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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# Chasing the uncommon: Intra-Abdominal Testicular Tumors case report

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World Journal of Advanced Research and Reviews, 2023, 20(02), 257–260

Publication history: Received on 20 September 2023; revised on 01 November 2023; accepted on 03 November 2023

Article DOI: https://doi.org/10.30574/wjarr.2023.20.2.2028

## Abstract

Undescended testicles, a common congenital anomaly, can increase the risk of developing testicular tumors. This case report presents the unique occurrence of an intra-abdominal testicular tumor in a 30-year-old male with a history of cryptorchidism. The patient experienced persistent hypogastric pain, and diagnostic evaluation revealed elevated tumor markers, further indicating the presence of a testicular tumor. Surgical exploration confirmed a 256g differentiated seminoma within the peritoneal cavity. The discussion highlights the increased risk of malignancy associated with cryptorchidism, the limited preventive impact of orchidopexy, and the challenges in early diagnosis due to the non-palpable nature of these tumors. It emphasizes the need for awareness, early diagnosis, and ongoing research to improve the management of intra-abdominal testicular tumors in individuals with cryptorchidism and enhance patient outcomes.

**Keywords:** Undescended testicles; Cryptorchidism; Testicular tumor; Orchidopexy; Seminoma; Early diagnosis

## 1. Introduction

Undescended testicles represent a common congenital anomaly [1], affecting approximately 10% of cases where the testicles do not descend properly. Notably, when a testicle remains located within the abdominal cavity, it carries a higher risk of developing testicular cancer compared to one situated in the inguinal region [2,3]. To reduce the risk of testicular tumors and infertility [1,2], it is generally recommended to perform orchidopexy, a surgical procedure that brings the testicle down into the scrotum, around the age of 12 months. However, it is important to acknowledge that undescended testicles may persist within the abdominal cavity even after orchidopexy due to various factors [4]. In this article, we will present a case report of a patient with an intra-abdominal testicular tumor, an exceedingly rare condition that warrants special attention.

## 2. Case Presentation

T.K., a 30-year-old male, sought medical attention due to persistent hypogastric pain that had been ongoing for one year. His medical history was significant for cryptorchidism, a known risk factor for testicular tumors. Evaluation by a general practitioner raised concerns as the left scrotum was found to be empty. Subsequent abdominal ultrasound revealed a tissue-like mass, suggesting the presence of a testicular tumor in an ectopic location.

Upon referral to urology, physical examination confirmed the absence of the left testicle within the scrotum and identified a mobile, painful hypogastric mass. Further investigations through laboratory testing indicated elevated levels of beta-HCG (11.8 UI/ml), alpha-fetoprotein (3.4 ng/ML), and LDH (1500 UI/ml), raising suspicion of a testicular

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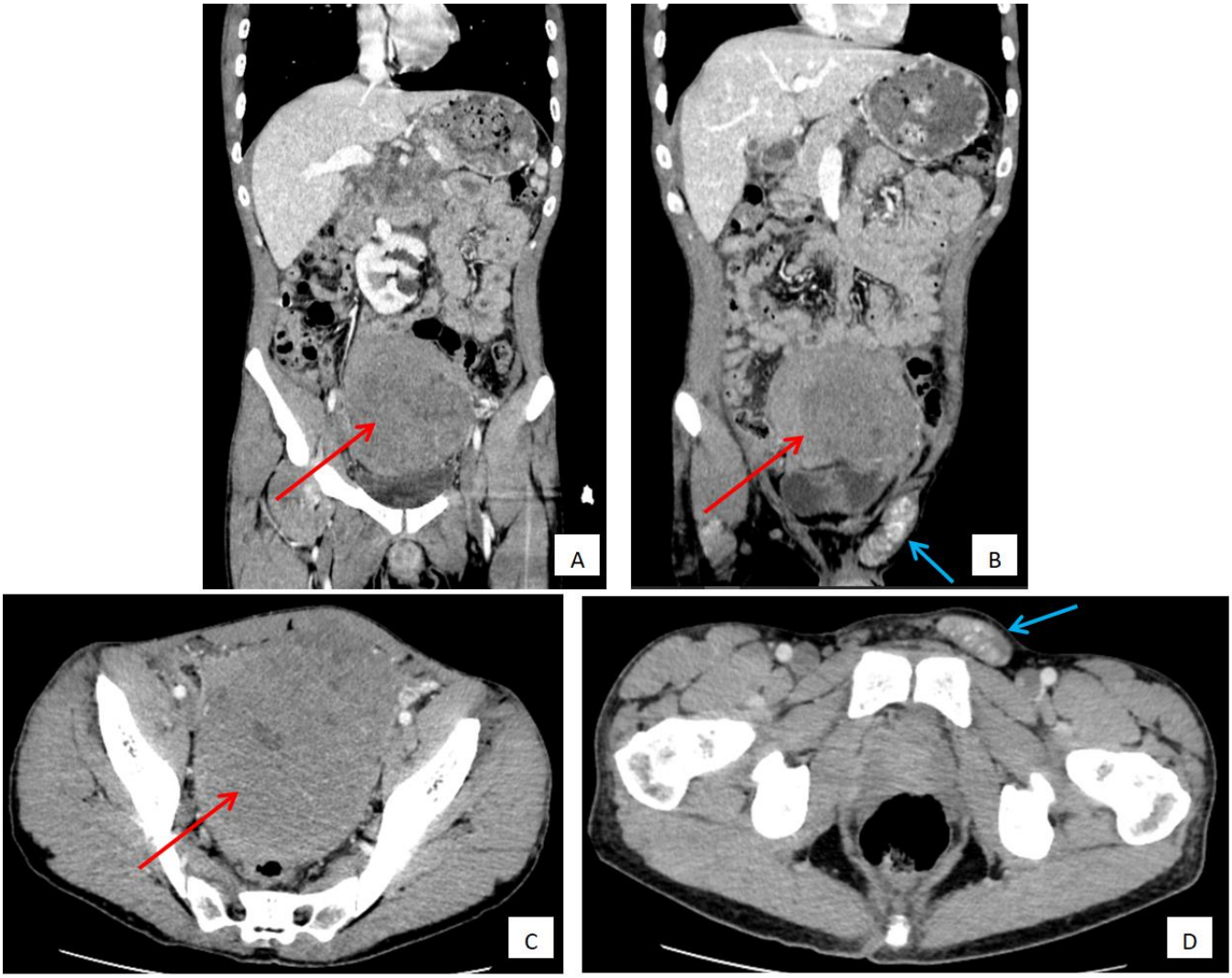
tumor. CT Scann of the abdomen and pelvis confirmed the presence of an abdominal tumor, presumably arising from an ectopic testicle.




