

Use of disposable endoscope for variceal sclerotherapy



Diagnostic esophagogastric endoscopy has recently been performed using new sterile single-use disposable endoscopes (Ambu aScope Gastro; Ambu, Ballerup, Denmark) (► **Fig. 1**) due to the potential risk of cross-infection associated with reusable endoscopes [1, 2].



► **Video 1** Gastric and jejunal variceal sclerotherapy using the Ambu aScope Gastro.



► **Fig. 1** Ambu aScope Gastro.

N-butyl cyanoacrylate (NBCA) is used for emergency endoscopic hemostasis in cases of gastric and ectopic varices [3, 4]. However, one of the complications associated with the use of NBCA during sclerotherapy is its adhesion to the endoscope, which causes critical damage to the endoscope and incurs high repair costs. In addition, the puncture site can overlap with the endoscope on the fluoroscopic images during sclerotherapy.

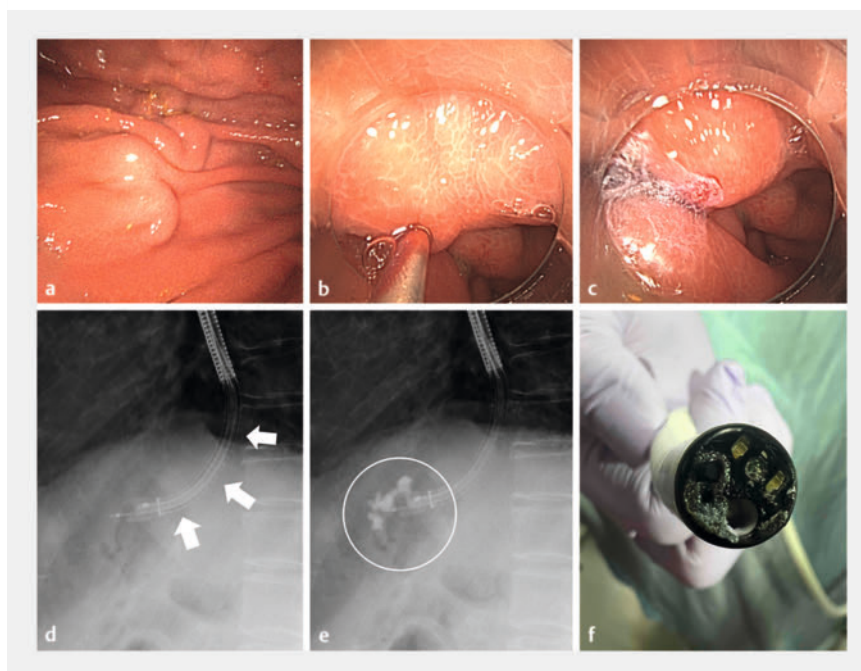
We report two cases in which sclerotherapy was performed using the Ambu aScope Gastro for treating gastric and jejunal varices (► **Video 1**).

Case 1 is of a 65-year-old man who was referred for the treatment of gastric varices due to alcoholic cirrhosis. The gastric varices were punctured using a 23-G esophageal varices puncture needle (Sumitomo Bakelite., Tokyo, Japan) (► **Fig.**

