CASE REPORT

Non Specific Granulomatous Prostatitis

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Abstract

Non specific granulomatous prostatitis (NSGnP) is rare benign inflammatory prostatic disease. Despite tuberculosis being very common in India, granulomatous prostatitis (GnP) associated with tuberculosis is not common. Clinically, it presents as hard fixed nodule on digital rectal examination, thus mimicking prostatic carcinoma. FNAC can help us in diagnosis but histopathological examination is recommended for confirmation. Distinction between non specific and infectious GnP is important for therapeutic reasons. We present a rare case of NSGnP in an adult male.

Key Words

Granulomas, prostatitis, core needle biopsy

Introduction

Granulomatous prostatitis (Gnp) is an unusual benign inflammatory process. Clinically, it mimics prostatic carcinoma, thus requiring pathological examination for diagnosis. Non Specific granulomatous prostatitis is the most common type of granulomatous prostatitis (1). It was first described by Tanner and Mc Donald (1943) who reported its incidence as 3.3% in inflammatory lesions of prostate (2). Clinically, it presents as a hard fixed nodule on digital rectal examination and may cause an elevation of serum prostate specific antigen (PSA) levels, thus mimicking prostatic carcinoma. The diagnosis of this lesion is made by histopathological examination only. We present a case of granulomatous prostatitis which was diagnosed on fine needle aspiration and classified on histopathological examination of core needle prostatic biopsy.

Case Report

A 56 years old male, presented in the department of surgery with increased frequency of urination, irritative voiding and pyrexia. On digital rectal examination, prostate was firm and nodular. Laboratory examination revealed increased total leukocyte count and normal routine urine examination. Prostate specific antigen was performed which showed an increased level of 9.5ng/ml. Chest X - ray was normal and ultrasonography revealed benign enlargement of the prostate. The patient underwent fine needle aspiration cytology which showed multinucleated giant cells, epithelioid cells, lymphocytes and plasma cells (*Fig 1*) . The patient subsequently underwent core needle biopsy. 2-3 linear cores of tissue were taken. On staining with haematoxylin and eosin stains, the sections showed dense inflammatory infiltrate of mononuclear cells composed of lymphocytes , plasma cells , histiocytes and epithelioid cell collections. Occasional giant cells were also seen in a background of fibrocollagenous stroma. However, no caseation necrosis was there. The prostatic glands were lined by double layer of cells (*Fig 2&3*)s Zeil Nelson staining for acid fast bacilli was done which showed negative results.

Discussion

NSGNP is usually reported as an incidental finding, with an incidence of 3.4% in an unselected series of patients. It is detected in 0.44 % of routine prostatectomy specimens and in 0.29-3.3% of needle prostate biopsies. Gnp occurs in 0.8% of benign inflammatory prostatic specimens(3). Granulomatous prostatitis (Gnp) is categorized into four subgroups as specific infectious GnP, nonspecific granulomatous prostatitis (NSGnP), post-biopsy granulomas, and as systemic GnP according to the underlying cause., Most cases of GnP are categorized as NSGnP (50% - 77%) (4,5). GnP is noticed occasionaly in prostate specimens. Its exact etiology remains unclear and may in many cases be idiopathic. The factors involved in its development include duct obstruction and ectasia with leakage of luminal contents into the glandular stroma which sets up a foreign body reaction with inflammation and fibrosis (5). It is characterized by the clinical triad of high fever, symptoms of prostatitis and a hard prostate on palpation in one fifth of cases (6). Our index case presented with increased

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Fig . High Power View showing Multinucleated Giant Cells, Lymphocytes and Normal Ductular Cells

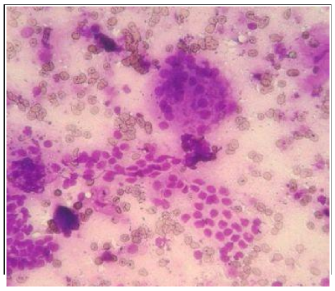
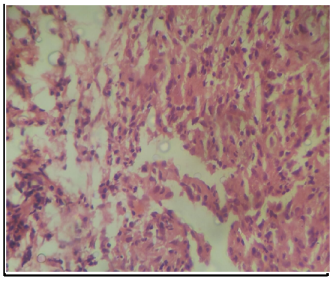
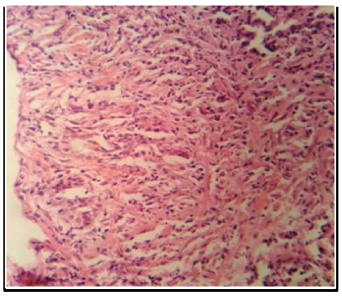


Fig 3. High Power View Showing Giant Cell, Epithelioid Cell Granuloma and Lymphocytes in a Fibrocollagenous Background



frequency of urination, irritative voiding, a hard prostate on palpation and raised PSA levels (9.5ng/ml). However, studies have found that this rise in PSA levels is transient and decreases with resolution of inflammation (7) as occured in our case. NSGnP is noticed occasionally in prostate specimens. Clinically it presents as focal or diffuse area of induration and is often mistaken for carcinoma. The diagnosis is usually made by needle biopsy or at transuretheral prostatectomy (94%) (8,9). In our index case also initial FNAC was done which showed many epithelioid histiocytes, multinucleated giant cells, lymphocytes and plasma cells (*Fig.1*). This was followed by subsequent histopathological examination which revealed a dense inflammatory infiltrate of lymphocytes, plasma cells and histiocytes with epithelioid cell collections. Occasional foreign body giant cells were also seen in a fibrocollagenous background. No caseation was seen. The prostatic glands were lined by double layer of benign cells (*Fig 2 & 3*). Subsequently the histological sections were stained with ZN stain which were negative for acid fast bacilli. The distinction of NSGnp from specific forms of GnP is important because of the formers benign and resolving clinical course. NSGnP resolves by scarring, whereas infective GnP requires treatment. However nonresolving NSGnP cases can be effectively treated by antibiotics, alpha receptor blocker blocker and transuretheral electrotomy (10,11).

Fig 2. High Power View Showing Epithelioid Cell Granuloma, Lymphocytes and Prostatic Glands in a Fibrocollagenous Background



Conclusion

Most granulomas of the prostate are nonspecific; infectious, post operative allergic lesions are less common. NSGnP can be definitely diagnosed by puncture biopsy under TRUS. Despite tuberculosis being very common in India, GnP associated with tuberculosis is reported very rarely and distinction between nonspecific and specific GnP is important for therapeutic reasons.

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