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Masked Malady: Unveiling the Tale of Scrotal abscess- A Case Report

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ABSTRACT :

A 38-year-old male, with no significant medical history, presented with 15 day of severe right scrotal pain. History, clinical examination and scrotal ultrasound suggested the diagnosis of right scrotal abscess with epididymoorchitis. Incision drainage followed by orchidectomy unveiled the diagnosis.

Keywords-Tuberculosis, genitourinary tuberculosis, testicular abscess

Introduction:

Tuberculosis (TB) is a global disease, found in every country in the world. Every year 10 million people fall sick with TB. Though TB is being the most preventable and curable disease, WHO says 1.5million people succumb to TB each year making it the world's top infectious killer. TB presents as pulmonary and extrapulmonary tuberculosis (EPTB). EPTB refers to TB involving organs other than the lungs like pleura, lymphnodes, abdomen, genitourinary, skin, joints, bones and meninges. Genitourinary TB (GUTB) comprises of 8-15% of EPTB. The most common site of genital TB in men is epididymis followed by prostate, seminal vesicles, testis and vas deferens. Testicular tuberculosis also known as TB orchitis is an extremely rare entity occurring in 3% of all cases of genital TB. 2-5We present a case of tuberculous epididymoorchitis clinically manifested as scrotal abscess that was diagnosed by histopathological examination of the surgical specimens.

Case Report

A 38 years old male, construction worker by occupation presented to our casuality with pain and swelling in the right scrotum since 15days. The scrotal swelling was initially of a 3x3 cms insidiously increasing to the present size of 7x4 cms. Swelling was associated with fever, pain and discharging sinuses from the scrotum. Earlier he had taken a course of antibiotic at the nearby clinic but with no relief in the swelling and pain but fever subsided. Patient denied any history of trauma to the scrotum and also any systemic complaints. He was married and having two children. On examination, there was painful right sided scrotal swelling measuring 7x4 cms with four pus discharging sinuses. Scrotal USG and color dopler revealed testis and epididymis enlarged with hypervasculaity and replaced by multiple collections. Together with clinical and radiological findings a final diagnosis of right scrotal abscess with epididymoorchitis was considered. Patient was taken up for emergency incision and drainage. Pus was drained and found right testis to be non-viable. After consent, right orchidectomy was done and specimen was sent for histopathological examination.
Specimen received to pathology was a solitary grey-white to grey-brown nodular mass measuring 7x5x4 cms. External surface showed congested blood vessels. Cut surface showed multiple spaces filled with friable necrotic material with adjacent few grey-white solid areas. There was no evidence of string test suggesting the structure of testis. (Fig 1).

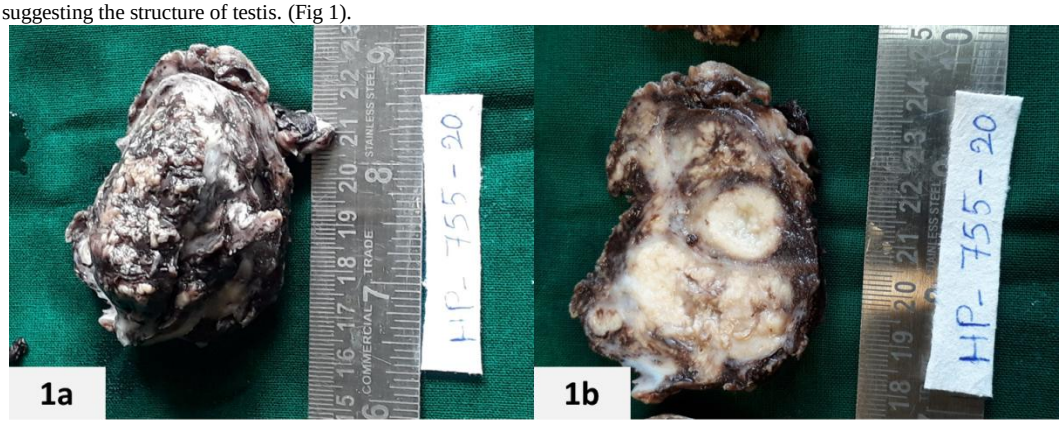

Fig 1a: Ovoid nodular specimen measuring 7x5x4 cms .

