

TORSION OF A CRYPTORCHID TESTICLE : A CASE REPORT

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ABSTRACT

Cryptorchidism, common in urology, carries a high risk of infertility, degeneration, and also appears to be associated with an increased risk of torsion. Despite this, it remains under-addressed in the medical literature. We report the case of an 18-year-old patient, without any particular medical history, brought by his parents to the consultation for a painful right inguinal mass evolving over 72 hours, and whose clinical examination had revealed a painless right inguinal swelling upon palpation. Treatment required emergency surgical exploration revealing torsion of the spermatic cord on a cryptorchid testicle, which was resolved by orchidectomy.

Keywords : *Spermatic cord torsion, Torsion of the cryptorchid testicle, Mauritania*

INTRODUCTION

Cryptorchidism is defined as a failure of testicular descent through the inguinal canal into the scrotum, resulting in ectopic positioning of the testicle within this canal or in an intra-abdominal position [4]. Various publications on this condition focus on the increased risk of infertility and degeneration associated with this anomaly [5]. Additionally, cryptorchidism is linked to a higher risk of torsion compared to a normally descended testicle, with the risk reported to be 10 times higher according to findings by WILLIAMSON [12]. This represents a genuine urological emergency, with diagnosis often delayed due to the unusual location of the testicle, thereby posing a higher risk of orchidectomy [4].

The diagnostic and therapeutic challenges associated with this condition motivate us to present this case, aiming to better characterize this clinical entity to facilitate diagnosis and, consequently, to attempt to reduce the rate of orchidectomies.

CLINICAL CASE

An 18-year-old patient, with no significant medical history, was brought by his parents to the consultation for a painful right inguinal mass evolving over 72 hours.

Clinical examination revealed :

-On inspection, a slight bulge at the level of the right superficial inguinal orifice (**Fig 1**).

-On palpation, presence of a fixed, slightly painful oval mass at the level of the right superficial inguinal orifice. Additionally, an absence of the right scrotal content was noted, while the left testicle was palpable at the bottom of the left scrotum with a normal appearance and sensitivity (**Fig 1**).

Abdomino-pelvic ultrasound revealed torsion of the right spermatic cord with a non-vascularized testicle in the inguinal position.

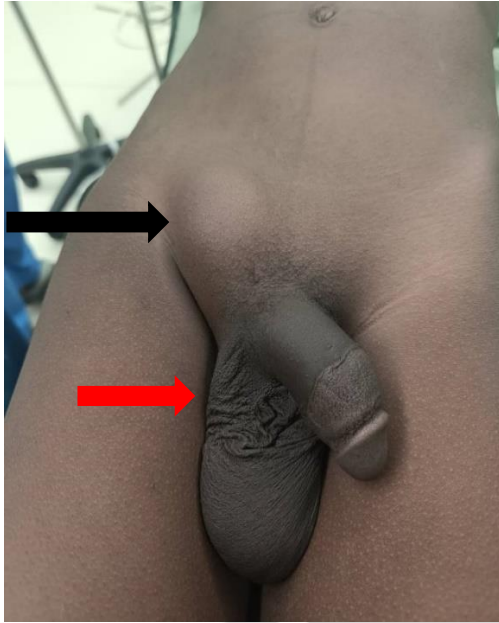


Fig 1 : Black arrow: a bulge at the level of the right superficial inguinal orifice ;
Red arrow : absence of content in the right scrotum

The hematological coagulation tests were normal.

Emergency surgical exploration, performed under spinal anesthesia, involved a right inguinal incision followed by dissection and hemostasis of the subcutaneous tissue.

This procedure revealed a necrotic cryptorchid right testicle at the level of the superficial inguinal orifice (**Fig 2.A**). After opening the aponeurosis of the external oblique muscle, torsion of the spermatic cord of the cryptorchid testicle with a very tight one-loop twist was noted (**Fig 2.B**). Treatment consisted of orchidectomy after double clamping with Kocher forceps, followed by sectioning and ligating the spermatic cord with Vicryl 1.

The postoperative course was uneventful. The patient was discharged the day after the procedure. Postoperative follow-up at day 7 and at 1 month was satisfactory.

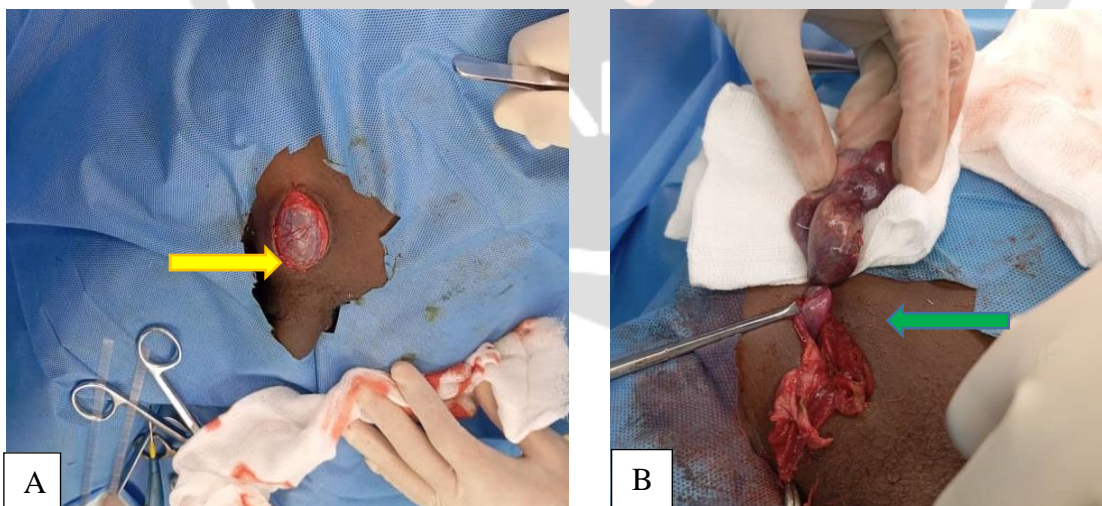


Fig 2 : Perioperative view :

