

Epididymo-Testicular Tuberculosis: A Case Report from Bamako

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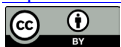
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Abstract

We report a case of epididymo-testicular tuberculosis in a 31-year-old man in the surgical department “A” at the University Hospital Point G of Bamako. Epididymitis or orchid-epididymitis is an infection of the epididymis and/or testis. It is the most frequent reason for consultation in urology and affects mainly young people between 30 and 50 years of age. *Mycobacterium tuberculosis* is very rarely incriminated (2% to 3% of cases). The main problem with genital tuberculosis lies in the diagnosis, which is often difficult and delayed in the absence of other suggestive locations, a notion of contagion or a history of tuberculosis. In the absence of germs in the urine or semen, the diagnosis of certainty is based on histological examination of biopsy fragments of the testicle or epididymis. Delayed treatment results in impaired fertility, such as oligospermia or azoospermia due to reversible or irreversible organic damage to the genitalia.

Keywords

Tuberculosis, Epididymis, Testicle

1. Introduction

Urogenital tuberculosis is a rare disease that is currently on the rise. It is a common germ infection.

Tuberculosis (TB) is one of the most common causes of death from infectious diseases in the world [1]. WHO global TB report 2018 indicated that in 2017 about 10 million people developed TB [2]. TB can affect any part of the body [3] [4]. Of the 10 million annual incidences of TB, between 5% and 45% have extra-

pulmonary TB (EPTB) characteristics [3] [5]. Common sites of EPTB are lymph nodes, pleura, bone, meninges and urogenital tract affecting kidneys, ureters, bladder, prostate, urethra, penis, scrotum, testes, epididymis, vas deferens, ovaries, fallopian tubes, uterus, cervix and vulva were originally grouped as genitourinary TB [6] [7].

Currently, the term urogenital TB (UG-TB) is considered to be more appropriate because urinary tract TB occurs more frequently than genital TB [8].

UG-TB is a neglected clinical problem and can easily go undetected due to nonspecific symptoms, chronic protean and cryptic clinical manifestations, and a lack of awareness among clinicians of the possibility of TB [7] [9].

Delay in diagnosis leads to disease progression, ureteral strictures, contracted bladder, obstructive nephropathy, destruction of renal parenchyma, irreversible organ damage, and end-stage renal failure [8].

UG-TB may remain subclinical, and therefore, currently data are only estimates [8] [10] [11] [12] [13]. UG-TB may occur simultaneously in up to 20% of individuals with TB lung disease (TBLD) [8] [10] [12] [13] [14].

Tuberculosis is caused by *Mycobacterium tuberculosis* complex (MTBC) [3] [4] [14] [15] [16]. These bacilli include *Mycobacterium tuberculosis* (Mtb), *Mycobacterium bovis*, *Mycobacterium africanum* (which causes TB in West and East Africa), *Mycobacterium caprae*, *Mycobacterium pinnipedii*, *Mycobacterium microti*, and *Bacillus Calmette Guerin (BCG)*, a derivative of *Mycobacterium bovis* that is used in vaccines. Mtb and *mycobacterium africanum* are the most common causes of human tuberculosis causing about 98% of infections.

Risk factors for developing TB include malnutrition, HIV infection, diabetes, chronic kidney and liver disease, alcohol and drug abuse, smoking, homelessness, poor housing, pneumoconiosis, genetics, vitamin deficiency, immunosuppressive drugs, kidney transplantation, chronic kidney disease, dialysis and end-stage renal disease [3] [4].

Tuberculosis of the testis is secondary to tuberculosis of the epididymis, which has a large blood supply and acquires infection with *Mycobacterium tuberculosis* secondary to hematogenous spread [17] [18].

The diagnosis is made in the presence of germ-free pyuria or in the form of trivial cystitis, epididymitis or orchi epididymitis.

A Uroscanner is always indicated as well as a chest X-ray to look for a pulmonary localization [5]. Bacteriological diagnosis is made by isolating the germ in the urine or by biopsy.

Tuberculosis of the testis is secondary to tuberculosis of the epididymis which has a large blood supply and acquires *Mycobacterium tuberculosis* infection secondary to hematogenous spread [17] [18]. The diagnosis is evoked in front of a pyuria without germ or in the form of a banal cystitis or an epididymitis or epididymitis orchi.

The Uroscanner is always indicated as well as a chest X-ray looking for a pulmonary location [5]. The bacteriological diagnosis is made by isolating germs in the urine or by a biopsy.

Current TB treatments are effective in all clinical forms of TB. They are based on an initial two-month intensive treatment using four drugs (RIFAMPICIN, ISONIAZIDE, PYRAZINAMIDE, ETHAMBUTOL). This treatment is followed by 4 months of reduced treatment [2].

It is important that this treatment is followed seriously without any interruption because the main cause of failure is poor compliance [2].

We report a case of epididymo-testicular tuberculosis diagnosed and treated in the Surgery Department <A> at the university hospital center of the CHU point G in Bamako with favorable evolution under antituberculous treatment.

