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Xanthogranulomatous Prostatitis : Case Report and Literature Review

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ABSTRACT

A 71-year-old patient with no past medical history consulted for the management of acute urinary retention. His PSA level was 87 ng/mg. A prostate biopsy revealed xanthogranulomatous prostatitis. Our case aims to discuss the epidemiological, clinical, histopathological and therapeutic characteristics of this rare disease which is a difficult differential diagnosis with other prostatic lesions.

1. Introduction

Xanthogranulomatous prostatitis is an unusual inflammatory form of prostatitis, rarely encountered in urological practice [1]. It was first described by Tanner and McDonald in 1943 [2]. Its clinical and biological presentation can mimic that of prostatic carcinoma. Therefore, histopathological studies remain the gold standard for diagnosis. We report a case of xanthogranulomatous prostatitis and discuss its epidemiological, histopathological, clinical and therapeutic characteristics.

2. Observation:

A 71-year-old patient with no past medical history consulted for the management of acute urinary retention. A digital rectal examination found a 60g prostate, supple. The PSA level was 87ng/mg and the urinalysis culture was negative. The prostate biopsy revealed xanthogranulomatous prostatitis (Figure 1).

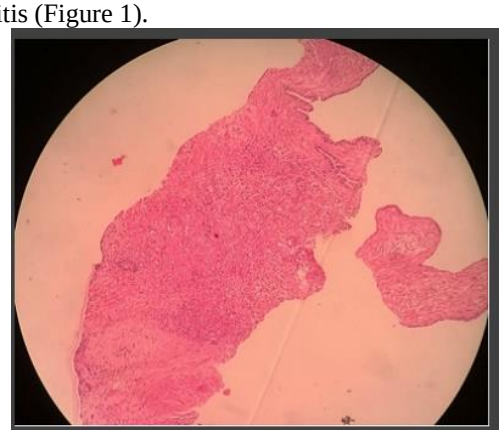

Figure 1. inflammatory infiltrate causing destruction of the acini (H&E, X10).

The patient underwent a transurethral resection of the prostate (TURP). The postoperative course was uneventful and the patient resumed normal micturition. The PSA levels at 3 months dropped to 9ng/ml.

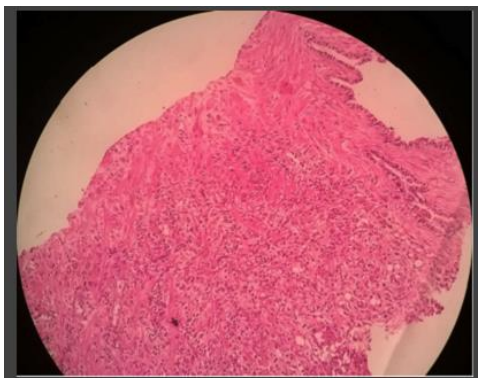

Figure 2. lympho-histiocytic inflammatory infiltrate in favor of xanthogranulomatous prostatitis (H&E, X20).

3. Discussion:

Xanthogranulomatous prostatitis is a benign inflammatory entity of the prostate, characterized histologically by an inflammatory response predominantly made up of macrophages or foamy histiocytes.

This disease is well known in the kidney and gallbladder, but the prostatic localization is rare [1]. According to our research in Pubmed/Medline, we estimate the number of cases reported in the literature to be 29 cases. Our patient represents the 30th case.

The etiology and pathogenesis of this morphologically distinct lesion remain unknown. It is thought to represent a reaction to altered prostatic secretions from clogged prostate channels [3], bacterial products, urine reflux or a secondary immunological response [4].

Xanthogranulomatous prostatitis constitutes a variety of granulomatous prostatitis. These were classified according to etiology and histopathology into the following subtypes [5]:

1) Idiopathic (non-specific)

- Typical nonspecific granulomatous prostatitis.
- Xanthoma – xanthogranulomatous prostatitis.

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2) Infectious

- Bacterial: Tuberculosis, Brucellosis, Syphilis
- Fungal:Coccididiomycosis, Cryptococcosis, Blastomycosis, Histoplasmosis, Paracoccidioidomycosis.
- Parasitic: Schistosomiasis, Echinococcosis, Enterobiasis.
- Viral: Herpes simplex virus.

3) Malakoplakia

4) Iatrogenic

- Post-surgical.
- After radiation therapy.
- BCG associated.

5)Systemic diseases: Sarcoidosis, Rheumatoid arthritis, Wegener's granulomatosis, Polyarteritis nodosa, Churg-Strauss syndrome.

The typical lesion of granulomatous prostatitis is a large nodular infiltrate of epithelioid histiocytes, lymphocytes and plasma cells occupying numerous prostatic lobules.

The distinctive characteristic of xanthogranulomatous prostatitis is the presence of a large number of "foamy macrophages" (histiocytes) in the infiltration of inflammatory cells. Using immuno-histological techniques, "T" lymphocytes are closely associated with the damaged epithelium, whereas "B" lymphocytes occur in a more peripheral location or form follicular structures [6]. A xanthogranulomatous pattern or prominence of epithelioid histiocytes sometimes resembles a high-grade prostatic carcinoma [7] and an immunohistochemical panel has been proposed to distinguish between these two conditions [8].

However, in rare cases, granulomatous prostatitis and prostatic carcinoma may coexist [9].

The average age at diagnosis is the early sixties, with a wide range from 20 to very old [1]. Clinically, symptoms are those of urinary obstruction or urinary tract infection [3]. On a digit rectal examination, it is difficult to distinguish it from prostatic carcinoma [10] because the prostate feels hard and nodular. In addition, PSA may be elevated, with an increase of up to 150 ng / ml [11]. This rise in PSA is usually transient [12]. Transrectal ultrasound and magnetic resonance imaging (MRI) cannot distinguish this entity from prostatic carcinoma, but usually ultrasound shows hypoechoic lesions [13].

Therefore, the diagnosis of xanthogranulomatous prostatitis is histological.

In case of significant urinary signs, the TURP may be diagnostic as well as therapeutic. In asymptomatic patients, a simple therapeutic abstinence can be adopted.

4. Conclusion

Xanthogranulomatous prostatitis is a benign inflammatory entity of the prostate with very few cases described in the literature. It poses a differential diagnosis problem with prostatic carcinoma and other types of graulomatous prostatitis. Histopathologic studies remain the gold standard for its diagnosis. Its management in symptomatic patients is TURP.

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