AN UNUSUAL PRESENTATION OF PRIMARY SCROTAL TUBERCULOSIS

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INTRODUCTION

The genitourinary tract is the most common site of extra pulmonary involvement by tuberculosis (TB) [1]. The most common side of genital TB is the epididymis, followed by the seminal vesicles, prostate, testis, and the vas deferens [2].

However, in our knowledge a primitive scrotal localization has only been reported in the literature four times previously.

We present a rare case of primitive genital tuberculosis localized in the scrotum. We discuss the physiopathology, epidemiology, clinical and therapeutic aspects of this disease through the study of this case and a review of the literature.

CASE REPORT

A 31-year old patient was present to our services with increasing redness and painless swelling of the Left scrotum with 6 months duration. He was no history of systemic symptoms, pulmonary tuberculosis, epididymitis, lower urinary tract symptoms, trauma, medical treatment or infertility.

Physical examination revealed an enlarged and painless left testicle while epididymis and spermatic cord were normal to palpation. The overlying scrotal skin showed no sign of inflammation, the right testis and cord were normal and lymph nodes were not palpable. Prostate was also found normal during rectal examination. Clinical examination of chest and the abdomen were normal.

Complete blood count, biochemistry tests and tests for serum tumour markers including LDH, alpha-fetoprotein and beta-human chorionic gonadotropin were all within normal levels. Urine analysis was normal without pyuria. Urine culture was negative. The patient was not immunocompromised, and he did not have the human immunodeficiency virus. Chest X-ray was clear.

Scrotal ultrasound found two lesions of the lower pole of the left testis (4*3 cm and 2.9*2.1 cm) with cystic and solid components and normal epididymis. The right testis and epididymis were normal [Fig 1].

DISCUSSION

TB remains one of the leading infectious diseases worldwide [3][4]. The incidence of genital TB (included prostate gland seminal vesicle, and testis) in men was reported to account for0.43–15% of extra pulmonary TB [5]. Isolated genital tuberculosis is very rare and usually presents with concomitant kidney and/or lung disease [6]. Primary scrotal TB is an extremely rare condition and it
may mimic viral orchitis, epididymitis, hydrocele, spermatocele, testicular torsion, scrotal trauma or tumor [7]. The Mycobacterium Tuberculosis (MT) bacillus is disseminated by way of the bloodstream from a pulmonary focal point to genitourinary tissues causing infection in the kidney, epididymis, testis, prostate, and seminal vesicles. Primary lesions cause granulomas that remain viable for decades and can be reactivated from a granuloma after a large period of inactivity[8]. TB often affects the lower genitourinary system rather than the kidney. The epididymis is the commonest structure to be involved, followed by the seminal vesicles, prostate, testis, and the vas deferens [9]. Ultrasonography is currently the best technique for imaging the male genital system.

Ultrasonography of scrotum was reported to be helpful in assessing of testicular and extra testicular lesions [10]. The diagnostic of scrotal Tb is confirmed by biopsy of the scrotal lump for pathology study when granulomas are found in the histopathological specimens. Differential diagnosis should be made with Mycobacterium bovis and atypical mycobacteria such as M. kansasii, M. leprae, M. avium, and M. fortuitum. In order to make diagnosis it is essential to have clinical, pathological, and microbiological findings [11].

Patients should be treated with initial anti-tuberculosis regimen based on rifampicin, isoniazid, pyrazinamide and ethambutol for two months and then with rifampicin and isoniazid for 6 months [12].

**Figure 1. Scrotal Ultrasound Showing Two Lesions of The Lower Pole of the Left Testis**

Blue arrow: lesion 1  
Green arrow: lesion 2

Patient underwent surgical excision of cystic mass under general anesthesia and the specimen was sent for histopathological examination.

Histological examination revealed tuberculotic granuloma with necrotic caseation and Langhans giant cells. [Fig 2].

**Figure 2. Histological Examination Revealed Tuberculotic Granuloma With Necrotic Caseation and Langhans Giant Cells**

Blue arrow: Langhans giant cells  
Green arrow: Necrotic caseation

Anti-TB treatment (Isoniazid 300 mg, Rifampicin 450mg, Ethambutol 1000mg and Pyrazinamide 1500mg daily) was started to the patient for 2 months, followed by administration of Isoniazid and Rifampicin for an additional 4 months.
CONCLUSION
TB remains one of the leading infectious diseases worldwide. The physician is not easily oriented by clinical symptoms to suspecting TB. Nevertheless, it should be one of the obligatory differential diagnoses in any patient presenting with atypical urogenital symptoms. Opportune diagnosis is important so that useless and costly treatments can be avoided as well as surgical procedures that have no diagnostic support, allowing the patient’s symptoms to be resolved solely through anti tuberculosis treatment.

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CONFLICT OF INTEREST
The authors declare that they have no conflict of interest.

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All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

REFERENCES
4. Victor Ka-Siong Kho, Pei-Hui Chan. Isolated tuberculous epididymitis presenting as a painless scrotal tumor