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Successful Endoscopic Decompression for Intramural Duodenal Hematoma with Gastric Outlet Obstruction Complicating Acute Pancreatitis

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Non-traumatic intramural duodenal hematoma (IDH) with duodenal obstruction caused by acute pancreatitis is rare. Most patients with non-extensive hematoma show improvement with non-operative treatments. Percutaneous drainage or surgery may be necessary in cases with suspected malignancy, perforation, or intestinal tract obstruction. We present a case of IDH caused by acute pancreatitis that led to obstruction of the duodenum and an experience of successful endoscopic decompression of the hematoma.

Key Words: Successful endoscopic decompression; Intramural duodenal hematoma; Gastric outlet obstruction

INTRODUCTION

An intramural duodenal hematoma (IDH) with duodenal obstruction is usually a complication of blunt abdominal trauma, endoscopic biopsy, or peptic ulcer disease.[1] In particular, non-traumatic IDH is associated with coagulation abnormalities. However, few cases of IDH caused by acute pancreatitis have been reported.[2] The presentation of spontaneous IDH can vary from mild abdominal pain to intestinal tract obstruction and acute abdomen. Most patients with non-extensive hematoma will show improvement with non-operative treatments such as nasogastric decompression and correction of abnormal coagulation. Percutaneous drainage or surgery may be necessary in cases with suspected malignancy, perforation, or intestinal tract obstruction.

Here, we present a case of IDH in which duodenal obstruction was caused by acute pancreatitis and an experience of successful endoscopic decompression of the hematoma.

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CASE REPORT

A 55-year-old man who had been experiencing right upper abdominal pain and vomiting for 2 days was admitted to the hospital. He had been treated previously for alcoholic pancreatitis caused by heavy drinking and had no history of antiplatelet, anticoagulants, or non-steroidal anti-inflammatory drug use. Laboratory analysis showed mild leukocytosis (13,850 cells/μL) and marked elevation of serum pancreatic enzyme levels (amylase, 1,001 U/L; lipase, 1,809 U/L). Activated partial thromboplastin time and prothrombin time were measured at 30.4 seconds and 10.1 seconds, respectively, which were within their normal ranges. Computed tomography (CT) revealed a highly attenuated mass along the duodenum and acute pancreatitis; the mass narrowed the lumen, causing significant distension of the stomach and mild pancreatic swelling with peripancreatic infiltration (Fig. 1).

We treated the patient with intravenous nutrient supplementation and nasogastric tube. However, the symptoms of gastric outlet obstruction worsened. Upper endoscopy revealed a submucosal mass with a hyperemic mucosa in the duodenal bulb and complete obstruction of the second duodenal portion caused by external compression. A tiny erosion was found on the surface of the duodenal hematoma, suggesting the presence of fistula between duodenal lumen and hematoma. We decided to perform rapid decompression of

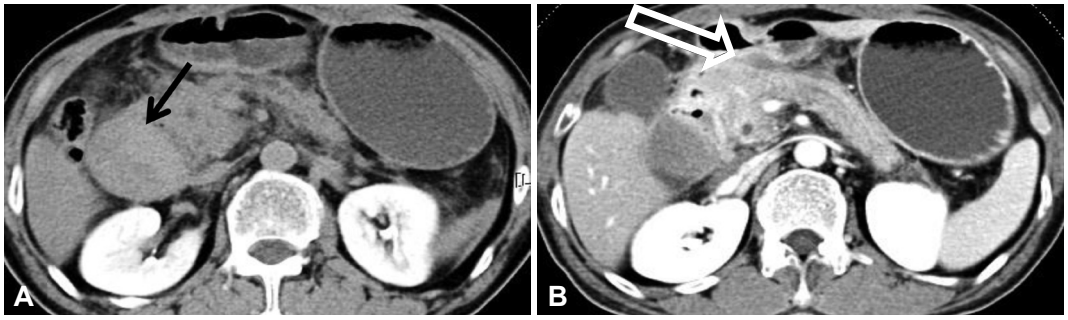

Fig. 1. Computed tomography findings. (A) The arrow indicates a highly attenuated mass narrowing the lumen and major distension of the stomach. (B) Blank arrow indicates mild pancreatic swelling with peripancreatic infiltration.

