A rare variant of inguinal hernia with cryptorchid testis: a case report

Hernie inguinale droite a contenu testiculaire : a propos d'un cas

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SUMMARY

Introduction : Cryptorchidism is common in children, but remains rare in adults. In such a condition the testicle is in an extrascrotal location. The testis is in the upper part of the inguinal canal, between the internal and external inguinal rings (ectopic descent) or even in the abdominal cavity (undescended testis). Cryptorchidism may be mistaken for a groin hernia, then the examiantion of the scrotum must be part of the physical examination when we look for an inguinal or femoral hernia.

Case report: 38-year-old man who presented with history of an uncomplicated right inguinal hernia. The physical examination noticed the vacuity of the right scroctum. The computed tomography confirmed the examiantion's findings. The uncommon content of the righ indirect inguinal hernial sac was surprising – the sac contained the right testis, the spermatic cord and a part of the omentum. This case brings us to encourage the exploration of the the sac content during surgical hernia repairs.

Conclusion: Cryptorchidism in adults remains a rare pathology. The treatment is surgical.

Key-words : Inguinal hernia, Orchiectomy, hernia repair.

Introduction

The term " **cryptorchidism** " etymologically means: " **hidden testicle** "[1]

It refers to an undescended testis or an ectopic descent of the testis**.**[2]. It is frequent in childhood, 3%, and often occurs simultaneously with an inguinal hernia. It is rare in adults, 0.3 to 0.8%[2-3]. The sac of inguinal hernias usually contains omentum, small bowel or colon, but uncommon contents are possible, a testis is one of those exceptions.

The purpose of this case report is to highlight the current available knowledge of this very rare condition.

Late diagnosis and treatment of cryptorchidism in adulthood are signs of failure of appropriate screening and management that should have been carried out in pediatric age.

Observation

The patient was 38 years old man, married and father of a healthy child. The patient had a past medical history of diabetes mellitus and high blood pressure, both under medical treatment. He had no past surgical history. The chief complaint was an uncomplicated right inguinal hernia, pailess, spontaniously reducible, with cough impulse; the neck of the sac was two centimeters in diameter.

The examination of the scrotum foud a normal left testis and cofirmed the emptiness of the right side of the scrotum. A fertility assessment was done including Follicle-stimulating hormone (FSH), Prolactin, and Testosteron - it

showed no abormalities. However the spermogram revealed a semen hypervicosity, while the spermatozoids had an altered morphlogy, but a normal vitality and motility.

The findings of the abdominopelvic computerized tomograph (CT scan) were consistent with the finding of the physical examiantion: 38-mm right inguinal defect. Hernial sac contained mainly a hypotrophic right testicle, measuring 27x21x24 mm in diameter, homogeneous with mild contrast enhancement (Fig1). The final and retained diagnosis was: right inguinal hernia with an undescended right testis as sac content. A referral to our collegue urologist was asked in order to improve the therapeutic part of the manaqgement.

The paient underwent an open surgical procedure under general anesthesia. The intraoperative findings were in consistency with the preoperative workup. The performed surgical gestures were: reintegration of the herniated omentum into the abdominal cavity, resection of the hernial sac, orchiectomy (Fig3), hernia repair with a 15x9cm polypropylene mesh.

The specimen's histological study showed no signs of malignancy.

The post-operative follow-up was eventless. During the three months, so far, of follow-up, the patient showed no signs of recurrence.

