

# Persistent Multiple Vesicocutaneous Fistulas or Watering-Can Abdomen

Shanmugasundaram Rajaian, Santosh Kumar, Ganesh Gopalakrishnan

*Keywords: urinary bladder fistula, cutaneous fistula, suprapubic cystostomy*

*Urol J. 2008;5:280-3.  
www.uj.unrc.ir*

## INTRODUCTION

Vesicocutaneous fistula (VCF) is a known complication of longstanding suprapubic cystostomy tract. We report the first case of neglected urethral stricture with rectourethral fistula following pelvic trauma presenting as “watering-can abdomen” due to multiple vesicocutaneous fistulas following suprapubic cystostomy.

## CASE REPORT

A 24-year-old man referring from a remote village presented with the history of passing urine through multiple openings in the anterior abdominal wall. At presentation, his kidney function and the urinary tract were normal. He had a history of urethral injury due to pelvic trauma following accidental fall of heavy metal object while playing at the age of 4 years. As initial management, he immediately underwent suprapubic cystostomy. The suprapubic cystostomy catheter slipped out spontaneously and was not replaced. Meanwhile, he was voiding via the urethra along with the leakage

of urine through the rectum. Two months later, he developed retarded urinary stream, and the leakage of urine through the rectum increased.

He did not present for follow-up, and 6 years after the trauma, he developed a firm globular subcutaneous mass in the suprapubic area with the size of 10 × 10 cm and multiple punctuated openings through which he was voiding almost the entire volume of the urine (Figure 1). He also had intermittent leakage of the urine through the rectum. Rectal examination revealed palpable comminuted healed fracture of the pubis and superiorly displaced prostate across the anterior rectal wall. Ascending urethrography



**Figure 1.** Suprapubic mass—“watering-can abdomen”—reveals multiple urine and pus discharging tracts.

*Department of Urology, Christian Medical College, Vellore, Tamilnadu, India*

*Corresponding Author:  
Ganesh Gopalakrishnan, MD  
Department of Urology, Christian Medical College, Vellore, Tamilnadu, India - 632 004  
Tel: +91 416 228 2111  
Fax: +91 416 223 2035  
E-mail: ganesh@cmcvellore.ac.in*

