

Inflammation and infection

Inflammatory pseudotumor of the tunica albuginea and the tunica vaginalis: Case-report

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ABSTRACT

Inflammatory pseudo tumor of the tunica is rare and typically presents as long standing, painless scrotal mass. A 23-year-old man had palpable, multiple, hard scrotal masses for 3 months. Laboratory investigations were normal (including LDH, AFP, HCG).

Radical inguinal orchiectomy done.

Macroscopically the testis and epididymis were normal, with multiple gray nodules surrounding the testis and epididymis, attached to the tunica albuginea and vaginalis, had smooth surface, partly whorled cut surface.

Histologically, the nodules were well circumscribed, consisting of fibrous tissue, with infiltration by plasma cells and mononuclear inflammatory cells, giving the diagnosis of plasma cell granulomas.

Introduction

Inflammatory pseudotumor of the tunica is a rare entity, composed of single or multiple intrascrotal fibrous nodules, with infiltration with plasma cells and mononuclear inflammatory cells. Fibrous or inflammatory pseudotumor are within the spectrum of benign paratesticular lesions, category which includes distinct inflammatory myofibroblastic tumors and calcifying fibrous tumors. Only few cases had been reported worldwide.¹

The etiology is not well understood. It has been mentioned in some of the reported cases that these lesions may arise as a result of local tissue reaction to testicular trauma, surgery, localized infection or local irritation, although in many cases an underlying cause is never found.²

Case report

A 23 years-old college student, from rural area, who had palpable multiple hard scrotal masses for 3-months, the patients denied any history of trauma or infection in the past. The laboratory investigations were normal, and ultrasonography show multiple nodules or variable sizes in the right of the scrotum. There was no lymph adenopathy.

Radical inguinal orchiectomy done. Grossly, the excised mass, was weighing 135 gm and measuring 95*90*35 mm. The testis has normal appearance with a soft yellow-light brown cut surface, with multiple

gray nodules surrounding it, arising from the tunica albuginea and the tunica vaginalis.

The nodules range from 5 to 30 mm across and have a gray, partly whorled cut surface. The epididymis is not involved, Fig. 1.

Microscopically the nodular lesions are composed of intersecting fascicles of spindle cells with a delicate network of small blood vessels. Cells resemble reactive fibroblasts with uniformly elongated nuclei containing one or more distinct nucleoli. Mitotic figures are not numerous. Lesions contain large numbers of plasma cells and scattered mononuclear inflammatory cells and prominent dilated capillaries, Fig. 2.

Lesions lack significant nuclear pleomorphism and there was no atypia or malignancy, Fig. 3.

Post operatively and during follow up for 3 months, the patient had smooth postoperative period, with no complications and no additional treatment was needed.

Discussion

Variable terms have been used to describe lesions such lesion such as inflammatory pseudotumor, inflammatory myofibroblastic tumor, proliferative funiculitis, pseudo-sarcomatous myofibroblastic proliferation of spermatic cord, fibrous pseudotumor, nodular periorchitis, inflammatory paratesticular tumor of the spermatic cord, benign

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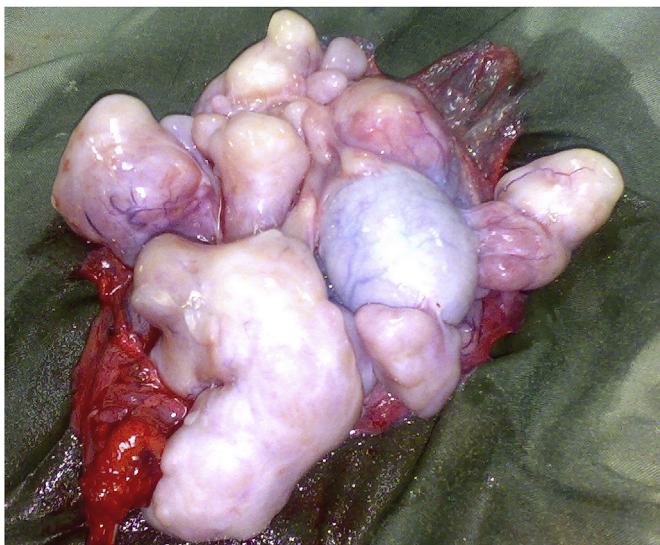


Fig. 1. Showing the inflammatory pseudotumor of the testis.

