

Vesicocutaneous fistula originating from bladder diverticulum as an unusual delayed complication after open prostatectomy

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ABSTRACT

A 65 years old male presented with vesicocutaneous fistula in suprapubic region arising from bladder diverticulum 4 years after open prostatectomy. Several rare etiologies of vesicocutaneous fistula are described in literature. Vesicocutaneous fistula has been reported after hip arthroplasty, from a bladder diverticulum, by giant bladder calculus, radiation therapy for advanced vulvar cancer, radical abdominal hysterectomy, delayed complication of polypropylene mesh hernioplasty, as unusual complication of inguinoscrotal hernia, secondary to bladder instability, caused by actinomycosis, following antenatal bladder aspiration, and rare complication of open prostatectomy. Delayed presentation of vesicocutaneous fistula arising from bladder diverticulum after open prostatectomy is very rare. Standard management of vesicocutaneous fistula described in literature is complete excision of fistulous tract and interposition flap placement. We are sharing our experience of minimally invasive management of vesicocutaneous fistula of unusual etiology.

KEYWORDS: Bladder diverticulum, Open prostatectomy, Vesicocutaneous fistula.

INTRODUCTION

Vesicocutaneous fistula is very devastating condition for patient. It leads to continuous urinary leakage, foul smell, excoriation and maceration of skin and may lead to severe complication like sepsis and malignancy. Hence definitive management is imperative. Rare etiologies of vesicocutaneous fistula have been described in literature. We are sharing our experience of spontaneous vesicocutaneous fistula originating from bladder diverticulum as a delayed complication after open prostatectomy and to the best of our knowledge this complication is not reported in the literature till date

CASE REPORT

A 65 years old male presented with passage of urine through suprapubic region for last 2 months. He had open prostatectomy for benign prostatic enlargement (BPH) 4-years back. Patient remains asymptomatic for 3 years after surgery but again developed thinning of urinary stream and straining during voiding for last 1 year. An abscess was developed at scar of previous surgery which gradually ruptured and a urinary fistula developed at suprapubic region. Suprapubic catheter was put through the fistula.

On evaluation with RGU/MCU (**Figure 1**) he was found to have normal anterior urethra and severely trabeculated bladder with multiple diverticulae and inadequate filling of posterior urethra. CECT abdomen and pelvis (**Figure 2**) was suggestive of thickened trabeculated bladder with a diverticulum at the dome of

bladder with fistulous tract communicating to anterior abdominal wall and normal upper tract. On retrograde cystoscopy prostatic urethra stricture and multiple false tracts were found and guide wire could not be negotiated into the bladder. On ante grade cystoscopy through fistulous tract scope negotiated in the bladder through wide mouth diverticulum (from which vesicocutaneous fistula was formed). Guide wire could be negotiated through stenosed bladder neck and delivered from meatus. Endodilation of posterior urethra and bladder neck done over guide wire up to 22 Fr (**Figure 3**) and 16 Fr perurethral catheter was placed, suprapubic catheter was removed. Fistulous tract gradually healed over a period of 2 weeks and perurethral catheter removal was done after 3 weeks. At the follow up of 3, 6 and 12 months patient was voiding well without recurrence of vesicocutaneous fistula and insignificant post void residual urine in diverticulum.

DISCUSSION

Vesicocutaneous fistula has been reported after radiation therapy for advanced vulvar cancer¹, radical abdominal hysterectomy², hip arthroplasty³, from a bladder diverticulum⁴, by giant bladder calculus⁵, delayed complication of polypropylene mesh hernioplasty⁶, as unusual complication of inguinoscrotal hernia, secondary to bladder instability⁷, caused by actinomycosis⁸, following antenatal bladder aspiration⁹,

and rare complication of open prostatectomy¹⁰. Delayed presentation of vesicocutaneous fistula arising from

bladder diverticulum after open prostatectomy is very rare.

