UNPROVED TUBERCULOUS LESION OF PENIS: A RARE CAUSE OF SAXOPHONE PENIS TREATED BY A THERAPEUTIC TRIAL OF ANTI-TUBERCULAR THERAPY

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ABSTRACT

Although Tuberculosis (TB) most commonly affects the lungs, any organ or tissue can be involved. In countries with comprehensive diagnostic and reporting systems, extrapulmonary tuberculosis (EPTB) accounts for 20-25% of reported cases. Globally, extrapulmonary cases (without concurrent pulmonary involvement) comprised 14% of notified cases (new and relapse) in 2007. The most common sites of extrapulmonary tuberculosis consist of lymphatic, genitourinary, bone and joint, and central nervous system involvement followed by peritoneal and other abdominal organ involvement. We report a case of a 25 year old male patient who came with multiple discharging sinuses and an urethrocutaneous fistula over the penis treated by a therapeutic trial of Anti-tubercular therapy (ATT).

Key words: Extrapulmonary, penis, tuberculosis

INTRODUCTION

Penile tuberculosis (TB) remains an important but uncommon form of genitourinary TB which is one of the extrapulmonary tuberculous (EPTB) lesions.

Penis may be affected through different mechanisms: primary, as an ulcerative lesion of glans; secondary, which is due to TB of other parts in urinary tract system, usually extended through urethra; and finally, hematogenous.

CASE REPORT

A 25-year-old male patient presented with 2 months history of swelling of the penis and multiple discharging sinuses on the penis. Within a few weeks, he started passing...
urine through one of the sinuses. He also experienced difficulty in micturition. He had no systemic symptoms. The patient is not married and no history of sexual contact. No significant family history was found.

On examination, the penis shape was like saxophone [Figure 1a, b].

The prepuce and glans penis were edematous and indurated. The glans and the shaft of the penis had multiple purulent discharging sinuses and an urethro-cutaneous fistula with urinary leak from the undersurface of the glans. The glans penis also showed areas of hypopigmentation [Figure 2a, b].

The testes, epididymis, and scrotum were normal. No inguinal lymphadenopathy seen. Per rectal examination was normal.

The routine hemogram revealed an elevated erythrocyte sedimentation rate of 90 mm/h. His liver and renal function tests were normal. A plain radiograph of the chest and penis were unremarkable. An intravenous pyelogram (IVP) was normal. Retrograde urethrography (RGU) and micturition cystourethrography (MCU) showed the urethrocutaneous fistula.

Ultrasonography of abdomen, pelvis, and scrotum was normal. His venereal disease research laboratory test (VDRL) and HIV serology were non-reactive. The Mantoux test was negative. Giemsa stained thin and thick blood film smears showed negative results for microfilariae. Multiple biopsies of the sinus and fistula revealed nonspecific inflammation. Urine culture showed no growth of *Mycobacterium tuberculosis*. Polymerase chain reaction (PCR) on tissue sample for *M. tuberculosis* was negative. The *Chlamydia trachomatis* IgG antibody test was also negative.

A clinical diagnosis of penile tuberculosis with an urethrocutaneous fistula was made. The patient was started on a therapeutic trial of ATT comprising 2 months of intensive phase: Isoniazid 10 mg/kg, Rifampicin 10 mg/kg, Ethambutol 30 mg/kg, and Pyrazinamide 35 mg/kg three times a week followed by a continuation phase of 4 months: Isoniazid 10 mg/kg and Rifampicin 10 mg/kg three times a week. The sinuses and the fistula have healed leaving behind puckered scars and urinary leak has ceased. Residual lymphedema is present in the penis and the scrotum [Figure 3a, b].

**Figure 1:** (a, b) Saxophone penis

**Figure 2:** (a, b) Dorsal and ventral aspect of penis showing multiple discharging sinuses and a urethro-cutaneous fistula
DISCUSSION

The different conditions causing a Saxophone penis reported in the literature are primary lymphedema,[1] penile TB,[2] and lymphogranuloma venereum.[3]

Tuberculosis, a disease caused by the bacterium *M. tuberculosis*, has affected mankind for over 5000 years and the disease continues to be a major cause of morbidity and mortality. The five countries with the largest number of incident cases in 2009 were India (1.6-2.4 million), China (1.1-1.5 million), South Africa (0.40-0.59 million), Nigeria (0.37-0.55 million), and Indonesia (0.35-0.52 million). India is the highest TB burden country accounting for one fifth of the global incidence.[4]

The major pitfalls in the diagnosis of EPTB are atypical clinical presentations simulating other inflammatory and neoplastic conditions, resulting in delay or deprivation of treatment. Therefore, a high index of suspicion is necessary to make an early diagnosis. In developing countries, the lack of diagnostic resources adds to the problems.

This often leads to empirical treatment based on clinical grounds without pathological and bacteriological confirmation.

TB of the penis and of the urethra is very unusual manifestations. Up till 1971, only 139 cases are reported in the world literature.[5,6] Primary TB of the penis appears as a superficial ulcer of the glans. Clinically, it is indistinguishable from malignant disease although it can also progress to cause a tubercular cavernositis with involvement of the urethra.[7]

Urine culture is traditionally used for diagnosis because acid-fast bacilli (AFB) smears are often negative. Cultures, however, take 6 to 8 weeks because *M. tuberculosis* is slow growing, with a doubling time of 15 to 20 hours. Furthermore, the organism is intermittently excreted; therefore, at least three, but preferably five, consecutive early morning specimens of urine should be cultured.

High-dose intravenous urography (IVU) has traditionally been the gold-standard tool to diagnose and evaluate genitourinary TB. It is still used in common practice but in many institutions has been replaced by computed tomography (CT).

PCR can detect nearly all smear positive, culture positive cases, and also 50-60% of smear negative cases, but it has got limited role in extrapulmonary TB. Sensitivity and specificity for PCR is 83.5% and 99%, respectively.[8]

Surgical treatment has undergone many changes since the 1970s, but in general, it has become an adjuvant to medical
therapy in the treatment of genitourinary TB. Previously it was believed that all diseased tissue must be excised. This is now debated, and the current focus is on organ preservation and reconstruction as opposed to excision. Furthermore, when surgical intervention is mandated, it should be delayed until medical therapy has been administered for at least 4 to 6 weeks.

CONCLUSION

In countries with high prevalence of tuberculosis, a possibility of tuberculosis should always be considered in cases of multiple discharging sinus/fistulae and a therapeutic trial of ATT can be started if the etiological factor cannot be identified by any investigations.

REFERENCES


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