Case report

A patient with rectal cancer associated with ulcerative colitis in whom endoscopic ultrasonography was useful for diagnosis

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Abstract: Endoscopic ultrasonography (EUS) was helpful for the diagnosis of rectal cancer associated with ulcerative colitis. The patient was a 38-year-old Japanese man with a 19-year history of relapsing-remitting type ulcerative colitis involving the entire colon. Routine colonoscopy revealed multiple polypoid prominences in the upper portion of the rectum. EUS revealed a hypoechoic mass in the submucosa beneath and around the polypoid lesion on the most oral side. Signet ring cells were found in a biopsy specimen from this lesion. Subtotal colectomy was performed. A depressed lesion was observed around the prominence on the most oral side; histologically, this lesion was poorly differentiated mucinous and signet ring cell carcinoma extending into the subserosa. The polypoid lesion on the most anal side was well differentiated adenocarcinoma, which was limited to the mucosa. Our findings suggest that EUS is helpful for detecting invasive cancer associated with ulcerative colitis.

Key words: ulcerative colitis, rectal cancer, endoscopic ultrasonography

Introduction

The association of cancer with long-standing ulcerative colitis has been established.1,2 A number of studies of colonoscopic surveillance of patients with ulcerative colitis have been conducted; however, the outcome of such surveillance remains unsatisfactory, since detection of cancer associated with ulcerative colitis is difficult. We recently treated a patient with rectal cancer associated with ulcerative colitis in whom the presence of an invasive cancer was suspected on endoscopic ultrasonography (EUS).

Case report

The patient was a 38-year-old Japanese man with a 19-year history of relapsing-remitting type ulcerative colitis involving the entire colon. He had been treated with sulfasalazine after his last hospital admission 2 years previously. He had four to five bowel movements per day, but no passage of blood was observed. Although colonoscopy had been performed repeatedly, dysplasia had not been demonstrated. Sigmoidoscopy on January 22, 1998 revealed diffuse redness and mild erosions in the rectum and the sigmoid colon and multiple polypoid prominences in the upper portion of the rectum. EUS performed at that time, using a miniature ultrasonic probe (UM-3R; Olympus Optical, Tokyo, Japan) revealed an irregularly shaped hypoechoic area in the submucosal layer beneath and around the polypoid prominence on the most oral side. A biopsy taken from around the polypoid prominence included a cluster of signet ring cells. The patient was admitted to our hospital for further examination on February 14, 1998.

Physical examination revealed no specific abnormalities. The results of laboratory examinations, including urinalysis, fecal occult blood test, complete blood cell count (CBC), and liver and renal function tests were normal. C-reactive protein level was 0.6mg/dl; carcinoembryonic antigen (CEA), 1.3ng/ml; and carbohydrate antigen (CA) 19-9, 4U/ml.

Barium enema X-ray demonstrated multiple polypoid prominences in the upper portion of the rectum, and slight indentation of the wall (Fig. 1a); an irregularly shaped shallow barium fleck measuring about 15mm was observed around the prominence on the most oral side (Fig. 1b).
Fig. 1a,b. Barium enema X-ray. Multiple polypoid prominences were visualized in the upper portion of the rectum. a Slight indentation (black arrow) and b an irregularly shaped barium fleck measuring 15 mm (white arrows) were found around the prominence on the most oral side.

Fig. 2. a Colonoscopic picture and b endoscopic ultrasonography (EUS) image of the polypoid prominence on the most anal side. a The lesion was crest-like, and was visualized as a mucosal lesion by EUS (b).

Fig. 3. a Colonoscopic picture and b EUS image of the polypoid prominence on the most oral side. a The lesion was surrounded by discolored and glossy mucosa; b EUS demonstrated a hypoechoic area reaching the deepest portion of the submucosa.