BioBacta

Journal of Bioscience and Applied Research
www.jbaar.org

XANTHOGRANULOMATOUS PROSTATITIS

Farouk Hachem, Imad Boualaoui, Ali Mikou, Zouaidia Fouad, Ahmed Ibrahimi, Hachem Elsayegh and Yassine Nouini.

Urology "A" Department, University Hospital Center of Rabat, Morocco

Faculty of Medicine and Pharmacy, Mohammed V University, Rabat, Morocco

DOI : 10.21608/jbaar.2022.246744

Abstract

Xanthogranulomatous prostatitis is a rare chronic inflammatory condition and may simulate prostatic carcinoma both clinically and microscopically. Conservative treatment is recommended for xanthogranulomatous prostatitis, including the use of alpha-blockers and corticosteroids.

Surgical options, such as transurethral prostatic resection or open adenomectomy, are reserved for patients who are severely symptomatic or who have failed conservative treatment.

Keywords: Xanthogranulomatous, prostatitis, alpha-blockers, adenomectomy

Introduction:

Multiple granulomatous lesions of the prostate have been described with varied etiology and pathogenesis [1]. Xanthogranulomatous prostatitis is one of the rare benign inflammatory lesions of the prostate. grade [2]. The most common xanthogranulomatous inflammations are seen in the kidneys and gallbladder [3]. Here we report the case of a patient who presented with xanthogranulomatous prostatitis but who, on clinical and biochemical grounds, was mistakenly diagnosed with locally advanced prostatic carcinoma.

Case report:

We report the case of a 63-year-old patient with no medical-surgical history.

He consulted for BAU obstructive syndrome made of dysuria and weak micturition associated with pollakiuria without fever or other associated urinary signs evolving for 4 months despite an alpha-blocker treatment.

A digital rectal examination shows a large painless hard prostate with a suspicious nodule in the left lobe. The rest of the clinical study is unremarkable.

There is an inflammatory syndrome CRP 102 ng / L, and renal function is normal PSA 120. ECBU is sterile with hyperleucocyturia greater than 10^2.

The Reno-Vesico Prostatic ultrasound shows a prostate of 70 grams with an irregular intravesical median lobe and a significant post-void residue at 210 ml, heterogeneous prostate, and no Upper urinary tract dilation. (Figure 1)

A provisional diagnosis of locally advanced prostatic adenocarcinoma was made.

The patient underwent transurethral resection of the prostate. During cystoscopy, the prostatic urethra was inflamed. The prostate was quite occlusive with

Received: April 9, 2022. Accepted: June 19, 2022. Published: June 29, 2022

irregular intravesical protrusion. The prostate shavings were yellowish during resection, but no abscess or calculus cavity was observed. His postoperative recovery was uneventful. Histopathology of the resected tissue revealed cystic dystrophy of the prostate on xanthogranulomatous prostatitis, with no histological sign of malignancy (Figure 2). After six months of follow-up, the patient still has no symptoms. His serum PSA decreased to 5 ng/ml.

