World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(CASE REPORT)

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A spontaneous acute abdomen revealing testicular torsion of an undescended testicle

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World Journal of Advanced Research and Reviews, 2024, 21(03), 2356–2359

Publication history: Received on 04 February 2024; revised on 26 March 2024; accepted on 28 March 2024

Article DOI: https://doi.org/10.30574/wjarr.2024.21.3.0840

Abstract

Torsion of an ectopic testicle is an exceptional condition, occurring mainly in young adults. Its etiopathogenesis is still poorly understood.

The clinical picture consists of the sudden onset of abdominal pain without fever, associated with a palpable inguinal mass and an empty scrotum. Medical imaging appears to play a limited role. The management of torsion of an undescended testicle involves urgent surgical exploration.

An inguinal incision allows diagnosis, detorsion, reduction and orchidopexy in dartos after lowering the testicle if the testicle is viable and the spermatic cord is of sufficient length.

Keywords: Testicular torsion; Undescended testis; Cryptorchidism; Orchiectomy

1. Introduction

Cryptorchidism is a fairly common pathology in urology. It is associated with a high risk of infertility and degeneration. It also seems to be associated with a high risk of torsion.

Torsion of an ectopic testicle is rare, and often associated with several risk factors: premature infants, oscillating testicle and poor arterial perfusion. It represents a surgical emergency. The diagnosis should be suspected in the event of sudden abdominal pain with an empty testicular bursa. There is usually no traumatic background; most torsions occur spontaneously.

Most undescended testicles are asymptomatic; in rare situations, the diagnosis is made by torsion of an ectopic testicle, and may present as undifferentiated abdominal pain mimicking intestinal obstruction. Doctors must be aware of the diagnosis of testicular torsion, and physical evaluation of the genitourinary system for any abdominal pain presenting in young patients is mandatory.

In the majority of cases, the clinical picture included pain in the inguinal canal with, on clinical examination, a painful subcutaneous mass accompanied by locoregional inflammatory signs (heat and redness).

Doppler ultrasonography revealed an atrophic inguinal testicle with absence of testicular parenchymal perfusion.

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A conservative approach with descent of the testicle to the scrotum and orchidopexy is usually sufficient in cases where the testicle is still vascularised.

Orchidectomy is mandatory in the case of a necrotic testicle that is not vascularised after detorsion.

2. Case Report

19-year-old patient, with a history of congenital cerebral palsy, who had been experiencing sudden swelling and inflammation in the right inguinal region for 10 days.

Clinical examination revealed a mobile right inguinal mass, hard and painful on palpation. Examination of the external genitalia reveals a left testicle in place and a right scrotal void.

After having the consent of his parents, the patient first underwent a complete pre-operative assessment then was admitted to the operating room for surgical exploration which revealed a necrosed right testicle.

He underwent a right inguinal orchidectomy (Figure 1). The patient was discharged on postoperative day 1.

A left orchiectomy was performed and the patient was then transferred to our facility for further care.

Postoperative management consisted of implementing analgesic treatment with broad-spectrum penicillin-based antibiotic therapy to avoid infection.

We then sent the piece for anatomopathological study.