Yellow arrow : a right inguinal incision followed by dissection and hemostasis of the subcutaneous tissue, revealing a necrotic cryptorchid right testicle at the level of the superficial inguinal orifice;

Green arrow : torsion of the spermatic cord of the cryptorchid testicle with a very tight one-loop twist.



Fig 3 : Right orchidectomy specimen

DISCUSSION

Cryptorchidism is a common congenital condition in pediatric urology. The risk is multiplied by 10 in premature infants, newborns with low birth weight, and those with neuromuscular pathology [2]. This migration defect interferes with the process of maturation of neonatal gonocytes into type A spermatogonia. The absence of this differentiation is the cause of complications related to this condition, the most documented in the literature being infertility and malignant transformation [5]. The fertility rate is 14% in individuals treated after the age of 13 for bilateral cryptorchidism compared to 87.5% in those operated on before the age of 2 [6]. Cryptorchidism represents the main risk factor for testicular cancer. This risk varies from 2.5 to 18%. It is maximal in cases of bilateral cryptorchidism and is not reduced regardless of the age at testicular descent [7].

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 condition [4]. Torsion of the spermatic cord was first described by DELASIAUVE in 1840 in a 15-year-old boy with torsion of a testicle in an inguinal position. The patient underwent orchidectomy [11]. In 1857, CURLING described a similar case but with a viable testicle; the patient underwent detorsion followed by descent and orchidopexy [9]. The frequency of this condition is low, HAND [3] in a series of 153 cases of spermatic cord torsion, found only three cases of undescended testicles (1.9%). It is a complication that most often occurs in young individuals, with a peak frequency between 14 and 15 years old [1].

While the etiopathogenesis of torsion of the spermatic cord in the normal position is clear, often related to a deficiency in fixation mechanisms, that of torsion of the ectopic testicle remains poorly understood [8]. Several mechanisms have been implicated in the genesis of torsion on an undescended testicle [4]:

- Spasmodic contraction of the cremaster muscle after physical exertion.
- Increased testicular volume.
- Mobility of the testicle within the abdominal cavity.
- Massage by peristaltic waves of the intestinal loops.
- The angular disposition of the spermatic cord.

Functional signs are dominated by sudden, intense pain localized to the inguinal region or iliac fossa, which diminishes after a few hours, indicating an ongoing necrotic process [10]. It constitutes the initial symptom in 80% of cases [1].

Palpation of the abdomen reveals pain localized to the iliac fossa and hypogastric region, and a mass when the testicle is in the inguinal position. Examination of the external genitalia shows absence of the homolateral scrotal contents. The cremasteric reflex is absent in cases of spermatic cord torsion. However, this sign can also be found in incarcerated inguinal hernia or testicular tumor [1]. At this clinical stage, the main differential diagnosis in children includes acute appendicitis, incarcerated inguinal hernia, abscess, or testicular tumor [1], but the absence of the homolateral testicle is a good diagnostic indicator [4].

In our case, clinical examination revealed a slightly painful swelling at the level of the right superficial inguinal orifice and absence of content in the right scrotum.

Abdominal ultrasound is not a reliable examination for the diagnosis of ectopic testicular torsion [10]. Its sensitivity is 13 to 17% when the testicle is not palpable [10]. Color Doppler ultrasound can confirm the absence of blood flow in the testicle during torsion. CT scanning has good sensitivity if the testicle volume is greater than 1 cm and when its location is in the inguinal canal or near the deep inguinal orifice. MRI has a sensitivity of 88% and a specificity of 100% [1].

In our case, ultrasound revealed torsion of the right spermatic cord with a non-vascularized testicle in the inguinal position.

The treatment of torsion on an undescended testicle is a surgical emergency that must be performed within the first six hours and should not be delayed by any additional examinations [1]. The objectives of this treatment are to restore testicular vascularization through detorsion by counting the number of twists, to prevent recurrence by fixing the testicle after its descent, and to prevent contralateral torsion through orchidopexy. First, control of the cord is imperative if testicular tumor is suspected [1]. Orchidectomy is performed when the testicle is not viable [1].

The rate of salvage of the twisted testicle in the scrotal position varies between 20 and 92% depending on the series. The literature does not provide rates for cases of cryptorchidism, but it seems that the chances of recovery are lower since the diagnosis is often made late [4].

In our case, the testicle was necrotic, and there was no recovery of normal testicular coloration after detorsion, leading to the decision to perform an orchidectomy.

CONCLUSION

Torsion of an undescended testicle is a rare surgical emergency but should be considered in the differential diagnosis of inguinal masses, especially in patients with neuromuscular disorders. Diagnosis relies primarily on clinical examination. The only treatment option is emergency surgery. Orchidopexy of the contralateral testicle should be performed either during the same procedure or later. Prognosis depends on the timeliness of torsion management. Early screening for cryptorchidism at birth and during schooling is crucial for preventing this condition.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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