

## GENITOURINARY TUBERCULOSIS MANIFESTING AS ACUTE EPIDIDYMO-ORCHITIS: A REPORT OF TWO CASES

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### ABSTRACT

Like tuberculous infection the overall incidence of genitourinary tuberculosis has increased in many countries during the recent years.

Two cases of testicular tuberculosis manifesting as acute epididymo-orchitis are presented.

**Key Words:** Tuberculosis, Orchitis

### INTRODUCTION

Isolated tuberculous epididymo-orchitis occurs rarely. Tuberculous epididymitis occurs most commonly between the ages 20 and 50 years and patients usually present with the insidious onset of scrotal pain with no irritative voiding symptoms. Unfortunately, the definitive diagnosis of tuberculous epididymo-orchitis is often made after pathological examination of the orchiectomy specimen.

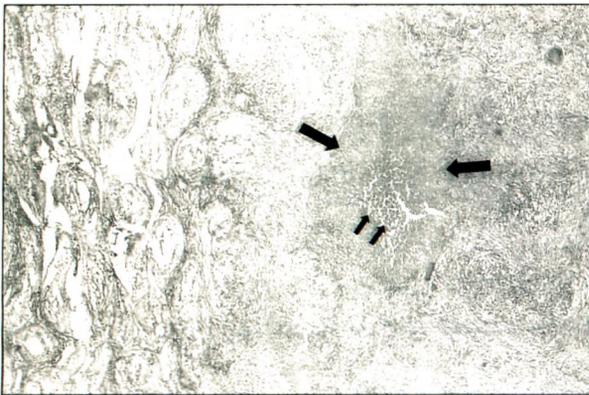
#### Case 1:

A 44-year-old man admitted to our out-patient clinic because of a painful right scrotal swelling of one week's duration. The physical examination

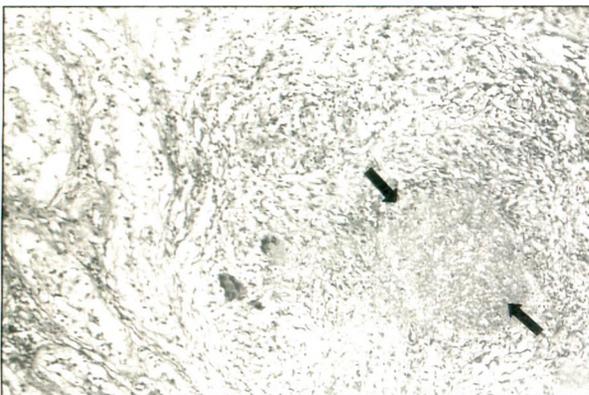
revealed an elastic hard, irregular and painful right-sided scrotal mass (8.5x8 cm) and a normal left testicle. Tumor markers (AFP, beta-hCG and LDH) and chest X-ray were found to be normal whereas, erythrocyte sedimentation rate and C-reactive protein level were slightly elevated. The patient had no fever or any co-morbidity. Urine analysis and cultures were normal. Ultrasound revealed a normal upper and lower urinary tract, a normal left testicle and a right epididymo-orchitis with micro-calcifications. The patient was started on Ofloxacin (1x400 mg) and Diclofenac (2x100 mg) treatment, but there was no symptomatic improvement during a 2-week follow up. A repeat scrotal ultrasound revealed right testicular abscess. The patient underwent right inguinal orchiectomy and histopathological examination revealed caseificious granulomatous orchitis (Figs 1, 2). Three early morning urine samples for acid resistance bacteria examination and urine Bactec culture test were negative.

#### Case 2:

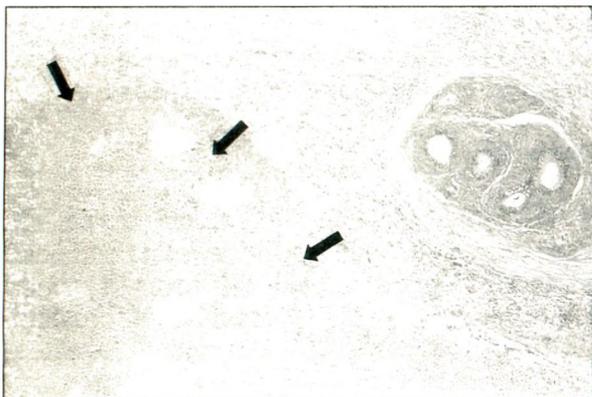
A 65-year-old man admitted to our out-patient clinic because of left testicular swelling and pain which was not associated with fever, a month after the transurethral resection of prostate (TURP). The physical examination revealed testicular swelling and pain on the left side.



**Fig.1 :** (x40. Hemotoxylin-Eosin staining) (a granulomatous lesion in which a large area of caseification necrosis is surrounded by palisading epithelioid histiocytes and lymphocytic rim.)



