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TUBERCULOSIS OF TUNICA VAGINALIS OF TESTIS: A CASE REPORT AND REVIEW OF LITERATURE

General Surgery

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KEYWORDS

INTRODUCTION

With an incidence rate of as high as 210 cases per 1,00,000 of population, tuberculosis (Tb) is a very common disease in India (1). Primarily, pulmonary involvement is most common, however recently extra pulmonary sites of Tb has also been rapidly increasing. Among extra-pulmonary Tb (EPTB), lymph node Tb is the most common, genital Tb being the second most common affected site (2). Genital Tb affects both the genders equally and causes complications like infertility. It usually affects organs like bladder, prostate, fallopian tubes and testis.

The tunica vaginalis is a serous membrane covering the testis and is an unusual site for Mycobacterium tuberculosis infection. Since the patient presents with vague symptoms, the diagnosis is very difficult and high degree of suspicion is needed in endemic areas for diagnosis. Understanding the atypical presentation is crucial for early recognition, appropriate treatment and prevention of complications in affected individuals.

Case Presentation

A 72 year old male resident of Mumbai presented to the outpatient department with complaints of right scrotal swelling since 1 month which was initially small and then gradually increased in size. The swelling was also associated with dull-aching scrotal pain. There was no history of fever, nausea, vomiting, trauma or urinary complaints.

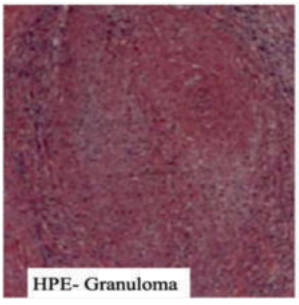
On examination, a single swelling about 4x5cm was present in the right scrotum which was tender with variegated consistency without any signs of inflammation.

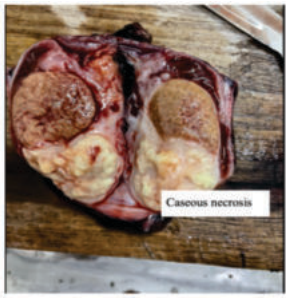
The blood reports suggested mild leukocytosis (total counts- 13520 X 10^3/mm3). Tumour markers- AFP, b HCG and LDH were normal, urine routine was within normal limit.

Ultrasonography of the testis showed heterogeneously hypoechoic lesion in the right testicular parenchyma measuring 2.7 X 2.2 X 2.0 cm. The volume was 10cc. Multiple calcific foci seen within it with mild peripheral vascularity. Areas of low lying moving echoes were also noted. Moderate multiseptate fluid collection was seen in the right tunica vaginalis.

The patient was posted for scrotal exploration. Intraoperatively, the testis had variegated consistency with cystic as well as firm areas, however there was no evidence of testicular abscess. In view of susceptible age group and atypical intraoperative findings, right orchidectomy was done and the sample was sent for frozen section which reported an inflammatory lesion that was probably tuberculous in origin.

On multiple sections studied from the sample, only the tunica vaginalis showed multiple caseating and non caseating granulomas composed of epithelial histiocytes and macrophages. Sections from testis, epididymis and spermatic cord showed mild lymphocytic infiltrates. However no evidence of epithethoid granuloma was noted.





DISCUSSION

Tb remains one of the leading causes of morbidity and mortality in developing countries like India. India has one of the highest burdens of TB globally. Few factors contributing to the high disease burden includes poor healthcare infrastructure, population density, poverty, malnutrition.

Genitourinary Tuberculosis comprises of 20% of all the EPTB (3). It most commonly affects the kidney, seminal vesicle, epididymis and testis. Isolated affection of Tunica vaginalis is rare (4).

The most common mode of spread is hematogenous mode of spread. In Tuberculosis of the tunica vaginalis, the serous membrane covering the testis is affected which leads to scrotal swelling, pain and the development of a hydrocele.

Genitourinary Tuberculosis in male patients present as epidermal or scrotal mass, scrotal sinus tract, hemospermia or penile ulcer. Presentation of acute cases may be in the form of hydrocele, scrotal access or fistulas. (5)

The differential diagnosis includes testicular tumour, acute infection, infarction (6).

Isolated Tuberculosis of the tunica vaginalis is extremely rare (4,7) and only two similar cases have been documented in literature before and is difficult to diagnose. (7,8) The diagnosis often involves histopathological examinations of the biopsy specimens and often along with acid fast staining to confirm the presence of mycobacterium tuberculosis. Radiological investigations act as a compliment of the same to assess the extent of the infections and guide treatment decisions. (9)

diagnosis is done mainly on a high index of suspicion in regions of tuberculosis to ensure prompt diagnosis and appropriate management to prevent complications and improve patient outcomes. Management includes antitubercular medications with a multidrug regimen inclusive of drugs like isoniazid, rifampicin, pyrizinamide and ethambutol. On an average the drugs are started for a 6 month period where ethambutol and pyrizinamide is given for 2 months (10) and is usually altered according to the resistance patterns. Only two similar cases have been documented previously in literature.

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Conflict of Interest
No potential conflict of interest was noted.

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