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Case Report

Tuberculous epididymitis masquerading as acute scrotal abscess

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ABSTRACT

Isolated tuberculous epididymitis is a rare form of genitourinary tuberculosis. It presents with non-specific symptoms thus warranting a high clinical suspicion and timely diagnosis in order to prevent later complications. We present a case of epididymal tuberculosis which presented as an acute scrotal abscess in a 60 year old male. The case had a painful scrotal swelling that was initially drained as a non-specific abscess. However, a strong index of suspicion along with use of diagnostic modalities like the TB-PCR (Polymerase Chain Reaction) allowed the diagnosis of isolated tuberculous epididymitis. Meticulous debridements along with prompt anti-tuberculous chemotherapy then resulted in a favourable outcome. This report attempts to highlight the rarity of this clinical picture, and the importance of a high index of suspicion in facilitating diagnosis and early treatment.

Keywords: Tuberculosis, Genitourinary, Urology

INTRODUCTION

Genitourinary tuberculosis contributes to 10-14% of extrapulmonary tuberculosis and is a major health problem in India.[1] Urologic spread of renal foci may infect genital organs: the prostate, seminal vesicles, epididymis and testes. Isolated tuberculosis of the epididymis however, presents a diagnostic difficulty due to non-specific symptoms while excluding a possible testicular neoplasm. Most cases present with heaviness, pain or mass lesion in the scrotum.[2] We report a case of tubercular epididymitis presenting as an acute scrotal abscess, where a high index of suspicion along with the use of the TB-PCR (Polymerase Chain Reaction) facilitated diagnosis and prompt treatment.

CASE REPORT

A 60 year old male was admitted in our hospital with complaints of painful scrotal swelling of 8 days duration. The swelling had appeared insidiously, and had gradually increased in size to reach its present dimensions. It was associated with fever. The patient was also a known diabetic, on oral medication since three years. He had no other comorbidities, with no past history of tuberculosis or prior surgeries.

Clinically, he had diffuse, warm, tender, erythematous swelling of the entire scrotum which blanched on pressure as shown in Figure 1. Testes could not be felt separately. Both spermatic cords were thickened and tender. An area of tender induration of 5×4cm was also noted between the base of the scrotum and the root of the penis. Per rectal and penile examination were unremarkable. Systemic examination did not reveal any abnormality.

The patient had leucocytosis (12,700/mm3), anaemia (haemoglobin 8.3gm/dl) and raised ESR (34mm/hr). Urine showed evidence of haematuria and pyuria, although urine culture was sterile. Blood sugar levels were markedly raised (>326mg/dl). He tested negative for HIV. Chest X-ray was unremarkable. USG Scrotum showed presence of oedema of the skin and the subcutaneous tissue of the scrotum. Both testes were normal. However, epididymides were mildly enlarged

and showed increased vascularity on both sides. Ultrasound of the abdomen was normal.

Figure 1: Erythematous scrotal swelling with indurated area below.

Figure 2: Healthy wound bed achieved after third debridement.

A clinical diagnosis of cellulitis was made, keeping in mind the possibility of Fournier's gangrene. The patient was empirically put on Inj. Crystalline Penicillin 20 lakh units IV 6th hourly along with Inj. Amikacin 500mg IV 12th hourly and Injection Metronidazole 500mg IV 8th hourly.

Multiple ecchymotic patches appeared on the scrotal skin with increase in size of the swelling on the third day. Therefore, he was taken up for the first in a series of three debridements. Only 20ml of pus was initially drained, and dead skin excised, leaving the wound open. Pus culture isolated ESBL producing *E.coli*, following which he was placed on Inj. Ceftazidime + Tazobactum 1.125gm IV 12th hourly, based on sensitivity. Crystalline Penicillin and Amikacin were discontinued. Pus discharge persisted. During 2nd debridement, pus was traced to originate from the right epididymis. Tissue from the wall of the abscess in the perineum was subjected to TB PCR examination. Interestingly, it revealed tuberculosis. However, histopathology and PCR of tissue taken from the epididymis were negative for TB. The patient has been started on anti-tubercular chemotherapy, based on DOTS CAT I Protocol consisting of Isoniazid 5mg/kg, Rifampicin 10mg/kg, Pyrazinamide 25mg/kg and Ethambutol 15mg/kg, 3 days per week. The proposed regimen involves 2 months of intensive phase and 4 months of continuation phase with Isoniazid and Rifampicin alone. Following a third debridement two weeks later, and meticulous dressings, a healthy wound bed was achieved shown in Figure 2. Secondary suturing was done and the wound has now healed.