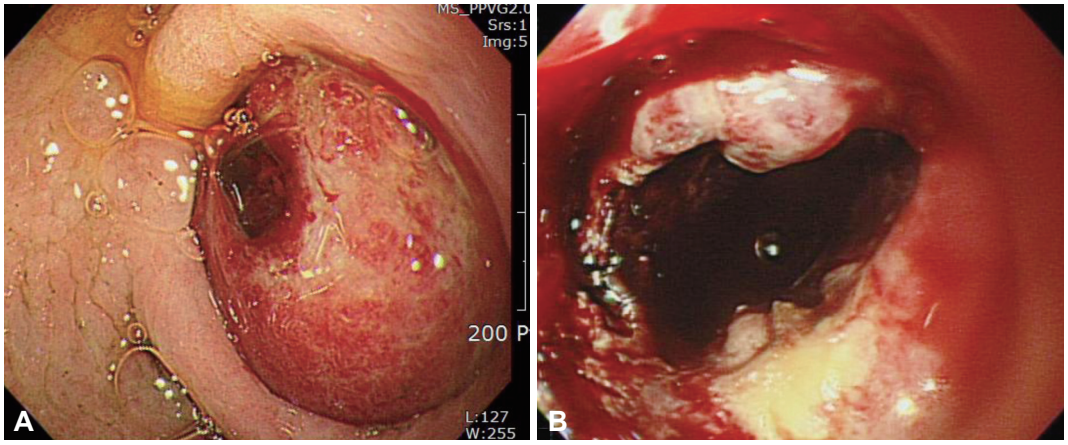

Fig. 2. Endoscopic findings. (A) Tiny erosion on the surface of the duodenal hematoma, suggesting the presence of a fistula between the duodenal lumen and hematoma. (B) Endoscopic decompression for intramural duodenal hematoma through the fistula.

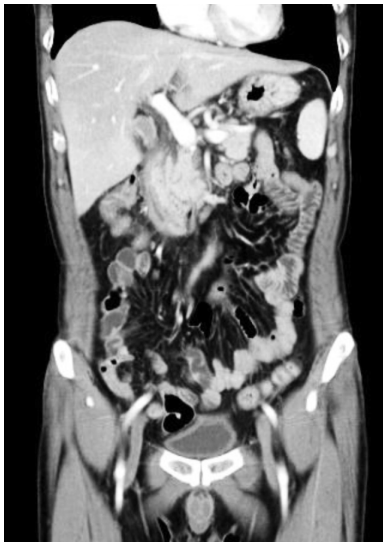

Fig. 3. Follow-up computed tomography of the abdomen showing a decrease in the mass lesion.

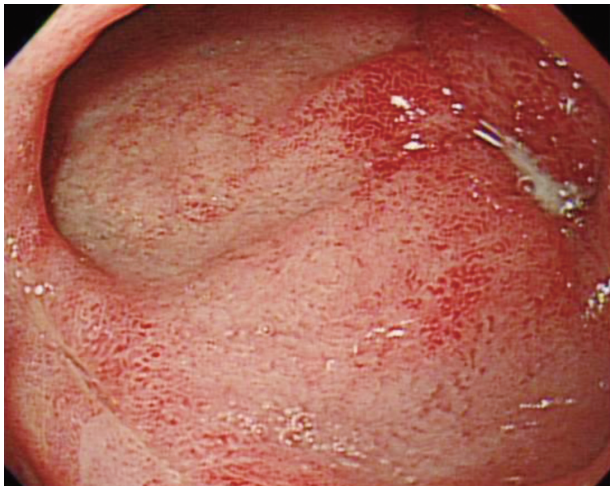

Fig. 4. Follow-up endoscopy showing the remaining small ulcer on the duodenal bulb.

this hematoma in order to resolve the gastric outlet obstructive symptoms and the nothing per oral (NPO) period. We removed the mucosa at the erosive surface of the mass using biopsy forceps and made a small fistula. After the blood had flowed out, we carefully advanced an endoscope through the fistula and observed the presence of blood clots with oozing. Therefore, we removed some of the clots using a basket and suctioned them to decompress the luminal obstruction (Fig. 2).

Conservative therapies such as fluid therapy and NPO were continued, and the patient's symptoms and abnormal laboratory findings improved after 1 week. In a follow-up CT scan of the abdomen conducted after 2 weeks, the previously large

mass was found to be smaller (Fig. 3). Only a small duodenal ulcer was found after 18 days (Fig. 4).

DISCUSSION

IDH with duodenal obstruction is usually a complication of trauma.[1] Non-traumatic IDH is generally associated with coagulation abnormalities.[3] However, few cases of IDH caused by acute pancreatitis have been reported.[2]

Non-traumatic IDH can cause intestinal stenosis, often initially presenting as abdominal pain and vomiting.[4] Obstructive symptoms from duodenal hematomas generally resolve in 10 to 15 days; however, some patients experience a prolonged course with persistent duodenal obstruction that requires operative exploration.[5] Intensive medical therapy is now gaining wide acceptance with recent advances in diagnostic imaging techniques.[6] In the current case, the large hematoma was treated adequately with endoscopic evacuation of the hematoma through a fistula that was created at the erosive surface using biopsy forceps, and after this treatment, the symptoms of gastric outlet obstruction improved rapidly. In our patient, it is not clear if the acute pancreatitis occurred because of the hematoma, probably due to obstruction of the duodenal papilla, or if the compression of the pancreas was caused by the hematoma; however, the patient did not experience any traumatic event or have a suspect medication history, although he did drink a significant amount of alcohol before being admitted to the hospital for abdominal pain. Therefore, we believe that acute pancreatitis was the likely cause of duodenal hematoma with gastric obstruction.

To the best of our knowledge, this is the first case of successful endoscopic decompression for IDH with gastric outlet obstruction caused by acute pancreatitis. Although the effectiveness of endoscopic decompression for IDH has not been proved because IDH is rare, we hope our experience will allow patients to avoid more invasive procedures in the future.

Conflicts of Interest

The authors have no financial conflicts of interest.

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