

Testicular tuberculous mimicking malignant tumor of testis: a diagnostic and surgical dilemma

Shamsul Hadi¹, Maria Tasneem Khattak² and Iqbal M. Khan³

^{1, 2, 3}Department of histopathology Rehman Medical Institute

ABSTRACT

Background: Clinically Orchitis may resemble malignancy. Our objective is to determine importance of multidisciplinary approach to diagnose testicular Tuberculosis (TB).

Methods: A 27-year young male from Afghanistan presented with 2 weeks history of left scrotal swelling. FNAC, Zeil Nelson stain, MTB-PCR done for diagnosis as clinically it mimics malignancy.

Results: Cytopathological finding were chronic granulomatous changes with suppurative acute inflammation. ZN stain was positive for AFB. The diagnosis was confirmed by MTB-PCR and gene expert.

Conclusion: It indicates that multidisciplinary approach is important for diagnostic accuracy, optimal treatment and avoiding needless surgical intervention in case of testicular TB.

Keywords: Genito urinary TB (GUTB), scrotal swelling, epididymo-orchitis

Introduction

Tuberculosis is still one of the most important lethal infections of Asian population. Still death from TB in adult is more than any infectious disease.¹ TB Orchitis is not that uncommon in developing countries like India Afghanistan and Pakistan due to high prevalence of tuberculosis in this region. Clinically Orchitis may resemble epididymo-orchitis, sarcoidosis and malignancy as well.² Testicular biopsy is contraindicated in suspected malignancy. The diagnosis of tubercular Orchitis can be achieved only on histopathological examination of resected testis and sometimes it come with shock. TB epididymo-orchitis is a significant manifestation of genitourinary tuberculosis (GUTB).

Case Presentation

A 27 year young male from Afghanistan refer to Histopathology department, Rehman Medical Institute Peshawar KPK for FNAC.

Chief complains were left sided scrotal swelling, pain at site of lesion, weight loss, discharge from wound site for last 10 days and mild fever for last two weeks. There was no history of trauma and no other systemic complaints.

On further evaluation patient had right Orchiectomy eight months ago in Afghanistan. On examination the patient was weak and morbid looking. His pulse was 80 per min and RR 16 per min and temp was 37°C. The scrotum was swollen, reddish, and tender with purulent discharging sinus (Figure-1) on left side.

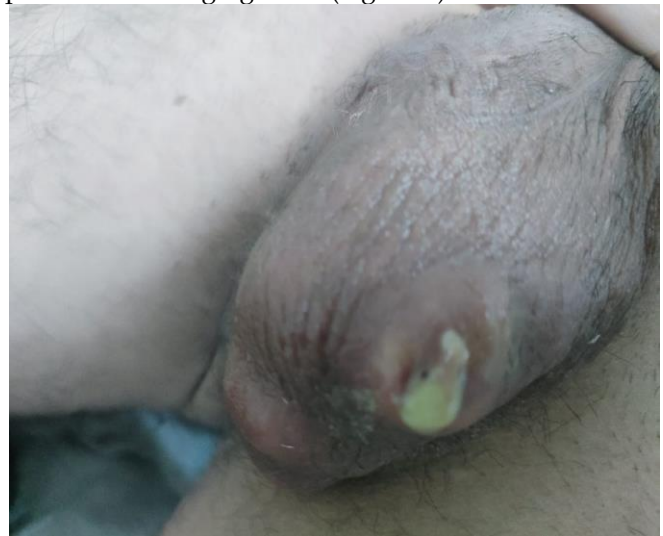


Figure 1

Right testis was absent due to previous surgery. FBC count shows Hb 14.8 WBC 10.4 and ESR was 19mm/1st hour. USG scrotum shows right testis not seen. Left epididymis is Heterogenous and enlarged with multiple small hypoechoic areas (fig-2). A small hypoechoic area was seen communicating with subcutaneous small collection 2cm in greater

CORRESPONDENCE AUTHOR

Dr. Shamsul Hadi

Department of histopathology Rehman Medical
Institute

Email: srgshams82@gmail.com

dimension. No inguinal para aortic enlarged lymph nodes were seen.

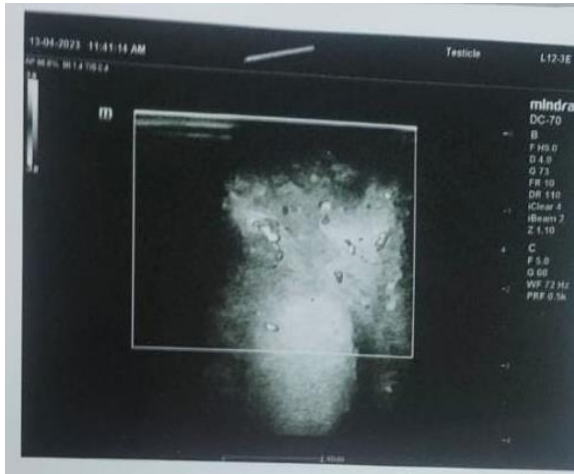


Figure 2

Microscopically smears reveal high cellularity and consist predominantly of numerous neutrophils. Scattered a few histiocytic aggregates forming granulomas. (Fig 3 &4). Thin walled blood vessels (granulation tissue) are seen with abundant amorphous material in the background. Special stain: - ZN Stain: Highlights Acid Fast Bacilli. Opinion was chronic granulomatous inflammation with superimposed abscess formation of tuberculous origin. MTB DNA: Target detected. (There is molecular evidence of Mycobacterium Tuberculosis targets using IS1081 and IS6110; at the time of collection of the sample)

