Unusual association of diseases/symptoms

Chronic epididymo-orchitis and scrotal ulcers

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Extrapulmonary tuberculosis (TB) still presents a diagnostic and therapeutic challenge. Genitourinary TB constitutes about 20% of the extrapulmonary cases in regions where TB is endemic. Tuberculous infection of epididymis and testis is difficult to differentiate clinically from pyogenic infection, tumour or infarction. High-resolution sonography is currently the best readily available technique for imaging the scrotum and its contents, and accurate differentiation is important for proper diagnosis and treatment. The authors are presenting a unique case of chronic epididymo-orchitis with scrotal ulcers.

BACKGROUND

We decided to write this interesting case of scrotal ulcers and fever as the latter were the markers/tuberculids of underlying tuberculous epididymo-orchitis. There was no other systemic involvement by tuberculosis (TB).

CASE PRESENTATION

A 34-year-old unmarried Bengali male presented with 2 weeks history of fever, night sweats, loss of appetite and painful swelling of scrotum. There was history of drinking camel milk 4 weeks back. The patient's examination revealed an average build male with normal general physical and systemic examination. On local examination, there were two ulcers with thick edges and covered with slough (figure 1). Right testis was enlarged and tender; there was no feature of hydrocoele; and complete blood counts, serum chemistry, urine analysis and x-ray chest were normal. Erythrocyte sedimentation rate was 45 mm/h. Mantoux test was positive. Staining and culture of discharge from ulcers was negative for any organism. VDRL (Venereal Disease Research Laboratory test) and HIV serology was negative. Patients septic screen was negative as were morning samples of urine for acid fast bacilli (AFB). Owing to endemicity of brucellosis and patients history of drinking unpasteurised camel milk, brucellosis was thought of and ruled out by repeat serology as there was no increase in titre.

Patient was treated with antibiotics for 2 weeks without any improvement. Urologist was consulted who advised for fine needle aspiration/biopsy, but patient refused. We were left with choice of ultrasonography which revealed multiple hypoechoic lesions in right testis which was enlarged (in size), and adjacent epididymis was also hypoechoic. In view of the ultrasound findings, Mantoux test and prevalence of TB in our part of the world, four-drug regimen of antitubercular medication was started and continued for 2 months after which patient was continued on isoniazid and rifampicin for another 4 months as continuation therapy. Patient recovered, and ulcers healed after 8 weeks of therapy (figure 2). Repeat ultrasonography

showed resolution of lesions, but varicocele was noted as a complication.

INVESTIGATIONS

- ▶ VDRL
- ▶ AFB staining
- ▶ Brucella serology
- ▶ HIV serology
- ▶ Ultrasonography of scrotum
- ▶ Mantoux test

DIFFERENTIAL DIAGNOSIS

- ▶ Syphilis
- ▶ Chancroid
- ▶ TB
- ▶ Brucellosis
- ▶ Infected sebaceous glands
- ▶ Malignancy

TREATMENT

Antitubercular medication

OUTCOME AND FOLLOW-UP

Recovered

DISCUSSION

TB is a disease of poverty affecting mostly young adults in their most productive years. The vast majority of TB deaths are in the developing world, and more than half of all deaths occur in Asia. The estimated global incidence rate fell to 139 cases per 100 000 population in 2008 after peaking in 2004 at 143 cases per 100 000.¹ Although genital tract TB is characterised by a range of clinical presentations, it is an important cause of male and female infertility.^{2 3} Although tuberculous epididymitis is usual, tuberculous orchitis is rare.⁴ The kidney or prostate is hypothesised to be the reservoir for tuberculous infection in the male genitourinary tract. Although the pathogenesis is quoted to be haematogenous, spread from pulmonary

Figure 1 Scrotal lesions as sentinel lesions of tubercular epididymo-orchitis.

Figure 2 Showing healed scrotal ulcers after 4 weeks of antitubercular medication.

TB, 30–50% of patients with genitourinary TB have no history of pulmonary TB or exposure to TB. Our case had no exposure and normal x-ray chest. Testicular involvement is hypothesised to occur by secondary direct extension from epididymal infection through the globus major. Also, haematogenous spread to the testis, in the absence of epididymal involvement, has been described.⁵ In most series, tuberculous orchitis represents a direct extension of tuberculous epididymitis.

Our case had no evidence of TB elsewhere, and urine analysis was normal – urine for AFB negative. Thus it was difficult to attribute the pathology to TB. However, ultrasound revealed multiple hypoechoic, nodular lesions suggestive of tubercular orchitis supported by Mantoux test.⁶ The high-resolution sonography is currently the best technique for imaging the scrotum and its contents in areas where MRI is not available. The grey-scale sonographic appearances of tuberculous epididymitis include diffusely

enlarged heterogeneously hypoechoic, diffusely enlarged homogeneously hypoechoic and nodular enlarged heterogeneously hypoechoic lesions. Enlarged heterogeneous epididymis is reliable in differentiating TB from non-tuberculous epididymitis.⁷ Gray-scale sonographic patterns of the tuberculous orchitis include diffusely enlarged heterogeneously hypoechoic testis, diffusely enlarged homogeneously hypoechoic testis and nodular enlarged heterogeneously hypoechoic testis.

Drudi *et al*⁸ described multiple hypoechoic nodules in the enlarged testis as being of the miliary type and suggested that this sonographic pattern was a feature of tuberculous orchitis. This pattern was also found in 2 of 18 cases in the series of Chung *et al*.⁹

Presence of scrotal ulcers made us to think of Behcet's disease, sexually transmitted infections, infected sebaceous glands for a while, but the absence of other diagnostic criteria, unresponsiveness to antibiotics and typical sonographic appearance, made the TB as the likely possibility.

There are case reports of scrotal TB, but the presentations have been variable and diagnosis delayed.^{10 11} Thus in situations as that of ours, TB must be kept in mind and non-invasive tests like ultrasonography can be helpful in reaching a diagnosis especially in areas of the world where TB is rampant. Scrotal lesions were tuberculids (papuloulcerative lesions) – the sentinel cutaneous manifestations of visceral TB.¹²

Competing interests None.

Patient consent Obtained.

Learning points

- ▶ TB must be considered in cases with genital lesions not responding to non-specific antibiotics.
- ▶ Scrotal lesions are the tuberculids – the sentinel lesions of underlying tuberculous epididymo-orchitis.
- ▶ Ultrasonography is the non-invasive test of choice for the diagnosis of tuberculous epididymo-orchitis.

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