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Case Report

A rare case of segmental ulcerative colitis

Tetsuro Tominaga[a], Takashi Nonaka[a], Hiroaki Takeshita[a], Shuichi Tobinaga[a],
Masaki Kunizaki[a], Yorihisa Sumida[a], Shigekazu Hidaka[a], Terumitsu Sawai[b], and Takeshi Nagayasu[a]

[a]Division of Surgical Oncology, Department of Surgery, and [b]Department of Cardiopulmonary Rehabilitation Science, Nagasaki University Graduate School of Biomedical Science, 1-7-1 Sakamoto, Nagasaki 852-8501, Japan

Background: Ulcerative colitis (UC) typically develops in the rectum and progresses proximally. Segmental UC is a rare condition that is often difficult to diagnose. We present a case of segmental UC mimicking colon cancer that developed in the transverse colon.

Case presentation: An 83-year-old woman with abdominal pain visited our hospital. Total colonoscopy revealed a granular mass with stenosis in the transverse colon. Biopsy specimen showed infiltration of inflammatory cells. No mucosal inflammation was evident on the anal side of the colon and rectum. Abdominal computed tomography showed enhanced mural thickening in the transverse colon. Enlarged regional lymph nodes were apparent. Although no malignancy was evident, cancer-like stenosis and swollen lymph nodes were identified, so colectomy with regional lymph node resection was performed. The resected specimen showed near-circumferential thicknening. Aggregated small polypoid lesions and a mucosal bridge were also revealed. Histological findings showed a wide range of crypt abscess. No cellular atypia was found. We finally diagnosed segmental UC. The patient was subsequently followed closely without treatment, and abdominal distension developed one and a half years later. Total colonoscopy showed mucosal redness and erosion in the residual transverse colon. Pharmacotherapy immediately improved symptoms. As of 10 years postoperatively, she has experienced no further recurrence.

Conclusion: We encountered a rare case of segmental UC in the transverse colon. UC does not always develop from the rectum and progress towards the oral side. Early definitive diagnosis can achieve good results for treatment and the clinical course.

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Key words: segmental ulcerative colitis, operation, splenic flexure

Introduction

Ulcerative colitis (UC) is one of the major conditions comprising inflammatory bowel disease, and is characterized by chronic and relapsing inflammation of the colon and rectum[1]. UC typically develops in the rectum and progress to involve the more proximal side of the colon in a continuous fashion[2]. Segmental UC with rectal sparing is a rare condition in which exact diagnosis and treatment usually prove difficult[3]. We present a case of segmental UC that developed in the transverse colon and mimicked colon cancer.

Case presentation

An 83-year-old woman visited our hospital with appetite loss and abdominal pain. She had a 2-month history of left upper quadrant pain and a past history of laparoscopic chole-

Address correspondence: Tetsuro Tominaga, Division of Surgical Oncology, Department of surgery, Nagasaki University Graduate School of Biological Sciences 1-7-1 Sakamoto, Nagasaki 852-8501, Japan
Phone: +81-95-819-7304; Fax: +81-95-819-7306; E-mail: tomitetsu2000@yahoo.co.jp

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cystectomy 30 years earlier. No muscular guarding or rebound tenderness was evident. Vital signs such as blood pressure, heart rate, and level of consciousness were all within normal ranges. Laboratory data showed anemia and a low albumin level. Tumor marker levels including carcinoembryonic antigen (2.0 ng/ml) and carbohydrate antigen 19-9 (10.6 U/ml) were normal (Table 1). Total colonoscopy revealed a granular mass causing stenosis in the transverse colon near the splenic flexure (Fig. 1a). Biopsy specimen revealed infiltration of inflammatory cells, however, there was no atypical cell.

No tumors or inflammation of the mucosa suggestive of inflammatory bowel disease were seen on the anal side of the colon and rectum (Fig. 1b). Barium enema revealed an irregular elevated lesion at the splenic flexure. Passage of barium was nearly obstructed by the severe stenosis. No abnormal findings were seen in other sites of the colon. Abdominal computed tomography (CT) again showed enhanced mural thicknening in the transverse colon (Fig. 2, arrow). Enlarged regional lymph nodes were also identified (arrowhead).

Although biopsy showed no evidence of malignancy, the tumor showed cancer-like stenosis and swelling of the lymph nodes, and colectomy with regional lymph node resection was performed.

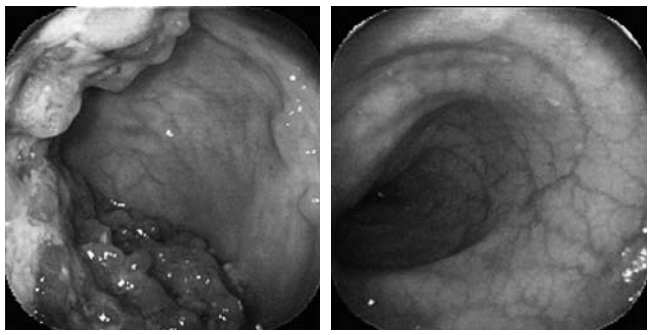

Figure 1: Colonoscopy of the transverse colon reveals a granular mass causing stenosis (a). No tumors or inflammation of the mucosa are seen on the anal side of the colon and rectum (b).

