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CASE STUDY

PARATESTICULAR INFLAMMATORY PSEUDOTUMOR- A CASE REPORT

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ABSTRACT

Inflammatory Pseudotumor of the paratesticular region are rare and are often misdiagnosed. Despite being rare, Inflammatory tumors of the paratesticular area represents the second most common paratesticular mass after adenomatoid tumor roughly comprising 6% of the lesions. They present clinically as long standing painless scrotal masses. These are reactive proliferation of inflammatory and fibrous tissue. The initial stimulus may be a previous surgery, trauma, infection, or inflammation. Although benign, this often clinically mimics intrascrotal malignancy and usually remains undiagnosed preoperatively. To our knowledge no recurrence has been reported after complete excision of paratesticular inflammatory pseudotumour, however continued follow up is strongly recommended. The aim of this paper is to emphasize the importance of distinguishing benign mimickers and pseudotumors from true neoplasia.

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INTRODUCTION

Paratesticular inflammatory pseudotumor is a rare tumor which is characterized by nodular growth composed of reactive proliferation of fibroblasts and inflammatory cells. Despite being rare, Inflammatory tumors of the paratesticular area represents the second most common paratesticular mass after adenomatoid tumor roughly comprising 6% of the lesions. They present clinically as long standing painless scrotal masses. Although benign, this often clinically mimics intrascrotal malignancy and usually remains undiagnosed preoperatively. In most of the cases the tumor involves tunica vaginalis, however, rarely tumor can involve tunica albuginea, epididymis and spermatic cord. Clinically the tumor mimics malignancy which results in treatment by radicalorchidectomy.

Case Report

We present a case of a 45 year old man who presented with a painless right testicular swelling that had gradually increased in size over a period of four years. He had no history of trauma, surgery or infection of testes or systemic symptoms associated with it.

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On examination of scrotum

- Right testis was large (7 x 5cm in size), firm, mildly tender, non reducible with well defined margins.
- Left testis, scrotal skin, both spermatic cords, and both inguinal regions were normal.
- Haematological as well as biochemical investigations were within the normal limit.
- Plasma HCG and AFP levels were within normal limits. Patient underwent a total right orchidectomy which revealed a firm capsulated mass measuring about 6x 4 x 3 cm. The excised specimen is sent in 10% formalin to the Dept. of Histopathology. After regular processing multiple sections are being stained with Haematoxylin and Eosin.

Gross

Normal testicular tissue with a 3 cm thick firm gray brown fibrotic band of tissue.

Microscopy: Tumor was composed of benign looking spindle cells, arranged in bundles and short fascicles, admixed with fibrocollagenous tissue and increased proliferation of plump and spindle shaped myofibroblastic cells with multifocal areas of dense aggregates of lymphocytes and plasma cells. Testis

and epididymis appeared normal histologically. No necrosis, mitotic activity or pleomorphism was seen. A diagnosis of Paratesticular Inflammatory Pseudotumor was made. Patient made uneventful recovery and remained well in follow up.

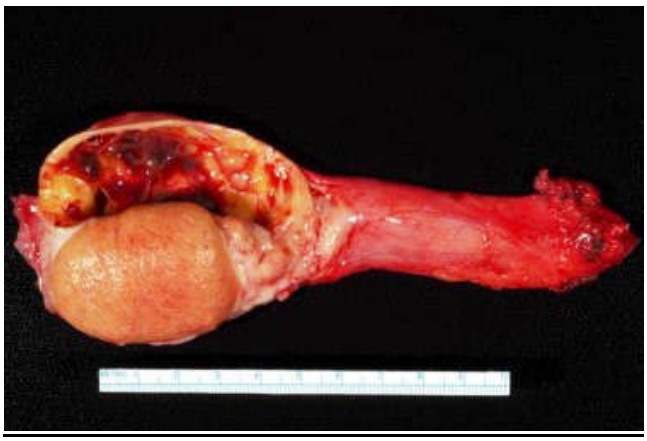

Fig.1. A fibrous band around the normal looking testis (Gross)

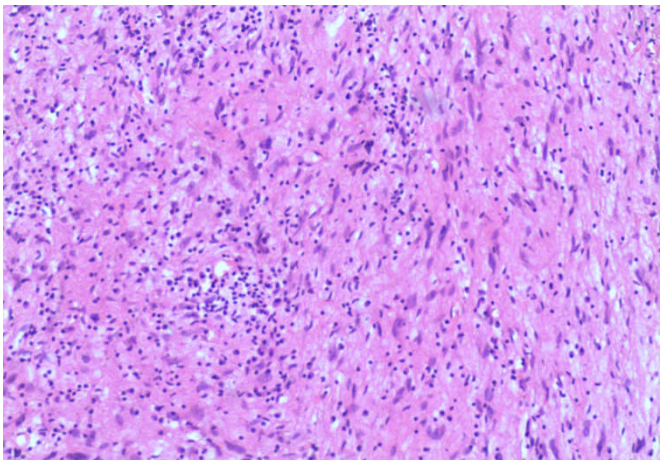

Fig.2. The benign looking spindle cells admixed with fibrocollagenous tissue and lymphocytes (H&E 40x)