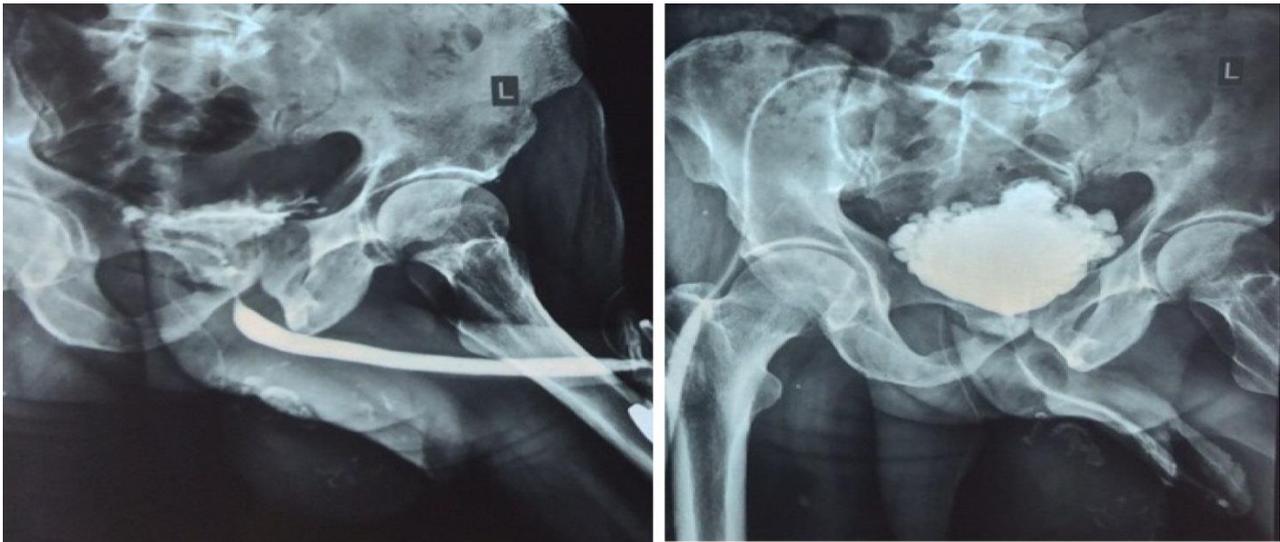


Figure 1:RGU/MCU normal anterior urethra and severely trabeculated bladder with multiple diverticulae.

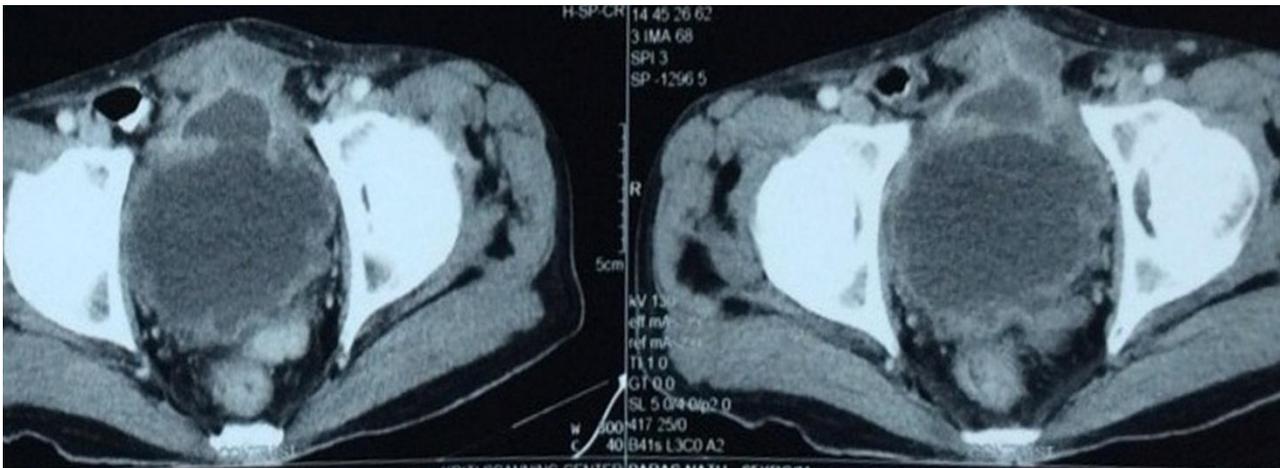


Fig 2: CECT suggestive of thickened trabeculated bladder with a diverticulum at the dome of bladder with fistulous tract communicating to anterior abdominal wall.

