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Case Report

A Rare Case Of Genital Tuberculosis

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ABSTRACT

A 23-year-old male with an atypical presentation was diagnosed with a rare case of left-sided isolated testicular tuberculosis (TB). Testicular TB is an uncommon form of genitourinary TB, characterized by painful or painless swelling of the testicles, sometimes accompanied by scrotal ulceration or discharging sinus. The epididymis is often affected as well. Genital TB is frequently associated with TB involvement in the kidneys or lower urinary tract, leading to lower urinary tract symptoms in affected patients. High-resolution ultrasonography (HRUS) is the recommended method for assessment due to the lack of definitive signs distinguishing genitourinary TB from testicular malignancy. Once testicular TB is confirmed, the primary treatment approach is anti-TB chemo-therapy, aiming for complete resolution of the lesion. However, in rare cases, orchidectomy may be necessary for both diagnostic and therapeutic purposes. In this case, the patient underwent a 6-month regimen of anti-TB chemotherapy, resulting in a complete cure of the isolated testicular TB.

KEYWORD: Pulmonary tuberculosis, High-resolution ultrasonography, anti-TB chemo-therapy, Extra-pulmonary TB

INTRODUCTION

Pulmonary tuberculosis (TB) is the most common form of TB disease. Extra-pulmonary TB (EP-TB) is seen in only 10-15% of cases, and lymph nodes are the most common site for EP-TB in India. Genital TB is uncommon, with tes-ticular TB comprising only 3% of genital TB.[1] In most cases, it clinically mimics other testicular lesions such as a testicular tumor, infarction, or even testicular torsion. Middle-aged males, especially those aged 20-40 years, are most commonly affected and present with painful or painless scrotal swelling with or without a discharg-ing sinus. The best modality for assessment is High-resolution ultrasonography (HRUS). Sometimes, a testicular biopsy is needed, especially in the elderly age group, to exclude testicular malignancy, which is the main concern in this age group. Anti-TB chemotherapy comprising rifampicin, isoniazid, pyrazinamide, and ethambutol is the mainstay of treatment. Here, we report a very rare case of left-sided isolated testicular TB in a 23-year-old male with an atypical presentation who was completely cured with a 6-month regimen of anti-TB chemotherapy.

CASE REPORT

A 23 year old male presented with non-progressive swelling in the left testis of 10 days duration associated with mild pain. No h/o trauma, fever, LUTS, pain abdomen, any swelling in the neck, or anorexia. The patient was a non-smoker and non-alcoholic. General examination revealed no abnormality, and no inguinal lymph nodes palpable. His pulse rate was 78 beats/min, regular, respiratory rate, 18 breaths/min, temperature, 97°F, and blood pressure, 118/76 mmHg. Systemic examination revealed no abnormality. The right scrotum was normal. There was a firm and tender swelling of approximately 02cm x 01cm fixed to the left testis, and able to go above the swelling. The skin over the swelling was normal. On examination, the right testis and right epididymis showed no abnormality. Complete hemogram and blood chemistry including fasting blood glucose were normal. Blood for anti-HIV types 1 and 2 antibodies was non-reactive. Chest X-ray postero-anterior view was normal. Microscopic and biochemical examination of urine was normal.

USG Scrotum showed a focal hypoechoic lesion of 16 x 9 x 7 mm in the left testis with indistinct margins and no significant vascularity as shown in Fig. 1. Clinically no abnormality was detected in the bilateral epididymis and right testis. USG Ab-domen and pelvis was within normal limits. Tumor markers were WNL. MRI Scrotum showed an extra testicular mass of approx. 7.2 x 6.7 x 7 mm lesion in the left scrotum. Considering the young age of the individual and based on the findings of clinical examination and radiological investigations, the probable diagnosis of seminoma left testis was considered. Wide local excision of the testicular mass was done through the inguinal incision and sent for the frozen section which was negative for malignancy. There was a 1.5 X 1.0 cm firm to hard left testicular swelling over the mid pole. The biopsy report showed a confluent granuloma with central caseating necrosis with Langerhans Giant cells. Ziehl-Nelsen staining of the tissue reveal ed acid-fast bacilli (AFB). Mantoux test (5 TU) showed 11mm induration after 72 h. With the above findings, a final diagnosis of Necrotising Granulomatous lesion (left testis) likely tubercular was made. As the patient had no past history of anti-TB chemotherapy, category I anti-TB treatment regimen (thrice-weekly regimen comprising rifampicin: 450 mg/day, isoniazid: 600 mg/day, pyrazinamide: 1500 mg/day, and ethambutol: 1200 mg/day for first 2 months, followed by rifampicin and isoniazid for next 4 months) was given. Complete resolution of left testicular swelling and pain was documented at the end of 6 months of treatment as repeat USG Scrotum after 06 months of anti–TB chemotherapy showed no evidence of recurrence as shown in Fig. 2.

