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Urinary Bladder Tuberculosis – A Case Report

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Abstract **Case Report**

***Introduction*:** Genitourinary tuberculosis (GUTB) has varied presentation and affects many organs including urinary bladder. Urinary bladder involvement without the involvement of kidneys is considered rare. Delayed diagnosis causes severe complication including thimble bladder. Here we present case report of 45 year old female patient diagnosed with tuberculous cystitis.

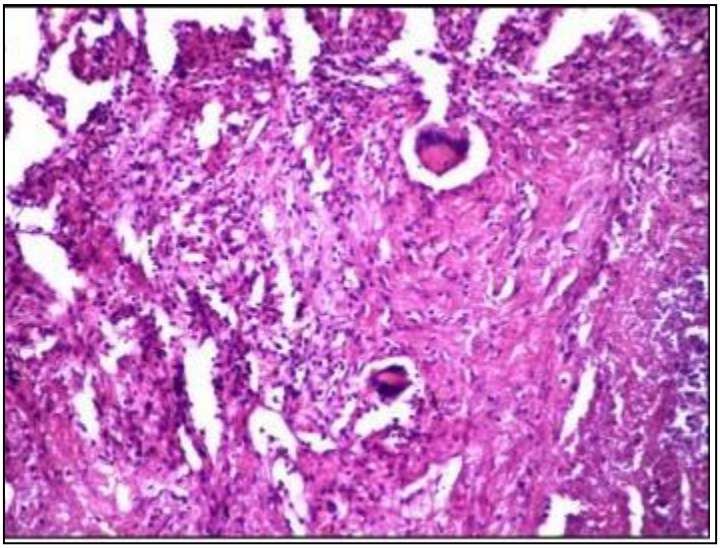
Keywords: Genitourinary tuberculosis, tuberculous cystitis, thimble bladder.

INTRODUCTION

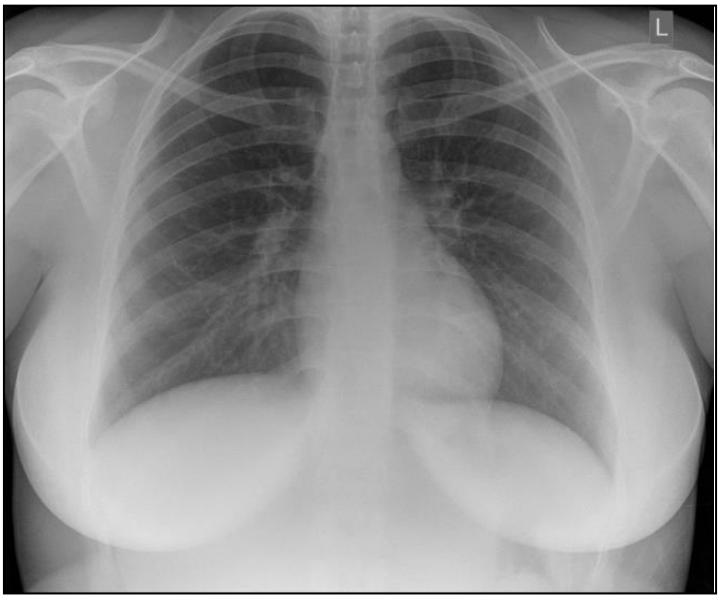
Tuberculosis (TB) is one of the principal causes of death from a single infectious disease agent all over much of documented human history. India is the highest TB burden country in the world having an estimated incidence of 26.9 lakh cases in 2019 [1]. Tuberculosis is an international wide ranging disease. Globally, it has been estimated that 10.4 million individuals developed TB out of which 1.3 to 1.8 million people lost their life [2]. Globally 2/3 rd of the 10 million cases are seen in eight countries with India constituting to the maximum number of cases (27%) [3]. Tuberculosis can affect any part of the body out of which 3-5 % of cases are genitourinary TB cases [4]. TB infection involving kidneys, ureters, bladder, prostate, urethra, penis, scrotum, testicles, epididymis, vas deferens, ovaries, fallopian tubes, uterus, cervix, and vulva are considered to be genitourinary TB [5].

CASE REPORT

45 years old female patient presented with complaints of increased frequency of micturition, burning micturition, dysuria, difficulty in urination along with lower abdomen pain on and off for 3 months. Patient also complained of low grade fever with evening rise in temperature. She had no history of any other complaints. Her past surgical history was not significant along with her personal and family. Patient was treated with repeated courses of different antibiotics which failed to relieve her symptoms. On general examination no abnormality was seen along with her respiratory system examination. Complete blood count showed increased total counts along with increased ESR. Rest of her blood investigations including LFT, RFT, Serum Electrolytes, chest x ray and RBS was within normal limits. HIV was non reactive. Urine routine showed plenty of pus cells. Bacterial urine culture yielded no growth. USG whole abdomen showed irregular thickening of the urinary bladder. After getting informed consent cystoscopy was done which revealed narrowed urethra with trigonitis with perimeatal inflammation, bilateral vesicoureteric junction inflammation with trabeculated bladder. Biopsy from the bladder revealed granulomatous lesion. Gene X pert from the tissue also showed MTB detected with rifampicin sensitive. Patient was then started on anti tuberculous drug based on NTEP guidelines.



Histology Suggestive Tuberculosis



Normal Chest X Ray

DISCUSSION

GUTB is one of the common sites of extra pulmonary tuberculosis. It is diagnosed 1.1–1.5% of all TB cases and in 5–6% of cases of extrapulmonary TB [6]. Mycobacterium tuberculosis reaches the urinary tract via the blood stream the lungs or bowel, rarely from the bone. From the pelvicalyceal system bacilli reaches the bladder through ureters. In the bladder granulomatous lesion develop in the form of ulcer or tumor like mass [4]. Symptoms such as frequent voiding, dysuria, pyuria presenting as lower back, flank, or abdominal pain and microscopic or macroscopic haematuria are seen commonly [7]. Rarely it can even present like mass lesion mimicking RCC, hence high degree of suspicion is required especially in countries where TB is most prevalent [8]. GUTB has varied presentation and some of the common ways are recurrent or resistant urinary bladder tuberculosis, sterile pyuria with or without haematuria, irritative voiding symptom like frequency, urgency and dysuria, an accidental diagnosis in a known case of tuberculosis, renal or epididymal mass, infertility, pelvic inflammatory disease, renal failure, flank pain with pyelonephritis, non healing wounds, sinuses or fistulae, hemospermia [9]. Involvement of urinary bladder is usually secondary to renal tuberculosis and is found in nearly one third of the patients. In early states the changes in the bladder are usually non specific giving rise to symptoms irritative voiding symptoms. Chronic inflammation causes reduce compliance and increased micturition. Thimble bladder develops if the bladder is extensively involved along with urinary incontinence. Chronic inflammation and extensive fibrosis of the vasicoureteric junction causes “golf hole ureter” [10]. Diagnosis is usually microbiological or histopathological. Persistent sterile pyuria in acidic urine with absence of any organism on ordinary urine culture is the main clue of diagnosis of urinary tract

tuberculosis [11]. The mainstay of treatment for this disease is a regimen of anti-TB therapy [12].

CONCLUSION

Tuberculosis of the urinary tract should be strongly suspected in patients having repeated or persistent urinary tract infection along with sterile pyuria. Timely diagnosis is very important to prevent the patients from developing complications like thimble bladder or extensive fibrosis of the vasicoureteric junction causing "golf hole ureter".

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