

## PENILE FRACTURE? IT CAN HAPPEN!

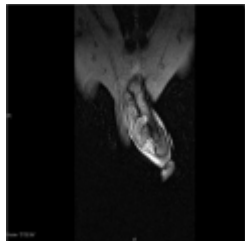
Compiled by Charles (Chuck) Maack – Prostate Cancer Advocate/Activist

Disclaimer: Please recognize that I am not a Medical Doctor. I have been an avid student researching and studying prostate cancer as a survivor and continuing patient since 1992. I have dedicated my retirement years to continued research and study in order to serve as an advocate for prostate cancer awareness, and, from a activist patient's viewpoint, to help patients, caregivers, and others interested develop an understanding of prostate cancer, its treatment options, and the treatment of the side effects that often accompany treatment. Readers of this paper must understand that the comments or recommendations I make are not intended to be the procedure to blindly follow; rather, they are to be reviewed as my opinion, then used for further personal research, study, and subsequent discussion with the medical professional/physician providing prostate cancer care.

The information in the following regards a penile fracture that occurred during intercourse. Apparently this is a rare occurrence, but important for men to be aware. In this case, during intercourse the wife heard a sound like something snapped. The man experienced instantaneous pain, loss of erection, and immediate swelling, followed by bleeding.

Following from: [http://www.medscape.org/viewarticle/752697\\_2](http://www.medscape.org/viewarticle/752697_2)

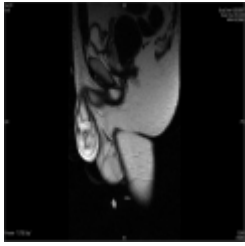
### **A 35-Year-Old Man With Acute-Onset Penile Pain and Swelling**



**Figure 1.**

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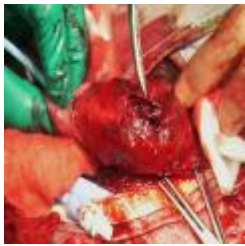
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**Figure 2.**



**Figure 3.**



**Figure 4.**



**Figure 5.**



**Figure 6.**

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Penile fracture is a true urologic emergency that generally requires urgent surgical repair; therefore, prompt diagnosis is required and the patient should be referred to a urologic surgeon with experience in the repair of this type of injury. This patient's presentation and physical findings immediately led to suspicion for penile fracture. The cracking sound reported by the patient's partner, with instantaneous pain, loss of erection, and immediate swelling, all pointed to a diagnosis of penile fracture.

This center has seen 3 cases of penile fracture in recent years, with differing management and outcomes. The first patient was rushed to the operating room without any imaging. While the final outcome was excellent, undertaking a penile exploration procedure blindly without any idea of the exact site and extent of the injuries, including urethral involvement, made for a very challenging procedure. The penis is a very vascular structure that bleeds heavily when injured, which makes blind exploration technically difficult and more traumatic. In the second case, preoperative MRI was performed. The site and extent of injury were localized prior to surgery, which made for a more straightforward surgical exploration.

In this patient, MR imaging was initially obtained. The findings of meatal blood and urinary retention suggested urethral involvement; a suprapubic catheter was placed in the emergency room prior to performing MRI. The MR images confirmed a penile fracture and also demonstrated a complete transection of the midurethra (Figure 1). The findings were confirmed on surgical exploration (Figure 4).

Surgical exploration involved first performing a circumcision followed by degloving of the entire penile shaft. A rugged, 1-cm midshaft defect of the tunica albuginea was discovered on the ventral surface. A urethral catheter was then placed retrograde and appeared midshaft through the disruption. The area was irrigated with normal saline and the proximal stump of the urethra was identified; the catheter was then cannulated through to the proximal urethral end and into the urinary bladder. Further exploration revealed a complete disruption of the corpus spongiosum and partial disruption of both corpora cavernosa. The urethra was then repaired with 3-0 VICRYL™ over a silastic catheter. The rest of the penile injuries were repaired in layers with 2-0 VICRYL, including the tunica albuginea defect. The urethral catheter was left in situ and the suprapubic catheter removed in the operating room.

