CASE REPORT
Urooncology

Doi: 10.4274/jus.galenos.2024.2024-9-4
J Urol Surg

Testicular Mass: Is Orchiectomy Necessary? A Case Report

Muhammed Selçuk Özer, Gürol Akan

Bakırçay University Çiğli Regional Education Hospital, Department of Urology, İzmir, Turkiye

Abstract

Testicular fibrous pseudotumor is a rare benign condition. It is often mistaken for malignant testicular masses, leading to unnecessary orchiectomies in many patients. We present a case of a 23-year-old male with a painless and enlarging mass in his left testis. Tumor markers were within normal limits, and imaging studies, including ultrasound and magnetic resonance imaging, could not definitively differentiate between a benign and malignant mass. During surgery, intraoperative frozen section analysis did not reveal malignancy, so the mass was excised en bloc with its capsule, sparing the testis and spermatic cord, thus avoiding unnecessary orchiectomy.

Keywords: Benign, case report, testicular tumor, fibrous pseudotumor

Introduction

Testicular fibrous pseudotumor is a rare inflammatory fibroproliferative disorder. Its clinical significance lies in its ability to mimic testicular tumors during physical examination. As a result, in cases where tumor markers are normal, unnecessary orchiectomies are often performed under the suspicion of a "burned-out" tumor. Here, we present the case of a 23-year-old patient who visited our clinic with a testicular mass in June 2024.

Case Presentation

A 23-year-old male presented to our clinic, after noticing a mass approximately 3 cm in size in his left scrotum four months earlier. Physical examination revealed a firm, poorly defined mass approximately 4x3 cm in size at the upper pole of the left testis, which was non-tender and without discharge. The boundaries between the left testis and the mass were unclear, while the inferior part of the left testis appeared normal. The right scrotum and testis were also normal. No palpable lymph node enlargement was detected in the bilateral inguinal regions. The patient had no history of fever, pain, difficulty urinating, hematuria, suspicious sexual contact, or previous urogenital surgery. Tumor markers were within normal limits (beta- human chorionic gonadotropin): <2.39 mIU/mL, (alpha-fetoprotein: 5.42 ng/mL, and lactate dehydrogenase: 146.1 U/L). Scrotal Doppler ultrasound revealed a solid, partially heterogeneous, 35x20 mm mass in the head of the left epididymis with calcifications causing the posterior acoustic shadowing. Magnetic resonance imaging (MRI) showed a 38x35 mm well-defined solid lesion, T2 hypointense and T1 iso-hypointense, located extratesticularly, and suspected to originate from the epididymis, in the left scrotal region adjacent to the superior part of the testis. Diffusion-weighted imaging demonstrated significant diffusion restriction in the lesion, and post-contrast images showed marked contrast enhancement (Figure 1). Through a left inguinal incision, the spermatic cord and testis were mobilized en bloc without ligating the cord. The mass was found to originate from the tunica vaginalis, independent of the spermatic cord, epididymis, and testis tissue. A total of five masses, the largest being 5x6 mm, were identified along the tunica parietalis. The 38x35 mm mass at the superior pole of the testis was excised en bloc without damaging the spermatic cord, testis, or epididymis using sharp and blunt dissection. The other five masses were also excised. Intraoperative frozen section analysis of the mass did not indicate malignancy, so the testis was returned to the scrotum, and the procedure was completed. The mass was encapsulated, homogeneous, and shiny white in appearance, with no necrosis or calcification (Figure 2). The patient was discharged on the first postoperative day. Pathology confirmed the diagnosis of fibrous pseudotumor (Figure 3). Written informed consent for publication of the case details.

Correspondence: Muhammed Selçuk Özer MD, Bakırçay University Çiğli Regional Education Hospital, Department of Urology, İzmir, Turkiye
E-mail: mseljukozer@gmail.com **ORCID-ID:** orcid.org//0000-0002-5238-2691
Received: 11.09.2024 **Accepted:** 25.11.2024 **Epub:** 18.04.2025

Cite this article as: Özer MS, Akan G. Testicular mass: is orchiectomy necessary? A case report. J Urol Surg. [Epub Ahead of Print].

