were noted at EUS after completion of paracentesis the second day.

The patient was discharged, and a treatment of oral ciprofloxacin (250 mg twice a day for 4 days) and oral furosemide (40 mg once daily) was prescribed. After paracentesis, the patient did not require home oxygen therapy. Her appetite improved, and she was able to resume ambulation. At the 2-month follow-up, CT revealed minimal ascites, and the patient remained symptomatically better.

DISCUSSION

EUS is reportedly more sensitive than CT and transabdominal US for the detection of ascitic fluid.[1-4] Also, EUS-FNA has been shown to diagnose malignant ascites when prior percutaneous paracentesis has been unsuccessful.[4] To our knowledge, the utility of EUS for performing therapeutic paracentesis has not been previously reported.

In general, aspiration of cyst fluid at EUS-FNA is performed by using a 19- or 22-gauge needle and 10- or 20-mL suction syringes.[5,6] Given this limitation, it is not feasible in practice to perform large-volume paracentesis. Using a 19-gauge FNA needle that is attached to continuous suction will enable performance of large-volume therapeutic paracentesis as described in this report. EUS, by avoiding the presence of tumor implants in its path, enables real-time positioning of the FNA needle into different ascitic fluid compartments. Given the cost, procedural duration, necessity for frequent interventions, use of sedatives, and requisite procedural expertise, EUS-guided therapeutic paracentesis should be attempted only when a percutaneous approach fails or is technically not feasible. This situation is more likely to be encountered in symptomatic patients with tense malignant ascites who have extensive compartmentalization of the ascitic fluid from tumor implants. Performing multiple percutaneous punctures in these patients is painful and has the potential to increase chances for tumor seeding. Also, it may not be possible to visualize small tumor implants adequately with transabdominal US, thereby leading to clogging of the percutaneous needle as encountered in our patient.

DISCLOSURES

The authors report that there are no disclosures relevant to this publication.

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Complete eradication of duodenal varices after endoscopic injection sclerotherapy with ethanolamine oleate: a case report

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Because bleeding from the duodenal varices is serious and often fatal,[1-3] prompt and effective hemostatic treatment is needed. However, it is still unclear which method would be best for initial hemostasis and for the prevention of rebleeding. We report a case of bleeding from the duodenal varices, which was eventually completely eradicated after endoscopic injection sclerotherapy (EIS) with ethanolamine oleate (EO). In this case, complete eradication of bleeding from the duodenal varices was confirmed with follow-up CT angiography.

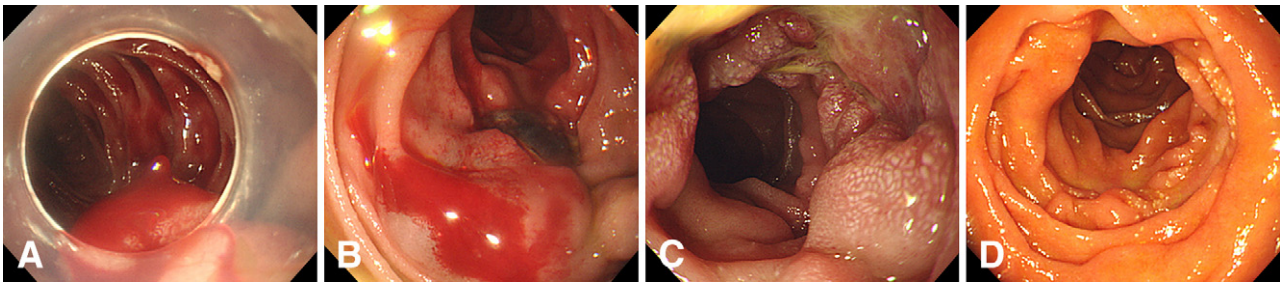

Figure 1. Endoscopic view of the second portion of the duodenum. **A**, Before treatment: duodenal varices with active spurting before endoscopic treatment. **B**, The day after EVL: active oozing around a deep ulcer at the site of band ligation. **C**, One week after EIS: an ulcer at the injection site and remnant varices proximal to the injection site were noted. **D**, Three months after EIS: completely eradicated varices; lymphangiectasia was noted around the completely healed ulcer.

