

# Testicular Tuberculosis: One of the Unusual Forms of Tuberculosis

Short Communication

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## Author Details

Lidaw Déassoua Bawè<sup>1,2\*</sup>, Akouda Akessiwe Patassi<sup>1</sup>, Awèréou Kotosso<sup>1,2,3</sup>, Bawoubadi Abaltou<sup>3</sup>, Kwame Doh<sup>4</sup> and Majesté Ihou Watéba<sup>1</sup>

<sup>1</sup>Department of Infectious and Tropical Diseases, Sylvanus Olympio University Hospital, Togo

<sup>2</sup>Lomé-Commune Regional Hospital, Togo

<sup>3</sup>Hospital of the Armed Forces of Lomé, Togo

<sup>4</sup>Department of Anatomy and Pathology, Sylvanus Olympio University Hospital Center, Togo

## \*Corresponding author

Lidaw Déassoua Bawè. Department of Infectious and Tropical Diseases, Sylvanus Olympio University Hospital, Lomé-Commune Regional Hospital, Togo

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## Abstract

Tuberculosis is a communicable infectious disease of which pulmonary localizations constitute the vast majority of cases of tuberculosis disease representing the majority of contagious forms. Extra-pulmonary tuberculosis are also more frequent in black subjects, women and immunocompromised patients. We report a case of testicular tuberculosis in a black subject without associated immune deficiency. The clinical presentation was marked by pain and testicular mass required several testicular ultrasound examinations successively suggesting cord cyst which recurred between two surgeries before the final diagnosis of a tuberculous orchitis-epididymitis made on the basis of anatomopathological examination of a biopsy specimen of the testicular mass. The evolution was favorable after the institution of antituberculous treatment for a period of 6 months.

**Keywords:** Tuberculosis; Testicle; Black race; Togo

## Introduction

Tuberculosis is a communicable infectious disease caused by *Mycobacterium tuberculosis* (Koch's bacillus or KB) and remains a public health problem for a large part of the world's population. According to the World Health Organization (WHO), it is one of the most common infectious diseases causing death worldwide. It is the second most common cause of death from infectious diseases after Human Immunodeficiency Virus (HIV) infection [1]. Pulmonary localizations constitute the vast majority of cases of tuberculosis disease and represent the majority of contagious forms [1]. Extra-pulmonary tuberculosis is frequent, reaching 20 to 40% depending on the series. They are more frequent in black subjects, women and immunocompromised patients. Globally, the WHO reports, among all cases of tuberculosis, 14% of extra-pulmonary tuberculosis without concomitant pulmonary involvement. The most common types of involvement are

lymph node, pleural or osteoarticular [1]. Isolated testicular tuberculosis is rare. Diagnostic and therapeutic care is delayed, due to the difficulty in identifying tubercle bacilli [2]. We report in this work a case of testicular tuberculosis in a subject of good socio-economic level and without associated immune deficiency.

## Ethical Considerations

Patient anonymity was respected. The result of the anatomical-pathological examination released does not allow any identification of the patient.

## Observation

This was a 36 year old patient who presented a chronically evolving symptomatology for about 5 years made of unilateral then bilateral testicular mass. The symptomatology began in January 2015 with a



swelling and pain of the right testicle that required a testicular ultrasound performed on January 14, 2015, which revealed a large left epididymis with 2 hypoechoic nodules of 14mm and 12mm evoking nodules of epididymitis. A first diagnosis of cord cyst was retained. Following this result, a nodulectomy type surgery was performed by the urologist in the same year. Despite this intervention, the evolution was marked by persistent pain in the left testicle. A second testicular ultrasound was performed on August 03, 2015 and showed a 13 mm fluid formation of the left spermatic cord, with a wall evoking an aspect that could be in favor of a cyst probably superinfected and treated with antibiotics. The persistence of signs motivates another testicular ultrasound on May 25, 2016 with as results, moderate bilateral testicular hypotrophy; normal epididymides; a left hydrocele blade; a small cyst of 15mm x 11mm presumably of the left spermatic cord. A second surgical procedure of left cystectomy was performed in July 2016.

Post-operative ultrasound checks made it possible to note:

A. January 24, 2017: right pachyvaginalitis associated with a simple left hydrocele of minimal abundance.

B. February 24, 2017: right scrotal abscess (50mm) with homolateral epididymal infiltration (whose puncture brought back a purulent liquid) and a left hydrocele of minimal abundance.