**Fig.2 :** (x100. Hemotoxylin-Eosin staining) (caseification necrosis)



**Fig.3 :** (x40. Hemotoxylin-Eosin staining) (Granulomas formed by epithelioid histiocytes and lymphocytes; large area of necrosis in the center)

His past medical history revealed a 6-week course of intravesical Bacillus Calmette-Guerin (BCG) treatment for his superficial transitional cell bladder carcinoma. During his last tumor-free check-cystoscopy the patient had also undergone a TURP for benign prostatic hyperplasia (BPH). Histopathological examination of TURP specimen had revealed nonspecific granulomatous prostatitis.

Scrotal ultrasound revealed a left epididymo-orchitis with micro-calcifications. Urine analysis and cultures were found normal. Ofloxacin (1x400 mg) and Diclofenac (2x100 mg) treatment was started on an out-patient basis. Two weeks later, he underwent left inguinal orchiectomy since no improvement was achieved with antimicrobial treatment. Histopathological examination revealed tuberculous epididymitis and atrophic left testicle (Fig. 3). The urinary tract was radiologically normal.

Both patients are currently on an antituberculous drug regimen and no other symptoms or complications have developed.

## DISCUSSION

It is estimated that from 8 to 10 million people develop overt tuberculosis annually and 3 million die due to tuberculosis (1). The prevalence may be as high as 400 in 100,000 in the developing countries (1). Genitourinary tuberculosis accounts for 14% of nonpulmonary manifestations (1,2). Like the tuberculous infection of other systems, the overall incidence of genitourinary tuberculosis has increased in many countries during the past years (3).

The predisposing risk factors associated with the development of tuberculosis include prolonged steroid use, immunosuppressive therapy, diseases that impair cell-mediated immunity and diseases with poor local immune mechanism. A higher incidence of granulomatous prostatitis was found in patients who had been treated with intravesical BCG (4,5). Extrapulmonary tuberculosis has been reported to be steadily increasing in patients with acquired immunodeficiency syndrome (6,7).

Tuberculous epididymitis occurs most commonly between the ages of 20 and 50. Lattimer contends that epididymal tuberculosis is almost always secondary to a prostatic lesion, presumably via a retrocircular descent (8). Gow argues for hematogenous dissemination to the epididymis, reporting that only 1 of 20 men with epididymal tuberculosis had results on prostate biopsy positive for acid-fast bacilli (9). Testicular involvement is usually via a direct extension from the epididymis, although there is evidence of occasional hematogenous infection (9,10). Common presenting problems are scrotal swelling, pain, discharge and sinuses (11). When only the external genitalia are involved pyuria, urinary acid-fast bacilli and irritative voiding symptoms are usually absent. Fever is infrequent as are other constitutional symptoms (11). Patients usually present with the insidious onset of scrotal pain with no irritative voiding symptoms. Therefore, the definitive diagnosis of tuberculous epididymo-orchitis is often made after pathological examination of the orchiectomy specimen.

Tuberculous epididymo-orchitis should always be considered in the differential diagnosis of acute testicular swelling and pain, especially when symptoms do not resolve after a 2-week antibacterial chemotherapy and/or if the patient has received a prior intravesical BCG treatment. It must be remembered that urine culture tests for tuberculosis may be negative in tuberculous epididymo-orchitis and definitive diagnosis may only be made by histopathological examination.

## REFERENCES

1. *Statutory Notifications to Communicable Disease Surveillance Centre. Tuberculosis. November, 1998.*
2. Lane DJ. *Extrapulmonary tuberculosis. Med Int 1982;1:983*
3. Lee YH, Huang WC, Huang JS. *Efficacy of chemotherapy for prostatic tuberculosis- A Clinical and histologic follow-up study. Urology 2001;57:872-877.*
4. Lamm DL, Stogdill VD, Stogdill DJ. *Complications of bacillus Calmette-Guerin immunotherapy in 1,278 patients with bladder cancer. J Urol 1986;135:272-274.*
5. Mukamel E, Konichhezky M, Engelstein D. *Clinical and pathological findings in prostates following intravesical bacillus Calmette-Guerin instillations. J Urol 1990;144:1399-1400.*
6. Shafer RW, Kim DS, Weiss JP. *Extrapulmonary tuberculosis in patients with human immunodeficiency virus infection. Medicine 1991;70:384-397.*
7. Trauzzi SJ, Kay CJ, Kaufman DG. *Management of prostatic abscess in patients with human immunodeficiency syndrome. Urology 1994;43:629-633.*
8. Lattimer J K. *Editorial comment. J Urol 1983;129:613.*
9. Gow JG. *Genitourinary tuberculosis in Cambell's Urology, 7th ed. In: Walsh PC, Petik AB, Wanghan ED, Wein AJ. 1998:807-836.*
10. Riehle RA, Jayaraman K. *Tuberculosis of testis. Urology 1982;20:43.*
11. Wolf JS, McAninch JW. *Tuberculous epididymo-orchitis: Diagnosis by fine needle aspiration. J Urol 1991; 145:836-838.*