

# Successful Closure of a Recto-Prostatic Fistula

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## Summary

Recto-prostatic fistula is a rare complication of prostatic surgery, occurring usually because surgical planes are not appreciated. We describe a combined abdomino-perineal approach for the repair of a large recto-prostatic fistula with the interposition of omentum and gracilis without formally closing the fistula in layers.

**Key Words:** Recto-prostatic fistula, Closure

## Introduction

Recto-prostatic fistula is an unusual problem. Most cases are the result of overzealous surgery when surgical planes are not appreciated, radiation, or urethral instrumentation. Small fistulae may heal with conservative measures such as prolonged catheter drainage but most require some form of intervention. Closure of these fistulae poses a problem because of the difficulty in gaining adequate access and exposure. Various approaches have been described in the literature for the repair of this defect. We report a synchronous abdomino-perineal approach with the interposition of omentum and gracilis to close the defect.

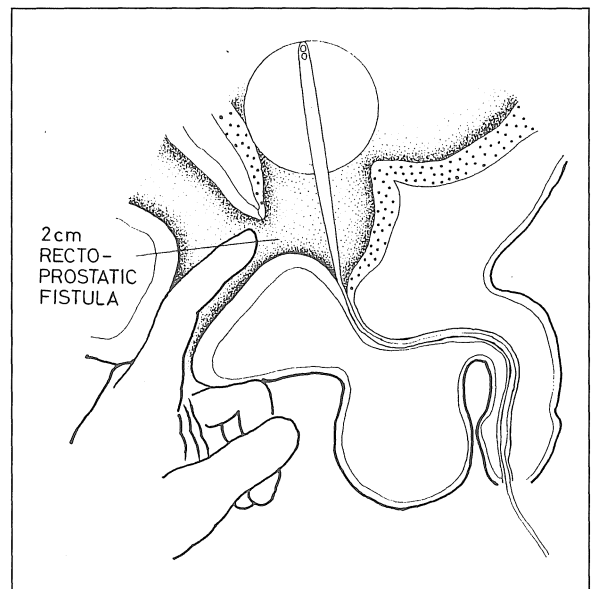
## Case Report

A 73-year-old Chinese male presented to another hospital with acute retention of urine. He underwent a reportedly uneventful transvesical prostatectomy following which he started leaking urine from his anus. He was kept on an indwelling catheter and when histology returned as adenocarcinoma of the prostate, bilateral subcapsular orchidectomy was performed. A defunctioning transverse colostomy was also created. He was subsequently referred to our institution 6 months later when the fistula showed no signs of closing.

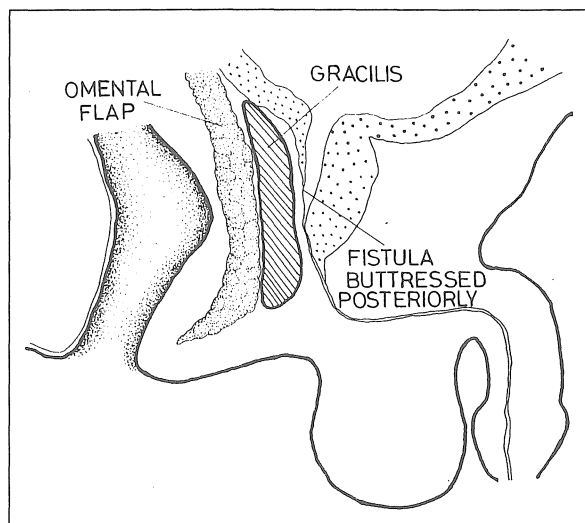
On examination, we found a fit 73-year male who had an indwelling Foley's catheter. Abdominal

examination revealed no abnormalities except for a transverse suprapubic scar, a defunctioning transverse colostomy and an empty scrotum; on digital rectal examination however, the catheter and catheter balloon could be easily palpated through a 2 x 2cm recto-prostatic fistula (Fig. 1).

Our initial step was to restage his disease. A cystoscopy was performed and this revealed the large



**Fig 1:** Digital rectal examination revealing a large recto-prostatic fistula



**Fig. 2: Sagittal section showing the interposition of omentum and gracilis muscle**

fistula. The ureteric orifices were 1 cm away from the proximal edge of the fistula. The external sphincter appeared incompetent. Biopsies from the edge of the fistula were taken and these proved to reveal only fibrous tissue.

A bone scan showed several hot spots scattered throughout his axial skeleton but a PSA level was  $<1$  ng/ml. We also performed an IVU which showed normal upper urinary tracts.

A combined abdomino-perineal approach was chosen to close the fistula. Via a transverse perineal incision just anterior to the anus, the plane between the rectum and urethra was entered and followed to reach the distal edge of the fistula. As the fistula was approached fibrous tissue had to be sharply divided taking care not to enter the rectum. The abdominal operator approached the fistula transvesically. The ureters were catheterised for easier identification and the bladder and trigone were split down the midline to reach the fistula. The fistula was divided, but as it was too large and fibrotic, we could not formally close it in layers. The omentum was mobilised based on the right gastro-epiploic artery, and brought down

as a pedicled flap between the bladder and rectum, and the left gracilis muscle was harvested and used to further bolster the defect. We therefore had two vascular pedicles interposed between the bladder and rectum (Fig. 2). Urethral and suprapubic catheters were left for a period of 4 weeks. We repeated a cystoscopy at catheter removal and found the fistula had closed and reepithelialised. A voiding urethrogram did not show any leaks and the patient was allowed to void spontaneously. He had initial incontinence but this progressively improved over the subsequent 8 weeks until he was left with only mild stress incontinence. The colostomy was subsequently closed. Follow-up at eighteen months revealed a grateful patient with a PSA still less than 1 ng/ml. Apart from one episode of urinary tract infection and occasional stress incontinence, the patient has been asymptomatic.

### Discussion

A recto-prostatic fistula is a rare complication following prostatectomy<sup>1</sup>. Several surgical approaches have been devised for the closure of these difficult fistulae but there are few surgeons with a large experience owing to the rarity of the condition. These approaches can be broadly classified as abdominal, abdominoperineal, or perineal but one of the requirements for success in all the previously reported cases is the anatomical separation of the urethra and bladder from the rectum and closure of each individual structure, with or without interposition of a vascularised flap. In our patient, it was not possible to oppose the edges of the fistula because of the gap and adjacent fibrosis. We therefore brought a tongue of pedicled omentum to separate the urethra and rectum and bolstered this posteriorly with a gracilis muscle flap. The use of the omental pedicle graft in pelvic urological reconstructive procedures has been described previously<sup>2,3</sup>. Omentum provides a vascular scaffold on which reepithelialisation can proceed readily. Whilst most fistulas can be repaired by careful dissection and closure in layers for healing by primary intention, this report shows that in difficult fistulas where the edges cannot be opposed, a pedicled omental flap can be used successfully as cover for the opening.

**References**

1. Parks AG, Motson RW. Peranal repair of rectoprostatic fistula. *Br J Surg* 1983;70 : 725-6.
2. Kiricuta I, Goldstein AMB. The repair of extensive vesicovaginal fistulas with pedicled omentum: a review of 27 cases. *J Urol* 1972;108 : 724-7.
3. Turner-Warwick RT, Wynne EJC, Handley-Ashken M. The use of the omental pedicle in the repair and reconstruction of the urinary tract. *Br J Surg* 1967;54 : 849-53.