

CASE REPORT

Isolated testicular tuberculosis masquerading as a testicular tumor

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ABSTRACT

Tuberculosis is a major cause of morbidity and a persisting public health problem in the developing countries. Testicular tuberculosis particularly in isolated form is extremely rare. We report an unique case of testicular tuberculosis in a 20-year old male patient who presented in a painless right testicular swelling and whose clinical, radiological and biochemical parameters indicated a germ cell tumor. However, the histopathology revealed a tubercular lesion underlining the necessity of an element of suspicion for tuberculosis even in testicular swellings particularly in the developing countries. *J Microbiol Infect Dis 2015;5(2): 76-78*

Key words: Tuberculosis, testis, germ cell tumor

Testis tümörünü taklit eden testis tüberkülozu

ÖZET

Tüberküloz önemli bir morbidite nedenidir ve gelişmekte olan ülkelerde bir devam eden bir halk sağlığı sorunudur. Özellikle izole formda testis tüberkülozu son derece nadirdir. Sağ testiste ağrısız şişlikle gelen 20 yaşındaki bir erkek hastada, şişliğin klinik, radyolojik ve biyokimyasal parametrelerle germ hücreli tümör olarak gösterildiği testis tüberkülozlu bir olguyu sunduk. Histopatolojik inceleme sonucunda tüberküloz teşhisi konulmuş olması özellikle gelişmekte olan ülkelerde testis şişliklerinde tüberkülozdan için şüphelenilmesi gerektiğini gösterdi.

Anahtar kelimeler: tüberküloz, testis, germ hücreli tümör

INTRODUCTION

Genitourinary tuberculosis is the second most common extrapulmonary tuberculosis.^{1,2} About 15% of extrapulmonary tuberculosis represents genitourinary tuberculosis.³

Testicular involvement is rare among different genital organs, far behind epididymis, seminal vesicle and prostate.⁴ Testis is involved usually from the tubercular infection spreading from the epididymis and rarely through the hematogenous route. Tuberculosis of testis is uncommon and hence can pose diagnostic difficulties as clinicoradiologically it may mimic a testicular tumor.^{5,6}

Henceforth, we present a case of isolated testicular tuberculosis due to its diagnostic dilemma and rarity.

CASE REPORT

A 20-year old male patient presented to the surgical out-patient department with a right sided painless testicular enlargement. On enquiry, the patient stated that the swelling has been increasing for the last 10 months. There was no history of pain or fever but the patient complained of weight loss and anorexia. There were no urinary symptoms as well.

On clinical examination, the right testis was enlarged, measuring 10 X 10 cm. It was non-tender, firm but the testis could not be felt separately. The testicular sensation was lost. The spermatic cord felt normal. The Translucency test was negative. There was no sign of inflammation on the overlying scrotal skin. The contralateral testis appeared normal.

The complete blood counts (CBC) revealed a low haemoglobin percentage of 10.5 gm/dl with other parameters being within normal limits. The eryth-

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rocyte sedimentation rate (ESR) was raised, being 80 mm in the first hour (Westergren method). The chest X-ray was normal.

Ultrasonography showed a right-sided hypoechoic testicular swelling. The left testis and both the epididymis were normal. There were no intra-abdominal lymph nodes. A provisional radiological diagnosis of germ cell tumor was made. Fine-needle aspiration cytology was not done for confirmation of diagnosis due to the risk of upstaging the tumor.

The serum AFP (α -fetoprotein) and β -hCG levels were normal but the LDH (Lactic acid dehydrogenase) levels were increased (650 U/L; normal range: 230 - 460 U/L at 37°C by Modified IFCC method).

A right high inguinal orchidectomy was performed and the resected specimen was sent to the Department of Pathology for histopathological examination.

Grossly, there was the specimen measured 10 X 9 X 6 cm with the cut section being solid white homogenous with greyish areas and foci of yellowish white softer areas. (Figure 1) Histopathological examination revealed plenty of epithelioid cell granulomas, Langhan's giant cells with central caseous necrosis destroying normal testicular parenchyma. (Figure 2) Acid fast bacilli (AFB) were seen in the Ziehl-Neelsen (ZN) stained section. There was interstitial fibrosis with occasional seminiferous tubules shows features of atrophy. The epididymis was found to be unaffected by tuberculosis. The overall picture was consistent with isolated tuberculous orchitis.

