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Case Report

Diverticulitis of multiple diverticulosis of the terminal ileum

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Abstract: Diverticulosis of the terminal ileum is very rare. We report a case of diverticulitis of multiple diverticula of the terminal ileum. A 67-year-old Japanese woman consulted to our hospital because of abdominal pain and melena. A blood laboratory revealed severe anemia increased CRP (11.21 mg/dl). The upper and lower gastrointestinal endoscopic examination revealed no significant changes. The colon was free from diverticulum. CT demonstrated two tumors in the small intestine. PET identified a few shadows identical to the tumors detected by CT. The clinical diagnosis was small intestinal tumors, particularly malignant lymphoma. Operation was performed, and it revealed multiple tumor-like masses in the terminal ileum. The ulcers are deep and appeared diverticula. Microscopically, the diverticula were located in the proper muscle and subserosa. The walls of the diverticula were composed of granulation tissue with heavy lymphocytic and neutrophilic infiltration. Diverticular mucosal walls were recognized in some areas. The lymphocytes were free from atypia, and no features of malignant lymphoma were recognized. The pathological diagnosis was severe diverticulitis of multiple diverticula in the terminal ileum.

Keywords: Terminal ileum, diverticulosis, diverticulitis

Introduction

Except for Meckel's diverticulum, diverticulosis of the small intestine is very rare. If present, most of diverticulosis of the small intestine is located in the duodenum and jejunum. Diverticulosis of the ileum is extremely rare; only a few case reports are present in the English literature [1-3]. We herein report a case of severe diverticulitis of multiple diverticula in the terminal ileum. Clinically, the lesions of diverticulitis were detected by CT and PET.

Case report

A 67-year-old Japanese woman was admitted to our hospital because of abdominal pain and melena. A blood laboratory revealed severe anemia (red blood cells, 300 x 10^4 /μl, hemoglobin 7.4 g/dl) and increased CRP (11.21 mg/dl). Tumor markers were within normal ranges. The upper and lower gastrointestinal endoscopic examination revealed no significant changes. The colon was free from diverticulum. CT demonstrated two tumors in the small intestine (**Figure 1**). PET identified a few shadows (**Figure 2**) identical to the tumors detected by CT. The clinical diagnosis was small intestinal tumors, particularly malignant lymphoma. Operation was performed, and it revealed multiple tumor-like masses in the terminal ileum from 2 cm oral to the Bauhin's valve to 14 cm oral to the Bauhin's valve.

Grossly, the terminal ileum showed eight ulcers (**Figure 3A**). The ulcers are deep and appeared diverticula (**Figure 3B**). Microscopically, the diverticula were located in the proper muscle and subserosa (**Figure 4A**). The walls of the diverticula were composed of granulation tissue with heavy lymphocytic and neutrophilic infiltration (**Figure 4B**). Diverticular mucosal walls were recognized in some areas (**Figure 4A**, **4B** and **4C**). The lymphocytes were free from atypia, and no features of malignant lymphoma were recognized. There was no vasculitis or granuloma. The pathological diagnosis was severe diverticulitis of multiple diverticula in the terminal ileum.

Discussion

The lesions of the present cases are not simple ulcers but diverticula because intestinal muco-

Figure 1. CT findings. Two masses are seen in CT. This figure demonstrates the one mass (arrow).

Figure 2. PET findings. A few accumulations are seen in the small intestine (arrows).

sa was present in the ulcer walls. Crohn's disease was unlikely from the histological point of view. Diverticulosis of the terminal ileum is extremely rare [1-3]. The pathogenesis of the diverticulum of the terminal ileum is not known. In large bowel, it is well known that diverticula are classified into congenital and acquired. In the large bowel, congenital diverticula are free of muscular walls in the floor, while acquired ones have muscular walls. In the present case, the pathogenesis is unclear. Accumulation of much more cases are required for the pathogenesis of diverticulosis of the terminal ileum.

The diverticula of the present case showed severe diverticulitis. In general, inflammation of

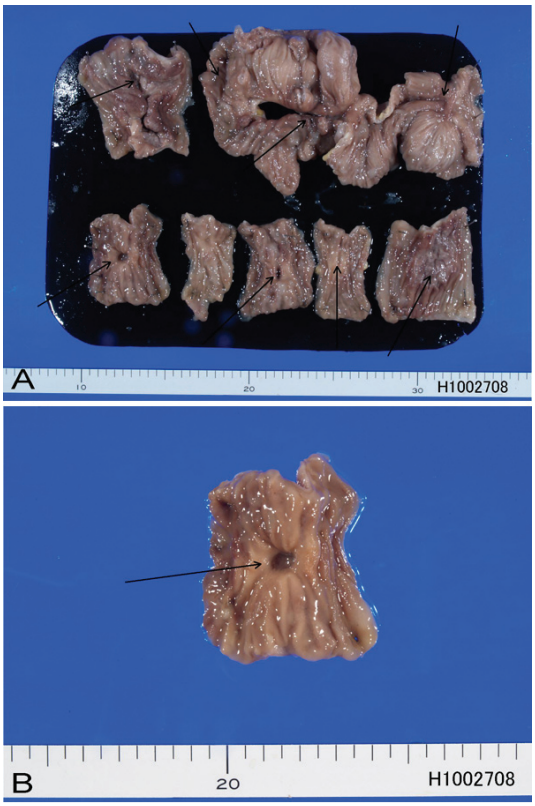

Figure 3. Gross features of resected terminal ileum. A: Multiple ulcers or diverticula are seen (arrows). B: An example of the diverticulum (arrow).

colon diverticula is a rare event. The pathogenesis of the severe inflammation of the diverticula of the present case was unclear. It may be possible, bacterial infection might have caused the diverticulitis. In the present case, the anemia and increased CRP may be due to the diverticulitis. The melena in the present case seems to be due to hemorrhage of the diverticula.

