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CASE REPORT

Colon perforation after esophagogastroduodenoscopy in an asymptomatic diverticulitis patient

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KEYWORDS
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Summary Esophagogastroduodenoscopy (EGD) is regarded as a relatively safe procedure; however, it carries a very low incidence of severe adverse events. Perforation is a rare complication of EGD, and it may further lead to pneumoperitoneum or pneumoretroperitoneum. The occurrence of large bowel perforation after EGD is extremely rare, and it has never been reported in the international literature. Herein, we present a case of concurrence of pneumoperitoneum and pneumoretroperitoneum as a result of sigmoid perforation after EGD. In our case, the probable mechanism of the perforation may have stemmed from the excessive inflation of air that passed through the gastrointestinal tract to the sigmoid colon, causing the increased intraluminal pressure, and then prompting a healed asymptomatic diverticulitis leak again.

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Introduction

Esophagogastroduodenoscopy (EGD) is commonly performed to diagnose gastrointestinal diseases, and it carries a low risk of adverse events, including cardiopulmonary adverse events, infection, perforation, and bleeding [1]. Perforation may occur at the esophagus, stomach, or duodenum and further lead to pneumoperitoneum or pneumoretroperitoneum; however, the occurrence of large bowel perforation after EGD is extremely rare and has never been reported in the international literature. We report a patient who presented with pneumoretroperitoneum and pneumoperitoneum, caused by a perforated sigmoid diverticulum, after undergoing EGD.

Case report

A 75-year-old woman presented with once blood-tinged stool passage a few hours prior to admission. No exaggerating factor, relieving factor, or associated symptom was reported. The patient had no associated family history and denied consuming alcohol or tobacco. She had been diagnosed to have coronary artery disease 10 years ago, and she has been receiving antiplatelet therapy with clopidogrel regularly since then. At admission, physical examination revealed normal vital signs and pale conjunctiva, but no abdominal tenderness was shown. Laboratory tests showed the following results: hemoglobin, 10.3 g/dL (normal range, 12.0—15.0 g/dL); platelet, 296,000/mm^3 (150,000—350,000/mm^3); white blood cell count, 17,230/mm^3 (5000—13,000/mm^3); prothrombin time, 10.7 seconds (International Normalized Ratio, 1.06 seconds); high sensitivity C-reactive protein, 13.124 mg/dL (0—0.748 mg/dL). Her plain abdominal X-ray scan showed normal bowel gas pattern (Fig. 1). EGD revealed no active bleeding lesion in the upper gastrointestinal tract. A few hours after the EGD, she experienced a sudden onset of abdominal pain and the pain was progressing. Her physical examination revealed diffuse tenderness over the abdomen and mild rebounding pain. The abdominal ultrasonography showed negative findings. The abdominal computed tomography revealed significant pneumoretroperitoneum and pneumoperitoneum; multiple outpouchings of the intestine with adjacent fat stranding were found along the sigmoid colon (Fig. 2). The patient received open laparotomy, and a whole-layered perforation from a sigmoid diverticulum was identified (Fig. 3). The pathology report showed acute diverticulitis with perforation (Fig. 4). She received critical care in intensive care unit postoperatively, and recovered uneventfully.

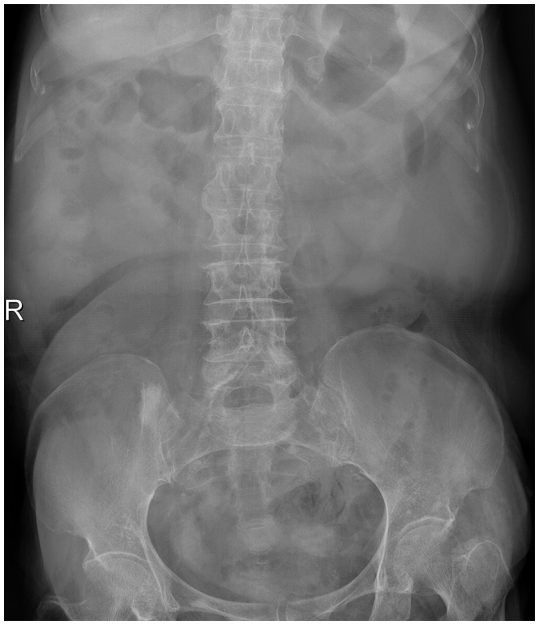

Figure 1 Plain abdominal X-ray shows normal bowel gas pattern.

Discussion

Perforation of the upper gastrointestinal tract is a rare complication of EGD, and it may further lead to peritonitis

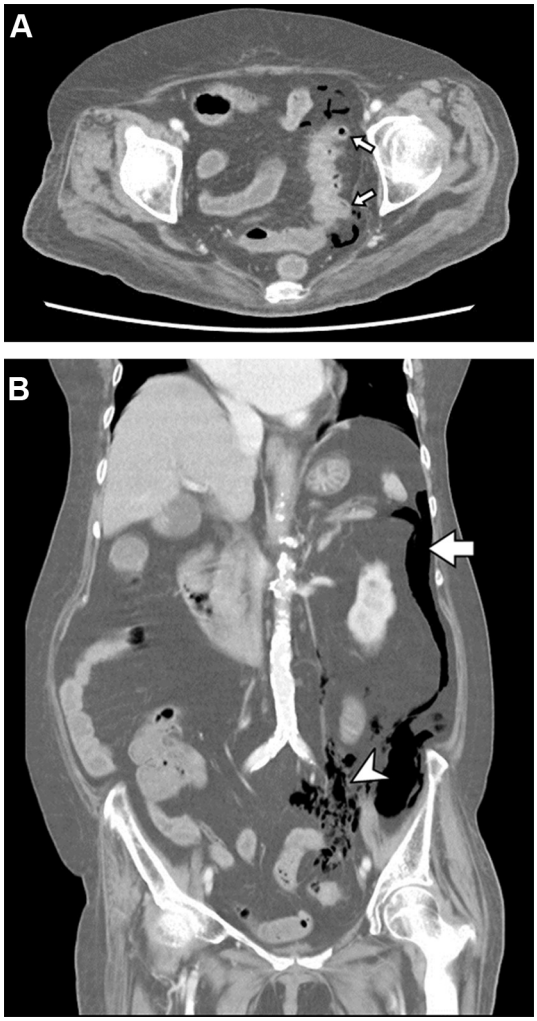

Figure 2 (A) Transverse view of abdominal computed tomography shows multiple outpouching structures (arrows) along sigmoid colon with adjacent fat stranding. (B) Coronal view of abdominal computed tomography shows significant pneumoretroperitoneum (arrow) and pneumoperitoneum (arrowhead).