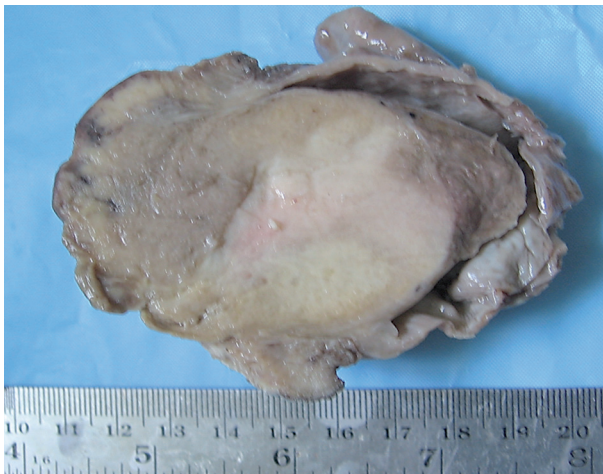


Figure 1. Gross appearance of the testicular mass showing white solid cut section with yellowish softer areas of caseous necrosis

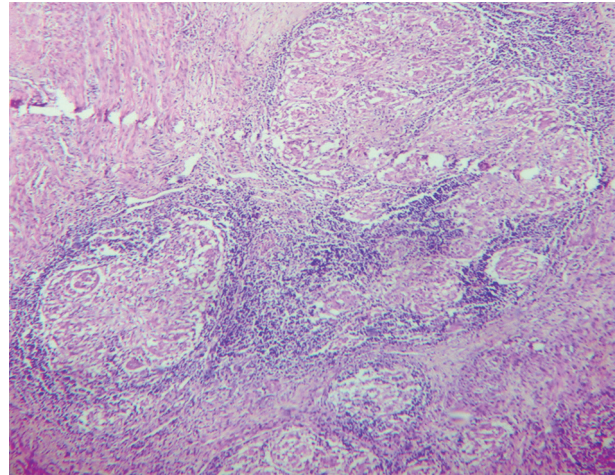


Figure 2. Caseating epithelioid cell granulomas with lymphocytic cuffing destroying the normal testicular parenchyma. (Hematoxylin and eosin stain; 100X magnification)

DISCUSSION

The second most common form of extrapulmonary tuberculosis is genitourinary disease, only next to tuberculous lymphadenitis. In India the incidence of genital tuberculosis is nearly about 18%.⁷ Isolated testicular involvement accounting for approximately 1.6% among different genital organ involvement.⁸

Urogenital tuberculosis affects all age ranges, with a predominance of males between the ages of 30 and 50 years.⁹ Involvement of testis by tubercular infection is generally believed to be due to direct extension of tubercular epididymitis.^{10,11} It is often debated whether the latter is a result of hematogenous spread or direct involvement from prostate and seminal vesicle. But cases of isolated tubercular orchitis without tubercular epididymitis are unusual.¹² Our patient is such a case of isolated tubercular orchitis causing diagnostic difficulties.

Testicular involvement secondary to retrograde spread from epididymis usually presents with urinary symptoms and or infertility whereas isolated testicular involvement (painless) may clinically mimic testicular tumor.¹ Similarly, in our case there was no epididymis thickening or sign of inflammation in the overlying scrotal skin. Other laboratory findings including sonographic findings did not help to point towards definite diagnosis. These situations can be explained by the fact of in face of haematological spread of the mycobacterium to testis there will be no urinary culture positivity, nor the elevated serum marker like LDH can differentiate neoplasm

from tubercular orchitis.³ There have been few case reports of tuberculous orchitis mimicking a testicular tumors.^{13,14} The common mimickers of tubercular epididymo-orchitis include bacterial epididymo-orchitis, testicular torsion, testicular tumors and rarely sarcoidosis.¹⁵ The patients of bacterial epididymo-orchitis usually suffer from an acute attack of testicular pain along with fever, nausea, vomiting, dysuria and present with a tender, swollen testis. Similarly, testicular torsion, in which the testis twists around the spermatic cord, usually occur in children and the patients present with severe acute testicular pain and swelling often accompanied by nausea and vomiting. On examination, the testis becomes firm and tender. Sarcoidosis can rarely involve the testis but epididymis is more commonly affected than the testis. A testicular tumor usually presents as a painless mass but the tumor markers are usually elevated and the ultrasound is usually suggestive.

CONCLUSION

Tuberculous orchitis is a rare entity which can closely mimic a testicular malignancy. An infectious cause should be considered before starting any definite treatment especially in a developing country like ours. This will lead to reduction in the cases of inadvertent orchidectomy.

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