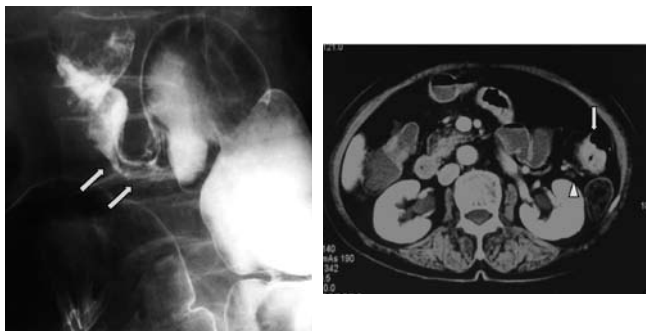

Figure 2: Abdominal contrast-enhanced CT shows enhanced mural thicknening of the transverse colon (arrow) and swollen lymph nodes (arrowhead).

Table 1: Laboratory data on admission

WBC:	5100 /mm³	Na:	142 mEq/l	γ-GTP:	131 IU/l	TPHA:	(-)
RBC:	362x10⁴ /mm³	K:	4.7 mEq/l	ALP:	150 IU/l	HBs-Ag:	0.1
Hb:	10.5 g/dl	Cl:	109 mEq/l	LDH:	162 IU/l	HCV-Ab	0.1
Hct:	34.3 %	BUN:	13 mg/dl	TTT:	8.0 K-U		
Plt:	35.5x10⁴ /mm³	Cr:	0.49 mg/dl	ZTT:	6.1 K-U		
		UA:	3.7 mEq/l	CK:	49 IU/l	CEA:	2.0ng /ml
PT:	124 %	TP:	6.7 g/dl	Amy:	59 IU/l	CA19-9:	10.6 U/ml
INR:	0.91	Alb:	3.8 g/dl	T-Chol:	194 mg/dl		
APTT:	26.6 sec	T.Bil:	0.6 mg/dl	Fe:	62 μg/dl		
Fib:	320 mg/dl	D.Bil:	0.1 mg/dl				
ATⅢ:	94 %	AST:	13 IU/l	CRP:	0.14 mg/dl		
D-dimer:	0.6 μg/dl	ALT:	9 IU/l				
		ChE:	111 IU/l				

The resected specimen showed near-circumferential abdominal thickening up to 96 mm, causing stenosis (Fig. 3a). Aggregated small polypoid lesions and a mucosal bridge were also revealed (Fig. 3b).

Histological findings showed a wide range of ulcers and crypt abscesses (arrow) (Fig. 4a, × 20; 4b, × 100). No cellular atypia suggestive of malignant disease was seen. Similarly, no non-caseating epithelioid granuloma characteristic of Crohn's disease or sideroferous cells characteristic of ischemic colitis were seen. We finally diagnosed segmented ulcerative colitis.

As no other regions showed mucosal irregularity, the patient was followed closely without treatment. One and a half years later, she showed abdominal distension. Barium enema showed lead pipe appearance in the residual transverse colon. No abnormal findings were seen in other sites of the colon (Fig. 5). Total colonoscopy showed mucosal redness and erosion in the residual transverse colon (Fig. 6). No mucosal changes were seen beyond the transverse colon. Pharmacotherapy, including salazopyrin and prednisolone, immediately improved symptoms and led to mucosal healing. Four months later, we changed in salazopyrin monotherapy. After that she has received colonoscopy in primary care doctor biyearly. As of the time of writing, 10 years postoperatively, the patient has experienced no recurrence of the disease.

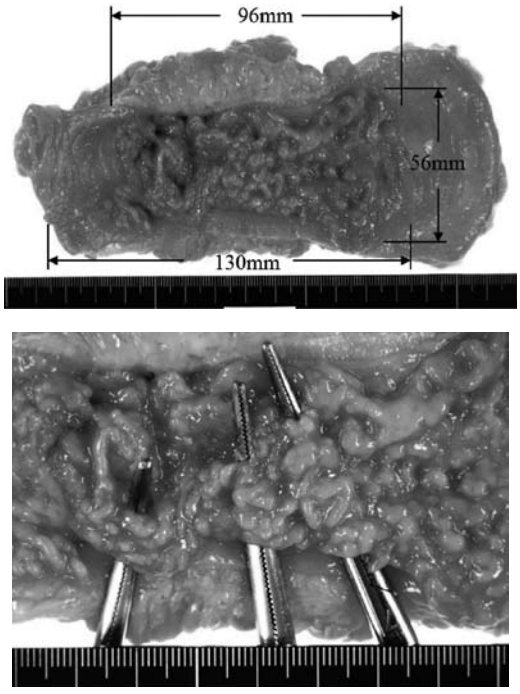

Figure 3: The resected specimen shows near-circumferential mural thickening up to 96 mm, causing stenosis (a). Greatest dimension of the lesion were 130mm. Aggregated small polypoid lesions and a mucosal bridge are also apparent (b).

