TAJ June 2010; Volume 23 Number 1

ISSN 1019-8555
The Journal of
Teachers Association
RMC, Rajshahi

Case Report

Tuberculosis of Prostate

Biswas P K[1], Haque M[2], Robbani A B M G[3], Khan M M [4]

Abstract

We are reporting a case of prostatic tuberculosis in a 50 year old man. The patient was treated due to intense lower urinary tract symptoms caused by benign prostatic hyperplasia. Based on physical examination and accessory investigations the patient was qualified for prostatectomy. Histological analysis of the removed adenoma revealed benign hyperplasia and tuberculosis of the prostate. Retrospectively, no signs of tuberculosis in the lungs or urinary system were confirmed. Antituberculous treatment was immediately administered according to the schedule for the systemic tuberculosis and the patient was followed up. There were no signs of tuberculosis after two months follow-up.

TAJ 2010; 23(1): 95-97

Introduction

Genitourinary tuberculosis is a common type of extrapulmonary tuberculosis. It accounts for 5-10% of extrapulmonary cases in developed countries and 15-20% in developing countries. The kidneys, ureter, bladder or genital organs are usually involved. Tuberculosis of the prostate has mainly been described in immunocompromised patients.[1] However, it can exceptionally be found as an isolated lesion in immunocompetent patients. We report a case of prostatic tuberculosis in a fifty year old healthy and immunocompetent patient with an intense lower urinary tract symptoms caused by benign prostatic hyperplasia.

Case Report

A fifty-year-old man hailing from Puthia Rajshahi was admitted in Surgery Unit – III of Rajshahi Medical College Hospital with a 12-month history of increase frequency of urination and acute retention four days back. He had no other medical problems and no history of fever or weight loss. The physical examination revealed no abnormalities except moderately enlarged prostate. His white blood cell count was 11,000/mm^3, Neutrophil count 70% and erythrocyte sedimentation rate 60 mm in 1st hour. Urinalysis showed pyuria and haematuria. No abnormalities were found on a chest radiograph. An ICT for tuberculosis test was negative. An ultrasonography of KUB and Prostate examination revealed prostatic enlargement 6.1x 4.5x 5.2 cm with uniform echotexture, while the other structures of the urinary system were normal. Urine culture detected no growth. Based on physical examination and accessory investigations the patient was qualified for prostatectomy. The eneucleated tissue was friable and grayish white in

[1] Assistant Professor, Department of Surgery, Rajshahi Medical College, Rajshahi.
[2] Associate Professor, Department of Surgery, Rajshahi Medical College, Rajshahi.
[3] Assistant Professor, Department of Urology, Rajshahi Medical College, Rajshahi
[4] Assistant Professor, Department of Medicine, Rajshahi Medical College, Rajshahi

colour. Histological analysis of the removed adenoma revealed benign hyperplasia and tuberculosis of the prostate. Retrospectively, no signs of tuberculosis in the lungs or urinary system were confirmed. Antituberculous treatment was immediately administered according to the schedule for the systemic tuberculosis and the patient was followed up. There were no signs of tuberculosis after two months follow-up. The patient was then advised to continue full course of anti tubercular medication.

Discussion

Changing disease patterns and the development of large pools of immunocompromised individuals has reversed the downward trend of tuberculosis.[2,3] Today, extrapulmonary tuberculosis is becoming increasingly common, especially involving the lymphatic system, pleura and urogenital tract.[3] Extrapulmonary sites are involved in 50% to 70% of immunocompromised patients, especially HIV patients. Genitourinary tuberculosis accounts for 5-10% of extrapulmonary cases in developed countries and 15-20% in developing countries. Nevertheless, isolated tuberculous prostatic abscesses are uncommon, especially in immunocompetent patients. *M. tuberculosis* is the most common pathogen involved, but others such as *M. kansasii* or *fortuitum* have been described. It is thought that tuberculous involvement of the prostate is usually the result of haematogenous spreading, although this can also occur as a result of descent of the organism from the kidneys or local spreading from the genital tract. Although sexual transmission of *M. tuberculosis* has been reported, it is extremely rare.[1]

Serial urine and semen cultures have a sensitivity of 50%. The polymerase chain reaction (PCR) test has been extensively used because it is a sensitive, specific and rapid technique. Although sterile pyuria is a classic feature of genitourinary tuberculosis, positive cultures for pyogenic organisms may lead to misdiagnosis. Pyuria plus haematuria with sterile cultures is a common urinary finding and intravenous pyelography examinations are abnormal in most cases of genitourinary tuberculosis.[4,5] In some patients, prostate-specific antigen (PSA) may be elevated. Imaging studies help to locate and determinate the presence of concurrent tuberculosis in other organs. Therefore, transrectal ultrasound, intravenous urography and chest X-ray should be considered. Ultrasound reveals enlargement of the gland with solitary or multiple hypoechoic zones of varying sizes inside it. Irregularity of the outline of these hypoechoic areas may also be noted.

CT scans or magnetic resonance imaging may be useful for differential diagnosis, and some characteristic findings from prostate tuberculosis cases have been published. CT provides direct viewing of intraprostatic lesions and reveals them as low-density areas with irregular borders. Contrast-enhanced CT demonstrates these lesions more clearly. Magnetic resonance imaging (MRI) may reveal low signal-intensity lesions suggestive of abscesses. Intravenous urographic examination is recommended because, in a high percentage of cases, renal tuberculosis is found in association.[2,3] Nonetheless, the definitive diagnosis was given by microbiological findings. Histopathological examination of tissue may give the feature tubercular infection. Faced with findings of genitourinary tuberculosis, physicians should ensure that pulmonary involvement can be ruled out.

In this patient, the symptoms could not suggest the presence of tuberculosis. However, it is exceptional for the prostate alone to be affected, as an isolated lesion in the genitourinary tract of an immunocompetent patient.

Conclusion

Genitourinary tuberculosis is not a rare disease, but prostatic tuberculosis in a immunocompetent individual is very rare. Without modern investigation facilities preoperative diagnosis may not be possible. Though the definitive diagnosis is made by microbiological findings, in absence of it histopathological diagnosis should be accepted as confirmatory and antituberculous treatment should be administered.

References

1. Gebo K A. Prostatic tuberculosis in an HIV infected male. Sex Transm Infect. 2002;78(2):147-8.
2. Wise G J, Marella VK. Genitourinary manifestations of tuberculosis. Urol Clin North Am. 2003;30(1):111-21.
3. Lenk S, Schroeder J. Genitourinary tuberculosis. Curr Opin Urol. 2001;11(1):93-8.
4. Tazi K, Nouri M, Elkhadir K, et al. La tuberculose prostatique A propos de deux cas. [Prostatic tuberculosis. Report of 2 cases]. Ann Urol (Paris). 1999;33(4):274-6.
5. García-Rodríguez JA, García Sánchez JE, Muñoz Bellido JL, et al. Genitourinary tuberculosis in Spain: review of 81 cases. Clin Infect Dis. 1994;18(4):557-61.

All correspondence to-
Probodh Kumar Biswas
Assistant Professor
Department of Surgery
Rajshahi Medical College, Rajshahi