

Laparoscopic Transureteroureterostomy with Ileal Conduit in Postradiation Vesicovaginal Fistula

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Abstract

Background: This article describes a technique of a minimally invasive, palliative approach for postradiation vesicovaginal fistula (VVF). **Case:** A 55-year-old female presented with locally advanced carcinoma of the cervix for which she underwent radiotherapy in 2006. She developed a rectovaginal fistula in September 2007 and had a sigmoid loop colostomy. She then developed a large VVF in March 2008. She also had bilateral hydro-ureteronephrosis with a raised creatinine level. Repair of the VVF was not technically feasible and the option of diversion by an ileal conduit was discussed. As it was not advisable to take a long loop of ileum to reach the left ureter in a patient with renal impairment and it was necessary to avoid devascularisation of the left ureter (because of the patient's irradiated pelvis); a left-to-right transureteroureterostomy was done (laparoscopically). A uretero-ileal anastomosis and an ileal conduit were fashioned transportally (in laparoscopic-assisted procedure). **Results:** Although the patient had two stoma bags, she was comfortable and socially acceptable at 12 months' follow-up. **Conclusions:** Laparoscopic transureteroureterostomy is technically feasible. Laparoscopic ileal conduit is a worthy palliation in patients with radiation-induced VVF. (J GYNECOL SURG 26:263)

Introduction

MICROVASCULAR INJURY caused by radiation results in poor wound healing following repair of radiation-induced vesicovaginal fistula (VVF).¹ This article presents the case of a 55-year-old female who had locally advanced carcinoma of the cervix for which she underwent radiotherapy in 2006. She developed a rectovaginal fistula in September 2007 and had a sigmoid loop colostomy in January 2008. Subsequently, she developed a VVF in March 2008. Ileal conduit diversion was considered in view of the low complication rate and the desirability of upper-tract preservation.² Diagnostic laparoscopy revealed the feasibility of surgery. Laparoscopic transureteroureterostomy with laparoscopic-assisted ileal conduit (transportal)^{3,4} was performed. To the current authors' knowledge, this is the first report of palliation of post-VVF by laparoscopic transureteroureterostomy with laparoscopic-assisted ileal conduit.

Case

A 55-year-old female presented with radiation induced VVF (Fig 1). She had undergone sigmoid loop colostomy for a rectovaginal fistula. Clinically and on imaging, the whole pelvis was found to be frozen and there was bilateral hydronephrosis. She did not have any evidence of

residual local malignancy or secondary tumors. Repair of VVF and the option of diversion by ileal conduit were discussed.

Cystoscopy revealed a large fistulous communication above the neck of her bladder. The edges showed bullous edema. Biopsy of the fistula margin revealed only necrotic material, and there was no evidence of malignancy. The bladder capacity was small.

The patient was placed in the supine position. Using four ports (a supraumbilical telescope port, a 10-mm port in the right pararectus area in the proposed site of stoma, a 5-mm port in the left pararectus area, and a 5-mm right flank port), the abdominal cavity was inspected (Fig. 2). There were no obvious secondary tumors. As a result of postradiation changes, her bladder could not be dissected; hence, a repair of the VVF was ruled out. Both ureters were dilated and the left lower ureter was found to be adherent. Although, technically, the left ureter could have been anastomosed to the ileal conduit, the vascularity of the left ureter was likely to be jeopardized by the additional mobilization needed for a uretero-ileal anastomosis. In addition, a long loop of ileum could not be used to reach the left upper ureter in view of her renal impairment (her serum creatinine was 1.9 mg/dL). Hence, to salvage the left kidney, a left-to-right ureteroureterostomy was done with the left ureter brought behind the colon (Fig. 3). Anastomosis was carried out using 4-0 Vicryl