DISCUSSION

Genitourinary TB is the second most common extrapulmonary form of TB after peripheral lymphadenopathy. Up to 20% of the patients with pulmonary TB have genitourinary lesions, particularly in the kidneys.[3] Mycobacterium tuberculosis generally reaches the genitourinary organs, by haematogenous route, disseminating from primary pulmonary TB. However, urologic spread of renal foci may infect genital organs: the prostate, seminal vesicles, epididymis and testes. Persistent sterile pyuria and haematuria are the most classical findings that can be seen in urogenital TB. Tuberculosis of the scrotum occurs in approximately 7% of patients with TB.[4,5] The epididymides are affected in 10% to 55% of men with urogenital tuberculosis, and scrotal changes are the main sign on physical examination.[6] Epididymal tuberculosis is bilateral in 34% of cases, presenting as a nodule or scrotal hardening in all patients, scrotal fistula in half of cases, and hydrocele in only 5%.[6] Chronic tuberculous epididymo-orchitis usually begins insidiously. The frequency with which the lower pole is attacked first indicates that the infection is retrograde from a tuberculous focus in the seminal vesicles.[7]

Urine PCR has good sensitivity (95.5%) and specificity (98.12%) in diagnosis.[1,8] PCR has become the ideal diagnostic tool because it gives results in 24 to 48 hours and allows diagnosis even when there are few bacilli. It is a rapid, sensitive, and specific diagnostic method and avoids a delay in starting treatment.[8,9] However, one of the disadvantages of PCR is its inability to detect whether the TB infection is biologically active or in its latent phase. Most investigators suggest using PCR in combination with cultures and Ziehl-Nielsen (ZN) staining while making a diagnosis and developing a treatment plan. We had not subjected our patient to urine PCR for TB as urine culture did not isolate acid fast bacilli.

Our case presented with a painful, tender, inflammed scrotal mass that was initially debrided and drained as a case of Fournier's gangrene. Presentation as a scrotal abscess is rare. Extensive search of literature revealed only one case in which presentation was that of a scrotal abscess, but that was in association with lung, lymph node and splenic involvement.[2] In our case, the diagnosis was clinched on the basis of TB-PCR (Polymerase Chain Reaction) test performed on the biopsy taken from the scrotal abscess wall. Therefore, a high index of suspicion for TB is necessary for the diagnosis. The treatment of choice is chemotherapy with 4 anti-tubercular drugs for

initial 6-12 weeks and later 2 drugs for additional 3-6 months.[10] Short-term treatment is justified because of the good renal vascularization, high urinary concentration of the drugs used, low bacillary load in the urine, lower cost and toxicity, higher compliance, and similar efficacy compared with longer-duration regimens.[10] Surgery is usually reserved for cases where chemotherapy fails and is resorted to after 4-6 weeks of anti-tubercular therapy. It is imperative that the patient must be thoroughly investigated, as the infertility/subfertility from ablative surgery may outweigh the cost of investigation for a medically treatable condition.

CONCLUSION

Our case was initially treated as a scrotal abscess. However, a routine protocol followed in our unit of considering tuberculosis as a possible aetiology wherever the clinical picture fits paid rich dividends in detecting TB in this case, which otherwise would have gone unnoticed. Thus, with a high index of suspicion it may be possible to diagnose a larger number of cases, especially in our country where tuberculosis is almost endemic.

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