Tuberculous Epididymo-Orchitis Treated with Intermittent Therapy: A Case Report

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Abstract

A case of tuberculous epididymo-orchitis where diagnosis was made after FNAC and put on intermittent therapy under RNTCP is discussed. A high level of suspicious by the treating physician is essential to avoid delay in diagnosis and treatment to prevent complications in the modern chemotherapeutic era.

The patient responded favourably to intermittent therapy (2R,3H,2/4R,3H) with marked clinical improvement.

Keywords: RNTCP, DOTS, TB, Epididymo-Orchitis

INTRODUCTION

The most common manifestation of genitourinary tuberculosis in males is epididymitis with or without orchitis1, and about 90% of cases presenting as chronic epididymo-orchitis can be attributed to tuberculosis2. Tuberculosis of epididymis and testes is the third commonest site of extrapulmonary tuberculosis after lymphnodes and bone tuberculosis respectively3. We present a case of epididymo-orchitis in a young adult who was treated with intermittent therapy (thrice weekly) under Cat-III of Revised National Tuberculosis Control Programme (RNTCP), with a favourable response.

Case report

A young male patient aged 22 years presented to
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direct smear as well as culture. Fine needle aspiration cytology of the epididymis was suggestive of tubercular epididymitis (Fig.1) showing a large number of lymphocytes and epithelioid cells. Ultrasonography revealed heterogeneous and hypoechoic echo-texture in the right epididymis and testis. Skiagram of chest and X-ray abdomen for KUB were within normal limits, HIV and VDRL were non-reactive.

The patient was treated with thrice-weekly intermittent therapy (2R₃H₅Z₅/₄R₃H₃) under direct supervision (DOTS). He improved clinically and became afebrile with reduction of local swelling and tenderness within one month. The clinical course was of continuous improvement and the treatment was stopped at the end of six months.

**DISCUSSION**

The prevalence of genital tuberculosis in males is reported to be about 0.43-15% in a number of studies spanning over half a century. Extra-genital tuberculous disease including renal involvement is present in majority (88%) of these patients. Tuberculous infections of the genital tract are likely to be due to secondary blood borne spread from a primary pulmonary lesion. This haematogenous spread results in genital lesions with or without any renal lesions. Genital tuberculosis frequently involves urinary tract as many patients with epididymal disease have positive urine cultures. Genital disease may arise by antegrade infection from the kidneys as hypotheated by a post-mortem study of autopsy findings in patients with genitourinary disease. It revealed an incidence of 13% of epididymal disease in patients with miliary renal disease as compared to an incidence of 52% and 100% epididymal disease in patients with caseous and cavitary renal disease respectively. Ferrie and Rundell showed that about 75% of patients with epididymal disease may have some abnormal finding on IVP. Epididymo-orchitis may also arise from either haematogenous seeding or direct extension from neighboring foci in the genital tract. Apparent veneral transmission from a woman with pelvic tuberculosis has also been reported.

Local symptoms of the disease are usually insidious and progressive, which can be confused with other infections, cysts and tumours. Occasionally abscess or scrotal sinus formation is also present. The diagnosis is based on clinical suspicion followed by confirmation with histopathological evidence, like epididymal biopsy. Fine

![Fig 1 Photomicrograph of needle fine aspiration cytology showing aggregates of lymphocytes and epithelioid cells.](image-url)
needle aspiration cytology (FNAC) has been used for successful diagnosis in many settings\textsuperscript{16,17}. A minority of patients may have positive semen cultures. An abnormal chest radiograph revealing evidence of quiescent or active pulmonary disease may be present in some of the patients and hence sputum microscopy for AFB must be carried out as routine.

The disease is most common in sexually active males between the ages of 20 and 40 years\textsuperscript{15}. Our patient was a young adult with history of multiple contacts with commercial sex workers and no previous history of any treatment with anti-tubercular drugs. Since our patients did not have any pulmonary and renal focus, the transmission could have been by the veneral route. Genitourinary tuberculosis has also been reported in HIV positive patients\textsuperscript{13,14}, although our patient showed a negative ELISA test for HIV.

Conventional regimens for tuberculosis in pre-rifampicin era consisted of 3 drugs in the intensive phase for two months followed by a continuation phase of 2 drugs for a total of 18-24 months. This protocol was applicable even for genitourinary tuberculosis. After the introduction of rifampicin and pyrazinamide, the short course chemotherapy of six months duration was introduced to treat genitourinary tuberculosis. Surgery was indicated only if there was lack of clinical response in the form of increase in size of swelling or abscess formation \textsuperscript{9,18}. However there was some concern with these short courses of chemotherapy because of the difficulty of delivering anti-tubercular drugs in sufficient concentration in the genital organs as noticed by some workers who were successful in their attempt to grow viable mycobacteria from these organs even after years of antitubercular treatment.

Gow\textsuperscript{9,19,20} demonstrated that genitourinary tuberculosis can be treated by short course chemotherapy for a total of 4-6 months with an initial intensive daily regimen for 2 months (2 RHZ or 2 SRHZ) followed by intermittent therapy for the remaining period of 2 or 4 months with 2 drugs (R\textsubscript{2}H\textsubscript{2}). In contrast to these studies, our case was treated with thrice weekly intermittent therapy under direct supervision (2R\textsubscript{3}H\textsubscript{3}Z\textsubscript{3}/4R\textsubscript{3}H\textsubscript{3}). Initial intensive phase consisted of 3 drugs (Rifampicin, Isoniazid and Pyrazinamide) for two months followed by a continuation phase with Rifampicin and Isoniazid for a period of further four months. Patient responded clinically with amelioration of fever and disappearance of local swelling and tenderness.

The successful treatment of tuberculous epididymo-orchitis on thrice weekly intermittent regimen of RNTCP augers well for any future patients with similar lesions.

**REFERENCES**


