

## An Unusual Case of Tubercular Recto-Prostatic Urethral Fistula

Dr. Dilip Kumar Pal<sup>1</sup>, Dr. Soumya Mondal<sup>2</sup>, Dr. Sayak Roy<sup>3</sup>

<sup>1</sup>Professor and Head, <sup>2</sup>Assistant professor, <sup>3</sup>Post-Doctorate trainee, Department of Urology, Institute of Post Graduate Medical Education and Research, Kolkata, India

### \*Corresponding author

Dr. Dilip Kumar Pal

Email: [urologyipgmer@gmail.com](mailto:urologyipgmer@gmail.com)

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**Abstract:** Rectourethral fistula is an uncommon occurrence. The usual anatomic site of occurrence is the prostatic urethra, in which a communication develops with the rectum. The common causes are surgery or radiotherapy for prostate cancer. Inflammatory causes are rare, and amongst them, tuberculosis is even rarer. There are only 9 cases of tubercular rectourethral fistula reported in literature. In this case report, we present a case of post-tubercular recto-prostatic urethral fistula, which was diagnosed by history, examination, MCU, cystourethroscopy and CT scan. The patient had a history of diagnosed pulmonary tuberculosis, for which he had received anti-tubercular therapy before. The patient was initially treated by urinary diversion along with ATT, and later on, fecal diversion by way of a colostomy was done, which resulted in resolution of symptoms. The patient did not require any definitive surgical repair of the fistula, as it healed on urinary and fecal diversion and medical management. On follow-up, recovery was good.

**Keywords:** tubercular, recto-urethral, fistula, cystourethroscopy.

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### INTRODUCTION

Rectourethral fistulas are a rare entity. As per the classification by Culp and Calhoun [1], there are five groups of rectourethral fistulas which are congenital, iatrogenic, traumatic, neoplastic and inflammatory. Iatrogenic fistulas are usually after surgery or irradiation for prostate cancer, with an incidence of about 0.1%-3% [2]. Inflammatory fistulas are even rarer, with inflammatory bowel disease, malakoplakia and tuberculosis being some of the known etiologies. Approximate incidence of rectourethral fistulas from Crohn's disease is 0.3% [3]. As regards tubercular rectourethral fistulas, there are only 9 cases reported in literature till now [4]. Rectourethral fistulas may present with fecaluria, pneumaturia and/or uorrhoea. In case of tubercular recto-prostatic urethral fistulas, patients can present with symptoms of storage Lower Urinary Tract Symptoms along with the aforementioned features. Despite the prevalence of urogenital tuberculosis in the non-industrialised world; tubercular rectourethral 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. Apart from suggestive history, digital rectal examination and certain investigations like cystourethroscopy, proctoscopy, Micturating Cystourethrogram(MCU) and cross-sectional imaging like CT/MRI can be useful aids in diagnosing rectourethral fistulas.

### CASE REPORT

A 55 year old male presented to the out-patient department with complaint of passage of urine per

rectum during micturition for 10 months. It was associated with frequency of micturition and occasional dysuria. There was no history of pneumaturia, fecaluria, haematuria, alteration of bowel habit or bleeding per rectum. He was diagnosed to have pulmonary tuberculosis 2 years back, for which he had received 6 months of anti-tubercular therapy. On digital rectal examination, prostate was nodular in consistency with variegated surface and there was an indurated area palpable in anterior wall of rectum adjacent to prostate.

Colonoscopy revealed a small rectal ulcer. Serum PSA was 2.3ng/ml. Transrectal ultrasound guided prostatic biopsy was done, and histopathology was suggestive of granulomatous inflammation (tuberculous prostatitis). Urine culture was sterile. Urine for AFB was negative. USG showed enlarged median lobe of prostate. MCU showed a fistulous communication between the posterior urethra and the rectum (Fig-1). CT scan showed contrast entry from the bladder into the rectum, suggestive of a fistula (Fig-2). A cystourethroscopic assessment was done. It showed a rent in prostatic part of urethra just proximal to and adjacent to verumontanum, along with few small openings near verumontanum (Fig-3).

Urinary diversion by suprapubic catheterization was done initially, and the patient was followed up. But the symptoms did not resolve. So, after 3 months, a fecal diversion by way of a sigmoid colostomy was done. Alongside the patient was given a course of anti-tubercular therapy. There was resolution of symptoms within a few days after urinary and fecal

diversion alongwith anti-tubercular therapy. The patient is doing well at present and is on regular follow-up.



**Fig-1: MCU showing fistulous communication between posterior urethra and rectum (arrow indicates site of fistula)**



**Fig-2: CT scan showing contrast in rectum in delayed KUB film, suggestive of fistulous communication**



**Fig-3: Cystourethroscopy showing fistulous rent in posterior urethra between verumontanum (right) and prostate lobe (left)**

## DISCUSSION

The etiology of rectourethral fistulas are highly variable; being mostly associated with prostate cancer; either due to tumour infiltration or after surgery or

radiotherapy. Tuberculosis is an extremely unusual cause. It is a rare but distressing condition for both the patient and the surgeon. Optimal strategies for treatment need to be formulated in order to minimize the morbidity associated with the disease. Most studies have advocated fecal and urinary diversion as the initial treatment. Spontaneous closure after diversion only, has been reported to be 14%-46.5% [5]. Fecaluria is known to be a poor prognostic sign, indicating that the fistula may be large in size [6] and difficult to heal. In our case, patient did not have fecaluria, which probably explains the resolution of symptoms after diversion in this case. Fecal diversion is usually needed when symptoms do not resolve after initial urinary diversion.

As regards treatment, various methods have been used for cases reported in literature. Some cases have cured with diversion. Others have required definitive surgical procedures like perineal approach with dartospedicled flap [7], posterior sagittal approach, transanal approach, posterior trans-sphincteric approach or modified York-Mason method [8], use of rectal advancement flaps, gracilis flaps or omental transposition. In case of tubercular rectourethral fistulas, the majority of reported cases have resolved with diversion and anti-tubercular drug treatment. In our case, the patient was diagnosed to have tubercular prostatitis, and had received ATT. On cystoscopic examination, the fistulous opening was found, alongwith other multiple small openings of sinus near the verumontanum, which is characteristic of prostatic TB, as described by Veenema and Lattimer [9]. The patient had a negative urine study for AFB, which emphasizes on the fact that even if urine for AFB is negative, patient can have prostatic tuberculosis (as suggested in this case by prostatic biopsy), and ATT should be promptly given.

## CONCLUSION

Rectourethral fistula is a serious, although rare, condition. Amongst the various etiological causes, tuberculosis is a known but very rare cause. There are very few cases of tubercular rectourethral fistula reported till now. A proper knowledge of this condition, its presentation and diagnosis will help in its proper management. One needs to keep malignant causes in mind and try to rule them out. This is important because this condition does affect the quality of life of the patient, and appropriate and timely treatment can aid in improving the well-being of the patient.

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