ORIGINAL RESEARCH PAPER

Urology

CASE SERIES OF XANTHOGRANULOMATOUS PROSTATITIS- A MIMIKER OF CARCINOMA PROSTATE

KEY WORDS: XGP-Xanthogranulomatous Prostatitis

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ABSTRACT

Introduction - Xanthogranulomatous prostatitis is a subtype of Granulomatous prostatitis which is a rare entity. Sometimes it is mistaken for carcinoma prostate both clinically and radiologically. Xanthogranulomatous prostatitis diagnosis can be made reliably only on pathological basis. Very few case reports has been published in English literature till now.

Materials and methods- The study was conducted on Ten cases of xanthogranulomatous prostatitis retrieved from records of pathology department of our Hospital, over a period of 7 years (2012-2019). Clinical presentations, physical findings, laboratory investigations, and MRI reports were retrieved from hospital EHIS system. Every case was reconfirmed by the expert pathologist in the field of urology.

Results - The age of diagnosis varied from 49 to 85 years. On digital rectal examination findings varied from firm to Hard prostate. 2 out of 10 patients were even having tenderness on DRE. Their PSA ranged from 1.37 to 43.3 ng/ml. 6 out of 10 patients also underwent MRI out of which 3 showed PIRADS 5 and 2 found to have PIRADS 4 lesion. 5 out of 10 patients underwent TRUS biopsy for suspicion of carcinoma prostate. After confirmation of diagnosis they were treated conservatively with alpha blockers and anti-inflammatory drugs. The remaining patients underwent transurethral resection of prostate followed by anti-inflammatory drugs.

Conclusion – Xanthogranulomatous prostatitis mimicks Carcinoma prostate clinically ,Biochemically and Radiologically.High index of suspicion is required in this condition and needs to be distinguished from carcinoma prostate since it is a benign condition and can be managed medically or surgically .Pathological examination is the only way by which Xanthogranulomatous prostatitis can be differianted from Carcinoma prostate.

INTRODUCTION -

Granulomatous prostatitis is a benign prostatic disease characterized by chronic granulomatous inflammation of prostate, which is a rare entity. Xanthogranulomatous prostatitis is a subtype of Granulomatous prostatitis which is even more rare.Importance of accurate diagnosis of Xanthogranulomatous prostatitis is its close resemblance with Carcinoma prostate Clinically ,Biochemically and Radiologically. Xanthogranulomatous prostatitis diagnosis can be made reliably only on pathological basis. Very few case reports has been published in English literature till now. We present a case series of 10 patients which were diagnosed of having xanthogranulomatous prostatitis on either TRUS biopsy or TURP.

MATERIAL AND METHODS -

The study was conducted on 10 cases of xanthogra nulomatous prostatitis retrieved from records of pathology department of our Hospital, over a period of 7 years (2012-2019). Clinical presentations, physical findings, laboratory investigations, and MRI reports were retrieved from hospital EHIS system. Histopathology was reconfirmed by the expert pathologist in the field of urology.

RESULTS -

Total of Ten patients were found to have XGP. The age of diagnosis varied from 49 to 85 years(Table 1).

Table 1 Age wise distribution of patients

Age	No of patients
<50 years	1
50 to 60years	2
60 to 70 years	4
70 to 80 years	2
<80 years	1

All patients presented to OPD with lower urinary tract symptoms and 2 patients along with Lower Urinary tract symptoms had Raised Serum PSA. On digital rectal examination findings varied from firm to Hard prostate. 2 out of 10 patients were even having tenderness on DRE. Their PSA ranged from 1.37 to 43.3 ng/ml(Table -2).

Table 2.PSA level of the patients

PSA	No of patients
<4	4
4 to 10	4
>10	2

6 out of 10 patients also underwent MRI out of which 3 showed PIRADS 5 and 2 found to have PIRADS 4 lesion and 1 patient had PIRADS 2 lesion.(Table-3)

Table 3.MRI (PIRADS scoring)

MRI(PIRADS)	No of patients
PIRAD 5	3
PIRAD 4	2
PIRAD 2	1

5 out of 10 patients with PIRADS 5 and PIRADS 4 lesion on MRI underwent TRUS biopsy for suspicion of carcinoma prostate. After confirmation of diagnosis they were treated conservatively with alpha blockers and antiinflamatory drugs. The remaining patients underwent transurethral resection of prostate followed by antiinflamatory drugs.