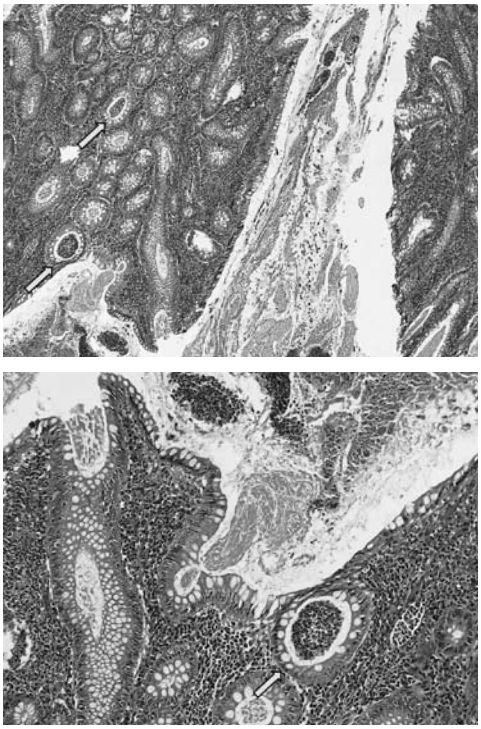

Figure 4: Histological examination shows a wide range of ulcers and crypt abscesses (arrow) (a, × 20; b, × 100)

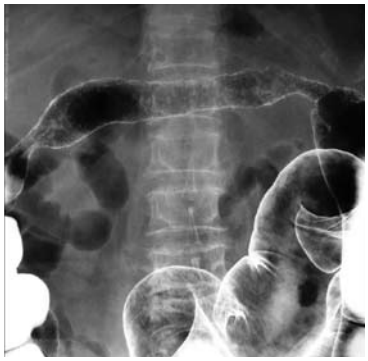

Figure 5: Barium enema 9 months after surgery shows lead pipe appearance in the residual transverse colon. No abnormal findings were seen in other sites of the colon.

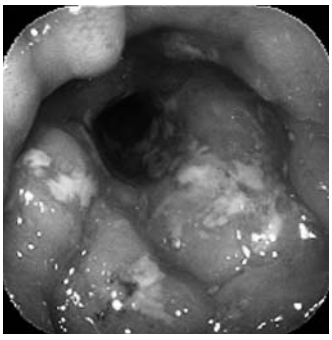

Figure 6: Colonoscopy 9 months after surgery shows mucosal redness and erosion in the residual transverse colon.

Discussion

Segmental UC is rare and is reported to mainly affect the right side of the colon[4]. Sang et al. retrospectively analyzed 240 adult patients with UC[5]. Eight patients (3.3%) showed segmental colitis with rectal sparing, and only two patients (0.8%) showed localized lesions. In the present case, the lesion was localized to the transverse colon with rectal sparing. Because the lesion resulted in stenosis, and surrounding lymph nodes were swollen, the possibility of malignancy was difficult to rule out. We finally performed colectomy, and the lesion was precisely diagnosed based on the postoperative pathology.

Differential diagnoses include elevated Crohn's disease, ischemic colitis, antibiotic-associated colitis, and colon cancer[6]. In this case, no antibiotic therapy was administered. Pathological examination showed no evidence of non-caseating epithelioid granuloma, sideroferous cells, and malignant cells. Instead, a wide range of ulcers and crypt abscesses were identified, leading to the final diagnosis of UC.

With regard to segmental UC, various forms of development have been described: 1) pancolitis type resulting from delayed treatment of UC; 2) inflammation of the appendiceal orifice; and 3) narrowly defined segmental UC[7, 8]. In our case, no mucosal changes were seen except in the transverse colon, and no irregular lesions were found in the cecum. We therefore diagnosed narrowly defined segmental UC.

The baseline characteristics of segmental UC such as sex, smoking, and duration of symptoms have not been reported to differ from those of typical UC[5]. Furthermore, clinical characteristics including cumulative rate of disease relapse appear the same as typical UC. With segmental UC, the usual UC surveillance may be important to prevent disease relapse. In our case, no abnormal lesions other than the resected lesion were identified, and no treatment after surgery was performed. However, 9 months later, mucosal changes were seen on the oral side of the anastomotic site. It is important to establish appropriate follow- up approach after surgery for segmental ulcerative colitis.

Conclusion

We encountered a rare case of segmental UC that developed in the transverse colon and mimicked colon cancer. The idea that UC develops from the rectum and continues to progress towards the oral side must be discarded. Further experience and refined follow-up protocols should be promising.

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