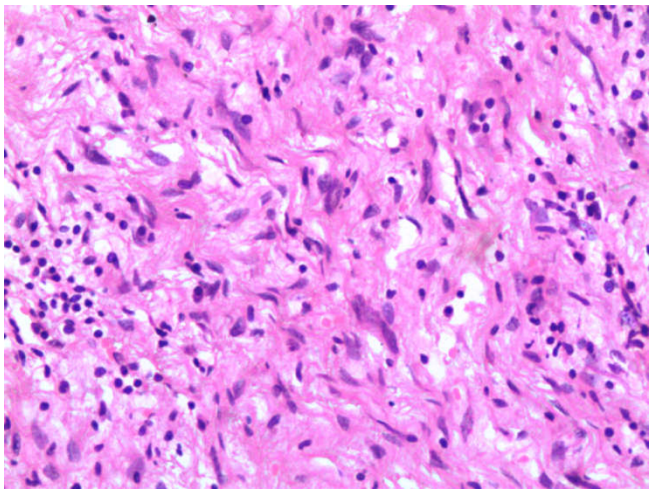

Fig.3. The myofibroblastic cells admixed with lypmhocytes (H&E 40X)

DISCUSSION

Paratesticular fibrous pseudotumor is a rare lesion of the scrotum that presents clinically as a painless mass. They are difficult to distinguish from testicular masses thereby needing surgical exploration to rule out malignancy. They were recognized first in 1904 by Balloch (Balloch, 1904). The tumor has a peak incidence in third decade of life but can occur at any age. Clinically the lesion mimics malignant process and frequently present as painless palpable intrascrotal mass. Variable terms such as inflammatory pseudotumor, inflammatory myofibroblastic tumor, proliferative funiculitis (pseudosarcomatous myofibroblastic proliferation of spermatic cord) and fibrous pseudotumor (periorchitis) have been used to describe lesions like the reported lesion (Parker, 2006). Currently, the term inflammatory myofibroblastic tumor has been generally accepted, encompassing all such lesions which can also be assigned to the reported case on account of predominant myofibroblastic component. This is essentially a tumor which exhibits cellular, fascicular fibroblastic/ myofibroblastic proliferations, accompanied by a prominent infiltrate of chronic inflammatory cells, particularly plasma cells and mast cells (Milanezi, 1997). Inflammatory pseudotumor is the second most common paratesticular mass after adenomatoid tumor thereby comprising of 6% of paratesticular lesions (Bhandari, 2008). Histological differential diagnosis of this tumor includes solitary fibrous tumor, leiomyoma, neurofibroma, fibroma of the tunics and fibromatosis (Weiss, 2001). Paratesticular fibrous pseudotumor can be seen in every age group but exhibits peak incidence in the 3rd decade of life. Fifty percent of the cases may be accompanied by hydrocele and 30% with previous trauma or epididymo-orchitis (Germaine, 2007). Grossly Inflammatory pseudotumor are typically well circumscribed, firm, gray white to yellow lesion with areas of necrosis, hemorrhage, calcification and cystic changes (Fig.1). Microscopically these lesions are characterized by predominance of myofibroblast and fibroblasts in a collagenous or myxoid matrix with presence of mixed inflammatory infiltrate mainly comprising of lymphocytes, plasma cells and occasional eosinophils. High mitotic figure, necrosis and pleomorphism are typically absent. Radiological investigation is the initial modality of diagnosis. Ultrasonography reveals typical pseudotumour as a solid lesion with various echogenicities depending upon the cellular component of the fibrous tissue (Bharti, 2013). Orchidectomy is often performed because of difficulty in removal of the lesion separatefrom testis. Incision biopsy in these cases may not becontributory because diagnosis is based on both grossand microscopic features; the latter feature being common to many tumors. However, intraoperative frozen section may be helpful if both the surgeon and pathologist are aware of this entity and may prevent, in some cases, performance of radical orchidectomy.

Conclusion

Paratesticular inflammatory pseudotumor is a benign tumor most often arising from tunica vaginalis of testis and can involve epididymis. Tumor is usually large multinodular and clinically mimics malignancy and preoperative diagnosis is challenging. Hence although rare it should be considered in the differential diagnosis of paratesticular lesions. Prognosis after complete excision or paratesticular inflammatory pseudotumour is excellent. Familiarity to this tumorcan prevent surgeon from unnecessary radical surgery (Seethala, 2003).

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