Figure

Showing infiltration of the prostate with lymphocytes, plasma cells and xanthoma cells.

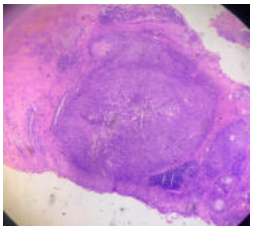

Figure1-Histopatholigical picture of XGP

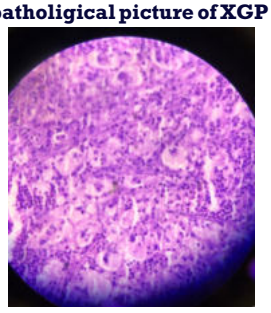

Figure 2-Demonstrating chronic inflammatory cells

DISCUSSION –

Granulomatous prostatitis is an uncommon benign disease characterized by chronic granulomatous inflammation of prostate. It was first described by Tanner and McDonald in 1943. There is controversy regarding its classification. Most commonly used classification was given by Epstein and Hutchins [1]. They classified granulomatous prostatitis into four groups: infectious, iatrogenic, secondary to systemic granulomatous diseases, and idiopathic (nonspecific). The nonspecific granulomatous prostatitis (NSGP) is the most common type. XGP is one of the sub type of non specific granulomatous prostatitis which is distinguished by presence of xanthomas [2].

The exact etiology of XGP is still unclear. Several theories has been postulated regarding its etiology like autoimmune, blocking of ducts, cell debris [3]. The diagnosis is made on histopathology characterized by large number of foamy histiocytes (lipid laden macrophages) (Figure1)in an inflammatory infiltrate accompanied by lymphocytes and plasma cells(Figure 2) [4]. Sometimes due to prominent epithelioid histiocytes it resembles to high grade prostatic adenocarcinoma on histopathology. Then immunohi stochemical staining is used to distinguish between these two. Staining for epithelial and prostatic cells (cytokeratin, PSA, prostatic acid phosphatase, leukocyte common antigen) and histiocytes(CD68) can be useful for differentiating[5].

Average age of diagnosis of XGP is early sixties, although may vary from twenties to elderly. In our study the youngest patient age was 49 years. Clinically most patients presents with symptoms of lower urinary tract obstruction or incidental detection of raised PSA. On digital rectal examination findings may vary from firm to hard nodular prostate making it difficult to distinguish it from carcinoma prostate. PSA may be in normal range or may be elevated multiple times. In a case report even PSA of 150 ng/ml has been reported. In our study, all patients presented with LUTS. 4 out of 10 patients were having PSA less than 4 ng/ml and highest PSA reported was 43.3 ng/ml. Currently no imaging can differentiate it from carcinoma prostate. In our study, 3 out of 6 patients who underwent MRI were reported of having PIRADS 5 lesion and 2 patients with PIRAD 4 lesion which later turned out to be XGP on Biopsy.

XGP is usually an incidental finding on biopsy done for suspicion of carcinoma prostate or on TURP. In our study half of the patients were diagnosed on TRUS biopsy and other half on prostatic chips examination after TURP. Diagnosis with certainty can be made only on HPE.

XGP is usually managed conservatively as it is a benign process and inflammation will resolve gradually. But in case of failure of conservative management or severe bothersome LUTS or abscess formation surgical intervention may be needed. Till now 4 cases of prostatic abscess has been reported in English literature. In our study no patient developed prostatic abscess.

CONCLUSION –

Xanthogranulomatous prostatitis mimicks Carcinoma prostate clinically ,Biochemically and Radiologically.High index of suspicion is required in this condition and needs to be distinguished from carcinoma prostate since it is a benign condition and can be managed medically or surgically .Pathological examination is the only way by which Xanthogranulomatous prostatitis can be differianted from Carcinoma prostate.

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