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Case Report

Surgery Section

Torsion in an Ectopic Testis: A Case Report

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ABSTRACT

Torsion of an ectopic testis represents a rare but clinically significant condition, often complicated by its atypical anatomical location and the resulting diagnostic uncertainty. Because the testis lies outside the normal scrotal position, classical signs of testicular torsion may be absent or misleading, contributing to delay in recognition and definitive management. We describe the case of an adolescent male who presented to the emergency department with a four-day history of progressively worsening right inguinal pain and swelling, accompanied by a known history of an empty right hemiscrotum since birth. This case underscores the importance of considering torsion of an ectopic or undescended testis in the differential diagnosis of acute inguinal or lower abdominal pain, especially in pediatric and adolescent patients with an empty hemiscrotum. Failure to recognise this possibility can result in irreversible testicular damage and subsequent loss. Moreover, the report highlights the critical value of Doppler ultrasonography as a non-invasive, rapid, and accessible diagnostic tool that can provide essential information regarding testicular perfusion and guide urgent surgical decision-making. Enhanced awareness of this uncommon presentation may contribute to earlier detection, timely management, and improved clinical outcomes in similar cases.

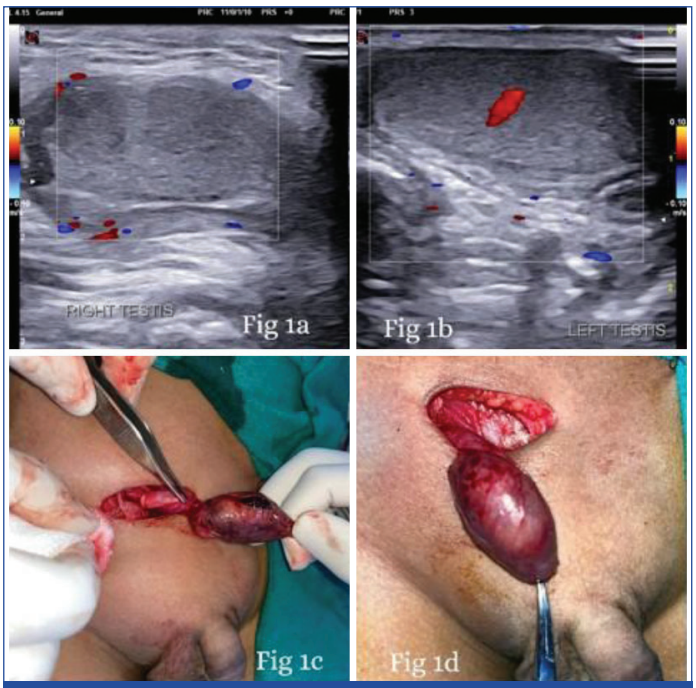
Keywords: Doppler ultrasonography, Orchidectomy, Superficial inguinal pouch, Undescended testis

CASE REPORT

A 12-year-old boy presented to the emergency department with complaints of acute onset severe right groin pain for four days, with no relieving or aggravating factors, associated with a tender lump in the right groin. He had no history of trauma, dysuria, or fever. He had a history of an empty right hemiscrotum since birth. On examination, he had a lump of about 4×3 cm in his right groin, which was hard, immobile, and tender. The right hemiscrotum was empty, and the left testis was palpable in the scrotum in the normal location. With the provisional diagnosis of torsion in an undescended testis, an urgent Doppler ultrasound was done, which showed a testis of 1.3×2.4 cm in the right inguinal region rotated around its axis, and a bulky epididymis with absent flow in the right testis or epididymis [Table/Fig-1a,b]. He was taken up for immediate surgical exploration. The testis was found in ectopic position in the superficial inguinal pouch just beneath the Scarpa's fascia, and the cord showed around two twists on its axis [Table/Fig-1c,d]. The testis was completely devascularised without any colour change, even after five minutes of warm saline-soaked gauze application. As intraoperative assessment confirmed the non-viability of the right testis, a right orchiectomy was performed. The left testis appeared normal and healthy upon examination, and a prophylactic left orchidopexy was performed. The patient's postoperative course was uneventful, and the patient was discharged on the third postoperative day. Recovery was normal. He is doing well and is scheduled for follow-up in 6 months.

DISCUSSION

An undescended testis cannot be brought down to the bottom of the scrotum without applying excessive tension on the spermatic cord. A true undescended testis is seen along the path of normal descent of the testis [1]. An ectopic testis, however, is found in locations other than along the natural descent pathway. The common sites are superficial inguinal pouch (Denis Browne pouch), perineum, femoral canal, contralateral scrotum, Transverse Testicular Ectopia (TTE) and prepenile area [1]. The superficial inguinal pouch is the space created by the tunica vaginalis in the groin. It is limited superficially by Scarpa's fascia and its deep attachment to the fascia lata just caudal to the inguinal ligament [1]. Torsion of an ectopic testis, although rare, represents a recognised surgical emergency. An ectopic undescended testis is associated with a 10-fold increased risk of torsion compared to a normally descended testis [2].



[Table/Fig-1]: a,b) Right testis ultrasound Doppler showing absence of internal vascularity in comparison with the left testis; c) Intraoperative image showing a non-viable right ectopic testis (superficial inguinal pouch) delivered through a right inguinal incision; d) Twisted spermatic cord demonstrating torsion of the right ectopic testis.

Torsion in an ectopic testis can be difficult to diagnose clinically, as symptoms may mimic other conditions like an irreducible inguinal hernia or acute abdominal pain. The absence of the testis in the scrotum can also delay diagnosis [3]. Very few cases have been reported in the literature, highlighting the variability in its presentation. Notably, Fujii T et al., described the role of ultrasound in a case of torsion in an ectopic testis situated within the superficial inguinal pouch [3]. Additionally, Doshi B et al., also described nine different

cases of torsion involving ectopic testes reported in the literature so far, and most of which were seen in the superficial inguinal pouch or intra-abdominal region [4]. These reports underscore the importance of considering testicular torsion as the first differential diagnosis of acute groin pain in patients where the testis is not located within the scrotum. Doppler ultrasound typically demonstrates diminished or absent blood flow in the affected testis relative to the contralateral side.

Early diagnosis and intervention improve outcomes in testicular torsion, yet the chance of retaining testicular viability in undescended testes remains low (~10%) compared to normally descended testes (~70%) within 12 hours [5]. The management of any testicular torsion is urgent inguino-scrotal exploration. Surgical exploration, along with ultrasound Doppler, helps to delineate the position of an ectopic testis [3-5]. Orchidectomy is done in cases where the testis is grossly ischaemic showing no change in colour even after warm gauze compressions. Further, a contralateral orchidopexy is also done to prevent torsion in the normal testis in future.

CONCLUSION(S)

Ectopic testis is a rare entity. Torsion in such a testis is very uncommon and hence often missed. Any patient with an acute onset of pain and inguinal swelling in the setting of cryptorchidism should raise the suspicion of torsion and warrant urgent evaluation with Doppler ultrasonography and immediate surgical exploration.

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