1b- Cut surface showed multiple spaces filled with friable necrotic material with adjacent few grey-white solid areas. There was no evidence of string test suggesting the structure of testis

Multiple sections were submitted for further processing and stained with H & E stains. On microscopy, extensive areas of caseous necrosis with dense inflammatory cells comprising of neutrophils and histiocytes was seen. Adjacent areas show granulation tissue, fibrosis and congested blood vessels. Focal area of structure of testis with atrophic seminiferous tubules having thickened basement membrane and few germ cells were noted. Repeated sectioning also showed epididymis, rete testis and spermatic cord with dense inflammatory cell infiltrates comprising of neutrophils, histiocytes and granulation tissue. (Fig 2, 3 a & b) A special stain for acid fast bacilli Ziehl Neelson stain was positive for tubercular bacilli. (Fig 3 c & 3 d) Periodic acid Schiff stain for fungal elements was negative. Hence the final diagnosis of Tubercular epididymo-orchitis was made. Patient was then referred to TB treatment centre. He was commenced on 6 months antitubercular treatment but lost to follow up shortly after treatment started.

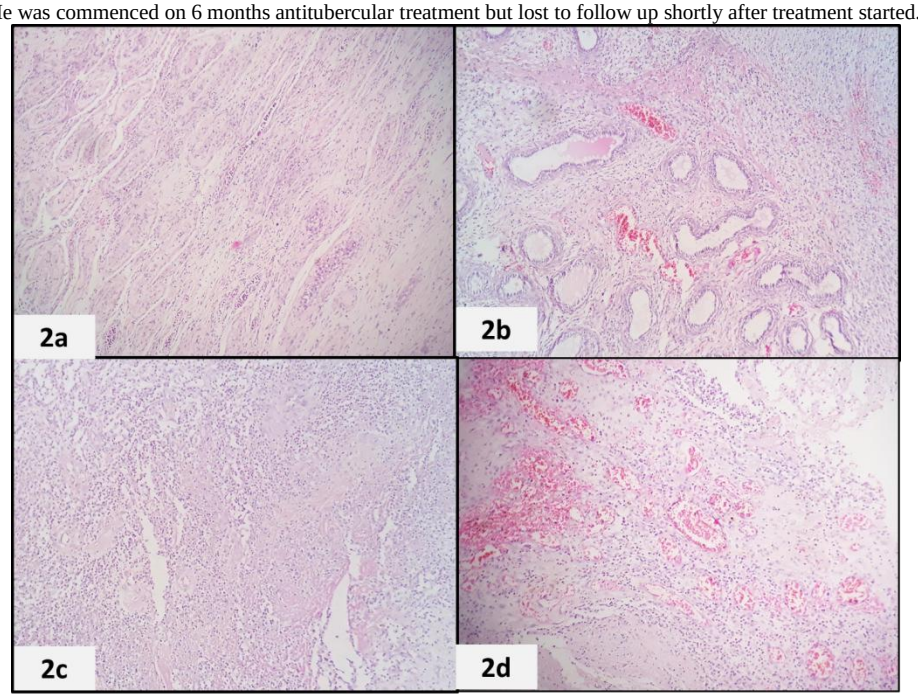

Fig 2a-d- Focal area of structure of testis with atrophic seminiferous tubules having thickened basement membrane and few germ cells were noted with extensive areas of caseous necrosis with dense inflammatory cells comprising of neutrophils and histiocytes.