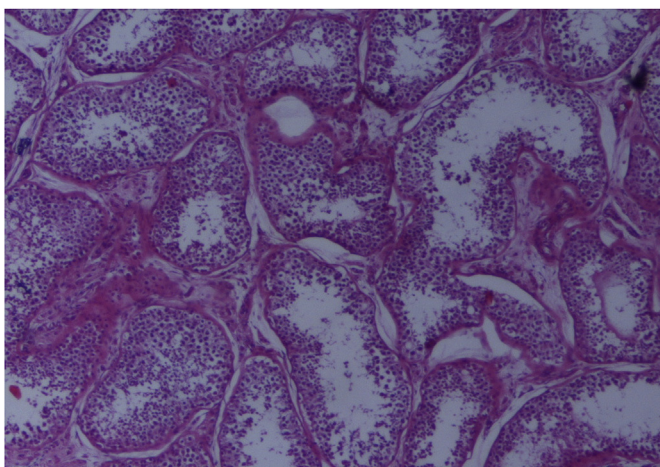


Fig. 2. Microscopic appearance showing plasma cells and scattered mononuclear inflammatory cells and prominent dilated capillaries.

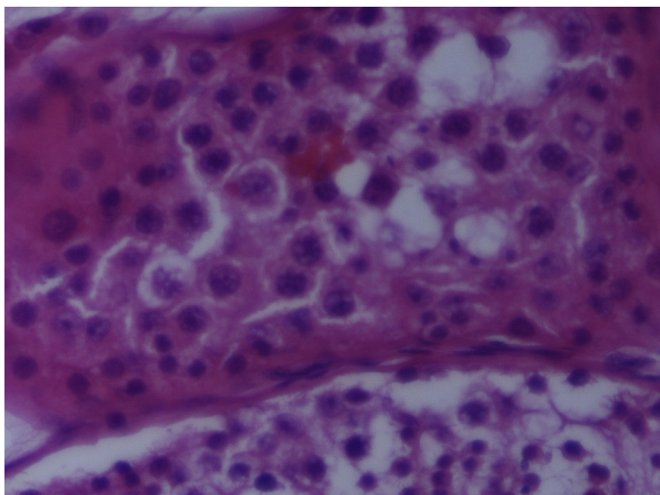


Fig. 3. A 400x magnified microscopic view of the tumor showing the presence of the inflammatory cells with the absence of atypia.

fibromatous tumors of testis.^{1,3}

This is essentially a tumor which exhibits cellular, fascicular fibroblastic/myofibroblastic proliferations, accompanied by prominent infiltrate of chronic inflammatory cells, particularly plasma cell and mast cells. In the literature there are few cases that had been reported worldwide. They typically presented with a slowly growing, non-tender lesion, occurring in the middle to late adulthood. The mean age was around 40 years, and the mean duration of symptomatic period was 4.6 years. All the cases yield good outcome after surgery without recurrence.⁴

The present case is typical of plasma cell granulomas of inflammatory pseudo tumor of tunica because the mass consists mainly of fibrous tissue, with infiltrate of mainly plasma cells.

This condition may be associated with a diverse disease entities including, retroperitoneal fibrosis, sclerosing cholangitis, sclerosing pancreatitis, and Riedel's thyroiditis which might belong to a group of IgG-4 related immune derangements.¹

Cases has been linked to Epstein-Barr virus, cytomegalovirus, or human immune deficiency virus, *Mycobacterium Avium Intracellulare* infection, but no clear evidence is present to support this.²

When the diagnosis is confirmed and malignancy accurately excluded, the primary treatment of such cases should be aimed for testicular sparing however in cases where the testis is extensively involved, like in our case, orchiectomy remain the main treatment option.⁵

Conclusion

In summary, the authors emphasize slowly growing inflammatory pseudo tumor of tunica (plasma cell granulomas).

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.eucr.2019.100954>.

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