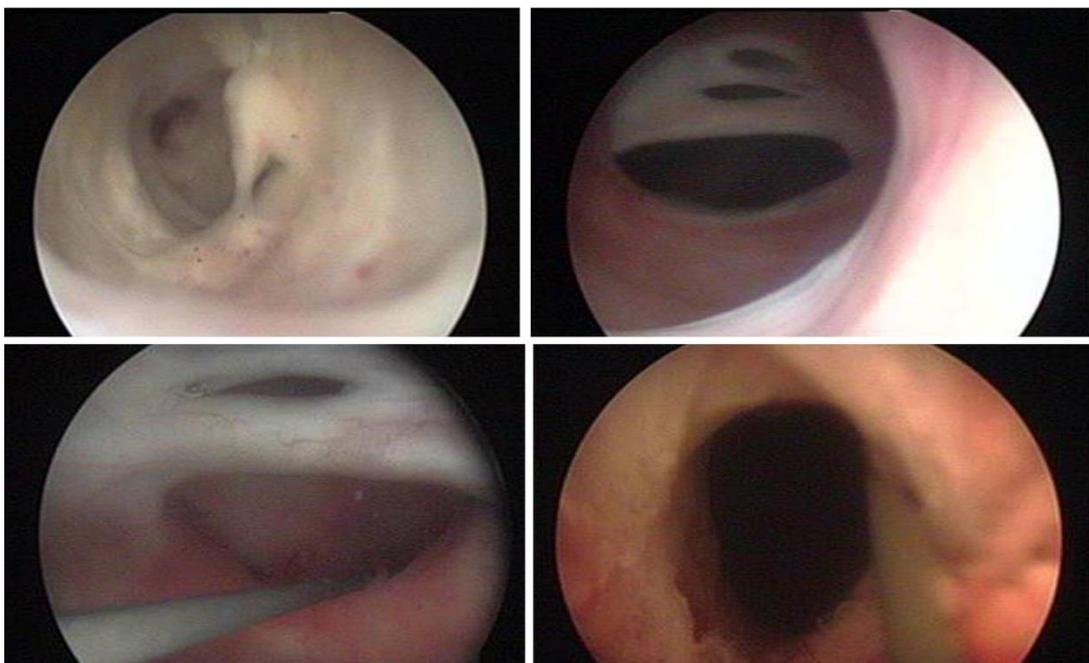


Fig 3: Endodilation of posterior urethra and bladder neck (retrograde and antegrade cystoscopic view).

Indications of open prostatectomy for benign prostatic hyperplasia are very limited in the era of minimally invasive endourology. Bladder neck contracture and prostatic urethral stricture are known delayed complication of open prostatectomy, but delayed vesicocutaneous fistula arising from bladder diverticulum in post open prostatectomy patient is very rare.

Most common etiology of persistent vesicocutaneous fistula in urology clinics were after longstanding suprapubiccystostomy done for various urological procedure for urinary drainage/diversion. Vesicocutaneous fistula may complicate many urological conditions of bladder outlet obstruction like urethral stricture disease and benign prostatic enlargement. Such cases of vesicocutaneous fistula usually managed by urinary drainage by supra pubic route and correction of predisposing conditions. In our case, the fistula persisted in the suprapubic region because of the bladder outflow obstruction due to posterior urethral stricture and bladder neck contracture after open prostatectomy. Every case of spontaneous urinary fistula should be evaluated thoroughly for malignancy, infection, stones and obstruction. IVU, RGU, MCU and cystoscopy are useful in making the diagnosis. CT and MRI may be needed in cases where fistulous tract is not properly delineated or there is suspicion of malignancy. Standard management described for vesicocutaneous fistula is surgical excision of fistulous tract along with tissue interposition flap and skin grafting for large defect with removal of predisposing condition. In our case fistulous tract was very small and fistula was arising from wide mouth diverticulum, so endoscopic management becomes feasible and diverticulum was asymptomatic and contains insignificant post void residual urine hence diverticulum excision was not done.

CONCLUSION

High index of suspicion and through evaluation to find out etiology of vesicocutaneous fistula is essential for proper management. Selected cases of Vesicocutaneous fistula can be dealt with minimally invasive measures.

CONFLICTS OF INTEREST

No authors have any conflicts of interest or financial ties to disclose.

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