www.jmscr.igmpublication.org
Impact Factor 5.84
Index Copernicus Value: 83.27
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v5i2.147

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Malakoplakia of Testis: A Case Report

Authors
Dr Mahesh M S[1], Dr Suresh Bhat[2], Dr Alvin Jose[3]
[1,3]SR, Dept of Urology, Govt Medical College Kottayam, Kerala
[2]Professor, Dept of Urology, Govt Medical College Kottayam, Kerala

Abstract
Malakoplakia is an uncommon chronic inflammatory condition of the urogenital tract characterised histologically by the presence of Von Hansemann cells and intracytoplasmic inclusion bodies called Michaelis-Gutmann Bodies. Although this condition ismore common in bladder (40%), it is also seen in the testis (12%). Malakoplakia of testis occursin middle aged men and usually involves one testis only. It is difficult to diffentiateit from testicular malignancy, epididymoorchitis and granulomatous orchitis either clinically or radiologically. This is a case report of an elderly patient with testicular malakoplakia.
Keywords: *Michaelis-Gutmann Bodies, Testicular Malakoplakia, Von-Hansemann Cells.*

Introduction

Malakoplakia is an uncommon condition usually affecting the urogenital tract. It is often associated with E coli infection[1]. The urinary bladder is the most commonly affected site, however it has been noted to occur in extra vesical sites such as kidneys, testis, prostate and colon[2]. Malakoplakia is characterised by the presence of large cells with abundant eosinophilic cytoplasm called Von Hansemann cells and within the cytoplasmare present calcified inclusion bodies called as Michaelis-Gutmann (MG) bodies which exhibit a concentric laminated (targetoid or owl's eye) appearance with a basic dye like haematoxyline[2] [3]. Malakoplakia of the testis is a very rare entity. We report a case of malakoplakia of the testis in an elderly patient.

Case Report

A 65 year old man presented with gradually increasing painless swelling of left testis of 6 months duration.

On examination, there was a hard non tender swelling of 8x5cm in the left testis. There were no regional or distant metastases. Routine investigations were normal. Serum tumor markers for testicular tumor were normal. Ulrasonography (US) scrotum showed mixed echogenic mass in the testis (Figure 1). Computerised tomographic scan of the abdomen and chest Xray were within normal limits. Patient underwent high inguinal orchidectomy considering the diagnosis of testicular malignancy. Histopathological examination revealed atrophy of the tubules along with interstitial infiltration by large number of histiocytes with abundant granular eosinophilic cytoplasm. The histiocytes showed intracytop-

lasmic Michaelis-Gutmann bodies (Figure 2). The diagnosis of malakoplakia of testis was confirmed.

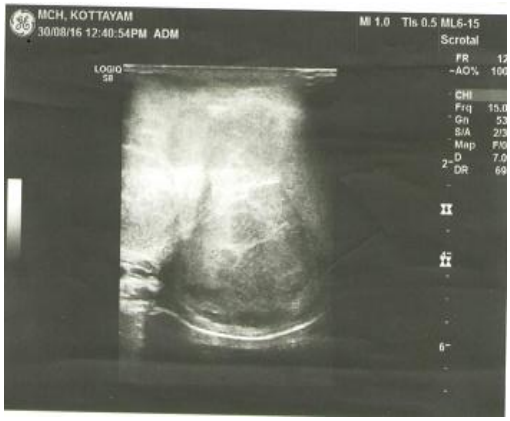

Figure 1. USG Scrotam showing Michelis Heterogenous echogenic lesion in left testis

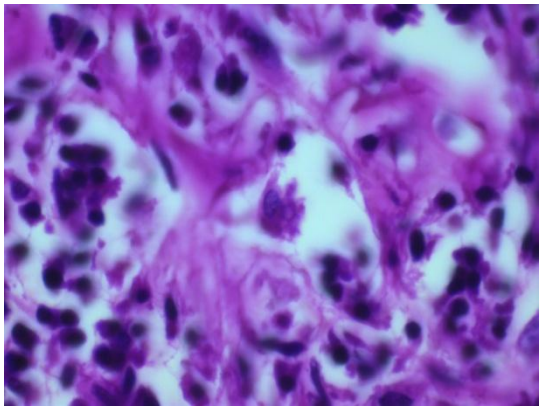

Figure 2. HPE: macrophages with Gutmann bodies (x40)

Discussion

Malakoplakia of the testis is a chronic inflammatory condition usually associated with E coli infection. It occurs in middle aged men. The presenting features include painless testicular swelling or fever, chills and testicular pain. Patients may have history of diabetis mellitus, recurrent urinary tract infection (UTI), renal transplantation and immunosuppression. Imaging studies are usually nonspecific. The diagnosis is usually made after high inguinal orchidectomy.

Grossly, the testis is tan-yellow-brown coloured, may contain abscesses and thrombosed vessels. The diagnosis of malakoplakia is based on the microscopic findings of testicular atrophy, sheets of histiocytes with Michalis-Gutmann bodies which is the name given to intratesticular and extratesticular round structures containing iron and calcium[2]. There is usually evidence of destroyed tubular architecture in the testis. Microscopically, gram negative bacilli can also be seen.

This condition clinically appears as epididymo-orchitisor testicular malignancy. Several theories are described for the occurrence of this condition, these are altered phagocytic function of macrophages, gram-negative infection and an abnormal immune response [4]. Ineffective phagocytosis occurs due to defect in the lysosome response of macrophagesto bacterial infections, usually by *E. coli*,. Imbalance between cyclic adenosine monophosphate (AMPc) and cyclic guanosine monophosphate (GMPc) causes in adequately somic degranulation in the monocytes [4]. The association of coliform urinary infection with testicular malakoplakiacan be explained by the fact that testicular infection may be acquired by retrograde spread from the urinary tract and is intratubular initially. The Sertoli cells and macrophages interact with bacteria, forming intracellular phagosomes which may fuse to form giant cytosegrosomes which undergo calcification resulting in MG bodies [4], however, in our case infection was not found.

An increased frequency of malakoplakia in immunocompromised patients is seen in upto 40% cases[1]. Other conditions which can coexist include cancer, diabetes, alcoholic liver disease and tuberculosis [4]. No such coexistent illness was observed in our case.

Orchidectomy is the only way to differentiate the lesion from other malignant or infectious processes like granulomatous orchitis. Although an infectious aetiology is evident, no antimicrobial therapy has been successfulin the long term. Fluoroquinolones, especially ciprofloxacin, are the first choice drugs due to 80% to 90% effectiveness [4]. Other drugs are trimethoprim, sulfamethiazole. Patients with malakoplakia should be followed up periodically.

Conclusion

Malakoplakia of the testis is an uncommon chronic inflammatory condition which should be considered in the differential diagnosis of testicular swellings especially in association with testicular malignancy, leydig cell tumor and gram- negative infections.

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