Hemorrhagic gastric ulcer after endoscopic ultrasound-guided fine needle aspiration of a pancreatic adenocarcinoma

Fig. 1 Contrast-enhanced computed tomography (CT) scan showing: **a** in early phase, a 3-cm hypovascular, irregular, tumorous lesion in the body of the pancreas, suspected of being pancreatic cancer, with invasion of the celiac, splenic, and common hepatic arteries; **b** in late phase, inferior vena cava invasion thought to be due to lymph node metastasis, and stenosis in the same area.

Fig. 2 Image during endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) showing a pancreatic lesion about 3 cm in size with an irregular margin and internal heterogeneity, consistent with pancreatic cancer.

Fig. 3 Views during upper gastrointestinal tract endoscopy showing a distinct ulcer about 20 mm in size in the upper gastric body on the posterior wall of the greater curvature, with bleeding evident from the base of the ulcer, on a background of atrophied gastric mucosa. The patient's serum *Helicobacter pylori* antibodies were positive.

A 64-year-old man presented with a chief complaint of back pain. A contrast-enhanced computed tomography (CT) scan showed a 3-cm hypovascular, irregular, tumorous lesion in the body of the pancreas invading the celiac, splenic, and common hepatic arteries (● **Fig. 1a**). Inferior vena cava (IVC) invasion was thought to be due to lymph node metastasis (● **Fig. 1b**), and thrombi in the peripheral veins were causing extensive blockage. An endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) was performed (2 times, 10 strokes each) on the pancreatic lesion with a 22-gauge needle (Expect; Boston Scientific, Tokyo, Japan) (● **Fig. 2**). Pathological findings indicated invasive pancreatic ductal cancer. The patient was diagnosed with stage IVB cancer of the pancreatic body (Union for International Cancer Control classifica-

tion). Systemic chemotherapy was planned, and edoxaban was administered for the venous thrombi caused by the IVC invasion.

On day 10 after the EUS-FNA, a small amount of hematemesis occurred. Upper gastrointestinal tract endoscopy showed a distinct ulcer, about 20 mm in size in the upper gastric body on the posterior wall of the greater curvature, on a background of atrophied gastric mucosa. Part of the ulcer was bleeding (● **Fig. 3**). Coagulation hemostasis was performed with coagulation forceps (Coagrasper; Olympus Medical Systems). Subsequently, no further bleeding occurred. From the lesion's location, the changes were thought to have occurred after the EUS-FNA.

Bleeding due to EUS-FNA occurs 0.13% of the time [1], but there have been no reports of hemorrhagic gastric ulcers

caused by EUS-FNA, making the present case rare. The hemorrhagic gastric ulcer possibly occurred because the patient's serum tested positive for *Helicobacter pylori* antibodies and he was receiving ongoing edoxaban treatment. New oral anticoagulants, including edoxaban, have become widely used for atrial fibrillation and venous thrombosis [2,3]. A recent meta-analysis found a greater risk of gastrointestinal bleeding with edoxaban than with warfarin or other conventional therapies [4]. Therefore, care should be taken when performing EUS-FNA in patients who are receiving anticoagulants.

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Competing interests: None

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References

- 1 Wang KX, Ben QW, Jin ZD et al. Assessment of morbidity and mortality associated with EUS-guided FNA: a systematic review. *Gastrointest Endosc* 2011; 73: 283–290
- 2 Giugliano RP, Ruff CT, Braunwald E et al. Edoxaban versus warfarin in patients with atrial fibrillation. *NEJM* 2013; 369: 2093–2104
- 3 Büller HR, Décousus H, Grosso MA et al. Edoxaban versus warfarin for the treatment of symptomatic venous thromboembolism. *NEJM* 2013; 369: 1406–1415
- 4 Loffredo L, Perri L, Violi F. Impact of new oral anticoagulants on gastrointestinal bleeding in atrial fibrillation: a meta-analysis of interventional trials. *Dig Liver Dis* 2015; 47: 429–431

Bibliography

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