Acute abdomen revealing a testicular torsion of an undescended testis
“case report”

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ABSTRACT

Undescended testis is a common situation in pediatric age groups, often asymptomatic. Torsion of an undescended testis remains an exceptional condition. Delayed diagnosis in many cases involves the prognosis of the testis, hence the importance of a correct clinical assessment including the examination of the external genitalia. Immediate surgical exploration should be performed without delay for testicular salvage. This paper aims to report the first case of torsion of an undescended testis in a 16 years old patient with bilateral testicular ectopy.

1. Introduction

The undescending testicle or cryptorchidism is a testicle whose location is not in the scrotum but the trajectory of its maturation. In adults and children older than 1 year, the incidence of an undescended testicle is 0.8-1%.

The most undescended testicles are asymptomatic, in rare situations, the diagnostic is made by the torsion of an ectopic testis, and it can be presented as an undifferentiated abdominal pain mimicking an intestinal obstruction. Emergency physicians must be aware of the diagnosis of testicular torsion and physical assessment of the genitourinary system for any abdominal pain presented in young patients is mandatory.

We are reporting a case of bilateral testicular ectopy with torsion in the undescended right testis with unusual clinical presentation and to discuss its diagnostic dilemma and urgent management.

2. Patient and observation

A 16 years old patient with no pathological history was admitted to the emergency room for diffuse abdominal pain associated with abdominal bloating and vomiting for two days. Clinical examination found a conscious patient hemodynamically and respiratory stable. Abdominal palpation objectified a diffuse abdominal tenderness with a painless right inguinal mass mobile to the superficial plane. Further more, the urogenital examination found an empty scrotum.

The abdominopelvic and scrotal echography found a right testicle of inguinal seat measuring 35 * 21 * 17 mm, heterogeneous hypoechoic containing hyperechoic areas, not vascularized on Doppler, with individualization of an image of a turn of the coil facing the cord spermatic in favor of a right testicular torsion. with a straight hydrocele blade. The left testicle is inguinal, small in size, measuring 22 * 19 * 8 mm with regular, homogeneous contours vascularized on Doppler (Fig. 1). The biological assessment was normal.

After having the consent of his parents, the patient underwent a right inguinal orchidectomy (Fig. 2), with a descent of left ectopic testis with orchidopexy (Fig. 3). The patient was discharged on postoperative day 1.

Consent from the patient has been taken for this case report.

3. Discussion

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. 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.

Despite that the undescended testis is more predisposed to torsion, only a few cases were reported in the literature. 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. 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.

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. 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 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. 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.

Fig. 1. Echographic images showing a right inguinal testicle measuring 35 * 21 * 17 mm, heterogeneous hypoechoic containing hyperechoic areas, not vascularized on Doppler.

Fig. 2. Perioperative image showing a necrotic right inguinal testis.

Fig. 3. Perioperative image showing a cure of left undescended testis.
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.

Authors’ contributions

Specify the contribution to the work and write-up of the manuscript for each person listed as author.

Declaration of competing interest

None of the contributing authors have any conflict of interest, including specific financial interests or relationships and affiliations relevant to the subject matter or materials discussed in the manuscript.

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