Penile fracture occurs as a result of forceful bending of an erect penis. This happens most commonly during sexual intercourse. Other reported cases have occurred during masturbation, falling on an erect penis, and rolling onto a nocturnally erect penis. It is often accompanied by an audible snap and followed

immediately by severe pain, detumescence, swelling, and ecchymosis. In the erect penis, the tunica albuginea thins down from 2 mm to 0.5 mm and easily snaps when a violent bending of the penis suddenly increases the intracorporeal pressure. A flaccid penis generally will not fracture.

Penile fracture ranges from a simple unilateral corpus cavernosa tear with minimal disruption to severe injury with transection of the urethra. Except for blood at the urethral meatus, it is not possible to discern the extent of injury via physical examination alone. Significant penile fractures generally involve the corpora cavernosa and their covering sheath, the tunica albuginea. Lacerations rarely extend to involve the urethra (only around 10%), and complete transection of the urethra and corpus spongiosum is extremely rare. If the Buck's fascia remains intact, the swelling and ecchymosis are confined to the penile shaft; if the fascia does not remain intact, blood and urine may dissect into the scrotum, perineum, and suprapubic spaces.

The major complications of penile fracture are loss of penile length, deformity, impotence, and urethral stricturing. It appears that the majority of patients who experience long-term complications are those who are managed nonsurgically. In a case series of 25 patients, all cases in which conservative (nonsurgical) management was the first treatment option suffered late complications (penile aneurysm, induration, penile curvature, erectile dysfunction) and the final results were often poor.

There have been a few reports on how best to image penile injuries prior to surgery. Some state that in the presence of obvious clinical signs consistent with a penile fracture, penile exploration can be undertaken without any imaging. The literature emphasizes the need for urgent operative management and suggests that the earlier the operation is done (preferably within 12 hours), the lower the risk for complications. Various imaging techniques have been utilized to determine the location and extent of the injury.

Cavernosography has been reported to be good at identifying a corpus cavernosal tear, but it is an invasive procedure; it has also been reported to cause postprocedural priapism. Ultrasonography can locate the exact site of a tear in the tunica albuginea, is easily available, and is noninvasive, but its use can be limited by gross penile swelling and often severe pain. Intraoperative urethrography has also been reported in cases without preoperative imaging. Urethrography will only provide evidence of urethral involvement.

MRI is an excellent tool in assessing the exact site and extent of injury in penile fractures and should be taken as the imaging modality of choice when available.<sup>[7]</sup> MRI is noninvasive, nonradiating, and provides excellent images allowing for

determination of the extent of corporal tears and assessment of urethral involvement. Some surgeons prefer to have imaging performed prior to surgery to assess the location of the injury. MRI can accurately depict the presence, location, and extent of tunical tear, which manifests as discontinuity of the tunica albuginea. Moreover, because the tunica albuginea is well demonstrated as a low-signal-intensity structure on both T1- and T2-weighted images, MRI is optimal for the evaluation of the integrity of this anatomic structure. Not all cases of blunt penile trauma with bruising and swelling are associated with significant corpora injury requiring surgery, and the degree of swelling or bruising is in no way suggestive of the severity of the injury. MRI can demonstrate an intact tunica albuginea and the presence of intracavernosal or extratunical hematoma, which does not require surgical management.

The time delay for obtaining MR images is not likely significant enough to affect the outcome of surgery. This patient made a full recovery with no complications.

All 3 patients treated at this facility underwent emergency circumcision, penile exploration, and repair. All 3 operations were supervised by the same consultant urologic surgeon. In the case presented today, the patient had a preoperative suprapubic urinary catheter placed. This was immediately removed at the end of surgery. He left the operating theatre with a Foley urethral catheter. The catheter was only removed when he returned for follow-up 2 weeks later. The other 2 patients had Foley urethral catheters that were removed after 48 hours and prior to discharge from hospital. They all reported painless nocturnal erections with no deformity at between 2 and 3 weeks postsurgery. They all resumed sexual activity at 6 weeks postsurgery. None of these patients experienced urine voiding difficulties. Follow-up urethrograms at 6 months revealed no evidence of urethral stricturing.