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Pathology

Fungal Prostatitis- Rare Masquerading Infection

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Abstract **Case Report**

Prostate pathology is a daily occurrence in urological and general medical consultations. Besides hyperplasia and neoplastic pathology, other processes, such as infectious ones, are also documented. Their etiology is diverse and varied. Within the infectious prostatic processes, fungi can also be a specific cause of prostatitis. Fungal prostatitis often appears in patients with impaired immunity. It can result from a disseminated infection, but it can also be localized. Fungal prostatitis is a nonspecific and harmless process. Diagnosis is commonly made by fine needle aspiration cytology or by biopsy. A number of fungi can be involved. Although there are not many reported cases, they are becoming more frequent, in particular in patients with some degree of immunodeficiency or those who live in areas where specific fungi are endemic or in visitors of those areas. We present a comprehensive case of fungal prostatitis with morphological characteristics of the fungi. We also report our own experience, aiming to alert physicians, urologists and pathologists of these particular infections.

Keywords: Prostatitis, Granulomatous, Fungal infection, Candida.

INTRODUCTION

Fungal granulomatous prostatitis is rare. Predisposing conditions include immunosuppression, prolonged antibiotic use, diabetes mellitus, malignancy and an indwelling bladder catheter. Fungi detected in the prostate include *Candida*, *Cryptoccocus*, *Paracoccidioides*, *Coccidioides*, *Histoplasma*, *Blastomyces* and *Aspergillus*. In patients with predisposing conditions, and granulomatous prostatitis or necrotizing granulomas, special histochemical stains for fungal organisms and acid-fast bacilli should be used.

CASE REPORT

A 50-years old Diabetic man with severe urinary retention was subjected to Trans Needle examination of prostate, after which the prostatic tissue was sent for histopathological examination. Grossly, Multiple tiny greyish white tissue bits (Total number - 10, Approximate weight- 1 grams) and size 2.5x2cm was received.

Microscopically, Hematoxylin and eosin stained sections of the prostate revealed a granulomatous inflammatory response, giant cells and long filaments especially within the prostatic stroma with reactive changes and marked inflammatory infiltrate mainly lymphocytes, plasma cells and foamy histiocytes and eosinophils along with stromal proliferation of filaments (pseudo-hyphae) and conidias (budding yeast forms) along with poorly formed granulomas in the stroma (Fig.1.1).

PAS stain confirmed magenta coloured Filamentous and round fungi in prostate (fig 1.2). Periodic Acid Sciff (PAS) stain highlighted the fungal elements specially conidias and filaments. These findings were diagnostic of fungal prostatitis, or granulomatous prostatitis most probably due to *Candidia* infection.

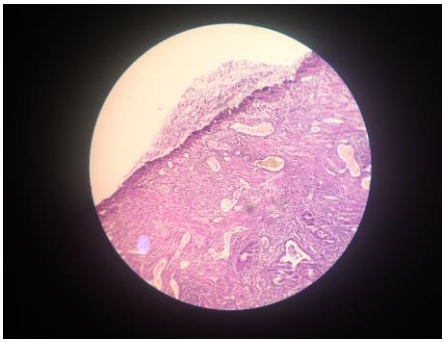

Fig-1.1: Microscopic H&E stained - 10x

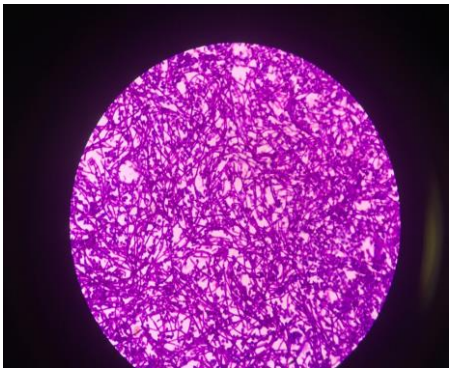

Fig-1.2: Microscopic PAS stained– 40x

DISCUSSION

Candida is commensal yeast which has two forms in the human body - budding (yeast) and penetrating (hyphal). It thrives on sugars and carbohydrates. Patients with symptomatic fungal prostatitis require immediate antifungal therapy. The treatment for isolated male genital tract disease has not been well defined [1]. Many but not all immunocompetent patients with isolated genital tract (including prostate) involvement have been cured with surgical resection. For asymptomatic patients with candidiasis of the prostate diagnosed as an incidental finding, management depends on the type of tissue sampling [2-4].

CONCLUSION

Candida is notorious for its ability to infect and affect all the various organs and tissues of the body. The urinary tract is a very common site and one of the first places to be affected. The relationship of the urinary tract to the prostate gland increases the likelihood of the spread of fungal candida to this gland. In the last decades, fungal urinary tract infections (UTI) due to candida yeasts have increased significantly. Recently, the incidence of UTI associated with Candida albicans is reported to be 6.8% of all microbial UTIs.

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