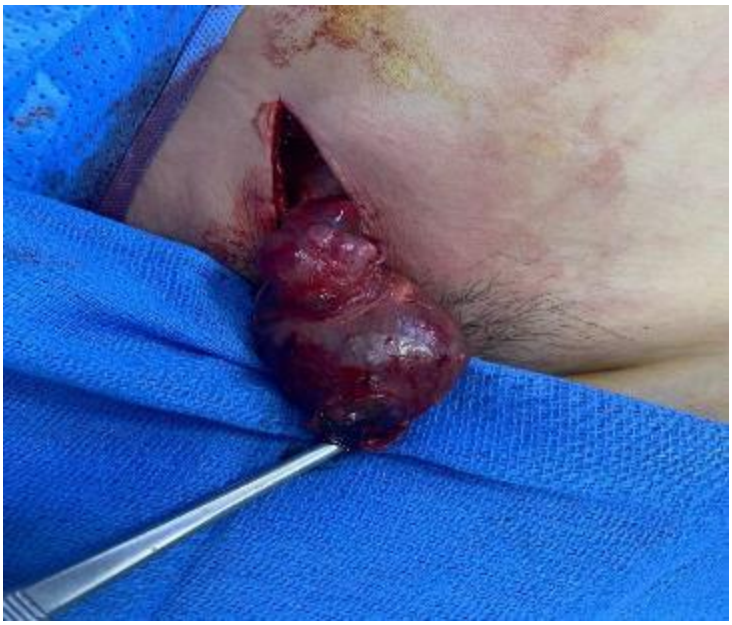

Figure 1 Perioperative image showing a necrotic right inguinal testis

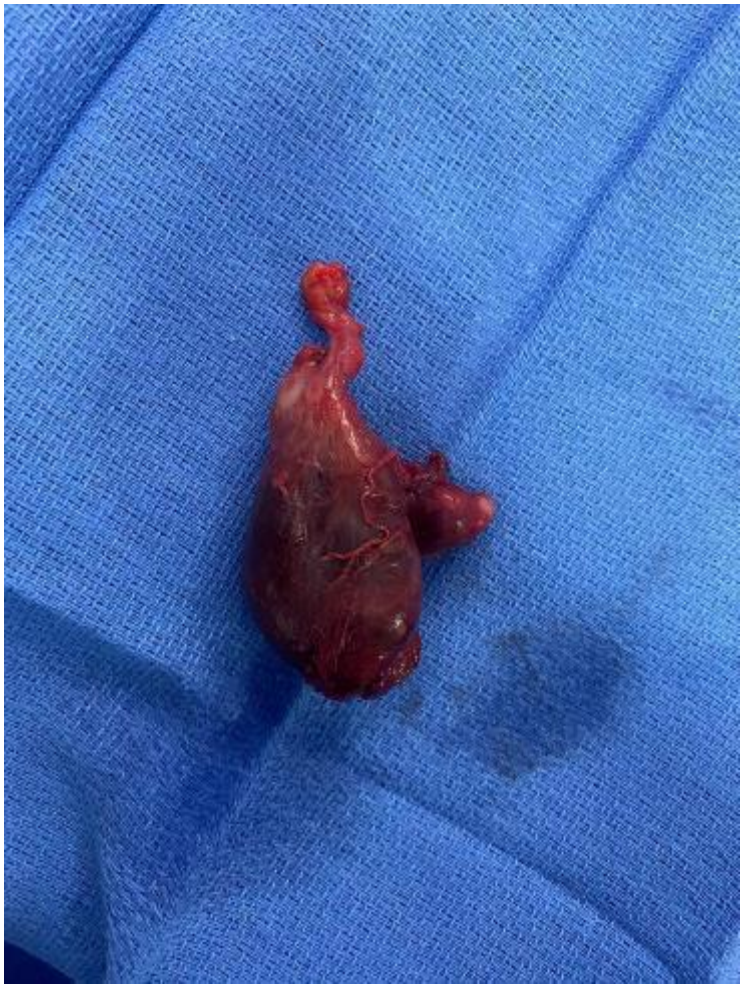

Figure 2 *O*rchiectomy of the necrosed right testicle

3. Discussion

The undescending testicle or cryptorchidism is a rare condition, its incidence varies between 0.8-1%. [1]

Testicular torsion is a diagnostic and therapeutic emergency that needs to be managed rapidly for testicular salvage due to the high risk of destruction of spermatogenic and Sertoli cells in 4 h period of ischemia. [2] Torsion of undescended testis is an exceptional condition. It is rarely seen as a differential diagnosis of acute abdominal pain because of the lack of physical assessment of the external genitalia as part of the clinical examination. [3]

Despite that the undescended testis is more predisposed to torsion, only a few cases were reported in the literature. [2] Its etiopathogenic is still controversial.

Until the 34th–36th weeks of life, the testes are in an extraperitoneal location, and then they descend into the scrotum through the inguinal canal. The undescended testes are seen in 3.5% of full-term infants. Most cases reduce spontaneously, and only 1% persists at 1 year of age. Neural tube defect disorders, cerebral palsy, and genetic disposition are identified risk factors seen in undescended testes. [2],[4] It has been proposed in patients with neuromuscular disorders that abnormal contractions of the cremasteric muscles can cause torsion, or that contractures of the hips prevent descent into the normal scrotum. Moreover, infertility and testicular cancer are the principal complications of untreated cryptorchidism. [4]

The unusual presentation of torsion of the undescended testis is a diagnostic dilemma and could delay the surgical treatment leading to irreversible necrosis. It may present with clinical features that could be confused with acute appendicitis, incarcerated hernia, or intestinal obstruction. [4] Therefore it should be considered in any patient with acute abdominal symptoms and empty testicular bursae.

The ultrasonography and color Doppler could be done without retarding the immediate surgical exploration to confirm the diagnosis. However, in some cases it may fail to differentiate between incarcerated inguinal hernia and torsion of an undescended testis, Slijper and al[5] found two cases of incarcerated inguinal hernia diagnosed in echo doppler revealed in surgical exploration as torsion of an undescended testis, in addition, the third case of torsion of undescended testis diagnosed by an echo doppler found out at surgical exploration as an incarcerated inguinal hernia. Therefore, he concluded that the diagnosis of torsion of undescended testis should be clinical rather than radiological.

Regardless of the location of the testis, the treatment of choice for suspected testicular torsion is immediate surgical exploration. [5] Furthermore, the orchidopexy of the contralateral testis is still a subject of debate. In our case, the patient underwent a right inguinal orchidectomy and a descent of the left testis with orchidopexy.

This case is interesting not only for the rarity of the condition but also because it points to a diagnosis that is important to consider in any male presenting with abdominal or groin pain. Torsion of an undescended testis can be difficult to diagnose because it can mimic other surgical emergencies. Moreover, it emphasizes the need for a proper abdominal, inguinal, and genitourinary examination of a patient presenting with acute abdominal pain, especially in a patient who is unable to communicate well with the emergency physician.

4. Conclusion

Torsion of undescended testis is an almost rare condition the emergency physicians must be aware of this situation to prevent the testicular infarction, an assessment of the genitourinary system should be routinely included in the abdominal examination.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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