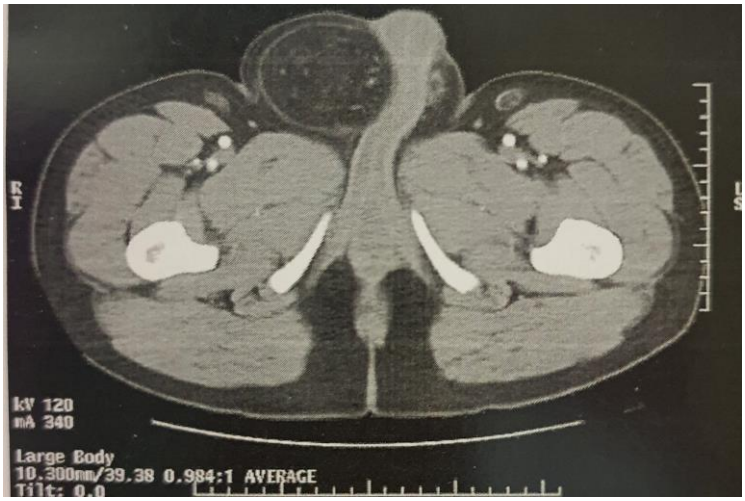

Fig1: Pelvic mass on right testicle cryptorchid

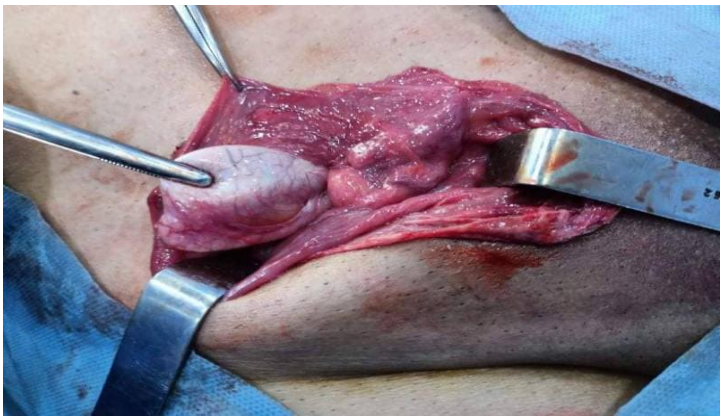

Fig2: Right testicle and spermatic cord in a hernial sac

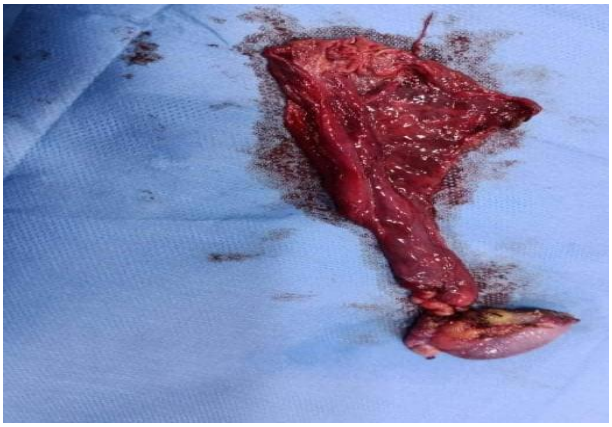

Fig3: Orchiectomy

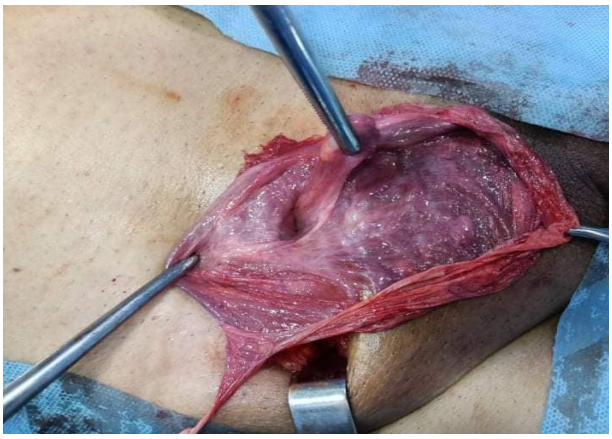

Fig4: right inguinal hernia repair with mesh

Discussion

Cryptorchidism is a congenital codition, its incidence is 2% to 4% of newborn boys and 1.5% at the age of 6 months. Cryptorchidism may be due to agenesis which is an exception, or due to an intra-abdominal arrest, or an incomplet descent with an intracanalicular site, or an ectopic descent. It is commoner on the right side.

