



### **Case Report:**

### **Inflammatory Pseudo Tumour of Prostate**

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#### **Abstract:**

A 60 year old man presented with history of overflow incontinence, requiring catheterization. Digital rectal examination revealed non tender grade II prostatomegaly. Patient underwent transurethral resection of prostate and specimen was sent for histopathological examination. The specimen revealed spindle cell proliferation interspersed with chronic inflammation. Immunohistochemical staining was positive for smooth muscle actin and desmin. A final diagnosis of inflammatory pseudotumour of prostate was made. The patient was later discharged and advised for regular follow up. Inflammatory pseudotumour is very rare condition of prostate. They usually follow benign course and does not require radical surgical treatment. So a definitive diagnosis is essential to prevent unnecessary radical procedures.

**Key Words:** Benign; Histopathology; Prostate; Pseudotumour; Spindle cell

#### **Introduction:**

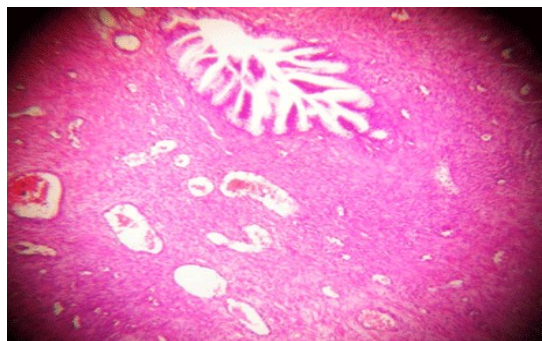
Inflammatory Pseudotumour (IPT) is a rare benign condition of unknown etiology. It is characterized by presence of a mass that may mimic malignancy, hence WHO continues to classify inflammatory pseudotumour as a distinct borderline lesion of uncertainty. The tumour is composed of proliferating myofibroblasts, extracellular collagen, histiocytes and occasionally plasma cells and lymphocytes.<sup>1</sup> IPT has been reported in nearly every site of the body. The common sites of occurrence are lungs and orbit and very rarely in genitourinary tract especially prostate. Till date very few cases of inflammatory pseudo tumour of prostate have been reported in literature.<sup>2</sup> So here we present a rare case of inflammatory pseudotumor of prostate which has an impact on the management of the patient.

#### **Case Report:**

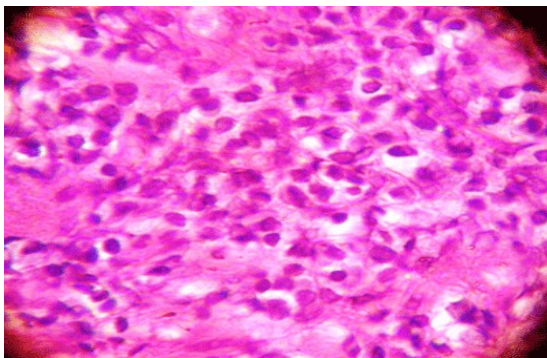
A non diabetic 60-year old man presented with history of overflow incontinence for past six months presented to our centre which is a tertiary care centre catering exclusively to needs of

nephrourology patients. Digital rectal examination revealed non tender, enlarged prostate (grade II) without nodules. PSA level was 2.01ng/ml. Ultrasonogram of abdomen and pelvis showed enlarged prostate with thickened bladder wall. There was no evidence of any lymph node enlargement or any form of lesion. Patient underwent transurethral resection of prostate and the specimen was sent for histopathological evaluation.

The tissue was processed and stained with hematoxylin and eosin stains. Histological examination showed mild adenomatous hyperplasia with few prostatic glands (Fig-1) lying in a hyperplastic stroma composed of numerous areas of elongated cells with central elongated nuclei characteristic of spindle cells interspersed with foamy histiocytes, blood vessels and chronic inflammation. Spindle cells were bland with only an occasional mitosis (Fig-2)



**Figure 1: 10 X showing mild adenomatous hyperplasia with few prostatic glands (arrow head)**



**Figure 2: 40 X showing spindle cells with mitosis (arrow head)**

Immunohistochemical staining of the spindle cells was positive for smooth muscle actin and desmin and negative for ALK, S100 and CD34. A review opinion of the case was obtained from an oncopathologist of the state run cancer institute and the final diagnosis concurred with ours as inflammatory pseudotumour of prostate. Post operatively, the patient voided normally and was discharged with advice for regular follow up.

#### **Discussion:**

Inflammatory pseudotumour of prostate is relatively very rare lesion. So etiopathogenesis is still not well understood. It may arise as an inflammatory reaction following surgery, trauma, inflammation or malignancy or as a denovo lesion without any previous insult<sup>3</sup>. In our case there was no evidence of the above causes from the history given by the patient. The tumour has various modes of presentation. Most cases are asymptomatic and have been reported in men aged from 40-67 years<sup>4</sup>. Clinical examination and radiological investigations are often inconclusive. Ultrasonography shows variable pattern of echogenicity with ill or well defined margins. Image guided biopsy may prove useful to make a definitive histological diagnosis<sup>5</sup>.

Morphologically inflammatory pseudotumour is small in size and identical to lesions occurring at other sites. These tumour show variable histologic characteristics and hence has been described by different names such as inflammatory myofibro-tumour, plasma cell granuloma or pseudotumour and myofibroblastoma. Studies suggest that spindle cells may have fibroblastic or myofibroblastic origin. Histologically IPT shows typical reactive spindle cells within collagenous matrix and prominent vascularity with variable inflammatory cells of acute or chronic origin like plasma cells, lymphocytes and histiocytes. Generally tend to lack severe cytologic atypia though mitotic rate may be elevated but no abnormal mitosis seen, ruling out malignancy. The key histological finding in establishing the diagnosis of IPT are the co-existence of variable numbers of inflammatory cells and spindle cells with varying degrees of fibrosis. Genetic studies have found aberrant forms of anaplastic lymphoma kinase (ALK) in these tumours. Other than ALK the spindle cells of inflammatory pseudotumour also commonly express pancytokeratin, actin, desmin and p53 and are negative for S100, CD 34, CD117, CD 21 and CD23<sup>6</sup>. In our case the tumour cells were positive for smooth muscle actin, desmin and negative for ALK, S100 And CD 34.

Most IPTs are benign with few very rare exceptions of the tumour that have been reported to metastasize. Generally the tumour follows innocuous course and prognosis is good. The differential diagnosis of the IPT remains difficult and challenging. So a definitive diagnosis and appropriate treatment play a crucial role in minimizing the morbidity. Hence preoperative recognition of this lesion to rule out malignancy is important.

#### **Conclusion:**

Inflammatory pseudotumour of prostate is of special clinical significance because the growth mimics malignancy and due to rarity of the tumour, the lesion may be misdiagnosed or over-diagnosed. As a result patient is subjected to radical surgical procedures leading to considerable morbidity. Also the financial burden is huge to the patient and community in general. Hence the definitive diagnosis of inflammatory pseudotumour is important as it will alter the management of the patient and prevent unnecessary radical treatment.

#### **Acknowledgement:**

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