Interestingly, the lesions of the present case were detected by CT and PET, and clinical diagnosis was ileal tumor, particularly malignant lymphoma. This implies that PET may detect inflammatory lesions in the terminal ileum. Also, CT may detect inflammatory lesions in the terminal ileum.

Conflict of interest statement

The authors have no conflict of interest.

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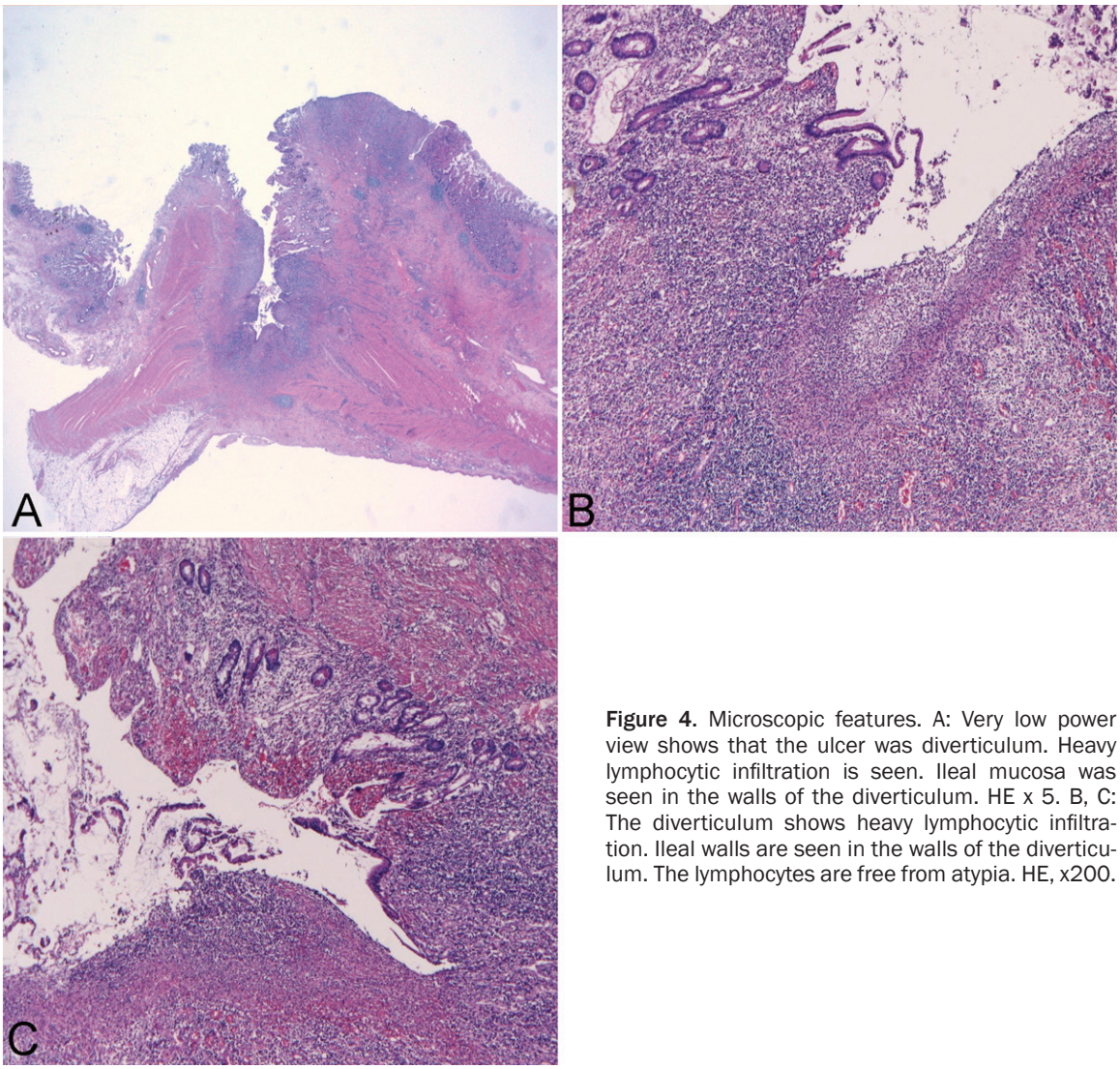

Figure 4. Microscopic features. A: Very low power view shows that the ulcer was diverticulum. Heavy lymphocytic infiltration is seen. Ileal mucosa was seen in the walls of the diverticulum. HE x 5. B, C: The diverticulum shows heavy lymphocytic infiltration. Ileal walls are seen in the walls of the diverticulum. The lymphocytes are free from atypia. HE, x200.

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