This was a 31-year-old patient, a professional worker who presented for consultation for painful right scrotal swelling. There was no particular medical and surgical history. The interrogation did not find a notion of tubercular contagion, nor any notion of trauma, moreover notion of weight loss, anorexia and physical asthenia were reported.

He had been vaccinated (BCG) since childhood.

Examination of the external genitalia allowed:

On inspection: the right scrotum was swollen with no change in the appearance of the skin opposite, the left side was unremarkable.

On palpation: the right testicle was swollen, hard and painful on pressure.

The translumination test was negative.

The rectal touch was unremarkable.

The scrotal ultrasound revealed the appearance of a right orchiepididymitis without notable sign of complication with some ipsilateral inguinal adenopathies (Figure 1).

Complete blood count was normal

The cytobacteriological examination of the urine did not find any germs (sterile culture).

HIV serology was negative.

We proceeded to a surgical exploration after the failure of an antibiotic treatment.

In per operative the right testicle was of aspect, multi cystic.

Image échographique

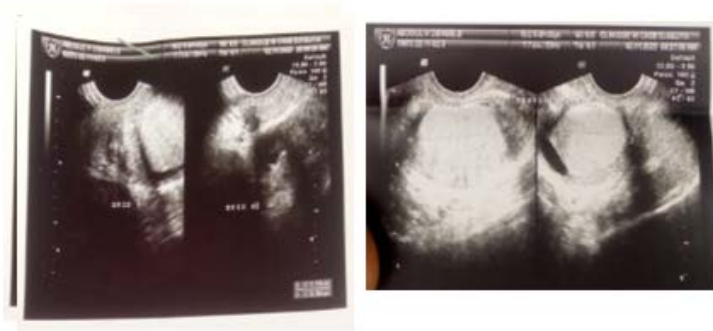


Figure 1. Evocative echographic aspect of a right epididymitis orchi without sign with some inguinal adenopathies.

We did biopsies.

Histological examination revealed case-follicular orchitis of tuberculous origin.

The anti-tuberculosis treatment was instituted under the protocol of 2RHEZ 4RH leading to a marked improvement, in particular the melting of the mass of the right testicle, weight gain.

2. Discussion

Since the advent of HIV infection, tuberculosis has experienced a resurgence in the world and particularly in developing countries. The most frequent localization of the disease is pulmonary (80% of cases). It is she who, because of her contagiousness, is responsible for the transmission of the disease [19]. Extra-pulmonary tuberculosis accounts for 10% to 20% of all tuberculosis cases [1]. All organs can be affected (such as the epididymis and/or the testicle) during hematogenous, lymphatic or contiguity dissemination. Isolated genital tuberculosis is rare. Contrary to our observation, it is most often secondary to urinary tuberculosis [20]. The essential problem of extra-pulmonary tuberculosis and particularly genital tuberculosis lies in the diagnosis which is often difficult and late in the absence of other suggestive localizations, a notion of contagion or a history of tuberculosis. Indeed, there are no specific clinical signs of genital tuberculosis.

The picture is often that of a chronic epididymitis [3] sometimes an orchiepididymitis evolving in a context of little pain except in the event of superinfection, associated more or less with signs of tuberculous impregnation. Faced with such a picture, with no notion of genital trauma in a subject in full genital activity, the diagnosis is immediately oriented towards the sexually transmitted germs which are responsible for it in 35% of cases, or towards the usual germs of urogenital infection. In 25% of cases [3]. Other germs including *Mycobacterium tuberculosis* are incriminated in 10% of cases. Tuberculosis is responsible for only 2% to 3% of epididymitis. It is the absence of response to non-specific antibiotic treatment or an incomplete response (in the event of superinfection) that often leads to the diagnosis of tuberculosis [20]. This delay in diagnosis promotes the extension and aggravation of the disease. Despite the helmet-crest appearance suggestive of probably tuberculous epididymitis [20], the diagnosis is certainly based on the detection of Koch's bacillus in semen or urine. These examinations are not always contributory as in our case for the diagnosis; the anatomic-pathological examination of biopsy fragments of testicle and epididymis then occupies a place of choice in the diagnostic decision. The diagnosis of granulomatous orchiepididymitis, even if it is not specific to genital tuberculosis, makes it possible, in the presence of other suggestive signs (weight loss, asthenia, anorexia) to conclude that there is epididymo-testicular tuberculosis and to treat the sick as such [3]. Although no predilection ground is found, adult men aged 30 to 50, as in our case, seem to be more affected by this disease [1]. The delay in

the therapeutic management has a serious consequence on the life of the couple, because it is easily complicated by an alteration in fertility such as oligospermia or azoospermia by reversible or irreversible organic lesions of the genital organs [3]. Once diagnosed, the treatment of uncomplicated urogenital tuberculosis is simple, effective and leads to the total remission of signs such as the improvement of the spermogram carried out at the end of treatment in the patient.

3. Conclusion

Genital tuberculosis is serious because it is often latent or barely visible, with lesions when discovered that bacteriological sterilization will not cure ipso facto. In the absence of germs in the semen and urine, the anatomo-pathological examination of epididymo-testicular biopsy fragment remains the key to diagnosis.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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