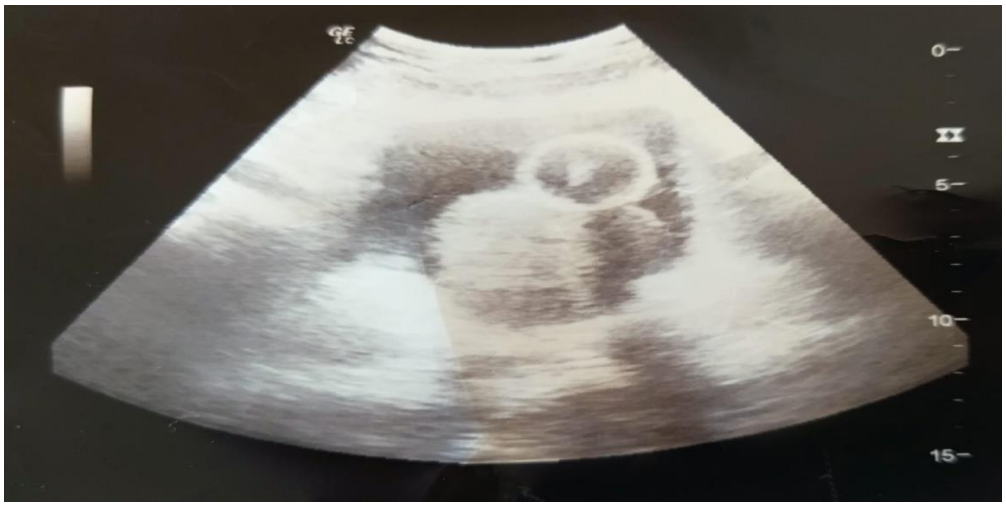

Figure 1: ultrasound image shows a 65-gram prostate with median lobe

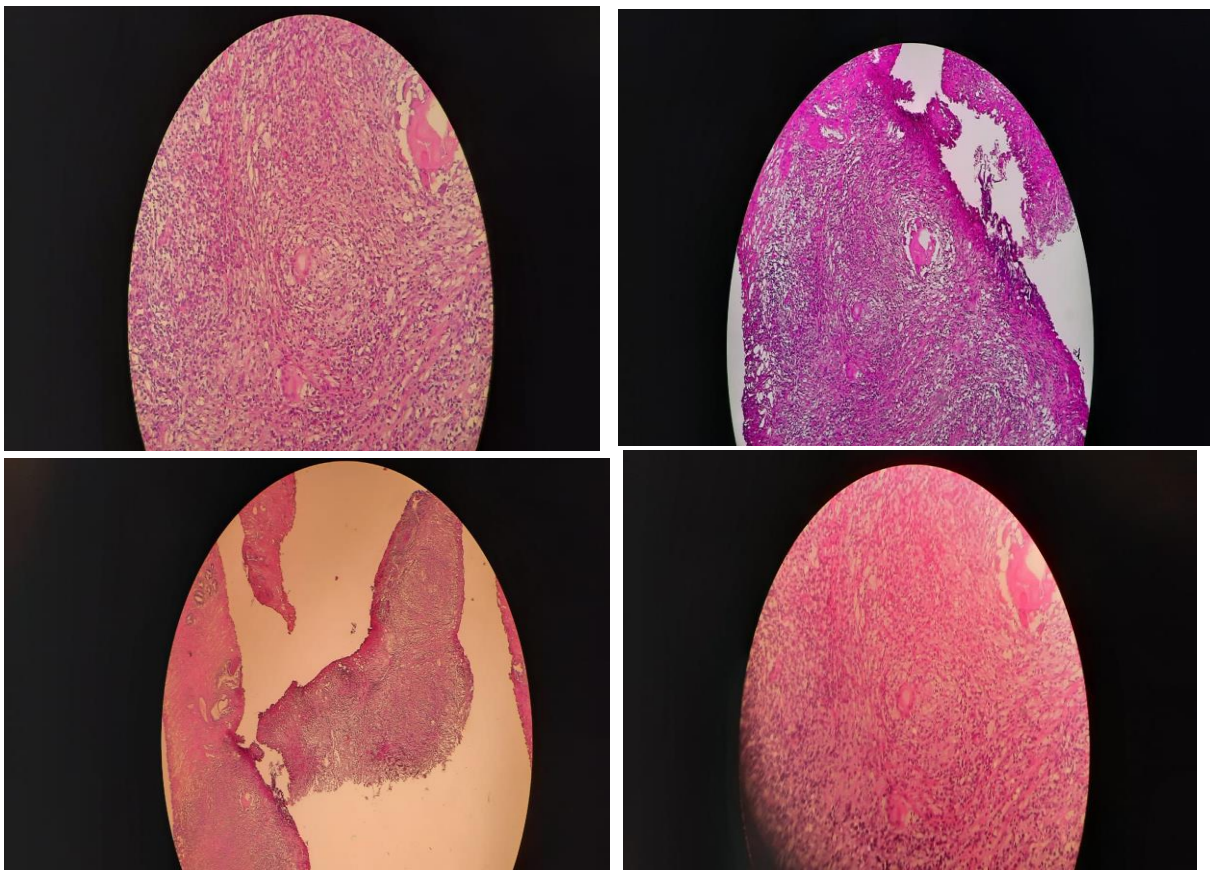

Figure 2: Histological examination showing cystic dystrophy of the prostate on xanthogranulomatous prostatitis.

