

Rectourethral fistula: A rare complication of injection sclerotherapy

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Abstract

In the modern era, the incidence of rectourethral fistula (RUF) has been on a rise due to an increasing number of surgeries being performed for prostatic carcinoma. Other causes of this condition still remain rare and their management differs from that of post prostatectomy RUF. We report a rare case of a young man who presented with leakage of urine per rectum 4 weeks after injection sclerotherapy for haemorrhoids. A Micturating Cystourethrogram/Retrograde Cystourethrogram revealed the presence of RUF arising at the level of prostrato-membranous urethra and the urine examination did not show any fecal contamination of urine. A fistula at the level of verumontanum along with stricture of the distal penile urethra was demonstrated on urethroscopy. The patient was successfully managed by dilatation of the stricture segment and urethral catheterization. RUF can rarely result from injection sclerotherapy and must be thoroughly evaluated. Cases which present early and have minimal contamination of urine by fecal contents can be conservatively managed with a simple Foleys catheterization for 4-6 weeks after ruling out any obstruction distal to the fistulous tract.

Key Words: Conservative management, haemorrhoids, injection sclerotherapy, rectourethral fistula

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INTRODUCTION

The incidence of rectourethral fistula (RUF) has increased with the increased detection and surgical management of organ confined prostate cancer. However, the incidence of RUF due to other causes is still rare and the treatment of such fistulae varies due to lack of common consensus. We here in report one such case of RUF, which developed following treatment of haemorrhoids after sclerotherapy, a very rare aetiology, and its successful treatment by conservative management.

CASE REPORT

A 28-years-old gentleman presented to the out-patient department with complaints of leakage of urine per rectum while micturating, 4 weeks after injection sclerotherapy for haemorrhoids without any complaints of pneumaturia or fecaluria. Examination per rectum revealed old stigmata of sclerotherapy but no other significant findings could be appreciated on a digital rectal examination [Figure 1]. Further evaluation of the patient in the form of a Micturating Cystourethrogram/Retrograde Cystourethrogram revealed a fistulous opening connecting the prostatic urethra to the rectum [Figure 2]. Laboratory workup in the form of a complete blood count, kidney function tests, random blood sugar and serum electrolytes showed no derangement. The urine examination did not show any evidence of contamination by faecal contents on microscopic and routine examination and culture.

A urethroscopy was done to demonstrate the fistula and revealed a stricture in the distal penile urethra along with a fistulous

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communication with the rectum at the level of verumontanum in the prostatic urethra [Figure 3]. The bladder was grossly normal. The stricture segment was dilated using serial plastic dilators passed over a 0.035 inch guidewire. A Foleys catheter with its distal most end cut, was glided over the guidewire into the bladder

and inflated. The patient was followed up on a biweekly basis in the out-patient department. Patient's symptoms improved on bypassing the fistula and the tract gradually healed over a period of 4 weeks after which the Foleys catheter was removed. The patient did not have any complaints at 3 months of follow-up.

DISCUSSION

RUF is a well-recognized urological complication that is increasing in incidence due to the detection of prostatic carcinoma at a localized stage, leading eventually to radical prostatectomy and other forms of minimal invasive therapies.^[1] Our search for this complication following sclerotherapy revealed only one case occurring due to similar aetiology as our case.^[2] RUFs cause severe morbidity and their management requires integration of various disciplines.^[3] These fistulas can arise following trauma, urological intervention, inflammatory bowel disease and colorectal surgeries.^[4] Surgically induced fistulas differ from radiation induced fistulas in being small and are located in the bladder neck.^[5] They respond well to surgical management. Pathogenesis of RUF following sclerotherapy is poorly understood, but it is likely that in our patient, an incorrect plane of injection may have led to the necrosis of the intervening tissue. The fistula became evident after a period of 4 weeks when the edema resolved completely.

History of the patient is a strong indicator towards the pathology. Typical clinical features, when present leave the clinician with a rather short list of differentials. A detailed history is important to find out the level of urinary contamination. In cases where the fistula is small and the urinary system is diverted to the gut rather than the fecal contents entering the sterile urinary system, the morbidity may be much less and conservative treatments may be more effective as in our case. Fecaluria and pneumaturia may be a poor prognostic factor, while passage of urine per rectum may indicate that the urinary system has less chances of being contaminated by the contents of the gut.

Diagnosis is confirmed by an antegrade and retrograde urethrogram. It is important to ask the patient to strain during the study so that the contrast agent enters and visualizes the abnormal tract. A small fistula may be missed on this investigation, but this investigation still remains one of the widely available simple contrast based studies, accessible to most of the clinicians. The diagnosis can be further confirmed by direct visualization of the fistulous opening by urethroscopy, which may reveal either the communication itself, or subtle edema around the fistulous opening. In the present case a small communication was identified associated with a seemingly large defect on the urethral side tapering to form a pinpoint communication with the rectum. In this case scenario urethroscopy also revealed the distal urethral stricture, which



Figure 1: Anal canal showing stigmata of sclerotherapy



Figure 2: Urethrogram demonstrating the recto-urethral fistula



Figure 3: Fistula tract seen at the level of verumontanum on urethroscopy

could have been a cause of a non-healing fistula. The distal stricture was managed with simple dilatation of the anterior urethra in order to avoid any accidental damage to the RUF.

Both conservative^[6,7] and surgical management for RUF has been described in literature. There still is a lack of consensus^[8] on the best modality of treatment for these fistulae. The transperineal repair approach with pedicled gracilis muscle interposition^[9] has been regarded as the method of choice for urologists. Use of rectal advancement flap, Gluteus maximus flap, Tunica vaginalis flap, Dartos muscle flap, selective buccal mucosal onlay graft and cytoadhesive glue has been reported in literature with successful results. Posterior transsphincteric Kraske approach, Bevan-Mason repair, transanal repair parasacral repair, endoscopic management^[10] and transanal microsurgical repair^[11] are some of the other approaches available for surgical management.

Conservative treatment is not applicable to most RUFs but in those detected early and those with no urinary contamination it may be tried successfully. The need for bowel diversion in patients with fecaluria^[12] has been emphasized and fecaluria is a relative contraindication to conservative management. In our patient the urinary system was bypassed successfully with dilatation of the distal stricture and urethral catheterization for a prolonged period of 4 weeks. The catheter was introduced over a guidewire inserted under vision to avoid trauma to the fistula site. The patient responded well to antibiotics and anti-inflammatory agents and tolerated the catheter well.

CONCLUSION

Injection sclerotherapy for the management of haemorrhoids is a rare cause of RUF. Small RUF with minimal faecal contamination

of the urinary system should be given a trial of conservative management after ruling out causes that may adversely affect healing such as a distal obstruction.

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