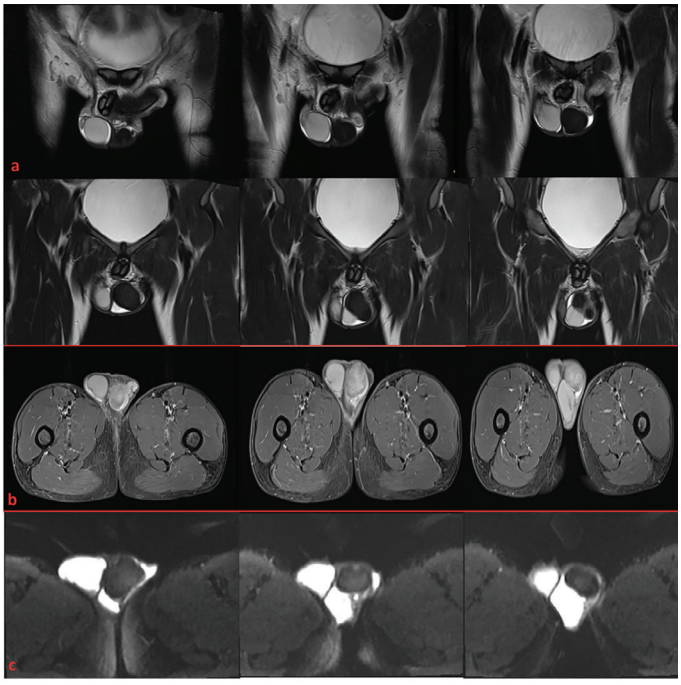

Figure 1. Magnetic resonance images of the mass (a. T2 coronal, b. transverse, c. transverse diffusion)

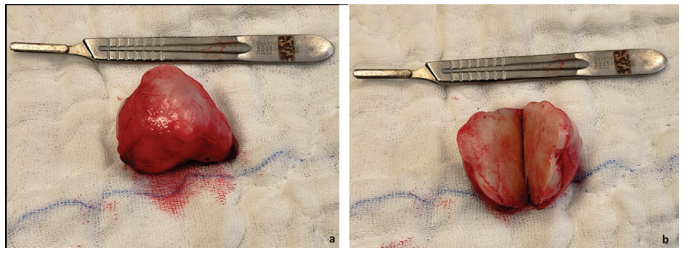

Figure 2. Intraoperative view of the mass (a. excised with its capsule, b. midline incision homogeneous grayish interior)

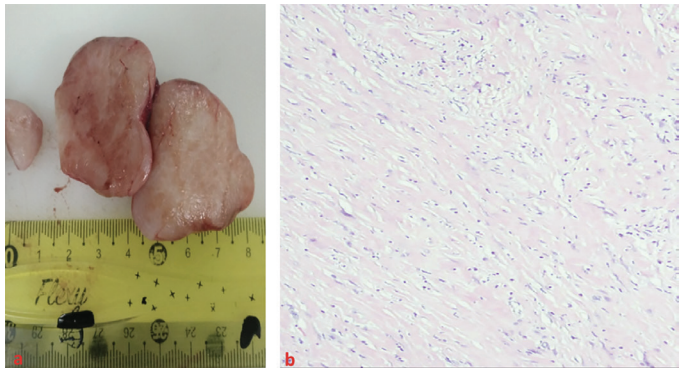

Figure 3. Pathological examination of the mass (a. macroscopic view, b. H&Ex100 showing collagen-rich fibrous stroma without atypia, necrosis or mitosis)

H&E: Hematoxylin and eosin

Discussion

Testicular fibrous pseudotumor is a rare disease, with limited detailed information on its epidemiology or prevalence. There are over 20 case reports in the literature (1-6). In a retrospective study by Başal et al. (1), only 2 out of 838 patients operated on for testicular mass were diagnosed with testicular fibrous pseudotumor. Although most patients are aged 20-30, cases have also been reported in pediatric and elderly patients (1,7). The exact etiology is unclear, but the benign lesion originates from the tunica vaginalis, and an abnormal inflammatory response is thought to play a role in its pathophysiology (8). Some studies suggest that IgG4-related sclerosis may contribute to the tumor's formation (8). Its clinical significance lies in its ability to mimic testicular tumors on physical examination. Benign testicular masses generally do not elevate tumor markers. In some cases, ultrasound may be insufficient for differential diagnosis. In such situations, diffusion MRI or intraoperative frozen section analysis can aid in differentiation, particularly when the boundaries of the lesion are unclear or when imaging does not provide a definitive description. Frozen section analysis can help prevent unnecessary radical orchiectomy. Since it is a benign mass, complete excision of the lesion and its components is sufficient for treatment. The prognosis is excellent, with no reported cases of recurrence or progression in the literature.

Conclusion

Testicular fibrous pseudotumor is a benign condition often mistaken for malignant masses in young men, leading to unnecessary treatment. Intraoperative frozen section analysis is beneficial to avoid unnecessary orchiectomy. The success of the treatment is determined by the complete excision of the lesions along with their capsules.

Ethics

Informed Consent: Written informed consent for publication of the case details.

Footnotes

Authorship Contributions

Surgical and Medical Practices: M.S.Ö., G.A., Concept: M.S.Ö., G.A., Design: M.S.Ö., G.A., Data Collection or Processing: M.S.Ö., Literature Search: M.S.Ö., Writing: M.S.Ö.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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