Discussion:

Granulomatous inflammation is classified as non-specific or idiopathic, infectious, iatrogenic, xanthogranulomatous, malacoplakia, or associated with systemic granulomatous disease and allergy (3,4,5)

Granulomatous prostatitis (PG) is a relatively rare condition; its etiology is variable: it can be of infectious tuberculous origin in the context of urogenital tuberculosis or, after BCG therapy, mycotic in immunocompromised patients, parasitic following non-specific urogenital or bacterial schistosomiasis. It can occur after transurethral resection of prostate adenoma or after prostate biopsy. (6)

Prostatitis falls within the framework of systemic diseases (Wenger's granulomatous disease, Churg Strausse's vascularity is exceptional. Four cases of PG occurring after vascularity are reported in the literature. (7) Xanthogranulomatous inflammation involving the kidneys and gallbladder is common. (4,8) However, xanthogranulomatous prostatitis is rare. (3,9) The exact cause of xanthogranulomatous inflammation is unknown. (10) It is thought to represent a reaction to inflammatory products and altered prostatic secretions released through clogged ducts. Recently, a study has linked this condition to autoimmune disease. (11,12) The mean age at diagnosis is the early sixteenth.

Clinically, the symptoms include a urinary obstruction or a severe infection of the lower urinary tract. (13) With rectal examination, it is challenging to distinguish prostate cancer because the prostate is hard and nodular. (14)

In addition, this condition can cause elevated serum PSA levels. In one study, serum PSA levels ranged from less than 0.5 ng/ml to 114 ng/ml (mean 12.7 ng/ml). (15) This increase in PSA levels is usually transient. (16). In the present case, the serum PSA level was markedly elevated at 120 ng/ml, which decreased to 5 ng/ml after transurethral resection of the prostate. On transrectal ultrasound and imaging by magnetic resonance (MRI), there is no profile allowing a specific diagnosis of granulomatous prostatitis or differentiating it from prostatic carcinoma. (17)

Therefore, the diagnosis of xanthogranulomatous prostatitis is made on histological examination of the prostate. (18)

The distinguishing feature of xanthogranulomatous prostatitis is the presence of a large number of "foamy macrophages" (histiocytes) in the infiltrate of inflammatory cells. Using immunohistological techniques, "T" lymphocytes closely associate with the damaged epithelium, while "B" lymphocytes are found in a more peripheral location or form follicular structures. (19)

A xanthogranulomatous pattern or prominence of epithelioid histiocytes sometimes resembles high-grade prostatic carcinoma. (20) An immunohistochemical panel has been proposed to distinguish between these two conditions reliably. (21)

However, in rare cases, granulomatous prostatitis and prostatic carcinoma can coexist.

Conservative treatment is recommended for xanthogranulomatous prostatitis, including alpha-blockers and corticosteroids.

Surgical options, such as transurethral or open prostatectomy, are reserved for patients who have severe symptoms or in whom conservative treatment has failed.

No corticosteroid was prescribed to treat our patient; he underwent TURP with satisfactory clinical and biological progress.

Conclusion:

Xanthogranulomatous prostatitis is a rare chronic inflammatory condition that can mimic prostatic carcinoma clinically and microscopically.

There are no specific radiological characteristics. Knowledge of this condition and close cooperation with the pathologist is necessary for the histological diagnosis of xanthogranulomatous prostatitis, whether by biopsy or post-TURP.

References:

1. Epstien JI, Hutchins GM. Granulomatous prostatitis: distinction among allergic, non-specific, and post-transurethral resection lesions. Hum Pathol. 1984;15:818–825. [PubMed] [Google Scholar]

2. Srigley JR. Benign mimickers of prostatic adenocarcinoma. Mod Pathol. 2004;17:328–348. DOI: 10.1038/modpathol.3800055. [PubMed] [CrossRef] [Google Scholar]

3. Valsangkar RS, Singh DP, Gaur DD. Xanthogranulomatous prostatitis: rare presentation of rare disease. Indian J Urol. 2012;28(2):204-205

