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Radiation Ileitis Leading to Enterovesical Fistula

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A 74-year-old woman presented with abdominal pain and vomiting. She had a medical history of a cesarian section and radiation therapy for cervical cancer at the age of 72. On examination, the abdomen was distended and tender without rebound. Laboratory examination showed white blood cells of $6.9\times10^3/\mu L$, hemoglobin of 12.2 g/dL, and C-reactive protein of 2.7 mg/dL (range, <0.14 mg/dL). Abdominal computed tomography scans disclosed circumferential mural thickening involving the ileum and rectum. Radiographic studies using gastrographin showed the markedly stenotic ileum (Fig. 1) and the narrowed rectosigmoid colon. Colonoscopy revealed multiple telangiectasias and neovascularity on a background of fibrotic and pale mucosa of the rectum. These typical features led to the diagnosis of chronic radiation enterocolitis. Conservative treatments with nutritional management for ileitis and repeated colonoscopic argon plasma coagulation for hemorrhagic proctitis were performed for 6 years until refractory cystitis with fecaluria occurred. Cystography disclosed the enterovesical fistula (Fig. 2). She underwent palliative ileostomy without resecting irradiated ileum due to the marked adhesion.

Radiation enterocolitis, divided into acute and chronic injury, is defined as intestinal inflammation complicated by radiotherapy. Acute radiation injury is usually mucosal damage, and its symptoms are diarrhea and abdominal pain, which resolve soon with the cessation of the radiation. In contrast, chronic injury is characterized by increased collagen deposition, resulting in thickened and fixed intestinal wall. Injury to the vessels also occurs, which leads to obliterative endarteritis and ischemia. In the small intestine, radiation damage more commonly occurs in the terminal ileum which is relatively fixed in position and in patients

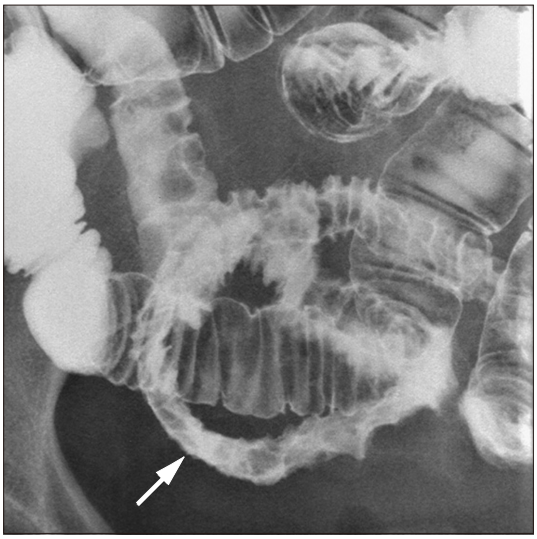

FIG. 1. A radiographic study using gastrographin showed the markedly stenotic ileum with 'saw tooth' appearance (arrow).

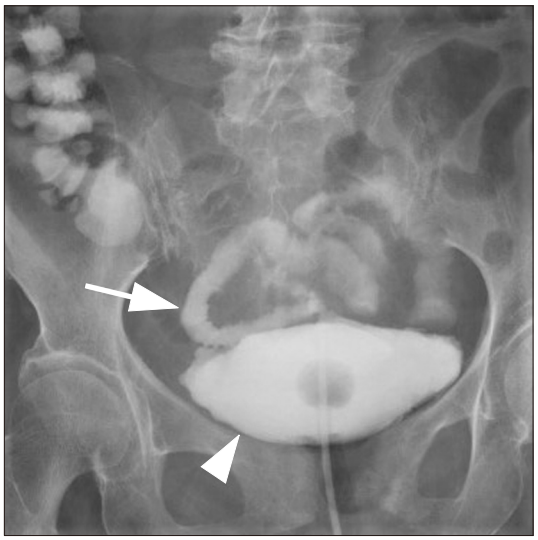

FIG. 2. Cystography disclosed the enhancing material draining from the bladder (arrowhead) to the diseased ileum (arrow), consistent with the enterovesical fistula.

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who had adhesions due to prior surgery, which may render the small bowel relatively immobile.[1] Small bowel strictures and fistulas are difficult to treat. Surgery for these complications should be indicated judiciously because of the inherent difficulty in operating in an irradiated field with higher rates of anastomotic leakage.[2] At present, consensus on the surgical strategy has not been established regarding intestinal resection or enteric bypass.[3] In conclusion, chronic radiation enterocolitis may be refractory and require multi-disciplinary management.

CONFLICT OF INTEREST STATEMENT

None declared.

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