Inflammation and Infection

Tuberculosis of the Spermatic Cord: Case Report

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Abstract

The spermatic cord tuberculoma is uncommon, especially in its lower portion. Most cases were described in Japanese literature. We report a case of tuberculosis of the spermatic cord in a sexually active young man, revealed by a scrotal mass mimicking a tumor of the testicle and discuss the suitable diagnostic and therapeutic procedures, with preservation of the testes and the other sexual organs.

Introduction

Tuberculosis can be present in different locations of the genitourinary tract, especially in patients in developing countries. However, the spermatic cord in its lower portion is rarely involved, and tuberculosis in this location can mimic a malignant lesion, which often leads to undue surgery. We discuss this rare disease with a short review of the literature.

Case presentation

A 44-year-old patient with no medical history of personal or family tuberculosis showed a 4-cm painful swelling on the right testicle, which had appeared 3 months earlier. The patient had not lost weight and showed no sign of infection. Testicle ultrasonography revealed an anechoic, cylindrical, paratesticular structure, measuring 4 cm in its largest diameter. Routine blood and urine tests were within normal values with no inflammatory signs. Alpha Foetoprotein and beta Human Chorionic Gonadotrophin were normal. No tuberculosis skin test was performed.

A surgery was performed, revealing an indurated right spermatic cord caught in a fibrous magma extending from the tail of the epididymis to the superficial inguinal ring (Fig. 1). The fibrous cord was dissected and isolated from all the elements of the spermatic cord, with preservation of the vas deferens and the spermatic vessels. The testes were reinstated in purse.

Histology showed on a 4 × 2 × 1 cm specimen, an epithelioid and gigantocellular granulomatous process with foci of caseous necrosis (Fig. 2). A checkup was made afterward revealing no other tuberculous location. The patient was given a 6-month antituberculous treatment: 2 (rifampicin + isoniazid + pyrazinamide + ethambutol) + 4 (rifampicin + isoniazid) with a satisfying uneventful evolution.

Discussion

Extrapulmonary tuberculosis is widespread in the world, especially in developing countries and among immunocompromised patients. However, the spermatic cord location is uncommon. The first publication found in the literature was made in 1945. Since then, at least 115 cases were described in the Japanese literature, but most of them involved inguinal locations. Intrascrotal tuberculomas are very rare, with very few cases reported in the English literature.

Tuberculosis of the spermatic cord is usually a disease that affects the sexually active man with a genitourinary contamination. But the few cases described in childhood imply the possibility of hematogenous spread of the bacillus. It can also affect patients with pulmonary infection (<1%). Contamination by bacille Calmette-Guérin instillation for bladder cancer has also been described but is uncommon. Prostate is more usually involved.

Clinically, the patients show a painful unilateral swelling of the scrotum. Voiding problems are usually absent when only the extraurinary organs are involved. As in our case, usual tuberculous...
signs such as fever, night sweats, and weight loss can be absent. Imaging findings including ultrasonography and computed tomographic scan are not specific.

Search for bacillus in urine and semen should be performed in case of call signs (hematuria, hemospermia, dysuria, and so forth). Polymerase chain reaction is very useful in this indication and gives quick detection. Differential diagnosis is represented by benign and malignant conditions.

Scrotal tuberculoma is usually a peroperative discovery. Most patients are operated for genital suspect masses, and unfortunately, most of them undergo undue orchiectomy (75%).

This kind of mistake can be avoided by a thorough preoperative checkup (clinical examination, tuberculosis skin test, ultrasonography, chest radiography, and urine and semen analyses) and a peroperative frozen section. Limited resection of the mass with preservation of the testes and epididymis must be performed once malignancy is excluded.

The medical treatment consists in the combination of powerful antituberculous drugs according to the regimen: 2 (rifampicin + isoniazid + pyrazinamide + ethambutol) + 4 (rifampicin + isoniazid) (R, rifampicin 10 mg/kg/j; H, isoniazid 5 mg/kg/j; Z, pyrazinamid 20-30 mg/kg/j).

**Conclusion**

Though it is only 1 case, the tuberculosis of the spermatic cord is a rare condition that must be kept in mind, especially in developed countries where tuberculosis has known recrudescence in the last decades. A complete preoperative checkup with a peroperative frozen section (when available) must be performed to avoid an excessive surgery that can threaten the patient’s fertility.

**Conflicts of interest**

The authors declare that they have no relevant conflicts of interest.

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