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Ectopic Testicular Torsion: About 2 Cases

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Case Report

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Abstract

Cryptorchidism is developmental defect in which a testis or both testes failed to descend from high in the abdomen to the bottom of the scrotum. Testicular descent is essential to normal spermatogenesis which requires temperature lower than the body temperature. We report two patients consulted for inguinal pain and were diagnosed with torsion of the spermatic cord on undescended testicle. The first consulted late and had a necrotic testicle, the second consulted on time and operative exploration found a viable testicle.

Keywords: Ectopic Testicle; Torsion; Pediatric Urology

Introduction

Cryptochidism is defined as a defect in the migration of the testicle through the inguinal canal into the scrotum, placing the testicle in an ectopic position in this canal or in an intra-abdominal position [1]. Spermatic cord torsion of an undescended testicle is a rare surgical emergency whose diagnosis is often delayed due to the unusual location of the testicle, and is therefore associated with a higher risk of orchiectomy [2].

Cases

Case 1

A 14-year-old patient with no pathological history presented with 2 days' left inguinal pain. Clinical examination revealed a soft abdomen, painful inguinal swelling and empty left hemiscrotum with right testicle in position. Ultrasound revealed torsion of the spermatic cord on a undescended testicle in inguinal position, with 2 turns of the spiral and a size decreased, non-vascularized testicle.

Surgical exploration was decided upon, performed via the inguinal approach, and revealed a torsion of the left spermatic cord on a pelvic ectopic testicle. The testicle was dark and did not regain its color after detorsion and soaking in warm saline Figure 1. An orchiectomy is then performed. Anatomopathological study revealed ischemic necrosis of testicular parenchyma with no sign of malignancy.

Figure 1: Intraoperative image showing a necrotic ectopic testicle.

Case 2

16-year-old patient, known to be have cryptorchidisme condition, presenting for 5 hours with pain in the left inguinal region, with no other associated signs. Clinical examination revealed a left inguinal mass that was mobile, hard and painful to palpation. Examination of the external genitalia revealed a right testicle in place, with a scrotal void on the left. Ultrasound revealed a well-defined oval mass of heterogeneous tissue resonance, measuring 3.4 x 1.3 x 3.4 cm, surrounded by a small layer of fluid effusion. Inguinal surgical exploration revealed torsion of the left spermatic cord on a pelvic ectopic testicle. After testicular resuscitation with warm saline, the testicle regained satisfying color and perfusion Figure 2. Orchidopexy was performed.

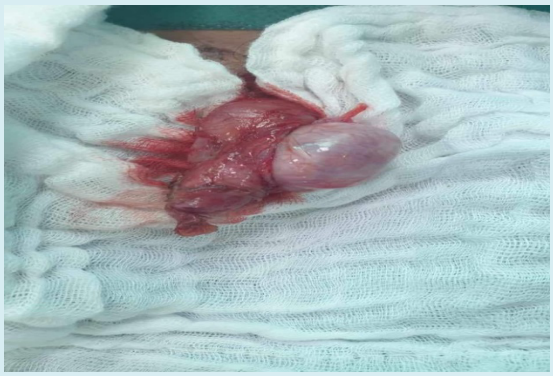

Figure 2: Image showing the ectopic testicle having regained its coloration after detorsion.

Discussion

Cryptorchidism is a relatively frequent congenital pathology in pediatric urology. The risk is multiplied by 10 in premature babies, low-birth-weight new-borns and those with a neuromuscular pathology [3]. It is the cause of complications, the most documented in the litterature being infertility and malignant transformation [4]. The absence of the testicle in the scrotum also predisposes to other risks, namely a high risk of torsion and exposure to trauma, not to mention the psychological impact of this pathology.

The first case of torsion of the spermatic cord on undescended testicle reported in the literature was by Gerster in 1897, and involved a sarcoma [5]. In 1964, Johnson And Holmes described cases of torsion on an ectopic testicle in patients suffering from spasmodic neuromuscular diseases. Up to 1984, 26 cases were reported in subjects with spasmodic neuromuscular disease [6]. The frequency of this condition is low: in a series of 153 cases of torsion of the spermatic cord, there were only three cases of undescended testicles [7]. It is a complication that most often occurs in young people, with a peak in frequency between the ages of 14 and 15 [7-9].

The mechanism of torsion in this context remains poorly understood. One theory is that it may result from a disproportion between the size of the spermatic cord and that of the cryptorchid testis, which is often atrophied. This disparity would create increased tension on the testicle, thus increasing the risk of torsion. This theory remains relevant even in the presence of a tumoral testis, which may twist under its own weight [10]. A second theory puts forward the role of the cremaster muscle, which, through pathological contractions, could especially induce torsion in individuals with neuromuscular pathology [11]. A third theory suggests a defect in the apposition of the epididymis in relation to the testis, creating a particular configuration predisposing to torsion [3]. It is noted that torsion is twice as frequent when the left testicle is involved, as the cord in this case is longer [12].

In fact, the possibility of torsion on undescended testis should be considered in any child presenting with inguinal or abdominal pain, associated with a painful inguinal mass and an empty hemiscrotum on the same side [10].

Torsion of an intra-abdominal testicle is relatively common in adults aged between 20 and 40. Symptoms may include abdominal pain associated with digestive symptoms such as nausea and vomiting. Common differential diagnoses include acute appendicitis and diverticulitis, but the absence of an intrascrotal testicle is an important diagnostic indicator. It should be noted that the risk of degeneration in this location is four times higher than when a testicle is located in the groin [13,14].

If the testicle remains viable after detorsion, the authors suggest two distinct options: either lower the testicle in the same surgery, or defer it to a second time. The majority of authors recommend systematic fixation of the contralateral testicle [3,10,12].

The rate of preservation of the twisted testicle in scrotal position varies between 20% and 92% depending on the series [10]. The literature does not provide a rate for cryptorchidism, but it seems that the chances of recovery are lower, probably due to the often late diagnosis.

Conclusion

Ectopic testicular torsion remains a rare occurrence. Its lack of recognition is frequently responsible for delays in diagnosis, and its consequences can be serious. It is crucial to consider this diagnosis in the face of any acute pelvic or inguinal pain in a child. Ultrasound combined with Doppler

not only helps to confirm the diagnosis, but also to adjust the surgical management appropriate to the situation.

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