Enhanced CT scan, in coronal (A, B) and axial (C, D) views, showing a massive and well circumscribed abdominal and pelvic mass, initially diagnosed as a GIST. Pathology concluded: it was a testicular seminoma, in an intra-abdominal position. To note an inguinal position of the left testicle.

**Figure 1** Surgical Exploration and Pathology: Surgical exploration was performed, revealing a 256g testicular tumor located within the peritoneal cavity. Histopathological analysis confirmed a diagnosis of differentiated seminoma.

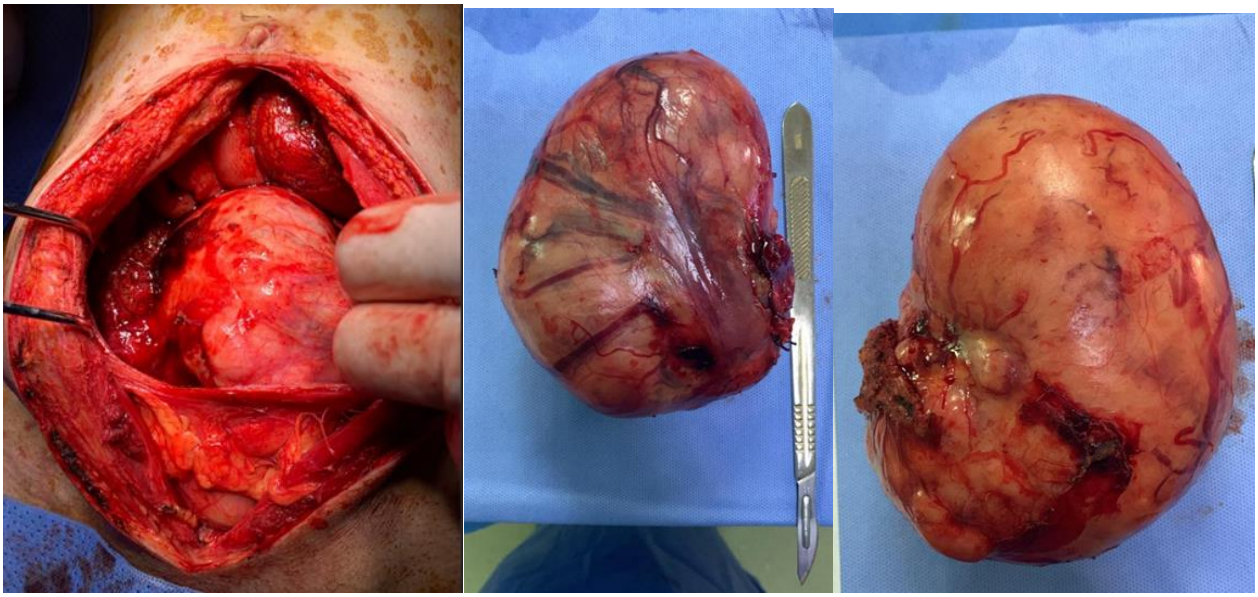


**Figure 2** Macroscopic view of the right testicular mass

## 3. Discussion

The association between cryptorchidism, or undescended testicles, and an increased risk of developing testicular tumors is well-established[5]. However, the exact prevalence of this risk remains a subject of debate due to varying data. Notable researchers such as Carnoma Campos and Campbell have contributed to our understanding of this risk. According to their work[6,7], the risk of malignancy is estimated to be 3 to 10 times higher in individuals with cryptorchidism, and even up to 48 times higher in some studies. This disparity in numbers can be attributed to different research methodologies, including the questionnaires used, classifications of undescended testicles, and data sources, which have a significant impact on odds ratio outcomes[8].

