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Case Report Open Access

# Xanthogranulomatous Prostatitis: A Rare Case Report

**Nikhil Patil*, Vinay S Kundargi, Siddangouda B Patil, Ashok Kumar Biradar and Anup S Desai**

*Department of Urology, B.L.D.E.U.'s Shri B. M. Patil Medical College, Hospital & Research Centre, Karnataka, India*

**Abstract**

Xanthogranulomatous prostatitis is one such rare benign inflammatory lesion of prostate. Herein we report a rare case of xanthogranulomatous prostatitis concurrent with benign prostatic hyperplasia. The exact cause of xanthogranulomatous prostatitis remains unknown. Xanthogranulomatous prostatitis is rare condition both clinically and microscopically. There are no specific radiological features. Serum prostatic specific antigen is non-specific. Only ten cases of xanthogranulomatous prostatitis have been reported till date throughout the world.

**Keywords:** Xanthogranulomatous Prostatitis; Benign Prostatic Hyperplasia; Prostatic Specific Antigen

## Introduction

A variety of the granulomatous lesions of the prostate have been described with varied etiology and pathogenesis. Xanthogranulomatous prostatitis is one such rare benign inflammatory lesion of prostate. Granulomatous prostitis was first described by Tanner and Mc. Donald in 1943 [1]. The exact cause of xanthogranulomatous prostatitis remains unknown. The first case of xanthogranulomatous prostatitis was documented in 1986 in Military medical academy in Poland. Only ten cases involving the prostate have been reported worldwide. We report a case of xanthogranulomatous prostatitis.

## Case Report

A 64-year-old patient presented with 5 months history of increasing difficulty in micturation, increased frequency, nocturia. No history of fever/vomiting. On digital rectal examination prostate was hard and nodular and estimated weight was 55-gram. His American Urological Association (AUA) symptom score was 24. Urine analysis showed hematuria and pyuria. His serum Prostate Specific Antigen (PSA) was 15ng/ml. His renal function tests and complete blood counts were normal. At transabdominal ultrasonography he had normal upper renal tract. Bladder was thick walled and prostate was 5×5×4 cm in size and was rather uniformly hypoechoic. Post-micturition residual urine was 180 ml. His chest, plain X-ray KUB was normal. Urine flow rate at flowmetry was 10 ml/sec. In view of severe obstructive urinary symptoms and significant post-micturition residual urine, transurethral resection of prostate was carried out. Histopathological examination of resected prostatic tissue revealed xanthogranulomatous prostatitis with no evidence of malignancy. At cystoscopy, prostatic urethra was inflamed. Prostate was quite occlusive with irregular intra-vesical protrusion and the prostatic mucosa was congested. Bladder was trabeculated and was generally congested. TURP was carried out, 54 gm tissue was resected and it amounted to near complete resection. The consistency of prostate was firm and gritty on resection. During resection, prostatic chips were rather yellowish but no abscess cavities or calculi were encountered. His postoperative recovery was uneventful. Histopathology of the resected tissue revealed dense xanthogranulomatous inflammation mixed with eosinophils and foci of calcification (Figure 1). Benign prostatic glands were identified and no evidence of malignancy was noted. Photomicrograph showing intense infilteration of prostate with lymphocyte, plasma cells and xanthoma cells.

## Discussion

A variety of granulomatous lesions of prostate have been described. Excluding the few cases in which the etiologic agent can be identified, the classification of the granulomatous lesions within the prostate remains controversial [2]. The etiology and pathogenesis of this morphologically distinct lesion remains unknown. It is thought to represent a reaction to inflammatory products and altered prostatic secretions released from obstructed ducts [3].

The distinctive feature of xanthogranulomatous prostatitis is the presence of large number of "foamy macrophages"(histiocytes) in the inflammatory cell infiltrate. Using immuno-histological techniques,"T" lymphocytes are in close association with damaged epithelium while "B "lymphocytes occur in more peripheral location or form follicular structures" [4]. A xanthogranulomatous pattern or prominence of epithelioid histiocytes sometimes bears a resemblance to high-grade prostatic carcinoma and immunohistochemical panel has been proposed that can reliably distinguish between these two conditions [5]. However, on rare occasions granulomatous prostatitis and prostatic carcinoma may coexist. Average age at the time of diagnosis is early sixties, with a wide range from twenties to the very elderly.

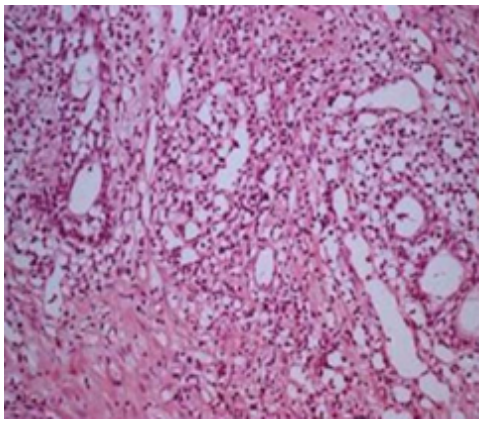

**Figure 1:** Micro pictographic picture xanthogranulomatous inflammation mixed with eosinophils, xanthoma cells and foci of calcification.

***Corresponding author:** Nikhil Patil, Department of Urology, B.L.D.E.U.'s Shri B. M. Patil Medical College, Hospital & Research Centre, Bijapur, Karnataka, India, Tel: 91 20 27424194/ 27421095,96,97; E-mail: drpatilnikhil@yahoo.com

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Clinically the symptoms are those of either urinary obstruction or a severe lower urinary tract infection. On digital rectal examination, it is difficult to distinguish from prostatic carcinoma. As xanthogranulomatous prostatitis may co-exist with prostatic carcinoma in cases where doubt still exists about malignancy, regular follow up is advised [6]. Xanthogranulomatous prostatitis cannot be diagnosed on the basis of biochemistry, transrectal ultrasonography, Fine nedle aspiration cytology and MRI.

## Conclusion

Xanthogranulomatous prostatitis is rare condition both clinically and microscopically. There are no specific radiological features. Serum prostatic specific antigen is non-specific [6]. It is necessary to collect and document more clinical cases to evaluate the pathogenesis and long term features. Final diagnosis of xanthogranulomatous prostitis is exclusively based on histopathological examination. The only reliable way to diagnose and exclude malignancy is immunohistochemistry.

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