

# Spontaneous Tubercular Recto-Prostatic Urethral Fistula, A Rare Presentation of Tuberculous Prostatitis at Muhimbili National Hospital

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## Keywords:

Tuberculous; Conservativel; Extra pulmonary TB

## 1. Abstract

We describe a case of tuberculous rectal prostatic urethral fistula in 34yrs old HIV positive male. He presented with passage of urine per anal during voiding without fecaluria, preceded with lower urinary tract symptoms, evening fever, night sweats and significant unintentional weight loss in which diagnosis was confirmed through tissue histopathology. We treated this patient conservatively, initially by suprapubic urinary diversion followed by standard ant tubercular therapy for extra pulmonary tuberculosis. We had a holistic approach of which the treatment team to this rare condition included urologist, pathologist, radiologist and infectious disease specialist at Muhimbili National hospital in Dar es Salaam. We report this case because of its rarity, few published cases in literatures and moreover it has not reported previously elsewhere in Tanzania.

## 2. Introduction

Tuberculosis (Tb) is an infectious disease caused by *Mycobacterium tuberculosis*. It generally affects the lungs, but can also affect other sites. According to the World Health Organization (WHO), one-third of the world's population is currently infected with *Mycobacterium tuberculosis* (1). Tanzania is one of the high TB-endemic countries with an estimated TB incidence rate of 269/100\*000 in the general population, and HIV-TB co-infection rate of 31% (2). While TB is primarily a pulmonary disease, extra pulmonary manifestations account for 14% of incident TB cases worldwide (2). In countries with a high HIV/TB co-infection rate such as Tanzania, 20% of incident TB manifest as extra pulmonary

TB (EPTB) with lymph nodes and pleura most frequent localizations (2). Genitourinary tuberculosis (GUTB) accounts for about 30–40% of all extra-pulmonary TB cases (3). The kidneys, ureter, bladder or genital organs are usually involved. Tuberculosis of the prostate has mainly been described in immunocompromised patients (4). We report a case of 34yrs immunocompromised young man presented with Spontaneous tubercular recto-prostatic urethral fistula as it has not been reported previously elsewhere in Tanzania.

## 3. Case Report

He presented with history of urine leakage per anum for 3 months of sudden spontaneous onset along with normal micturation per urethra. This was associated with painful maturation which was on and off. There was no associated abnormal per anal discharge or bleeding. He denied h/o urethral discharge, pneumohematuria or fecaluria. 2 months prior to the onset of this complaints he reported to have experiencing recurrent lower urinary tract symptoms characterized by both irritative and obstructive symptoms. He also reported accompanied evening fevers, night sweats and significant weight loss. He denied personal history of TB or TB contact. He denied history of cigarette smoking, STI, or schistosomiasis. Generally he was alert with GCSS 15/15, afebrile, cachexic, moderate pale not dyspnoeic,not jaundiced. BP was 128/73mmHG and pulse rate was 82b/mn.

On systemic examination the abdomen was scaphoid, non tender and there was no organomegally with tympanic percussion note. The inguinal and femoral areas were all normal as well as geni-

talia. DRE revealed normal anal verge and sphincter tone. There was palpable, tender, hard, nodulated mass over the anterior wall of rectum, unable to palpate above it. The posterior rectal wall was normal, gloved finger stained with normal fecal matters. The rest of the systems were essentially normal. He tested positive for HIV. Urine microscopy confirmed numerous leukocytes and few RBCs while culture grew significant colonies of *Escherichia Coli* sensitive to routine drugs. Three consecutive samples of urine for AFB smear were negative. So we had the provisional diagnosis of Rhabdomyosarcoma of prostate with urethro-rectal fistula and differential diagnosis of rectal carcinoma.

Micturating cystourethrogram (figure 1) revealed contrast medium intravasated into rectum.

Urethro-cystoscopy (figure 2) revealed a 1cm urethrorectal fistula just proximal to external sphincter distal to verumontanum with epithelialized tract.

Abdominopelvic magnetic resonance imaging (Figure 3) showed features suspicious of a neoplastic prostatic lesion extending into rectal lumen via a defect in the anterior rectal wall with multiple portal hepatis, peripancreatic and paraortic lymphadenopathy.

Histopathology (Figure 4a&b) revealed multiple cores with fibromuscular stroma. Other fragments showed rectal mucosa with benign glands. There were granulomas comprised of multinucleated giant cells, epithelioid cells and mixed inflammatory cells infiltrates. No prostate glands were seen.

