

# A peculiar type of cancer is testicular tuberculosis.

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### Abstract

A communicable infectious disease, tuberculosis is mostly localised in the lungs, accounting for the majority of cases and contagious forms of the disease. Additionally more common in women, black individuals, and people with compromised immune systems is extra-pulmonary tuberculosis. We present the case of a black subject with testicular tuberculosis who did not have any concomitant immunological deficiencies. The clinical presentation included pain and a testicular mass that required multiple examinations by ultrasonography, which suggested a cord cyst. The cyst recurred after two surgeries, and the final diagnosis of tuberculous orchidomyitis was made based on anatomopathological analysis of a testicular mass biopsy specimen. Following the start of antituberculous treatment for six months, the evolution was positive.

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

### INTRODUCTION

For a sizable portion of the global population, tuberculosis—also known as Koch's bacillus, or KB—remains a public health concern. It is a contagious infectious disease. The World Health Organisation (WHO) lists it as one of the infectious diseases that kill the most people worldwide. After HIV infection, it is the second most frequent cause of infectious disease-related mortality [1]. As with the most of infectious types of tuberculosis, pul-

monary locations account for the vast majority of occurrences [1]. Extrapulmonary tuberculosis is common, with rates ranging from 20 to 40%, contingent on the series. They are more common in immunocompromised people, women, and Black subjects.

According to WHO statistics, 14% of tuberculosis cases worldwide are extra-pulmonary diseases without concurrent pulmonary involvement. The three most typical involvement types are osteoarticular, pleural, and lymph node [1]. Rarely occurs isolated testicular tuberculosis. Because tubercle bacilli are difficult to diagnose, diagnostic and treatment care are delayed [2]. In this paper, we present a case of testicular tuberculosis in a subject with a good socioeconomic status who did not have any concomitant immunological deficiencies.

### Ethical Considerations

Anonymity of the patient was maintained. The patient cannot be identified based on the results of the revealed anatomical-pathological test. The 36-year-old patient had a unilateral testicular tumour, which eventually became bilateral, and had been the continuously evolving symptomatology for around 5 years. The right testicle started to enlarge and hurt in January 2015, necessitating a testicular ultrasound on January 14, 2015, which showed a big left epididymis with two hypoechoic nodules measuring 14 mm and 12 mm, respectively, suggesting epididymitis nodules. The original cord cyst diagnosis was kept. In response to this outcome, the urologist conducted a nodulectomy-style procedure that same year. Even with this surgery, the left side's evolution was characterised by ongoing pain. On August 03, 2015, a second testicular ultrasound revealed a 13 mm fluid formation of the left spermatic cord, with a wall suggesting a possibility that the cyst was likely superinfected and receiving antibiotic treatment. A second testicular ultrasound was performed on May 25, 2016, due to the signals' persistence. The findings included mild bilateral testicular hypotrophy, normal epididymides, a left hydrocele blade, and a small, 15 x 11 mm cyst that was likely formed in the left spermatic cord. In July 2016, a second surgical operation involving a left cystectomy was carried out.

The following was made possible by post-operative ultrasonography checks:

A. January 24, 2017: a simple, low-abundance left hydrocele was linked to right pachyvaginitis.

B. On February 24, 2017, there was a 50 mm right scrotal abscess with homolateral epididymal infiltration (whose puncture returned a purulent discharge) and a minimally abundant left hydrocele.

C. Chronic right orchi-epididymitis with intra-scrotal abscessed collections undergoing fistulization on April 12, 2017.

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

E. October 31, 2020: remodelled spermatic cord cysts, sparse hydrocele, and right testicular enlargement linked to stage I microlithiasis.

A biopsy specimen of the testicular mass taken on December 31, 2020, underwent anatomopathological testing. The results confirmed necrotizing and granulomatous epididymitis, which may be a component of tuberculous orchi-epididymitis at the caseo-follicular stage. The desired chest X-ray, which was part of the search for a pulmonary focus, came back normal. The patient did not exhibit weight loss, tuberculous impregnation, or tuberculous contagion during the questioning. He weighed eighty-five kilogrammes. The scar from the BCG vaccination as a child was apparent on the left arm's anterior surface. Other tests that were performed included:

- a. A negative retroviral serology.
- b. A CD4 cell count of 1370 cells/mm<sup>3</sup>.
- c. Normal blood glucose level after fasting is 0.96 g/l.
- d. 7% glycated haemoglobin is normal.
- e. Anti-HCV antibodies are negative.
- f. Complete anti-HBc and anti-HBs antibody positivity (previous hepatitis B cured).
- g. The 15 mm intradermal tuberculin test result was positive.

The following protocol was followed to start a 6-month anti-tuberculosis treatment based on rifampicin (R), isoniazid (H), pyrazinamide (Z), and ethambutol (E) in January 2021:

- i. Four anti-tuberculosis medications (RHZE) combined for two months is the first phase of treatment.
  - ii. After that, the second phase involves combining two important anti-tuberculosis medications (RH).
- a corticosteroid treatment consisting of 20 mg of Prednisone

given for two weeks at a dose of 1 mg/kg, and then for a month at a declining dose. Following the first phase of treatment, on March 10, 2021, an ultrasound examination was performed. The results showed that the patient had stage I microlithiasis-related left testicular hypotrophy, a sparse hydrocele, a normal right testicle, and a normal epididymis without varicocele.

## Discussion

Male TB with isolated testicular location is rare [3]. In the absence of other suggestive localizations, a theory of transmission, or a history of tuberculosis, the diagnosis is sometimes challenging and delayed [4]. With our patient, this was the situation. With the exception of cases of superinfection, which can result in the diagnosis of a testicular tumour or chronic orchi-epididymitis, the clinical picture is typically that of chronic epididymitis or orchi-epididymitis developing in an environment of minimal pain [5]. The diagnosis may be guided by the existence of a scrotal fistula and/or an enlarged or nodular epididymis [3]. HIV infection favours TB localizations outside of the lungs. Localization of the testicles appears to be an exception [4].

Reports of testicular tuberculosis have been made in a number of people under 40 years of age, none of whom had immunosuppression, especially not in relation to HIV [4,6,7]. In 50 to 75 percent of cases, male genital localization happens by a ductal or lymphatic pathway and is typically due to urinary involvement [8]. Local symptoms are typically subtle and develop over time. In isolated genital TB, systemic symptoms such as fever, chills, and sweats are uncommon [9]. In this instance, our patient showed gradual evolution in his genitalia for a number of years without showing any symptoms of tuberculous impregnation, and the possibility of tuberculosis had not been explored until much later.

## Conclusion

It is uncommon to have isolated or binocular testicular TB, as we do. Bacteriuria is not always positive, and the clinical and epidemiological context—which includes contagions and related pathologies—must inform the diagnostic strategy. Anatomopathological examination of testicular biopsy specimens validates the diagnosis in every instance, and a properly administered anti-tuberculosis antibiotic therapy guarantees a cure in every instance.

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