Inflammation and infection

A rare case of tubercular recto-prostatic urethral fistula with tuberculous orchitis

Niramya Pathak, Mohan Keshavamurthy, Karthik Rao*, Shakir Tabrez, Mohan Balaiah Ashwathaiya, Premakumar Krishnappa
Fortis Hospital, 154,9, Bannerghatta Main Road, Opposite IIM, Sahyadri Layout, Panduranga Nagar, Bangalore, Karnataka, 560076, India

ARTICLE INFO
Keywords:
Tubercular recto prostatic urethral fistula
Genito urinary tuberculosis
Tuberculous orchitis

ABSTRACT
Tubercular prostatitis and tuberculous orchitis are uncommon manifestations of genitourinary tuberculosis. Recto prostatic urethral fistula is also an extremely rare condition with less than 10 cases of tubercular recto-urethral fistula reported in literature. We present a case of post-tubercular recto-prostatic urethral fistula, which was diagnosed by history, clinical examination, micturating cystourethrogram, cystourethroscopy and MRI abdomen pelvis. The patient was treated by simple prostatectomy with rectal repair with omental inter-position along with a diversion ileostomy, followed by a course of Anti tubercular drugs following histopathological confirmation.

Introduction
Genitourinary Tuberculosis is seen as an extra pulmonary manifestation in 10–14% of tuberculosis.1 Prostatic involvement occurs via descending infection, hematogenous spread or as a direct extension from a neighbouring focus. Usually manifests as granulomatous prostatitis with a low incidence. Tubercular Recto-urethral fistulas are a rare entity with only 10 cases reported worldwide.2 Recto-urethral fistulas may present with fecaluria, pneumaturia and/or urine in stools. Patients of tubercular recto-prostatic urethral fistulas present with lower urinary tract symptoms along with the aforementioned features. Even though the prevalence of urogenital tuberculosis in the non-industrialised 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. 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 recto-urethral fistulas.

Case description
A 70 year old diabetic and hypertensive presented with complaints of passage of urine per rectum since 1 year with recurrent right testicular pain and recent onset of pus discharge from right scrotum, urinary frequency, occasional dysuria and previous history of recurrent UTI. There was no history of pneumaturia, fecaluria, alteration in bowel habits or bleeding per rectum. He had a past history of left orchidectomy for recurrent epididymo-orchitis 3 years back.

Clinical examination revealed right testicular tenderness with induration of the epididymis and a sinus discharging pus in the right scrotal wall. On digital rectal examination, grade 1 firm prostate with variegated surface was noted, and an indurated area in the anterior wall of rectum just adjacent to the prostate.

Retrograde urethrogram was suggestive of prostatic urethral diverticulum. Micturating cystourethrogram showed opacification of large bowel loops suggestive of vesico rectal fistula. MRI revealed a fistulous tract between the prostate and rectum (Fig. 1).

Cystoscopy showed proximal bulbar urethral stricture with a rent in prostatic urethra just proximal and adjacent to verumontanum. Sigmoidoscopy showed a sessile polyp in sigmoid colon which was biopsied and turned out to be benign and showed a suspicious fistulous opening in lower rectum 3 cm from anal verge (Fig. 2).

Patient underwent simple prostatectomy with fistulous tract excision and rectal repair with omental interposition and diversion ileostomy. Right orchidectomy was also done.

Histopathological examination of prostate and testes showed granulomatous inflammation with Langhans type of giant cells (Fig. 3).

Postoperatively the patient was started on Anti-tubercular medications.
Discussion

Tubercular involvement of the prostate gland is known to present as granulomatous prostatitis. The exact incidence is unknown at present, but is reportedly low. It is less common than renal, urinary bladder, seminal vesicle and epididymal tuberculosis. Testicular tuberculosis is an uncommon form, seen in only 3% cases of genitourinary tuberculosis.

Recto-urethral fistula is an uncommon but distressing condition for both the patient and the operating surgeon. Optimal strategies for management 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 pediced 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.  

In view of the large size of the recto urethral fistula in this patient he underwent simple prostatectomy with rectal repair and omental interposition. This case is being reported as Tuberculosis causing a recto-urethral fistula is extremely rare.

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. Tuberculous orchitis is also an uncommon manifestation of genitourinary tuberculosis. Urine for Acid Fast Bacilli may be negative and only prostatic and testicular biopsies may prove the
diagnosis. Hence in recto-urethral fistulas there should be a high index of suspicion of Tuberculosis especially in countries where it is endemic.

CRediT authorship contribution statement

Niramya Pathak: Writing - original draft. Mohan Keshavamurthy: Conceptualization, Validation, Resources. Karthik Rao: Writing - review & editing. Shakir Tabrez: Supervision. Mohan Balaiah Ashwathaiya: Supervision. Premakumar Krishnappa: Supervision.

References

1. Gupta N, Mandal AK, Singh SK. Tuberculosis of the prostate and urethra: a review. Indian J Urol. 2008 Jul-Sep;24(3):388-391. https://doi.org/10.4103/0970-1591.42623.

2. Pal DK, Mondal S, Roy S. An unusual case of tuberculous recto-prostatic urethral fistula. Scholars Journal of Medical case Reports. 4. 939-941. 10.21276/sjmc-2016.4.12.19.

3. Viveiros F, Tente D, Espiridio P, Carvalho A, Duarte R. Tuberculose testicular: caso clínico [Testicular tuberculosis: case report]. Rev Port Pneumol. 2009;15(6):1193-1197. https://doi.org/10.1016/S8873-2159(15)30201-4.

4. Lee TG, Park SS, Lee SJ. Treatment of a recurrent rectourethral fistula by using transanal rectal flap advancement and fibrin glue: a case report. Journal of the Korean Society of Coloproctology. 2012;28(3):165-169. https://doi.org/10.3393/jksc.2012.28.3.165.

5. Choi JH, Jeon BG, Choi SG, et al. Rectourethral fistula: systemic review of and experiences with various surgical treatment methods. Annals of coloproctology. 2014; 30(1):35-41. https://doi.org/10.3393/ac.2014.30.1.35.