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SURGERY

Inflammatory Pseudotumor of the Paratesticular Region

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Abstract

Inflammatory pseudotumor is a soft-tissue lesion of unknown etiology, but likely of reactive nature. It is considered benign and treated by simple excision; however, pre-operative diagnosis is often challenging because of the ability of pseudoinflammatory pseudotumor to mimic numerous benign and malignant entities, both clinically and ultrasonographically. Herein, we present the case of a 56-year-old man with a paratesticular inflammatory pseudotumor with concerning clinical features which could not be identified clinically or intra-operatively and thus required an orchiectomy to reach the final diagnosis. In the paratesticular region, inflammatory pseudotumors are uncommon (6% of masses) but must be kept in mind due to their benign nature.

Keywords Testicle · Paratesticular · Inflammatory pseudotumor · Differential diagnosis

A 56-year-old man with a history of recurrent epididymitis presented with a mass of the right paratesticular region. Ultrasonography showed a 2.5 × 2.0 cm heterogeneous extratesticular mass with ill-defined margins. Tumor markers were negative. Radical orchiectomy was performed.

Macroscopically, the specimen consisted in a 5.0 × 3.5 cm testicle with a 4.0-cm spermatic cord. Incision revealed a 2.5 × 2.0 cm whitish nodule of the upper pole, with lobulated margins and of fibrous consistency (Fig. 1). The testicular parenchyma was noticeably deformed, but not infiltrated, by the mass; the epididymis was not infiltrated by the mass either.

Microscopically, the mass showed a massive chronic inflammatory infiltrate composed mostly of plasma cells and lymphocytes, surrounded by a fibrous stroma with interweaved collagen bundles and plump spindle cells without atypia or mitoses (Fig. 2). Immunohistochemical analysis showed diffuse polyclonal positivity for kappa and lambda light chains in the plasma cell population

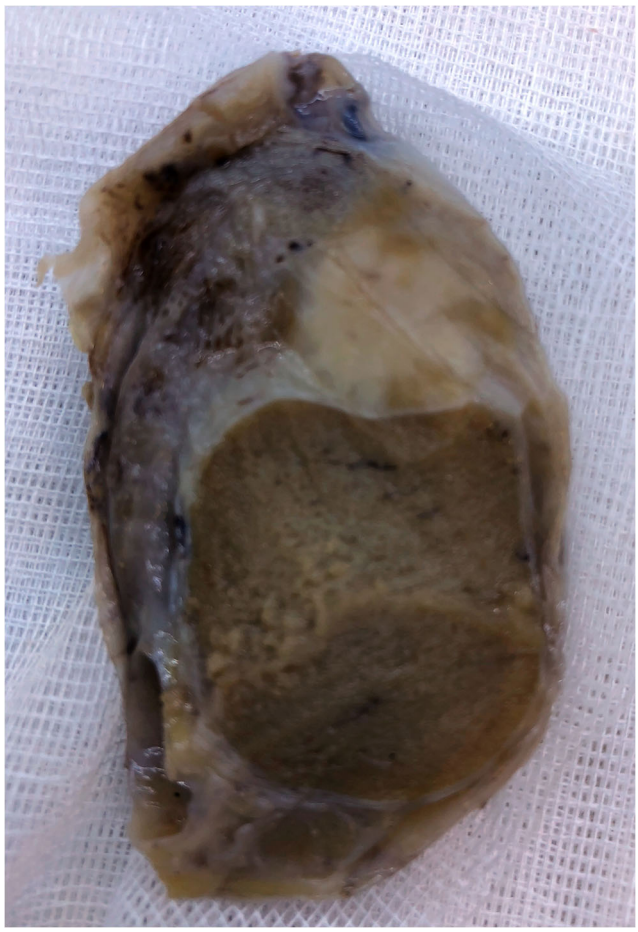

Fig. 1 The upper pole paratesticular mass is shown compressing and deforming, but not infiltrating, the testicular parenchyma

