

Blunt scrotal trauma causing testicular rupture: A case report

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INTRODUCTION

Injuries to the scrotum have been reported to be rare, accounting for less than 1% of injuries among patients presenting with injuries associated with trauma (1-3), with the peak occurrence among the age group of 10 and 30 years of age (1). These injuries can be classified according to their etiology – penetrating, blunt, degloving, and thermal injuries, with blunt trauma being more common (2, 3). Blunt trauma to the scrotum may cause injuries such as testicular rupture, testicular fracture, haematoma formation, haematocoele, testicular torsion, and spermatic cord injuries (2). We report a case of testicular rupture following blunt scrotal trauma.

CASE REPORT

A 19-year-old gentleman presented post trauma. Patient was allegedly riding a motorcycle, and sustained a fall, falling forwards with his scrotum colliding with the side-mirror of the motorcycle. Post trauma, patient complained of pain over the left hemi-scrotum, but otherwise had no abdominal pain or haematuria. Upon assessment, abdomen was soft, and non-tender. There was swelling and tenderness over the left hemi-scrotum, with no overlying skin changes. Left testis was enlarged and tender upon palpation. Aside from a laceration wound over the chin, there were no other major injuries sustained. Blood investigations were within normal range. A provisional diagnosis of left testicular rupture was made, and an urgent ultrasound scrotum was arranged.

Scrotal ultrasonography revealed an area of ill-defined hypoechoogenicity at the upper pole of left testis, with irregular and thickened tunica albuginea, and absence of internal vascularity of the whole left testis (Figures 1 to 3). Left epididymal head, body, and tail, and left spermatic cord were swollen with increased Doppler signal, and there was a complex left haematocoele with moving echogenic debris within. Right testis was normal. Patient was counselled and posted for surgical exploration.

Scrotal exploration was made through a midline scrotal incision. Intraoperatively, there was left haematocoele, and the left testis was ruptured over the mid to lower pole, with a defect in the tunica albuginea and protrusion of haemorrhagic seminiferous tubules (Figure 4). Left orchidectomy was done in view of a large defect with apparent non-viable tissue. Histopathological examination revealed focal capsular disruption with areas of preserved seminiferous tubules architecture, which was surrounded by haemorrhagic interstitium, consistent with testicular injury.

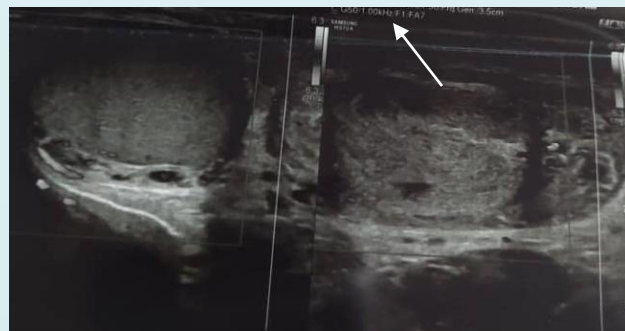


Figure 1. White arrow showing irregular area of tunica albuginea.



Figure 2. Showing hypoechoogenic and heterogeneous testicular parenchyma.

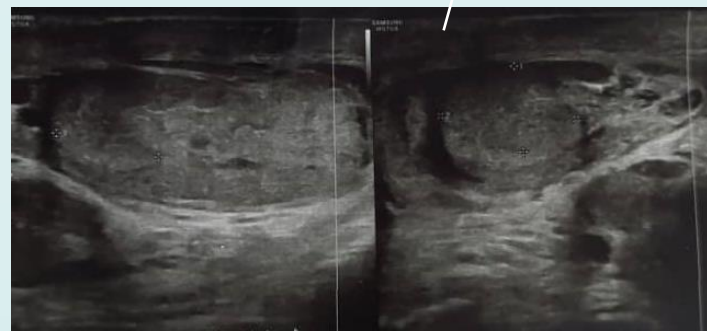


Figure 3. Showing heterogeneous testicular parenchyma. White arrow showing haematocoele.



Figure 4. Intraoperative findings of ruptured left testis.

DISCUSSION

Due to the relative mobility of the testis within the scrotum, the protective cremasteric reflex, and the tough capsule of the tunica albuginea, blunt trauma to the testis is infrequent (1, 4, 5). However, blunt trauma to the scrotum may cause compression of the testis against the pubic symphysis leading to injuries, including testicular rupture, haematoma, and haematocoele (4).

Testicular rupture is defined as the rupture of the tunica albuginea, with extrusion of the contents (2-4). This may lead to the release of spermatic antigens and the production of anti-sperm antibodies following exposure to the immune system, which may lead to infertility (6).

Patients with testicular rupture often present with pain and swelling over the scrotum (2). Examination findings typically include swelling, tenderness, abrasion, ecchymosis, and skin haematoma over the affected hemi-scrotum (2). However, often times, clinical examination of the scrotum may be difficult and unreliable (5).

Ultrasonography is often used as an adjunct in the evaluation and diagnosis of scrotal trauma, and has been shown to have high sensitivity in detecting testicular rupture (2, 5, 7, 8). Sonographic criteria for scrotal and testicular injuries include haematocoele, loss of contour definition, breach in tunica albuginea, hypoechoogenic and heterogeneous testis parenchyma, testicular haematoma (8), as was seen during ultrasonography of this patient.

Once a diagnosis of testicular rupture has been made, early surgical exploration within 72 hours and repair is warranted to increase the salvage rate of the testis (2). In this patient, repair was not feasible, and hence an orchidectomy was performed instead of a testis salvaging surgery.

Although controversial, conservative management may also be an option. While some think there is increased risk of infection and testicular atrophy, others have reported successful conservative management of testicular rupture (2-4).

CONCLUSION

Scrotal injuries are rare. Nonetheless, serious injuries such as testicular rupture may occur following blunt scrotal trauma. A thorough history and clinical examination are essential in the evaluation of the patient presenting with scrotal injury, with a high index of suspicion. An ultrasonography of the scrotum can identify the injuries sustained, and aids management. A diagnosis of testicular rupture should be prompt a surgical exploration to salvage the testis and to preserve fertility and to prevent complications which may develop from testicular rupture.

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