*Received december 2008  
Accepted April 2008*

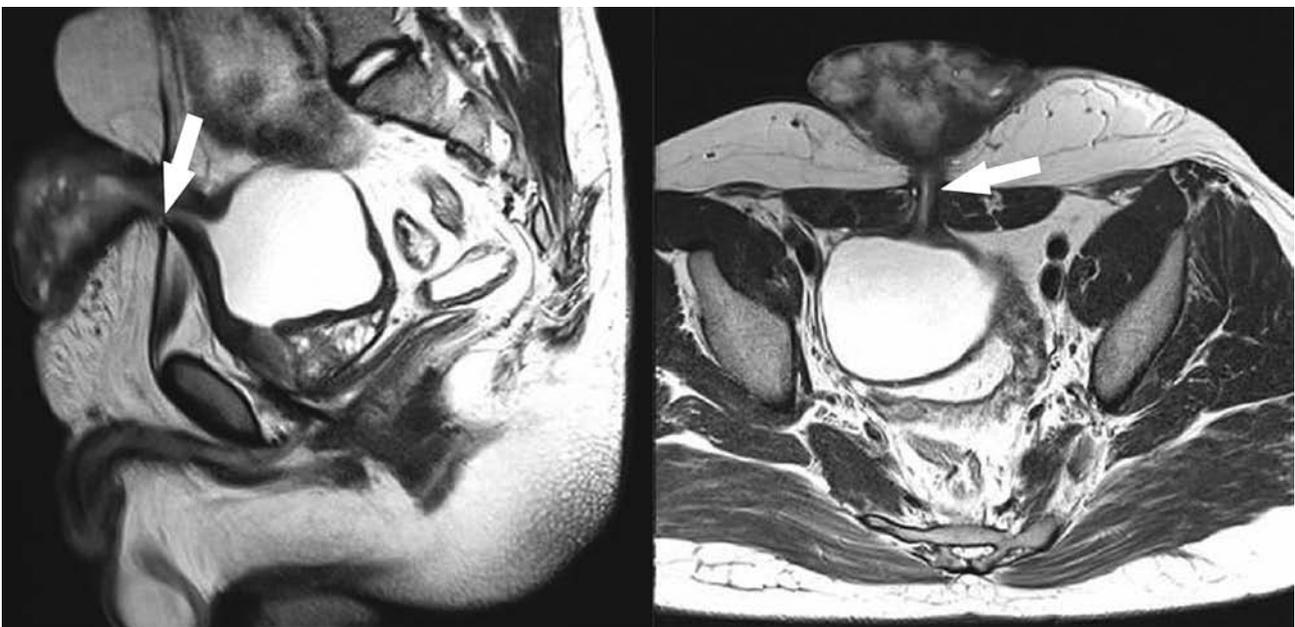


**Figure 2.** **Left,** Ascending urethrography shows bulbomembranous stricture (arrow) and opacification of the rectum. **Middle,** Fistulography shows arborizing tracts within the mass (arrows). **Right,** Micturating cystourethrography shows vesicocutaneous fistula (arrow) entering the “watering-can abdomen” and the rectum filled with the contrast medium.

showed bulbomembranous urethral stricture and rectourethral fistula. Fistulography and micturating cystourethrography showed multiple arborizing tracts, opacification of the vesicocutaneous fistula, and dilated posterior urethra along with the leakage of the contrast into the rectum (Figure 2). T2-weighted magnetic resonance imaging further confirmed the well-established tract between the urinary bladder and the nodular swelling in the anterior abdominal wall (Figure 3).

The mass and the VCF tract were excised and bladder was closed in layers. A new suprapubic

cystostomy was created away from the fistulous tract. Transverse loop colostomy was done to divert the feces away from the fistula. Chronic inflammation around and within the fistulous tracts was seen on histological evaluation of the mass. Six weeks later, the patient underwent anastomotic urethroplasty and correction of the rectourethral fistula along with gracilis flap interposition with our described technique successfully.<sup>(1)</sup> Three weeks thereafter, urethral and suprapubic cystostomy catheters were removed. During the follow-up, he was voiding with a good stream of urine, and there was no leakage of urine through the rectum. The



**Figure 3.** **Left,** T2-weighted sagittal magnetic resonance imaging shows the fistula (arrow) between the urinary bladder and the “watering-can abdomen.” **Right,** T2-weighted axial magnetic resonance imaging reveals the same communication (arrow).



**Figure 4.** Postoperative photograph shows healed suprapubic scar and spouting transverse colostomy.

suprapubic cystostomy site healed well as shown in the postoperative photograph taken 8 months after the operation (Figure 4). Postoperative micturating cystourethrography showed normal urethra and bladder and completely healed rectourethral fistula (Figure 5). Then, colostomy closure was planned.

