

Isolated Tuberculous Epididymo–Orchitis: A Rare and Instructive Case Report

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Abstract:

Tuberculous epididymo-orchitis in the clinical absence of tuberculosis elsewhere in the body is a rare clinical entity. Tuberculous epididymo-orchitis remains an important, but uncommon form of tuberculosis. Genitourinary tract as primary site of disease is only 1.2%, 2nd least common site after peritoneum which is about 0.8% in which Isolated Tuberculous epididymo-orchitis is an unusual presentation of tuberculosis. It is often misdiagnosed as testicular tumour in the absence of symptoms suggestive of tuberculosis. Generally, definitive diagnosis is based on the histological study of the operative specimen. Fine Needle Aspiration Cytology (FNAC) is a useful first choice of investigation. It provides a successful diagnosis thereby preventing unnecessary orchidectomy.

Key words: Tuberculosis, Epididymo-orchitis, orchidectomy

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Introduction: Tuberculosis known as “consumption” has been observed in human for over 7000 years. There is estimation of one third world’s population infected with mycobacterium tuberculosis by World Health Organization (WHO)^[1]. Extra pulmonary tuberculosis still presents a diagnostic and therapeutic challenge ^[2]. Adults seem to develop tuberculous epididymo-orchitis caused by direct spread from the urinary tract ^[3]. Involvement of the testis is usually due to direct extension

from epididymis. Clinically, patients present with a painless or slightly painful scrotal mass. The differential diagnosis of such a scrotal mass includes testicular tumor, acute infection, infarction, and granulomatous infection ^[4,5,6,7]. When clinical and radiology findings mimic those of a tumor, the diagnosis of tuberculosis infection is likely to be missed because tumors are a more common cause of scrotal mass ^[8]. TB epididymitis is indistinguishable from

bacterial epididymo-orchitis. The ultimate diagnosis of TB epididymitis is usually made when the pathologic specimen from epididymo-orchietomy is examined [7]. Tuberculosis should be considered in the differential diagnosis of a scrotal swelling even in the absence of a history of previous tuberculosis [4].

Case Report: A 50 year male Hindu patient presented with history of right testicular pain and swelling. A non-tender indurate tumour was identified in the right hemi-scrotum. Digital rectal examination detected a moderately enlarged, elastic prostate that was consistent with benign prostatic hyperplasia. Urinalysis was normal without pyuria. Urine culture

showed no growth of organism. Biochemistry, prostate specific antigen, alpha-fetoprotein, and beta-human chorionic gonadotropin were all within normal levels. Chest X-ray was clear. Scrotal ultrasonography revealed a hypoechoic and hypovascular tumour with epididymal abscess. We suspected a right testicular tumour with epididymal abscess and therefore, he was underwent right sided high inguinal orchietomy. On macroscopic findings, epididymis is enlarged and the fluid of the epididymis was yellowish and mucinous and multiple small nodules in testis (Figure 1). Histology revealed TB epididymo-orchitis (figure 2).

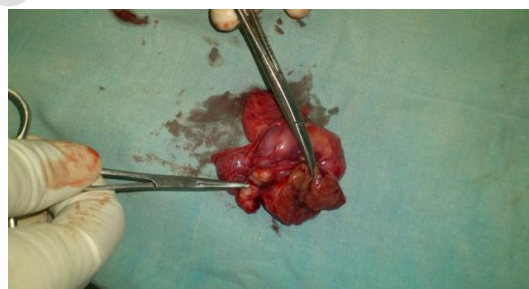


Fig 1 Enlarged epididymis and resected specimen show multiple small nodules in testis

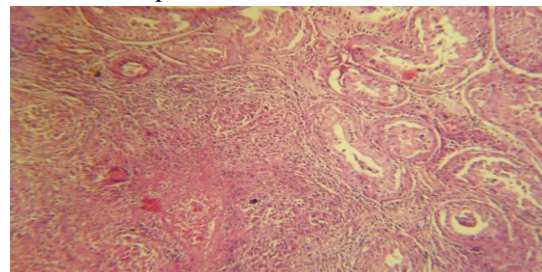
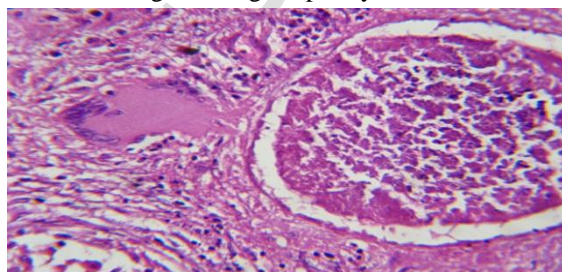


Fig 2 Photomicrograph of histologic section shows caseating granuloma with multinucleated Langhans' giant cell

Discussion:

Tuberculosis affects both pulmonary and extra pulmonary site. The source of infection may be haematogenous or the prostate. When the infection is haematogenous, it is caused by metastatic spread of organism through blood stream during the initial infection. When it originates in the prostate, there is involvement of tail of epididymis and the vas ^[9]. Spread of infection from the prostate to the epididymis may occur via the lymphatics in the funiculus spermaticus ^[10]. Patients with GUTB may also present with a painful testicular swelling, sinus, or genital ulcer ^[11]. The usual presentation is painful inflamed scrotal swelling that is difficult to differentiate from acute epididymo-orchitis. TB of testis is almost always secondary to infection of epididymis via direct extension. Tuberculosis of genitourinary system is classically characterized by sterile pyuria. However 20% of patients do not have leukocytes in their urine. Urine culture is used for diagnosis because acid fast smear is often negative. Culture, however takes 6 to 8 weeks. Molecular methods, including nucleic acid hybridization and PCR of DNA or rRNA are used for rapid

identification of TB. Radiological examination shows heterogeneous and hypoechoic swelling of the epididymis or the concomitant hypoechoic lesion of the testis ^[12, 13, 14, 15]. Fine-needle aspiration (FNA) as a minimally invasive technique plays a prime role in the diagnosis of tubercular (TB) epididymitis and epididymo-orchitis. However, because of the risk of tumor spillage, FNA should be avoided if a neoplasm is suspected ^{[16], [17]}. Histologic findings of TB epididymitis are similar to those of TB elsewhere in the body (granuloma formation, nonspecific inflammatory infiltrate) ^[18]. The primary aims of treatment are to preserve organ and function, to make the patient non-infectious, although some diagnostic and therapeutic indications for surgical excision still exist; the preferred approach to treatment is primarily multiple-drug antituberculous chemotherapy ^[19]. During the course of treatment for epididymal TB, if the lesion loses its tenderness while maintaining nodularity, consider a testicular malignancy, in which case operative exploration is indicated. Indications for surgery include stricture of the vas deferens that is causing infertility, persistent pain, and possible neoplasm.

Patients should be advised to use condoms during intercourse. Sexual transmission of tuberculosis (TB) via infected semen has been reported to result in a vaginal TB ulcer^[20].

Tuberculous epididymo-orchitis still presents a diagnostic and therapeutic challenge^[21]. Tuberculosis of epididymis may result in confluent caseation of organ,

when extensive infection can spread into testis and clinically simulate malignant tumour^[4]. FNAC provides a successful diagnosis thereby help to rule out malignancy and preventing unnecessary orchidectomy^[17,22]. This case is used to raise awareness of, and formulate a minimally invasive diagnostic approach to, this unusual but important entity^[21,23].

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