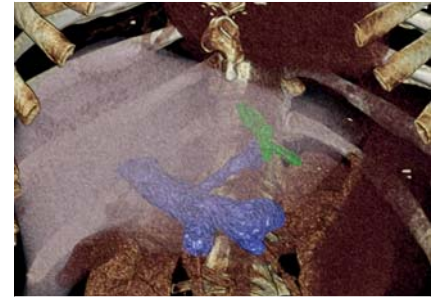


## Transesophageal endoscopic ultrasound-guided coil and cyanoacrylate treatment of challenging esophageal varices bleeding associated with CREST syndrome ulcerative esophagitis



► **Fig. 1** 3D Left gastric and portal vein reconstruction.



► **Fig. 2** 3D Venous reconstruction after embolization.

[2, 3] even in primary prophylaxis for gastric varices [4].

We report the case of a 43-year-old woman with CREST syndrome with scleroderma and sclerosing cholangitis with portal hypertension. She had hematemesis with oozing esophagitis twice in the past 3 months. We concluded ulcerative esophagitis due to CREST syndrome and esophageal motility dysfunction. She was admitted to our hospital for another hematemesis with hemorrhagic shock. After resuscitation, the initial gastroscopy showed active lower esophageal bleeding without any visible varices. An adrenaline injection and thermal treatment failed to control the bleeding and neither did band ligation owing to the difficult suction of sclerotic tissue. Thus the endoscopist decided to deploy a self-expandable metal SX-ELLA Danis stent (Ella-CS, Hradec Kralove, Czech Republic), which seemed to be effective. A computed tomography (CT) scan showed portal hypertension with a dilated left gastric vein associated with GOV 1 gastric varices along with a partial migration of the stent into the stomach (► **Fig. 1**). An early transjugular intrahepatic portosystemic shunt (TIPS) was excluded owing to severe pre-existing pulmonary arterial hypertension. We decided to perform a new endoscopy.



► **Video 1** Transesophageal endoscopic ultrasound-guided coil and cyanoacrylate treatment of a challenging esophageal varices bleed associated with CREST syndrome ulcerative esophagitis.

Ligation is the recommended endoscopic treatment for acute esophageal variceal bleeding [1]. It can be challenging when

associated with esophagitis. There is abundant evidence regarding the safety and efficacy of coil and glue embolization

After stent removal, we still found active venous bleeding without any visible varices. Endoscopic ultrasound (EUS) allowed following the dilated vein from the portal vein to the variceal network. We performed an EUS-guided deployment of three Nester embolization coils and injected 1.0ml of cyanoacrylate (CYA) glue with an Olympus Easyshot 19G needle (▶ **Video 1**). Doppler ultrasound confirmed decreased flow in the varix without bleeding, and a CT scan 24 hours later showed effective embolization (▶ **Fig. 2**).

In this video, we report on a successful transesophageal EUS-guided coil and CYA treatment of challenging esophageal variceal bleeding associated with CREST syndrome esophagitis.

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### Competing interests

J. Rivory is a consultant for Cook Medical.

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