In adults, the rate of cryptorchidism is within the range of 0.3 to 0.8% [2, 3]. Farrer and Walter [1]in a series of 10 millions military recruits, found a cryptorchidism frequency of 0.23%.

The etiology is still not well-known. However, currently, among the factors potentially mentioned are: genetic and environmental factors, prematurity, spina bifida and hormonal disorder [4]. A study concluded that smoking during pregnancy increases the risk of cryptorchidism [6]. Cryptorchidism is associated with a significant increase in the rate of infertility and testicular cancer compared to the general population.
Inguinal hernia with testis as sac content is a very rare finding, and a few cases have been recorded in the world.

The diagnosis of inguinal hernias is based on the medical history and the physical examination, confirmed by radiology which is not always necessary. [5,6].

On-time diagnosis and surgical treatment of testicular ectopia is intended to reduce the risk of cancerization and infertility. However, the risk of malignant transformation is not nil after surgery [7,11].

The prognosis of cryptorchid testicles is related to the early management. Several studies concluded that there is a direct correlation between how long the testicle has been subjected to a cryptorchid position and the incidence of testicular cancer risk assessed by TGCT (Testicular germ cell tumors) [9]. Petterson et al [11]. demonstrated that individuals who underwent corrective surgery after the age of 13 years had an incidence of 5.4%, while those who were treated before the age of 13 had an incidence rate of 2.23%.
In our case, we found no correlation between the timing of surgery and the risk of TGCT.
After 03 months of postoperative follow-up, we report no signs of recurrence in our patient. The patient will be followed for a longer period.

Conclusion

The frequency of cryptorchidism in adults remains a rare and poorly specified pathology in Algeria, due to the lack of epidemiological and statistical studies.

Our case is particularly remarkable, due to the unusual presentation that combines cryptorchidism with inguinal hernia in a 38-year-old adult.

The surgeon should always be attentive to a possible cryptorchid testis during the physical examination and even during a surgical hernia repair.

Conflicts of interest

The authors do not declare any conflict of interest.

Authors' contributions

All authors have read and approved the final version of the manuscript.

References

1. J. Farrer, R.Walter .Management of the post pubertal cryptorchid testis: astatistical review Journal. Urol 1985;135:106-07.

2. M.Averous,C. Lopez Cryptorchidism: the point of view of a pediatric urologist Gynécologie Obstétrique Fertilité 2004; 32 :813-17.

3. J. Leissner, D.Filipas et al The undescended testis: considerations and impact on Fertility. BJU int 1999; 83: 885-92.

4. Longui CA. Cryptorchidism: diagnosis and Treatment. Arq Bras Endocrinol Metabol 2005; 49(1):165–71.

5. R. Bendavid. Sliding hernias. Hernia 2002; 6:137– 40.

6. Jensen MS, Toft G, Thulstrup AM, Bonde JP, Olsen J. Cryptorchidism according to maternal gestational smoking. Epidemiology 2007; 18:220–5.

7. Tasian GE, Copp HL, Baskin LS. Diagnostic imaging in cryptorchidism: utility, indications, and effectiveness. J Pediatr Surg 2011; 46 (12):2406–13.

8. Nair SG, Rajan B. Seminoma arising in cryptorchid testis case report. Am J Clin Oncol
2002; 25:287- 8.

9. Kjaer S, Mikines KJ. HCG in the treatment of cryptorchidism. The effect of age and position of the testis. Ugeskr Laeger 2006; 168(14): 1448-51.

10. Faisal, Ben Jeddou; Samir, Ghozzi; Naufel, Ben Rais. Cryptorchidism of the adult: about 81 cases. Tunis Med. 2005; 83: 742-745.

11. Pettersson A, Richiardi L, Nordenskjold A, Kaijser M, Akre O. Age at surgery for undescended testis and risk of testicular cancer. N Engl J Med 2007 ; 356:1835-41.

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