## DISCUSSION

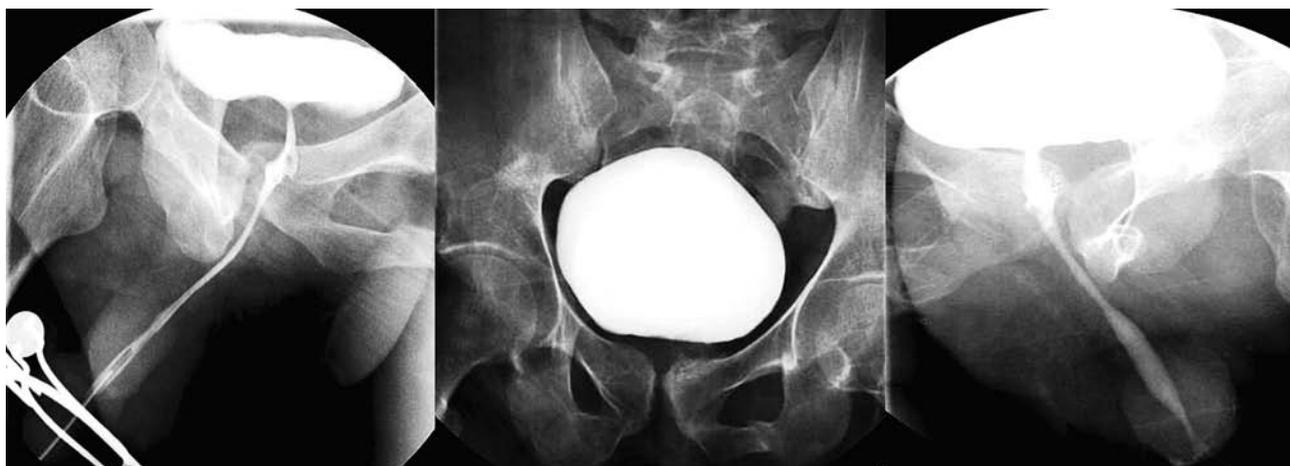
The term “watering-can perineum” is often used to describe multiple urethrocutaneous fistulous tracts caused by periurethral abscesses and fistulas complicating urethral stricture. The term “watering-can abdomen” explains the voiding pattern of our patient through multiple

suprapubic vesicocutaneous fistulas presenting as a mass following suprapubic cystostomy. A review of the English literature shows this to be the first case of its kind. Vesicocutaneous fistula occurs due to various causes such as infection, neoplasm, bladder calculus, and bladder diverticulum or following procedures such as open prostatectomy and total hip arthroplasty.<sup>(2-7)</sup> However, in routine urological practice, the most common cause is persistent VCF after longstanding suprapubic cystostomy. It could be a troublesome complication for many urological diseases including untreated bladder outflow obstruction due to urethral stricture and benign prostatic enlargement. Vesicocutaneous fistula often persists when the tract is well-epithelialized or infected, or when it is affected by foreign bodies or neoplasms. In our case, the VCF persisted and resulted in a keloidal mass in the suprapubic region because of the bladder outflow obstruction due to neglected urethral stricture and infection due to rectourethral fistula.

Excision of the longstanding suprapubic cystostomy tract along with treatment of the causes predisposing to the persistence of the vesicocutaneous fistula is mandatory in order to avoid complications like what we noticed in this case. Voiding through multiple openings in the presence of urethral stricture and rectourethral fistula makes our case a unique one.

## CONFLICT OF INTEREST

None declared.



**Figure 5.** Postoperative micturating cystourethrography shows normal contour bladder with well-healed patent urethral anastomosis and no leakage of the contrast medium into the rectum.

## REFERENCES

1. Gupta G, Kumar S, Kekre NS, Gopalakrishnan G. Surgical management of rectourethral fistula. *Urology*. 2008;71:267-71.
2. Deshmukh AS, Kropp KA. Spontaneous vesicocutaneous fistula caused by actinomycosis: case report. *J Urol*. 1974;112:192-4.
3. Gupta NP, Singh I, Nabi G, Ansari MS, Mandal S. Marjolin's ulcer of the suprapubic cystostomy site infiltrating the urinary bladder: a rare occurrence. *Urology*. 2000;56:330.
4. Kobori Y, Shigehara K, Amano T, Takemae K. Vesicocutaneous fistula caused by giant bladder calculus. *Urol Res*. 2007;35:161-3.
5. Kishore TA, Bhat S, John PR. Vesicocutaneous fistula arising from a bladder diverticulum. *Indian J Med Sci*. 2005;59:265-7.
6. Jaiswal P, Challacombe B, Dasgupta P. Groin abscess: a vesico-cutaneous fistula to the groin. A rare complication of open prostatectomy. *Int J Clin Pract Suppl*. 2005;:113-4.
7. Gallmetzer J, Gozzi C, Herms A. Vesicocutaneous fistula 23 years after hip arthroplasty. A case report. *Urol Int*. 1999;62:180-2.