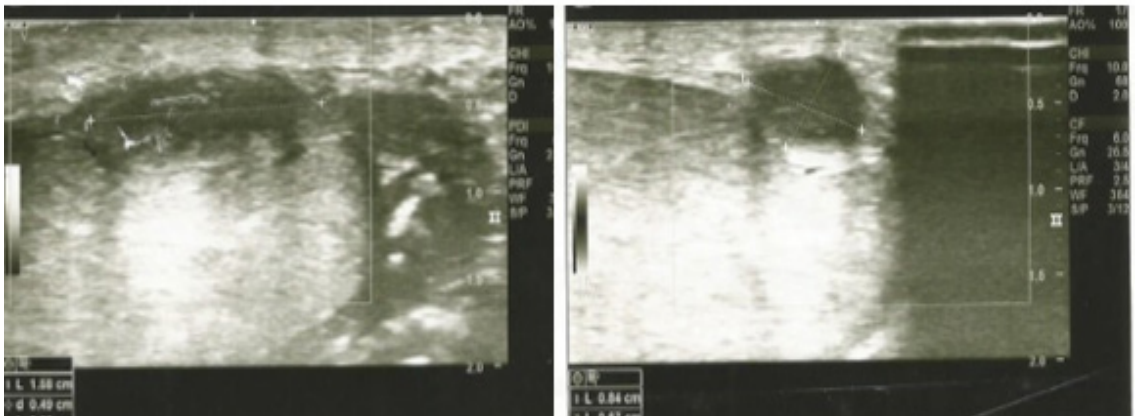

FIGURE. 1: USG scrotum with a hypoechoic lesion in left testis

FIGURE. 2: USG scrotum after completion of anti – TB chemotherapy

DISCUSSION

TB is a leading cause of death worldwide, especially in developing countries that are TB-endemic zones, like India. Genitourinary TB is an unusual presentation and has been reported in 8-15% of EPTB [2]. Only 28% of patients with genitourinary TB have isolated genital involvement [3]. It is more common in males. The most common site of genital tuberculosis is the epididymis, which presents as a nodular lesion limited to the tail or as diffuse enlargement. The sites of involvement, in descending order, are the epididymis (42%), seminal vesicles (23%), prostate (21%), testis (15%), and vas deferens (12%) [4]. Involvement of the testis is mostly secondary to epididymal tuberculosis and presents as single or multiple nodules, diffuse enlargement, or the 'miliary' pattern. Isolated testicular involvement should raise suspicion of malignancy. The mechanism of dissemination of tubercle bacilli into the scrotal sac structures is controversial. In most cases, TB epididymo-orchitis usually develops from the spread of tubercle bacilli from the affected urinary tract into the prostate via reflux, which then spreads to other genital structures [5,6]. Other routes of entry of TB bacilli are via the hematogenous and lymphatic routes. Involvement of the testis in most cases is due to local spread or retrograde seeding from the epididymis and rarely by hematogenous spread [5,6]. As a result, TB orchitis without epididymal involvement is extremely uncommon, which we have presented in this case report. Patients usually present with lower urinary tract symptoms, especially irritative voiding symptoms and hematuria. Garbyal et al. and Shugaba et al. reported cases of isolated TB orchitis presenting with scrotal ulceration [7,8]. In our case, the initial presentation was only the left-sided hard, painful testicular swelling without any discharging sinus, scrotal involvement, or urinary tract symptoms. USG of the testis is a very useful investigation in the diagnosis of TB orchitis. Based on the USG findings, TB involvement of the epididymis and testis may be classified into four types: (1) Diffusely enlarged, heterogeneously hypoechoic; (2) diffusely enlarged, homogeneously hypoechoic; (3) nodular enlargement, heterogeneously hypoechoic; and (4) miliary [9]. Seminoma and lymphoma are mostly homogeneous, while nonseminomatous tumours tend to be hetero-geneous [10]. It should be followed by FNAC of the testicular swelling if there is suspicion of TB orchitis, which is confirmed by the finding of the epithelioid granulomas and AFB on Ziehl Nelsen staining. However, the presence of AFB is again extremely uncommon, especially in an isolated TB orchitis in an immunocompetent male, which we report in our case. Once TB orchitis is confirmed, a six-month regimen of anti-TB chemotherapy comprising rifampicin, isoniazid, pyrazinamide, and ethambutol for the first 2 months, followed by rifampicin and isoniazid for 4 months, is very effective for the complete resolution of the lesion, which we have seen in our case also.

CONCLUSION

As the incidence of male genital tuberculosis is not high, the biggest hurdle is diagnosis. It is often considered impossible to differentiate epididymo-orchitis from testicular malignancy, as genital TB lacks pathognomonic signs. In view of this, genitourinary TB should always be kept in mind if there is a presentation of non-specific nodular lesions in the genital organs or if infections of the male genital organs do not improve with antibiotic treatment.

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CONFLICT OF INTEREST

None

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