Case Report

Colostomy with Vancomycin Administration as an Effective Treatment for Toxic Megacolon Associated with Fulminant Pseudomembranous Colitis: A Case Report

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Introduction

We report a case of toxic megacolon associated with fulminant pseudomembranous colitis. A 72-year-old woman was admitted with severe dehydration and shock. Computed tomography showed evidence of diffuse thickening of the colonic wall, colonic dilatation and ascites. She underwent transverse colostomy and received postoperative vancomycin, both orally and by administration from the stoma. Her clinical situation improved dramatically following surgery. When a patient is unable to tolerate subtotal colectomy and ileostomy because of a severe overall condition, temporary colostomy followed by administration of vancomycin through the stoma is recommended. [Asian J Surg 2004;27(3):236–7]

Case report

A 72-year-old female underwent closure of a sigmoid colostomy on 12 February, 1997. Cefotiam 1,000 mg intravenously (iv) twice daily was administered postoperatively for 6 days. From the 15th postoperative day, both imipenem and ofloxacin were given because of a low-grade fever. After the patient improved, she was discharged and demonstrated a normal bowel function on 15 March. Six days later, the patient noted the onset of abdominal distension. Her abdomen was markedly distended and rebound tenderness was mild. Bowel sounds were diminished. The white blood cell count was 55,100/mm³. Computed tomography (CT) showed diffuse colonic wall thickening, marked oedema, and dilatation of the transverse colon (7 cm) with ascites (Figure 1A). Intravenous fluid replacement was started and she was observed while receiving conservative therapy. The next day, her general condition further deteriorated and she underwent emergency surgery. No preoperative colonoscopy was performed. About 2 L of yellowish clear fluid filled the peritoneal sac. From the appendix to the sigmoid colon, the wall of the colon was thickened, oedematous and distended. Systolic blood pressure was 40 mmHg and pulse rate was 100/minute during the operation. The patient was not considered strong enough to tolerate a subtotal colectomy with an ileostomy, and thus a transverse colostomy was performed. The colonic mucosa was entirely covered with a confluent, yellowish plaque. A biopsy specimen of the mucosa of the transverse colon demonstrated typical PMC (Figure 2). However, stool culture and toxin assay were negative for Clostridium difficile and other organisms. From the
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first postoperative day, vancomycin, 500 mg twice daily, was injected via the distal loop from the stoma for 23 days, and 500 mg were also given four times daily by an oral or nasogastric tube to deliver to the proximal colon from the first postoperative day for 48 days. Two months later, the diffuse colonic wall thickening, colonic dilatation and ascites were found to have disappeared according to abdominal CT (Figure 1B). The patient was thereafter discharged with a normally functioning transverse colostomy.

Discussion

TM is a serious clinical entity usually identified as a complication of inflammatory bowel disease, ulcerative colitis, and PMC. TM is rarely associated with PMC, and the previously reported cases have often been grouped together with cases of fulminant colitis and/or perforation caused by PMC.1–3 The criteria for the diagnosis of TM are as follows: a temperature of more than 38.5°C, a pulse of more than 120/minute, leucocytosis of more than 10,500/mm³, and acute dilatation of all or part of the colon (> 5.5 or 6 cm in diameter) with associated systemic toxicity.4,5 This definition does not specify the underlying disease process. In our case, the temperature was 33.6°C, the pulse rate was 120–140/minute, the white blood cell count was 55,100/mm³, and CT showed doughnut-like ascending and descending colons with dilatation of the transverse colon. These data were closely correlated with the criteria for TM, except for the temperature. Although prompt colonoscopy together with biopsy normally leads to a rapid diagnosis, and a subtotal colectomy with ileostomy is the most commonly recommended surgical procedure, our patient was not able to tolerate these procedures. Therefore, transverse colostomy was performed. Though stool culture and toxin assay were negative for both Clostridium difficile and its toxin, biopsy specimen from the mucosa of the transverse colon was typical of PMC. Due to the fact that patients who undergo only colostomy show an increased risk of mortality,4 vancomycin was given postoperatively through the stoma. The patient showed dramatic clinical improvement following surgery. We therefore recommend that colostomy combined with postoperative injection of vancomycin from the stoma is indicated as a definitive treatment for severe cases of TM associated with fulminant PMC and shock.

References