4. Lee H-Y, Kuo Y-T, Tsai S-Y, et al. Xanthogranulomatous prostatitis: a rare entity resembling prostate adenocarcinoma with magnetic resonance image picture. Clin Imaging. 2012;36:858-60

5. El Moussaoui R, El Moussaoui A, Dakir M, Benkirane A. Case report: Xanthogranulomatous prostatitis, a difficult differential diagnosis of prostate adenocarcinoma. F1000 Research. 2019;8:1783

6. Granulomatous prostatitis (About 6cases) Dahamia I, Sarfa M, Dakira H, Elattarb L, Badreb M, AIraqui RA, boutaieba A, El Moussaouia F, Meziane A

7. Kopolovic J, Rivkind A, Sherman Y. Granulomatous prostatitis with vasculitis, A sequel to transurethral prostatic resection. Arch Pathol Lab Med 1984;108–109:732–3.

8. Mukendi AM, Doherty S, Mohanlal R. Xanthogranulomatous prostatitis: A rare mimicker of prostate adenocarcinoma. Clin Case Rep. 2002;8:203-5

9. Grewal N, Tuli A, Sridhar FK, Mammen KJ. Xanthogranulomatous prostatitis with benign prostatic hyperplasia: A rare combination. CHRISMED J Health Res. 2017;4:214-15

10. Joseph CMC. Xanthogranulomatous Prostatitis: Novel Presentation of a Rare Condition. Am J Case Rep. 2021 Sep 3;22: e932869. DOI: 10.12659/AJCR.932869. PMID: 34475372; PMCID: PMC8422563.

11. Alexander RB, Mann DL, Borkowski AA, Fernandez-Vina M, Klyushnenkova EN, Kodak J, Propert KJ, Kincaid M. Granulomatous prostatitis linked to HLA-DRB1*1501. Urology. 2004;171:2326–2329. [PubMed] [Google Scholar]

12. Noyola A, Gil JF, Lujano H, Piñon O, Muñoz G, Michel JM, Garcia J, Valdez J, Morales O. Xanthogranulomatous Prostatitis, a Rare Prostatic Entity. Urol Case Rep. 2016 Oct 22;10:4-5. doi: 10.1016/j.eucr.2016.07.011. PMID: 27800297; PMCID: PMC5079234.

13. Epstein JI. The prostate and seminal vesicles. In: Sternberg SS, editor. "Diagnostic Surgical Pathology". 2. Raven Press. New York USA; 1994. pp. 1807–1848. [Google Scholar]

14.Miekos E, Wlodarczyk W, Szaram S. Xanthogranulomatous prostatitis. Int Urol Nephrol. 1986;18:433–437. doi: 10.1007/BF02084115. [PubMed] [CrossRef] [Google Scholar]

15. Oppenheimer JR, Kahane H, Epstein JL. Granulomatous prostatitis on needle biopsy. Arch Pathol Lab med. 1997;121:724–729. [PubMed] [Google Scholar]

16. Speights VO, Jr, Brawn PN. Serum prostate specific antigen levels in non-specific granulomatous

prostatitis. Br J Urol. 1996; 77:408–410. [PubMed] [Google Scholar]

17. Naik KS, Carey BM. The transrectal ultrasound and MRI appearances of granulomatous prostatitis and its differentiation from carcinoma. Clin Radiol. 1999;54:173–175. DOI: 10.1016/S0009-9260(99)91009-7. [PubMed] [CrossRef] [Google Scholar]

18. Xanthogranulomatous prostatitis: a mimic of carcinoma of prostate

19. Bryan RL, Newman J, Campbell A. Granulomatous prostatitis. A clinicopathological study. Histopathology. 1991;9:453–457. [PubMed] [Google Scholar]

20. Bostwick DG, Chang L. Overdiagnosis of prostatic adenocarcinoma. Semin Urol Oncol. 1999;17:199–205. [PubMed] [Google Scholar]

21. Presti B, Weidner N. Granulomatous prostatitis and poorly differentiated prostatic carcinoma. Their distinction with the use of immunohistochemical methods. Am J Clin Pathol. 1991;95:330–334. [PubMed] [Google Scholar