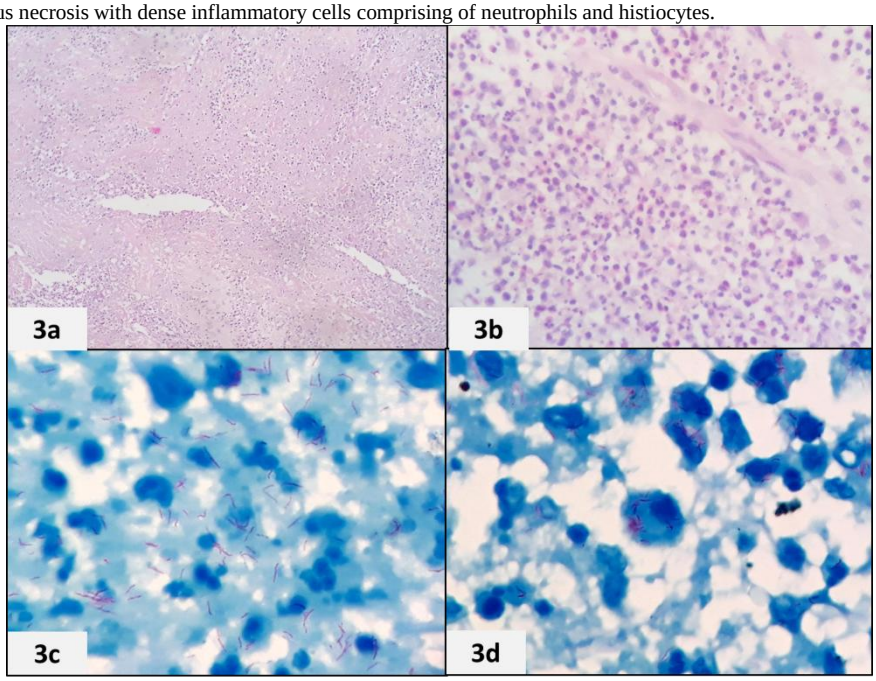

Fig 3 a, b- Epididymis, rete testis and spermatic cord with dense inflammatory cell infiltrates comprising of neutrophils, histiocytes and granulation tissue.

Fig 3 c, d- Ziehl Neelson stain was positive for tubercular bacilli

Discussion

Hans Wildbolz was the first person to use the term GUTB in 1937.[2] Studies reveal GUTB is associated with renal TB in 60-65% cases and with lung TB in 32-35% cases.[2,3] Our case was isolated testicular epididymoorchitis without any renal or lung involvement. Literature search reveals various mechanisms of spread to genital organs. Retrograde spread of TB bacilli from infected urinary tract into prostate and canalicular spread to the seminal vesicles. Testicular involvement usually is result of direct extension from epididymis and scrotal involvement is the result of direct local extratesticular extension of the disease process. Hematogenous and lymphatic spread to the genital organs without urinary tract involvement is also studied. Few cases of TB orchitis arising from treatment with intravesicular BCG in patients with bladder cancer also noted. Hematogenous or direct spread from prostate and seminal vesicles is still a point of debate. Infection usually affects the epididymis first and then affects the testis if not treated. [2-5]

Adults more commonly affected 75% in > 35 years similar to the present case. Clinically presents as painless or slightly painful scrotal mass and poses the dilemma to differentiate from testicular torsion with ischemia or infarction, trauma, abscess formation, hydrocele, orchitis, tumors.[5-7] Our index case too presented with similar complaints and clinico-radiologically was diagnosed as testicular abscess.

Histologically caseating granulomas confirmed by the presence or absence of acid fast bacilli acts as gold standard for the diagnosis as in the present case .But cases with only suppuration on histology pose difficulty in the diagnosis. Then Polymerase chain reaction (PCR) though expensive provides rapid detection of Mycobacterium tuberculosis. Therefore, a high index of suspicion for TB is necessary for the diagnosis followed by antitubercular treatment in any case of scrotal pain and swellings with or without sinus discharge.[5-7]

Conclusion

Isolated tuberculous epididymo-orchitis is a rare presentation of tuberculosis and its diagnosis is challenging as the clinical and radiological findings are nonspecific and may simulate those of scrotal abscess. It must be considered in the differential diagnosis of scrotal swelling especially in countries like India where prevalence of tuberculosis is high.

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