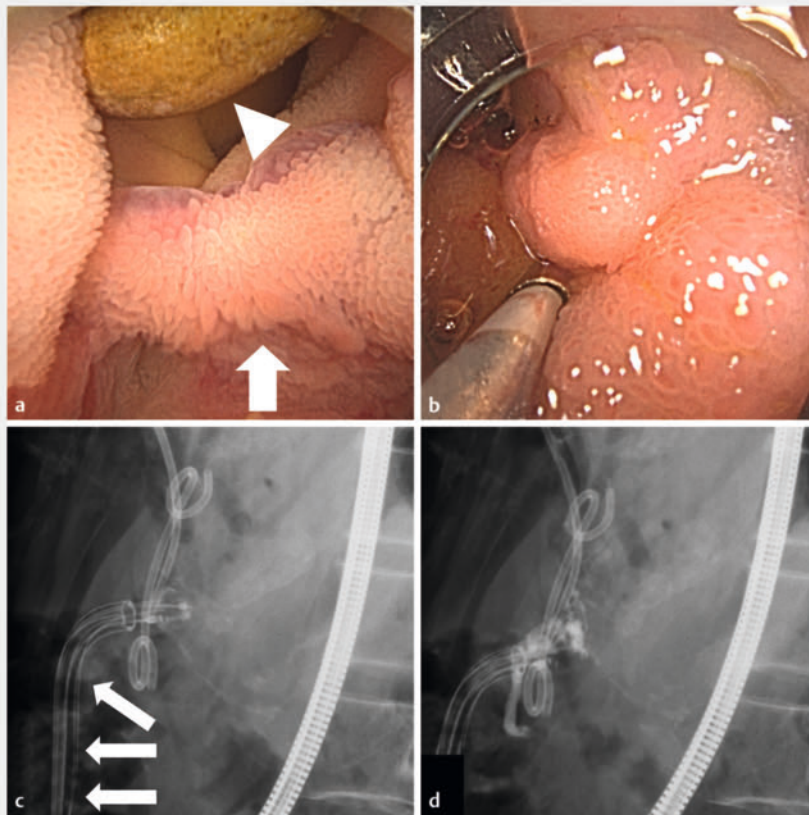
2). Under fluoroscopic guidance, 1.6 mL of 75% NBCA (NBCA:lipiodol ratio 3:1) was injected. A small quantity of NBCA adhered to the endoscope after the procedure.

Case 2 is of a 76-year-old man (► **Fig. 3**) who was referred by a surgeon following pancreaticoduodenectomy for an intraductal papillary mucinous adenoma because of suspected bleeding from jejunal varices formed at the site of choledochojejunostomy. The jejunal varices were punctured using a 23-G esophageal varices puncture needle. Under fluoroscopic guidance, 2 mL of mixture of 60% NBCA (NBCA:lipiodol ratio 3:2) was injected. The transparency of the soft tissue scope enabled easy confirmation of the flow and polymerization of the sclerosing agent on fluoroscopic images.

These cases demonstrate the successful use of sclerotherapy with NBCA using



► **Fig. 2** Use of Ambu aScope Gastro for gastric variceal sclerotherapy. **a** Gastric varices. **b** Varices were punctured with a 23-G needle. **c** N-butyl cyanoacrylate (NBCA) administration. **d, e** Radiolucent tip of the endoscope allows easier evaluation of contrast flow (arrow: endoscope). **f** Adherence of NBCA to the scope.



► **Fig. 3** Use of Ambu aScope Gastro for jejunal variceal sclerotherapy. **a** Jejunal varices formed at the site of choledochojejunostomy (arrow). A biliary stent was implanted for biliary strictures (arrowhead). **b** Jejunal varices were punctured with a 23 G needle. **c, d** Radiolucent tip of the endoscope allows easier evaluation of contrast flow (arrow, endoscope).

the Ambu aScope Gastro. This single-use disposable endoscope prevents the need for costly endoscope repair following NBCA adhesion and provides excellent visibility on fluoroscopic images.

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Conflict of Interest

The manufacturer of Ambu aScope Gastro, Ambu K.K., provided the endoscope free of cost.

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References

- [1] Ribeiro MM, de Oliveira AC. Analysis of the air/water channels of gastrointestinal endoscopies as a risk factor for the transmission of microorganisms among patients. *Am J Infect Control* 2012; 40: 913–916. doi:10.1016/j.ajic.2012.02.005

- [2] Lagström R, Stigaard T, Knuhtsen S et al. Diagnostic esophagogastroduodenoscopy performed using a novel sterile single-use disposable endoscope. *Endoscopy* 2022; 54: E1034–E1035. doi:10.1055/a-1915-5025
- [3] Castellanos ER, Seron P, Gisbert JP et al. Endoscopic injection of cyanoacrylate glue versus other endoscopic procedures for acute bleeding gastric varices in people with portal hypertension. *Cochrane Database Syst Rev* 2015; 5: CD010180
- [4] Garcia-Tsao G, Abraldes JG, Berzigotti A et al. Portal hypertensive bleeding in cirrhosis: risk stratification, diagnosis, and management: 2016 practice guidance by the American Association for the Study of Liver Diseases. *Hepatology* 2017; 65: 310–335. doi:10.1002/hep.28906

Bibliography

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