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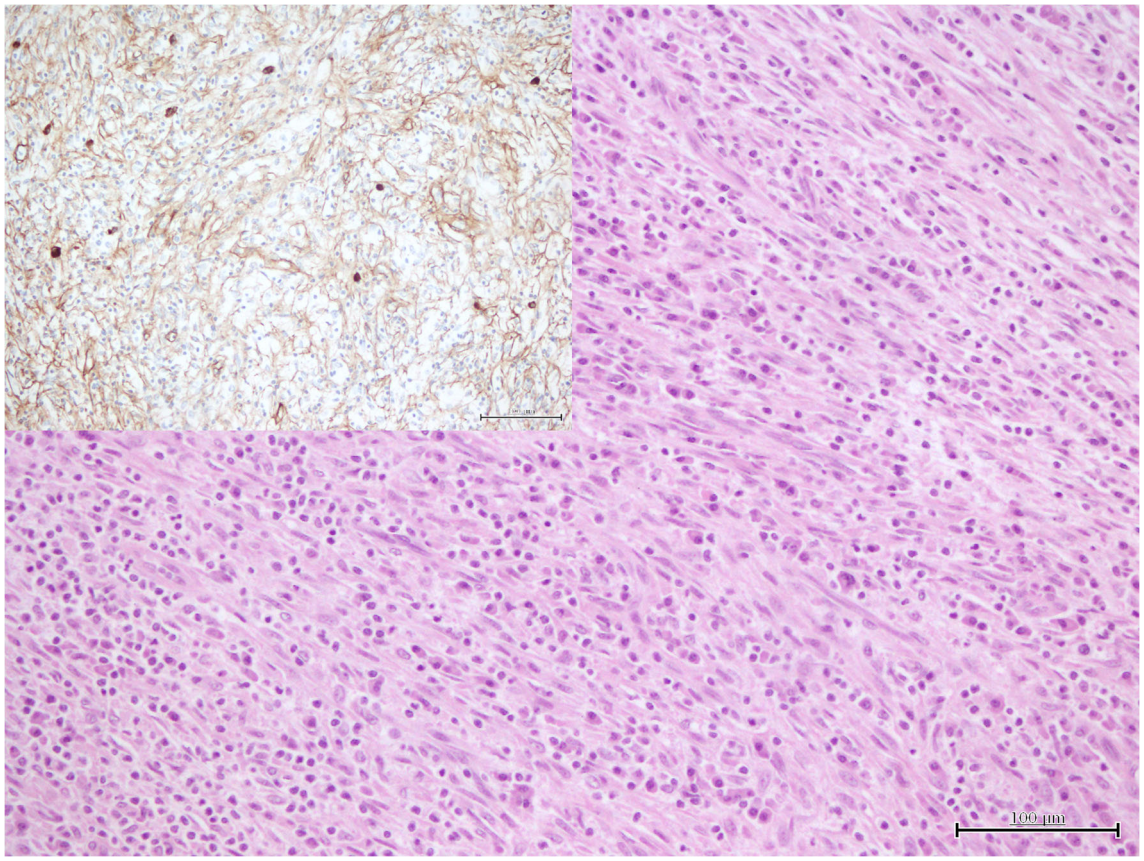

Fig. 2 The lesion shows a dense lymphoplasmacytic infiltrate surrounded by a proliferation of plump spindle cells in collagenous stroma. Hematoxylin and eosin, × 200. Inset: plasma cells were diffusely positive for kappa (not shown) and lambda light chains (pictured). 3,3′-diaminobenzidine, × 200

(Fig. 2, inset), while lymphocytes were mostly of T phenotype (CD3+). There was no reactivity for ALK in the spindle cells. Immunohistochemistry for IgG/IgG4 revealed a normal IgG4 ratio. The patient was discharged without complications.

Inflammatory pseudotumor constitutes a diagnostic challenge for the urologist because the ultrasonographic appearance can mimic various malignant entities. The pathologic diagnosis is also made difficult by the abundance of differential diagnoses, such as inflammatory myofibroblastic tumor, IgG4-related lesions and, in spindle cell–rich cases, some sarcomas. Immunohistochemical study for ALK, kappa, and lambda light chains and the IgG/IgG4 ratio can help in making the correct diagnosis, and consequently in adopting the best therapeutic approach.

The term inflammatory pseudotumor encloses a heterogeneous group of both neoplastic and non-neoplastic lesions, likely of reactive nature and with disparate etiologies [1, 2]. Inflammatory pseudotumors can arise at any site, and in the paratesticular region, they are an uncommon finding (6% of paratesticular masses) [3, 4].

Inflammatory pseudotumors are benign and surgical resection of the lesion is considered curative [3]. However, ultrasonographic appearance can be alarming, and intraoperative frozen section might sometimes be unhelpful in ruling out malignancy [5]. For these reasons, given that a definite diagnosis can only be obtained on the surgical specimen, it is sometimes necessary to proceed with a radical orchiectomy.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval This article does not contain any studies with animals performed by any of the authors. Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the editors of the journal.

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