Case Report

Tuberculosis of Tunica Vaginalis: a Case Report

Narges Najafi1, Lotfollah Davoodi2*, Reza Mirabi3, Mohammad Mahmoodbabooe4, Nabi Tarjani5.

1. Antimicrobial Resistance Research Center, Department of Infectious Diseases, Mazandaran University of.

2. Antimicrobial Resistance Research Center, Department of Infectious Diseases, Mazandaran University of Medical Sciences, Sari, Iran.

3. Medical Student, Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran.

4. Medical Student, Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran.

5. Medical Student, Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran.

*correspondence: **Lotfollah Davoodi,** Antimicrobial Resistance Research Center, Department of Infectious Diseases, Mazandaran University of Medical Sciences, Sari, Iran.lotfdavoodi@yahoo.com

Abstract:

Isolated Tuberculosis (TB) occurring in tunica vaginalis (TV) without renal or prostate involvement is extremely rare. We reported a 33-year-old man of genital tuberculosis occurring in TV presenting as acute hydrocoele.

Keywords: Tuberculosis, Tunica vaginalis.

Introduction:

Tuberculosis (TB) remains the leading cause of morbidity and mortality among infectious diseases worldwide (1, 2). The lungs are the usual site of involvement, however, extrapulmonary disease is increasing (3). Genitourinary TB (GUTB) is the second most common form of extrapulmonary TB (EPTB), after lymph node TB (4, 5). GUTB has the propensity to affect both men and women of child-bearing age (that is, 20–40 years old), is responsible for extensive morbidity and can render patients infertile. The nonspecific presentation of GUTB can result in delayed diagnosis and management of the disease, which could worsen morbidity (6). GUTB usually affects the kidneys, urinary bladder, prostate, epididymis ,testes and fallopian tubes (7). A diagnosis of GUTB is usually challenging owing to the nature of its chronic symptoms and non-specific findings. A high index of suspicion is required, especially in endemic areas (1, 8). Isolated TB of tunica vaginalis (TV) without renal or prostate involvement is extremely rare. two case reports of such involvement presenting as scrotal nodule has been published to date (9, 10). The author presents the case of acute hydrocoele caused by TB involving TV only.

Case Presentation:

A 33-year-old man presented with a painful right-sided scrotal swelling. The pain was sustain and had progressing course. After a month, the patient found out the painful nodules in his right-sided scrotum that gradually became swollen. Patient had no weight loss, fever and respiratory symptoms. He had no history of diabetes, ischemic heart disease, hypertension and trauma. He had the history of hemorrhoid surgery, and recently hydrocoele surgery. His blood

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pressure was 110/60 mm Hg, pulse rate, 80 beats/min, respiratory rate, 18 breaths/min and temperature, 37 ˚C axillary. Patient was smoker and alcohol usage occasionally. On clinical examination Lungs hearing were clear. There were not significant inguinal lymphadenopathy on the right side. The scar of hydrocoele surgery on right scrotum and mild swelling of scrotum were seen and tender mass 3x2 mm in size was palpated. Patient had two out hospital scrotal ultrasonography reports. Based on first scrotal ultrasonography that was about 7 months ago, the scrotum was normal in thickness. The testicles were normal in size and parenchyma echogenicity. The right-sided epididymis was thick and slightly hypervascular in head suggestive of epididymitis. There was a 10x6 mm hypoechoic area in epididymal head and that could be focal epididymitis. Right sided testicle and epididymis sequentially were 50×19 mm and 17 mm in size and left sided testicle and epididymis sequentially were 50×19 mm and 11 mm in size. There was no varicocele but small amount of hydrocoele at right side was seen. Also there were scrotal pearls in right-sided scrotum measuring 2.5 and 3 mm in size. Second scrotal ultrasonography was about 2 months ago. That nearly was similar to the first but new points were reported. There was large amount of hydrocoele. The fluid contained low level echo suggestive of hemorrhage. The tunica vaginalis covering the right testis and inner surface of scrotum was thick. There were multiple hypo echoic nodules attaching the right wall of scrotum at right side. They showed vascular flow on color Doppler evaluation. Right sided testicle and epididymis sequentially were 49×26 mm and 16 mm in size and left sided testicle and epididymis sequentially were 49×21 mm and 11 mm in size. These were suggestive of tumoral seeding or granulomatous lesion of TB. Therefore he underwent surgery.

