

Urethral Diverticulo-Rectal Fistula in AIDS

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A 41-year-old heterosexual African man was evaluated for persistent urethral discharge, pneumaturia and watery diarrhea. Radiographic and endoscopic procedures established the diagnosis of a rectourethral fistula. The differential diagnosis of an acquired rectourethral fistula and the significance of AIDS are discussed.

Key Words: Fistula, urethra, rectum, diverticulum, AIDS

INTRODUCTION

Congenital rectourethral fistulas are commonly seen in conjunction with imperforate anus and other anorectal malformations, but an acquired rectourethral fistula is uncommon. The condition is commonly associated with surgical injury, and less commonly with inflammatory disorders, trauma and neoplasm. We report upon a case of rectourethral fistula with urethral diverticulum and AIDS.

CASE REPORT

A 41-year-old heterosexual African male was referred to the international clinic for evaluation of a 3-week history of watery diarrhea and watery leaking per anus during voiding. He also complained of recent weight loss and general weakness. He was last sexually active 2 years previously when he engaged in ordinary heterosexual intercourse with his wife in his native country.

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Medical history revealed an unclear transfusion history during a cervical surgical procedure in Africa. He had no history suggestive of urethral stricture or posterior urethral valve. His physical examination was significant for wasting but no specific abnormalities in external genitalia or perineum were observed. The rectal examinations were unremarkable except for mild prostatic tenderness.

Many red and white blood cells were found during urinalysis, but the urine culture was negative for growth. Leukopenia ($1960/\text{mm}^3$) was noted on blood count. Anti HIV-1 antibody and subsequent Western blot were both positive and his CD4 (+) T lymphocyte count was less than $200/\text{mm}^3$. A cystourethrogram identified a saccular structure in the area of the posterior urethra (Fig. 1), and revealed an opening to the urethral diverticulum located 2cm proximally to the bulbous urethra. To confirm the relationships



Fig. 1. Cystourethrogram demonstrating a saccular structure at the area of posterior urethra.



Fig. 2. Axial T2 weighted sagittal MRI demonstrating a definite fistulous tract between the urethral diverticulum involving the membranous urethra and the terminal rectum.

between the pelvic structures, MRI was performed, and on sagittal view a definite fistulous tract between the urethral diverticulum and the terminal rectum, and involving the membranous urethra was observed (Fig. 2), which established the diagnosis of urethral diverticulo-rectal fistula.

The patient was scheduled for perineal exploration, but due to the current Korean law which states all foreigners with HIV (+) status must be deported, the patient was discharged.

DISCUSSION

HIV infection causes various urological involvements, ranging from infection to malignancy and renal disease.¹ Teichman reported an acquired rectourethral fistula caused by Kaposi's sarcoma in 35-year-old homosexual AIDS man.²

Acquired rectourethral fistula generally results from surgical injury, and perineal prostatectomy, suprapubic prostatectomy, radical retropubic prostatectomy, transurethral resection of the prostate and open prostatic biopsy have been implicated.^{3,4} Smith and Veenema reported 160 cases of radical retropubic prostatectomy that resulted in 15 rectal injuries.⁵ Associated factors in these 15 patients

were prostate cancer adherent to the rectum, a surgical accident and a delayed radical operation. Lack of bowel preparation and colostomy were also identified as associated factors. Inflammatory process also may cause acquired rectourethral fistula. Reports have implicated urethritis (gonococcal), periurethral abscess, prostatic tuberculosis and inflammatory bowel disease.⁶⁻⁸ Acquired rectourethral fistula may also be secondary to urethral stricture disease. Neoplasms of the prostate, urethra and rectum may cause acquired rectourethral fistula either by progression of the disease or due to operation.^{5,9} Radiation therapy, external beam and interstitial seed placement in the prostate also may cause the condition.

Urinary-intestinal fistula is a rare complication in AIDS patients, only 6 cases have been reported.¹⁰⁻¹² The etiologies of such fistulas include cryptosporidiosis and non-Hodgkin lymphoma. However, such confirmatory diagnosis is difficult, and only found after excision or biopsy. Due to the recent increase in the number of full-blown AIDS patients, the incidence of urinary-intestinal fistula will rise.¹² Other fistulous conditions reported in patients with AIDS include anal and rectovaginal fistula.^{13,14} Our case involved a sudden onset rectourethral fistula with urethral diverticulum, with coincidental finding of HIV infection.

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