He was treated initially by urine diversion via suprapubic catheterization and then standard therapy for extra pulmonary tuberculosis.

#### 4. Discussion

Even though the prevalence of urogenital tuberculosis in the non-industrialized world is common, but tubercular recto-urethral fistula is extremely rare; probably due to the fact that the fascia between the prostate and the rectum acts as a barrier for its spread (5). It has been evidenced from literatures that tubercular prostaticitis usually diagnosed late because both clinical features and laboratory findings are non-specific. Nevertheless, 70% of men who died from TB of all localizations had PTB, which was mostly overlooked during their lifetimes (6). It took five months for our case to confirm the diagnosis. The clinical presentation of TB prostaticitis is often nonspecific and patients most commonly present with lower urinary tract symptoms (LUTS) (7). It can also lead to chronic

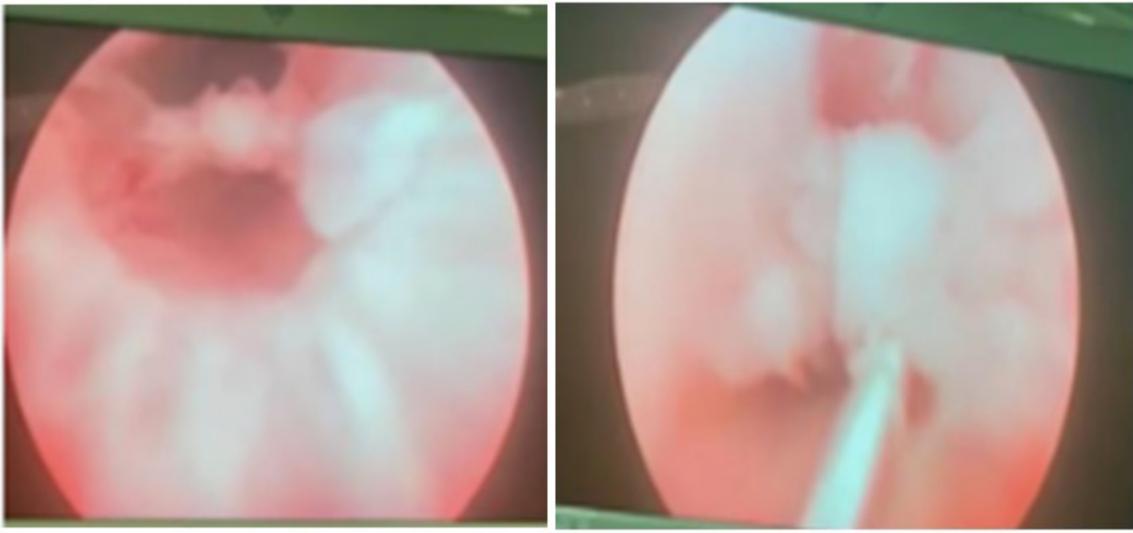
pelvic pain and alter the quality of life (8). Recto-urethral fistula is an uncommon but distressing symptom (5). Digital rectal examination (DRE) usually reveals an enlarged prostate, sometimes with nodulations and even hard consistency (9). These characteristics are shared with prostate cancer and benign prostatic hyperplasia (BPH) (1). The index case presented with recto-urethral fistula which was preceded by LUTS, evening fevers and significant weight loss. DRE revealed enlarged hard nodulated prostate.

Apart from suggestive history and digital rectal examination, certain investigations like cystourethroscopy, proctoscopy, micturating cystourethrogram (MCU) and cross sectional imaging like CT/MRI, can be useful aids in diagnosing recto-urethral fistula (10). In our case MCU showed contrast medium intravasated into rectum (fig 1) and urethroscopy revealed a 1cm urethrorectal fistula just proximal to external sphincter distal to verumontanum with epithelialized tract (figure 2). MRI showed an enlarged prostate 78g totally infiltrated with a suspiciously neoplastic lesions. The lesions were also seen extending into the rectal lumen causing a defect in the anterior rectal wall (figure 3). Most of the time, diagnosis of prostate TB is incidental, for example made by the pathologist while performing examination of prostate tissue specimen taken from biopsy or prostate resection (11). In view of enlarged nodular prostate on DRE and MCU and MRI findings we did transrectal needle biopsy of which histopathology study revealed of TB prostaticitis (figure 5a&b)

