Case report:

**Xanthogranulomatous prostatitis mimicking prostatic carcinoma clinically as well as biochemically- a rare case report**

Avinash Mane¹, Sujata Kanetkar², Parnika Garg³, Pankti Patel⁴, A D Huddedar⁴

¹Assistant professor, Department of Pathology, KIMS Karad, India
²Professor and Head, Department of Pathology, KIMS Karad, India
³Tutor, Department of Pathology, KIMS Karad, India
⁴Professor, Department of Surgery, KIMS Karad, India

Correspondence author: Dr Avinash Mane

Abstract:

**Introduction:** Xanthogranulomatous prostatitis one of the benign inflammatory lesion of prostate usually mimics as prostatic carcinoma. Histopathological examination is required for confirmatory diagnosis.

**Case Presentation:** A 65 year old male patient presented with 6 months history of retention of urine with dribbling and increased frequency of urine, nocturia, weak flow, intermittency. On digital rectal examination prostate was enlarged with approximate weight of 229 gms. It was tender and felt hard and nodular. His serum PSA was 40 ng/ml. In view of all these obstructive urinary symptoms, significant residual urine, elevated PSA level and hard mass on PR examination, Prostatic carcinoma was suspected and he underwent prostatectomy. Histopathological examination revealed Xanthogranulomatous prostatitis with no evidence of malignancy.

**Conclusion:** Xanthogranulomatous prostatitis is an excellent mimic of prostatic carcinoma, clinically as well as biochemically as PSA is elevated most of the times. There are no classical radiological features that differentiates it from prostatic carcinoma. Knowledge of this condition is necessary for confirmatory diagnosis as well as to prevent unnecessary radical prostatectomy as seen in our case.

**Introduction:**

A variety of granulomatous lesions of the prostate have been described with varied etiology and pathogenesis. Xanthogranulomatous prostatitis one of the benign inflammatory lesion of prostate usually mimics as prostatic carcinoma. PSA is elevated most of the times. PR examination usually reveals hard, irregular, nodular mass mimicking carcinoma.

**Case presentation:**

A 65 year old male patient presented with 6 months history of retention of urine with dribbling and increased frequency of urine, nocturia, weak flow, intermittency. He had no significant past medical history and was non diabetic. No history of fever/vomiting. His general physical examination was normal. On digital rectal examination prostate was enlarged with approximate weight of 229 gms. It was tender and felt hard and nodular. His serum PSA was 40 ng/ml (normal 0-4ng/ml) His renal function tests and complete blood counts were normal. ESR was elevated at 50mm at 1hr.

Routine urinalysis revealed 8-10 WBC’s/hpf but urine culture was negative. On Ultrasonography Abdomen and Pelvis (figure 1) : Evidence of prostatic enlargement -229gms. Median lobe shows significant indentation of the bladder wall shows moderate changes of chronic back pressure, wall of bladder was thick and prostate measuring 8.4 x 7.6 x 7.2cm in size. No vesical calculi / mass. Renal size & echotexture are normal. No medical renal disease. No upper urinary tract calculopathy /
obstructive uropathy seen. No ascites, no adenopathy, no focal hepatic mass. Past micturition residual urine was 170ml. Has chest, plain X-ray KUB and radiostope bone scan was normal. Urine flow rate at flowmetry was 1ml/sec.

In view of all these obstructive urinary symptoms, significant residual urine, elevated PSA level and hard mass on PR examination, Prostatic carcinoma was suspected and he underwent prostatectomy. Prostatectomy specimen was sent to our pathology department for histopathological examination.

Gross (figure 2) – Three globular, nodular yellow soft tissue masses largest measuring 4.5x3.5x3.5 cm & smallest 1x1x1 cm aggregate approximately 220 gms. External surface is nodular. Cut surface yellowish and slimy.

On histopathological examination the resected tissue revealed dense xanthogranulomatous inflammation (figure 3,4,5) mixed with lymphocytes and plasma cells in the lumen of the glands along with Benign prostatic hyperplasia (figure 6). There was no evidence of malignancy.

Discussion
Prostatitis is a common clinical entity and diagnosis is usually depends on laboratory tests in addition to the presence of symptoms. Granulomatous prostatitis was described for the first time in early 1940s as something which can mimic prostate cancer. Granulomatous prostatitis is an infrequent subtype of prostatitis and in etiology has been suggested to include intravesical BCG therapy, mycobacterial tuberculosis infection. Autoimmunity associated with HLA-DR15 expression and surgery.

Granulomatous prostatitis – classification in six groups including
1. Non-specific
2. Infectious
3. Latrogenic
4. Xanthogranulomatous
5. Malakoplakia
6. Associated with systemic granulomatous disease

Non specific granulomatous prostatitis is most common type. Xanthogranulomatous prostatitis – is rarer clinical entity and till now very few cases have been reported.

The etiology and pathogenesis of this morphologically distinct lesion remains unknown. The distinctive feature of xanthogranulomatous prostatitis is the presence of large number of “foamy macrophages” (histiocytes) in the inflammatory cell infiltrate. A xanthogranulomatous pattern or prominence of epithelial histiocytes sometimes beare a resemblance of high grade prostatic carcinoma. Xanthogranulomatous inflammation is well known in the kidney, colon, ovaries, pancreas, salivary gland, appendix, gall bladder, uterus but prostate is very rare site for this lesion. Approx 10 cases have be reported in the literature.

Average age at the time of diagnosis is early sixties with a wide range from twenties to the very elderly. Clinically the symptoms are those of either urinary obstruction or a severe lower UTI. On digital rectal examination it is difficult to distinct with from prostatic carcinoma as the prostate feels hard and nodular.

Treatment is usually made by TURP of prostate in the presence of significant Lower urinary tract infections.

Conclusion
Xanthogranulomatous prostatitis is an excellent mimic of prostatic carcinoma, clinically as well as biochemically as PSA is elevated most of the times. There are no classical radiological features that differentiates it from prostatic carcinoma. Knowledge of this condition is necessary for
confirmatory diagnosis as well as to prevent unnecessary radical prostatectomy as seen in our case.

Figure 1: USG : enlarged prostate

Figure 2: Gross Prostate

Figure 3 Xanthoma cells within the lumen of glands

Figure 4 Lymphoplasmacytic infiltration of the stroma

Figure 5 Xanthoma cells admixed with lymphoplasmacytic infiltration

Figure 6: BPH

References