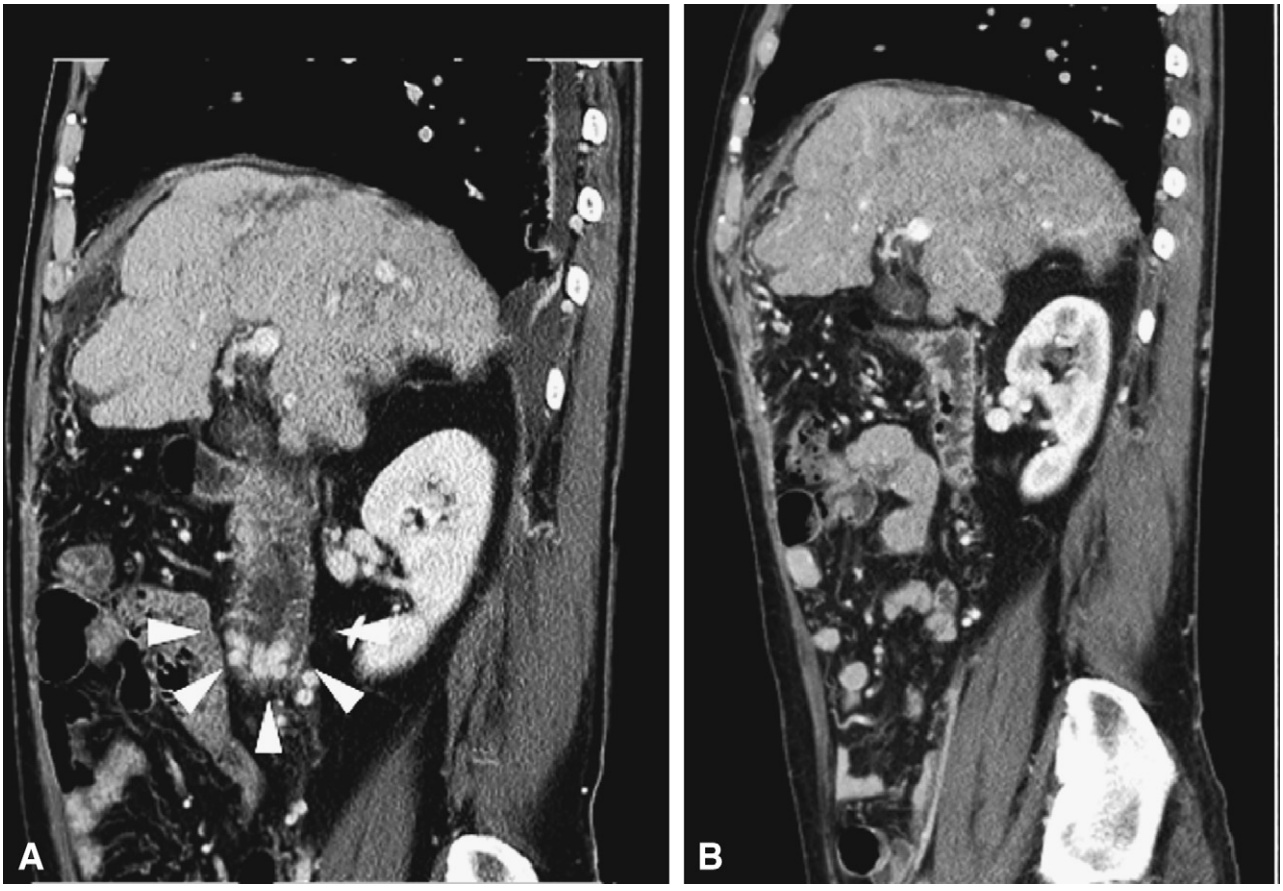

Figure 2. CT angiography of the abdomen. **A**, Before treatment: duodenal varices (*arrowheads*) arising from the anastomosis between the superior mesenteric vein and the gonadal vein. **B**, Three months after endoscopic injection therapy: previously noted duodenal varices were completely eradicated, although the anastomosis between the superior mesenteric vein and gonadal vein was unchanged.

CASE REPORT

A 63-year-old man who had been treated for membranous obstruction of the inferior vena cava and liver cirrhosis presented with a 6-hour history of massive melena. Seventeen years earlier, he had undergone EIS for ruptured esophageal varices.

An emergent endoscopy revealed a spurting, large varix in the second portion of the duodenum (Fig. 1A). For hemostasis, endoscopic variceal ligation (EVL) was immediately performed with a pneumoactivated EVL device. However, melena and tachycardia were not improved, and the Hb level did not increase, in spite of sufficient blood transfusion. On the following day,