C. April 12, 2017: chronic right orchi-epididymitis with intra-scrotal abscessed collections in the process of fistulization.

D. September 09, 2019: right caudal epididymitis in the subacute phase.

E. October 31, 2020: right testicular hypertrophy associated with stage I microlithiasis and sparse hydrocele and remodeled spermatic cord cysts.

An anatomopathological examination of a biopsy specimen of the testicular mass performed on December 31, 2020 showed histological confirmation of necrotizing and granulomatous epididymitis that could be part of a tuberculous orchi-epididymitis at the caseo-follicular stage. Chest X-ray requested as part of the search for a pulmonary focus was normal. During the interrogation, the patient had no tuberculous contagion nor weight loss or signs of tuberculous impregnation. He had a weight of 85kg. The scar from childhood BCG vaccination was visible on the anterior aspect of the left arm. Other additional examinations noted:

- a. Retroviral serology: negative.
- b. CD4 lymphocyte count at 1370cells/mm<sup>3</sup>.
- c. Normal fasting blood glucose at 0.96g/l.
- d. Normal glycated hemoglobin at 7%.
- e. Negative anti-HCV antibodies.
- f. Total anti-HBc antibodies positive with anti-HBs antibodies positive (old hepatitis B cured).
- g. The intradermal tuberculin test was positive at 15mm.

Anti-tuberculosis treatment based on rifampicin (R), isoniazid (H), pyrazinamide (Z) and ethambutol (E) was then instituted in January 2021 for a period of 6 months according to the following protocol:

- i. In the first phase: combination of 4 anti-tuberculosis drugs (RHZE) for 2 months.
- ii. Then the second phase: combination of 2 major anti-tuberculosis drugs (RH).

A corticosteroid therapy based on Prednisone 20mg at a dosage of 1mg/kg for the first two weeks and then at a decreasing dose for a total duration of 1 month. At the end of the first phase of treatment, an ultrasound check-up was carried out on March 10, 2021 with the result of left testicular hypotrophy associated with stage I microlithiasis,

a scanty hydrocele, normal right testicle and epididymis with absence of varicocele (Figure 1).

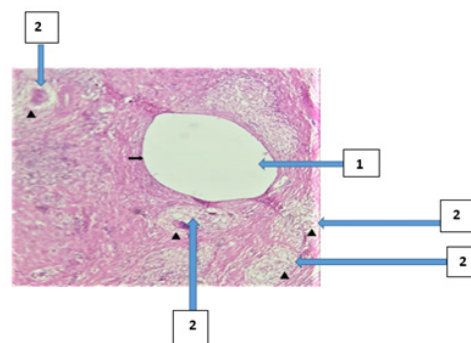


Figure 1: Appendix

1. Epididymal tubercle (epididymal canal)
2. Epitheliogiganto-cellular granulomas

## Discussion

Isolated testicular localization of tuberculosis is exceptional in men [3]. The diagnosis is often difficult and delayed in the absence of other suggestive localizations, a notion of contagion or a history of tuberculosis [4]. This was the case with our patient. The clinical picture is generally that of chronic epididymitis or orchi-epididymitis evolving in a context of little pain, except in the case of superinfection, which leads to the diagnosis of a testicular tumor or chronic orchiepididymitis [5]. The presence of a swollen or nodular epididymis and/or a scrotal fistula may guide the diagnosis [3]. Extra-pulmonary localizations of tuberculosis are favored by HIV infection. Testicular localization seems to be an exception [4].

Several cases of testicular tuberculosis have been reported in relatively young subjects under 40 years of age, in whom immunosuppression, particularly with respect to HIV, had not been found [4,6,7]. Male genital localization is usually secondary to urinary involvement and occurs via a ductal or lymphatic route, i.e 50 to 75% of patients [8]. Local signs are usually insidious and progressive. Systemic manifestations such as fever, chills and sweats are rarely present in isolated genital TB [9]. This was the case of our patient who presented genital signs of progressive evolution for several years in the absence of signs of tuberculous impregnation and in whom the hypothesis of tuberculosis had not been considered very early.

## Conclusion

Isolated or bifocal testicular tuberculosis, as in our case is rare. Bacteriuria is not always positive and the diagnostic approach must be based on the epidemiological and clinical context (associated pathologies, contagion, etc.). In all cases, the anatomo-pathological examination of testicular biopsy specimens confirms the diagnosis and a well-conducted anti-tuberculosis antibiotic therapy ensures a cure in all cases.

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