after the first episode of fracture of the penis.

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MANAGEMENT

Treatment of fracture of the penis depends upon the type and extent of the injury. The diagnosis is often evident from the history of direct or indirect trauma to the erect phallus followed by acute pain, detumescence, swelling, and ecchymosis. Many of these injuries are associated with a perceptible and, at times, audible crack at the time of rupture of the corpora. Urethral bleeding and voiding difficulty indicate urethral injury.

Corpus cavernosography helps delineate the site and extent of the tear in the tunica albuginea.⁶ Similarly, urethrography is indicated in the presence of urethral bleeding to establish the diagnosis and degree of urethral tear. These radiologic studies are of immense value in formulating the treatment guidelines.

Until the middle of this century, conservative therapy in the form of compression bandage, local cold, urethral catheter drainage, antibiotics, and sedatives were advocated in treating fracture of the penis, and a reasonable degree of successful recuperation of sexual function was achieved by these means. However, complications such as delayed chordee, organized hematoma, cavernous fibrositis, and impotence have been reported to result from such medical therapy.

Such conservative therapy might be reserved for selected cases in which cavernosography and urethrography unequivocally delineate a minor tear. For example, case 1 represents an instance in which, despite the clinical appearance of penile ecchymosis, a nonsurgical approach probably would have resulted in an equally satisfactory outcome. On the other hand, surgical exploration, evacuation of clots, and debridement followed by necessary repair of the tunica albuginea or urethra have proved consistently successful^{7,8} and should be used promptly in patients with substantial rupture of the corpora and urethra.

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