Optimal strategies for management of recto-urethral fistula need to be devised in order to reduce the morbidity associated with the disease. Most studies for benign recto-urethral fistulas have advocated fecal and urinary diversion as the initial treatment. After diversion, spontaneous closure has been reported to be 14%- 46.5%. Fecaluria is known to be a poor prognostic sign, indicating that the fistula may be large in size and difficult to heal. Different methods of treatment are described in literature, like diversion, surgical procedures like perineal approach with dartos pedicled flap, posterior sagittal approach, transanal approach, posterior trans-sphincteric approach or modified York-Mason method, use of rectal advancement flaps, gracilis flaps or omental transposition (12). Owing to small size and absence of fecaluria in this patient we opted to manage him conservatively with urinary diversion through suprapubic cystostomy and extra pulmonary tuberculosis standard therapy



Figure 1:



A

B

Figure 2:

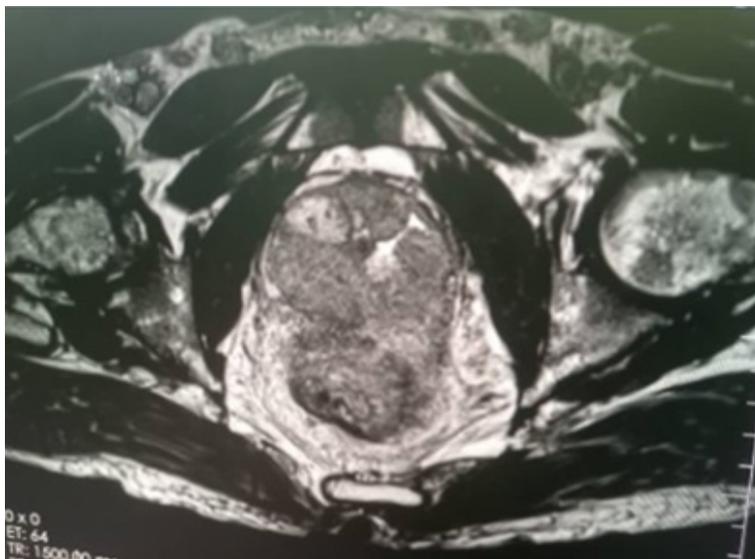
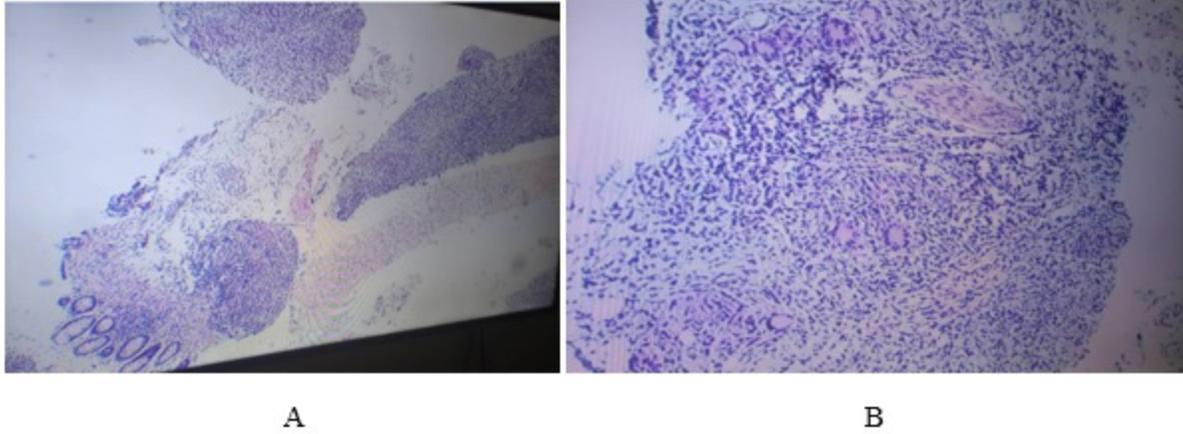


Figure 3:



**Figure 4:**

## 5. Conclusion

Spontaneous tubercular recto-prostatic urethral fistulae are a rare complication of prostatic tuberculosis. There is no renal, ureteric or bladder involvement. The fistulae open adjacent to the verumontanum in the prostatic urethra. In fistulas less than 1.5cm conservative treatment and ant tubercular therapy has proved spontaneous closure. Since it has been observed that urine for acid fast bacilli may be negative and only prostatic biopsies needs to prove the diagnosis, in recto-urethral fistulas there should be a high index of suspicion of tuberculosis especially in countries where it is endemic.

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