Investigations:

In our hospital Urine culture did not grow any organism and other laboratory tests include; Blood suger: 86, Urea: 21, Cr: 0.9, WBC: 6600, Hb: 16, Plt: 284000, AST: 32, ALT: 21, ALP: 223, ESR: 2, CRP: negative, U/A: negative, semen culture: No A.F.Basilli were seen. Lung CT and Abdominal & pelvic CT revealed no pathologic findings except some bilateral inguinal lymph nodes that biggest in size was 5x13 mm. PPD test was 30 mm induration. The patient underwent surgery with the diagnosis of hydrocoele and biopsy specimen was sent to histopathology. Gross appearance of specimen was consisted of membranous tissue, gray in color and measuring 8×2.5×0.2 cm. Multiple varying size nodules were seen on one surface of membrane that the largest one was 1cm in diameter. On sectioning, their cut surfaces were yellow-tan in color and firm in consistency. On microscopic examination of tunica vaginalis specimen of the right testis, numerous granulomatous composed of epithelioid histiocytes, scattered lymphocytes and occasional multinucleated giant cells were noted within fibrotic tissue. Focal necrosis and calcification were identified and the diagnosis of tuberculosis of tunica vaginalis was conducted and antituberculosis treatment started for patient.

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Outcome:

Postoperative scrotal ultrasonography revealed no inflammatory lesion and mass. There was no vascular, cystic or solid lesion in parenchyma of testicles. Amount of scrotal fluid was normal and no hydrocoele was seen. Right sided testis was 17×19×47 mm in size and left sided testis was 19×21×49 mm in size.

Discussion:

TB remains a great health concern all over the world, and especially so in developing countries (7, 11). Worldwide it is among top 10 causes of death, killing approximately 2 million people annually (2). Within Iran, each year, 12000 new TB cases are diagnosed, according to WHO statistics (12). GUTB is the common site of disease though in 28% of the cases involvement is purely genital (13, 14). GUTB usually affects those aged 30–50 years, with a male/female ratio of 2:1. GUTB usually occurs via haematogenic spread or through the urinary system. It is frequently associated with tuberculous involvement of the kidneys, although isolated genital lesions may occur (7, 15). History of TB is present in only 36.5% of patients; therefore, diagnosis of GUTB does not require prior TB history or exposure. A high index of suspicion is required, especially in endemic and HIV prevalent areas (15, 16). Significant morbidity may result if not diagnosed in time (8). Diagnosis of GUTB is often challenging but ultrasound, intravenous urogram (IVU), CT and urine culture help in making diagnosis (2). Ultrasound is currently the imaging modality of choice when evaluating the scrotum and its content(17). In the differential diagnosis of TB epididymo-orchitis, bacterial epididymo-orchitis as well as testicular torsion and sarcoid and testicular cancer should be kept in mind(18, 19). Common presentations of genital TB are chronic, such as nodule, fistula and scrotal skin thickening, or patients may be entirely asymptomatic (1). Acute presentation is unusual but may occasionally manifest in the form of scrotal abscess or epididymitis (1, 10, 14). Isolated involvement of TV is extremely rare, and the presentation of TB as acute hydrocoele has never been reported. There is new surge of TB in developed and African countries due to AIDS (20). Daniel et al state that 50–70% of immunocompromised and HIV patients have extrapulmonary site involvement (7). A high index of suspicion is required and the disease often merits treatment empirically. In the treatment of GUTB, antibiotic therapy should be considered at the initial stage and a six-month regimen is reported to be effective and adequate in most cases(21).

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