Unusual Late Complication Following Anterior Pelvic Exenteration and Ileal Conduit

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Abstract We report an unusual case of *Conduit Perineal Fistula* following Anterior Pelvic Exenteration and Ileal conduit, performed for cancer cervix in a patient who had post radiotherapy residual disease. Revision surgery and redo conduit with transverse colon was done. Patient tolerated the procedure well and postoperative period was uneventful. Patient was subsequently disease free for 27 months. She developed a pelvic recurrence and lived with the disease for another 36 months and was then lost to follow up.

Keywords *Conduit perineal fistula* · Ileal Conduit · Pelvic exenteration · Cancer cervix

Introduction

Anterior or total pelvic exenteration is a salvage surgical procedure for patients with cancer cervix who present with post radiation residue or recurrence. *Conduit perineal fistula* is an unusual complication following pelvic exenteration and urinary diversion with ileal conduit. Early fistulae are due to technical aspects of surgery whereas late fistulae are due to chronic inflammation, abscess or post radiation endarteritis and necrosis.

Case Report

39 year old woman, diagnosed as carcinoma cervix III B, who had a post radiation residual disease following 66 Gy EBRT,

was treated with Anterior Pelvic Exenteration with Ileal Conduit in September 2004. Four months later, she presented with urine leak through the perineum and decreased output through the conduit for 5 days. She had no H/o fever, abdominal, leg pain, edema feet or bowel disturbances. On examination, her stoma was healthy. Perineal examination revealed a small opening with urinary leak. There were no excoriations or ulceration. She had no clinical or radiological evidence of recurrence. A contrast study via the conduit showed a fistulous communication to the perineum.

On laparotomy, dense adhesions and fibrosis precluded entry into the pelvis and the *proximal* end of the conduit could not be traced. A new transverse colon conduit was fashioned, based on the middle colic vessels and the *proximal* end was closed, both ureters reimplanted into the colonic conduit and *distal* end brought out as stoma. Colonic continuity was re established by end to end anastomosis and the previous ileal conduit left behind as mucous fistula. Postoperatively, the new stoma was healthy and functioned well and the perineal leak ceased. Patient was on follow up and was disease free for 27 months. Subsequently, she did not have any conduit related problems. However, in 2007, she developed a pelvic recurrence involving the right psoas major. She was on symptomatic care for 36 months and was lost to follow up thereafter.

Discussion

Ileal conduit is one of the common methods of urinary diversion. Early complications following ileal conduit include metabolic acidosis, pyelonephritis and urinary leak. Late complications are usually anastomosis and conduit related [1]. Predisposing factors for late fistulation are prior radiotherapy, recurrence, stones in the conduit, parastomal hernia, stomal stenosis, diabetes and immunosuppression [2]. Radiation induces relative ischemia and reduced cell vitality in the

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Fig 1 Shows the transverse colon isolated and fashioned as conduit. The previous ileal conduit site is shown

exposed area, thereby reducing the healing process [3]. The incidence of postoperative urinary complications is significantly higher in previously irradiated patients [4,5,6,7,8]

There are very few reports of late urinary fistulae following ileal conduit [1,2,3]. Here we report a case of conduit perineal fistula, 4 months following anterior pelvic exenteration and ileal conduit. The predisposing factor for fistulation in our case was prior radiotherapy. The management options would be surgical exploration or percutaneous nephrostomy (Fig. 1). Surgical exploration of the abdominal cavity following radical radiotherapy and pelvic exenteration is a formidable task.

Anjum et al. [2] have reported a *conduit perineal fistula* following ileal conduit which was managed by resection and re anastomosis. Norton et al. have reported four cases of ileal conduit failure after pelvic exenteration who were managed using a jejunal conduit [8].

Complications following urinary diversion after pelvic irradiation have been attributed to radiation damage to the ureter and bowel, resulting in increased rates of anastomotic problems, upper urinary tract obstruction, and infection. The combination of acute and chronic radiation injury can result in varying degrees of inflammation, thickening, collagen deposition, and fibrosis of the bowel, as well as impairment of mucosal and motor functions [9]. The segments of bowel showing these changes must be avoided for reconstruction. Most centers use urinary

diversion with a transverse colonic segment or cutaneous ureterostomy, in these circumstances [10].

We report a rare case of late fistulation following ileal conduit which was successfully managed with a transverse colon conduit. The advantage of using the transverse colon is that an unirradiated segment of colon and ureters are used for diversion and generally the pelvis is inaccessible due to dense adhesions, following pelvic exenteration. This case is being presented for the rarity of presentation and the technical feasibility of a transverse colon conduit in this situation which is relatively easier than pelvic re exploration.

Conflict of Interest The authors declare that they have no conflict of interest.

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