### 3.1. Impact of Orchidopexy and Biopsies

Surgical lowering of the testicle, known as orchidopexy, is commonly recommended for children with cryptorchidism to improve surveillance and reduce the risk of malignancy. However, findings from the study by Debre suggest that even after orchidopexy, the risk of testicular tumors persists, with a reported 12.5% of cases[9]. Furthermore, biopsies performed at the time of orchidopexy do not definitively predict the later occurrence of tumor degeneration. Instead, they may constitute an additional risk factor[10]

### 3.2. Age at Diagnosis and Dysgenetic Lesions

Intra-abdominal testicular tumors primarily affect young adults. The time interval between orchidopexy and the diagnosis of these tumors can vary, ranging from 15 years to 29.4 years[9,10]. These tumors are often associated with dysgenetic lesions of the gonad, which are considered irreversible even after orchidopexy. These lesions may play a crucial role in the development of these tumors.[9]

### 3.3. Challenges in Diagnosis and Diagnostic Delays

The presented case illustrates the complexity of early diagnosis of these tumors. Lack of awareness about the absence of testicular descent at birth is a significant factor contributing to diagnostic delays. Moreover, many patients, even in adulthood, do not feel the need to consult a physician for a non-palpable testicle, further delaying medical intervention. The intra-abdominal location of these tumors allows them to grow significantly before symptoms appear, and the symptoms themselves can be deceptive, further delaying specialized medical care. [11]

### 3.4. Histopathological Characteristics

In this case, histopathological examination revealed a differentiated seminoma. However, it is worth noting that several studies have highlighted the predominance of seminomatous tumors in the context of cryptorchidism[12].

## 4. Conclusion

Managing intra-abdominal testicular tumors, especially in the presence of cryptorchidism, remains a clinical challenge. It is imperative to raise awareness among patients and healthcare professionals about this association to facilitate early diagnosis and appropriate intervention. Ongoing research is essential to better understand these rare tumors and improve their management. Long-term surveillance of patients with cryptorchidism is also crucial for promptly identifying and treating testicular tumors, thereby enhancing clinical outcomes and the quality of life for these patients.

## Compliance with ethical standards

### *Disclosure of conflict of interest*

There is no conflict of interest.

### *Statement of informed consent*

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

## References

[1] Kurz D. Current management of undescended testes. Curr Treat OptionsPeriatr. 2016;2:43–51

[2] Niedzielski JK, Oszukowska E, Słowikowska-Hilczer J. Undescendedtestis—current trends and guidelines: a review of the literature. Arch Med

[3] Pettersson A, Richiardi L, Nordenskjold A, Kaijser M, Akre O. Age atsurgery for undescended testis and risk of testicular cancer. N Engl J Med.2007;356:1835–41

[4] Pesce C, D'Adontino S, Costa L, Musi L, Manzi M. Reoperativeorchiopexy:surgical aspects and functional outcome. PediatrSurg Int. 2001;17:62–4

[5] ABRATT R.P., REDDI V.B., SAREMBOCK L.A. : Testicular cancer and cryîorchidism. Br. J. Urol., 1992 ; 70 : 656-659.

[6] CARMONA CAMPOS E., REGUEIRO LOPEZ J.C., PRIETO CASTRO R., LEVA VAHEJO M., MORENO ARCAS P., REQUENA TAPIA M.J. : Cryptorchidism and testicular cancer. Actas Urol. Esp., 2000 ; 24 : 49-51

[7] CAMPBELL H.E. : The incidence of malignant growth of the undesccended testicle. A reply and reevaluation. J. Urol., 1959 ; 81 : 663.

[8] STANG A., AHRENS W., BROMEN K., BAUMGARDT-ELMS C., JAHN I., STEGMAIER C., KREGE S., JOCKEL K.H. : Undescended testis and the risk of testicular cancer : importance of source and classification of exposure information. Int. J. Epidemiol., 2001 ; 30 : 1050-1056

[9] DEBRE B. : Les tumeurssurtesticulecryptorchide. AM. Urol., 1984 ; 18 : 253-255

[10] SWERDLOW A.J., DE STABOLA B.L., SWANWICK M.A., MANGTANI P., MACONOCHIE N.E. : Risk factors for testicular cancer : a case control study in twins. Br. J. Cancer, 1999 ; 80 : 1098-1 102.

[11] Niang, L., Diao, B., Gueye, S. M., Fall, P. A., Moby-Mpah, H., Jalloh, M., … Diagne, B. A. (2007). *Cancer surtesticule non descendu intra-abdominal. A propos de 5 cas. Progrès En Urologie, 17(5), 947–949.* doi:10.1016/s1166-7087(07)92394-5

[12] COUPLAND C.A., CHILVERS C.E., DAVEY G., PIKE M.C., OLIVER R.T., FORMAN D. : Risk factors for testicular germ cell tumours by histo- logical tumourSpe. United Kingdom Testicular Cancer Study Group. Br. J. Cancer, 1999 ; 80 : 1859-1 863.