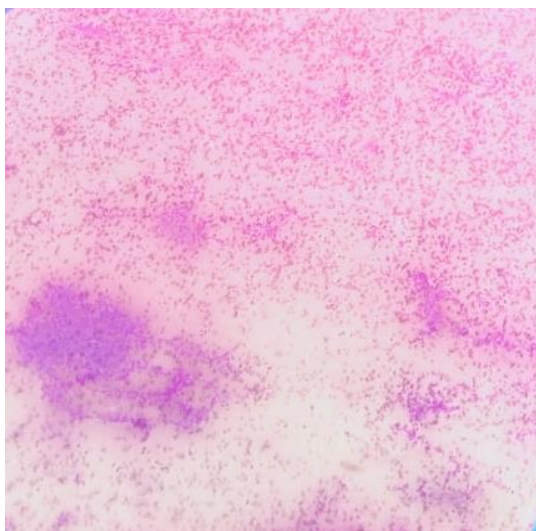


Figure 3 Scattered a few histiocytic aggregates forming granulomas (10x)

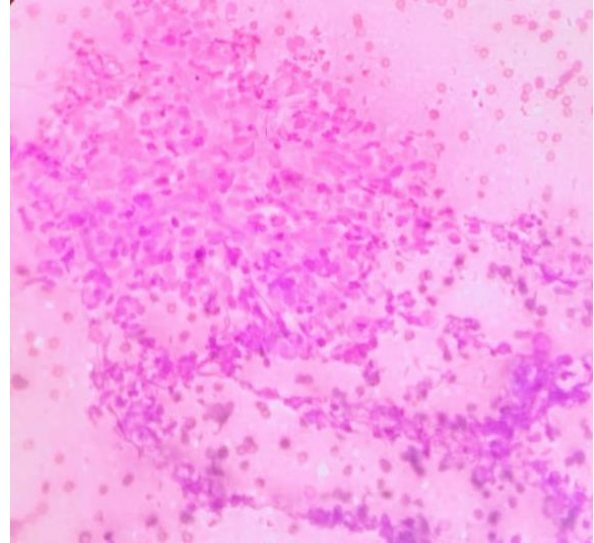


Figure 4 Scattered a few histiocytic aggregates forming granulomas (40x)

Discussion

According to WHO extra-pulmonary tuberculosis i.e. GUTB is 27% and out of that TB testis is 3%.³ The pathophysiological way of spreading to the genital system is varied i.e. several mechanism are identified including retrograde, canalicular spread to the seminal vesicle, efferent duct, and epididymis; hematogeneous, lymphatic and local spread are also present in literature.¹ The source of TB in our case is unknown. However the patient was not suffering from any known pulmonary or extra-pulmonary TB. Other cases which were reported in literature as TB Orchitis arise from intra vesical BCG treatment for bladder malignancy.⁴ Clinically symptoms develop in ten to fifteen years and other study show that it may be develop in five to twenty five years after primary TB of chest.¹ In case of our patient the above mention studies confirm that may be our patient had a pulmonary TB in his childhood as it very common in Afghanistan. Also due to warfare and the socio-economic status of this country vaccination and treatment of TB. were also affected.

Scrotal ulceration was presenting complain in one of the case report.⁵ Our patient has also scrotal swelling, ulceration, mild fever, and discharge sinuses. The epididymo-orchitis is common form of GUTB but when it is isolated, it may mimic testicular tumor,⁶ same happened with our patient where eight month ago Orchiectomy were performed in Afghanistan. Local symptoms are frequently insidious and progressive. Systemic manifestation, i.e. mild fever, night sweats, body-aches and others uncommon in

isolated GUTB ⁷ but in our case complains of sinus, abscess and mild fever were present.

A wide-ranging literature review presented that histopathologic examination of the orchidectomy and epididymectomy is still the gold standard for a definitive diagnosis of these specimens.⁸ Several patients may require orchidectomy etc. to remove large abscess or rule out any malignancy. We completely agree with the opinion stated by Wolf et al ⁹ that orchidectomy and other extensive surgery should be avoided as a primary procedure. The view of Ferrie et al¹⁰ that some of their patients may have been spared Orchiectomy if the diagnosis of GUTB had been consider earlier. An easy and substitute procedure for the diagnosis of GUTB is FNAC which can provide proper and sufficient material for Cytopathological, microbiological and even for Genexpert diagnosis of TB in less than 2hours¹¹. A very few studies are available in literature evaluating the adequacy and accuracy of FNA for scrotal TB.¹² In conclusion the FNAC is very cost effective reliable and a minimum time required procedure for diagnosis of scrotal I tuberculosis and it help to avoid unnecessary surgeries, process of surgical specimens and perhaps financial burden of hospitalization in developing countries. Furthermore, at the same time FNAC will also help in early detection of testicular malignancy and important for young patients preservation of testis and infertility in such young patients.

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HISTORY	
Date received:	27-04-2023
Date sent for review:	02-05-2023
Date received reviewers comments:	10-05-2023
Date received revised manuscript:	05-08-2023
Date accepted:	05-08-2023