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Case Report

Penile Fracture

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Abstract

penile fracture is a rare surgical emergency caused by rupture of tunica albuginea when an erect penis is subjected to unusual force. This condition requires prompt diagnosis and surgical treatment to preserve sexual function and to prevent deformity.

Keywords: Fracture; Penis; Tunica Albuginea; Urethra; Ultrasound

Clinical Cases

A 45 yrs. old patient presented to the casualty department with painful penile swelling. He gave history of vigorous intercourse and snapping sound during the act followed by swelling and discoloration (Figure 1).

Figure 1: Eggplant deformity of fractured penis.

Patient underwent ultrasound evaluation that revealed focal tear in the tunica albuginea and large adjacent hematoma, located venter laterally at 7 clocks. Correlative MRI revealed disruption of the tunica albuginea layer with adjacent hematoma (Figure 2,3).

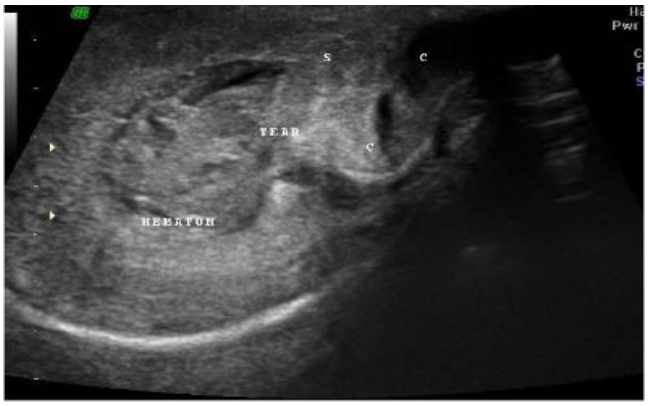

Figure 2: High resolution Ultrasound of penis revealing ruptured tunica albuginea and adjacent hematoma.

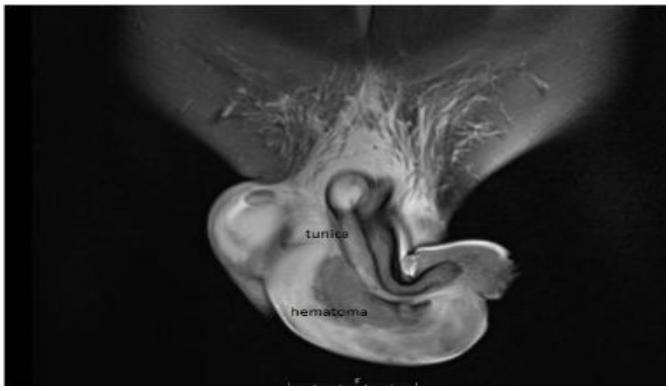

Figure 3: MRI revealing penile fracture as discontinuity of the linear black signal of tunica albuginea and hematoma.

In a similar scenario another 55 yrs. old male patient, presented with penile swelling. USG revealed focal tear of the tunica albuginea and adjacent overlying hematoma.

Both the patients underwent operative repair. Circumferential degloving incision was made. The hematoma was evacuated, the tunical rupture identified and sutured. The first patient had associated urethral tear which was noted during surgery and repaired (Figure 4).

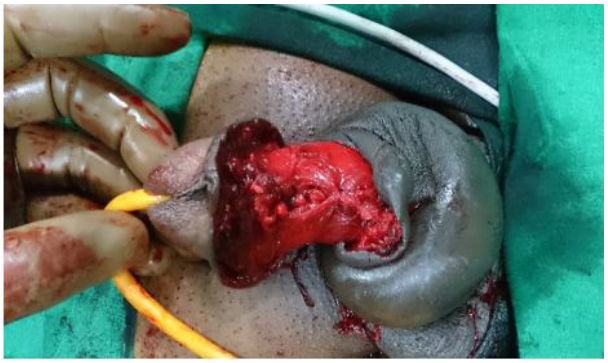

Figure 4: Intraoperative radiograph showing tunical repair.

Both the patients had uneventful recovery. Follow up at six months both had normal sexual and voiding functions.

Discussion

Fracture of the penis is tear/rupture of the tunica albuginea when an erect penis suffers blunt trauma. In the penile shaft, the dorsal corpora cavernosa and the ventral spongiosa with urethra are covered by the tunica albuginea. The tunica albuginea is responsible for maintaining the structural integrity of the erection and is significantly thinned out during the act of erection as the cavernosa distend with blood. Any unusual force on an erect penis can cause rupture of the tunica albuginea leading to the penile fracture [1]. Tear of the tunica albuginea leads to loss of blood from the corpora cavernosa with rapid detumescence. The result ant hematoma, discoloration and deformed penis is likened to 'eggplant deformity [2] Patient typically gives history of rapid detumescence followed by painful swelling. Inability to void and blood at the meatus is suggestive of associated urethral injury. The incidence of the urethral injury is 11-38%. The urethral injury being more commonly associated with the act of coitus than from self-manipulation [3] Immediate surgical repair is the standard care of treatment to prevent penile deformity and to preserve sexual function. Surgical treatment includes evacuation of the hematoma, suturing of the tunica albuginea and urethral repair if associated [4] Ultrasound is a quick reliable test to identify and grade penile fracture injury. Ultrasound reveals discontinuity in the bright echogenic line of the tunica albuginea and hematoma deep to the buck's fascia [5].

Urethral injuries need urethrogram for the assessment, however presence air in the cavernosal tissue is suggestive of possible associated urethral injury. Ultrasound can also grade penile fracture, grade 1 includes tear of the tunica albuginea, grade 2&3 is associated with hematoma. In grade2, the hematoma is seen on either side of tunica albuginea whereas in grade 3, the hematoma extends to involve the deep fascia. Grade 4 penile fracture is associated with urethral injury. MRI can also be used for the evaluation of the penile fracture injury due to its multiplanar capability and excellent soft tissue contrast. Disruption of the low signal intensity tunica albuginea and associated hematoma are the observed features.

Early surgical intervention is known to reduce the incidence of long term complications, however 6-25% patients can still have long term sequale in form of erectile dysfunction, penile deviation, painful erection, urtethral strictures [6].

Conclusion

Penile fracture is a urological emergency necessitating prompt diagnosis and surgical repair to prevent penile deformity and preserve sexual function.

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