Forward-viewing EUS-guided combined coil and glue injection in bleeding gastric varices secondary to splenic vein thrombosis in chronic pancreatitis

Dear Editor,

Splenic vein thrombosis (SVT) is an important vascular complication of both acute and chronic pancreatitis, with 17%–55% of patients with SVT developing gastric varices (GVs).[1] Although bleeding from GV in SVT and pancreatitis is rare, it can be fatal. Endoscopic as well as EUS-guided N-butyl-2-cyanoacrylate glue injection has been shown to be a safe and effective treatment for bleeding GV in patients with portal hypertension due to cirrhosis.[2] However, unlike GV in cirrhosis, experience of endoscopic glue injection in bleeding GV due to SVT and pancreatitis is limited, and the results are not so encouraging with high re-bleeding rates.[3,4] Moreover, EUS-guided combined coil and glue injection in bleeding GV due to pancreatitis-induced SVT has not been previously studied. We retrospectively evaluated the safety and efficacy of EUS-guided combined coil and glue injection in bleeding GV in six patients (all males; mean age: 36.1 ± 6.7 years) with bleeding GV due to chronic pancreatitis (CP)-induced SVT.

EUS was performed using a forward-viewing echoendoscope (FVE) (TGF-UC180J; Olympus Optical Co. Ltd., Tokyo, Japan).[5] The GVs were punctured using a 22G fine needle aspiration needle (Echotip; Cook Medical, Winston Salem, NC, USA), and the embolization coil (s) (8–16 mm) (Nester Embolization Coil; Cook Medical) were pushed into the GV via the needle using the stylet as a pusher [Figure 1]. After deploying adequate number of coils, 1 mL of N-butyl-2-cyanoacrylate (Endocryl, Samarth Life Sciences, Mumbai Maharashtra, India) was injected followed by 1 mL of dextrose solution to completely flush the glue through the same needle. EUS and color Doppler were done 5 min after the glue injection to confirm the absence of flow in the treated varix. In case of persistent flow on Doppler or detection of any additional large patent GV, the endoscopic treatment described above was done in the same session.

All patients had an underlying alcohol-related CP with one patient having a co-existent chronic pseudocyst [Table 1]. All patients presented with hematemesis and melena with three (50%) patients having postural symptoms. EUS-guided combined coil and glue injection was technically successful in all the six patients, with no instrument-related technical difficulty in any patient. A single coil was placed in four (66%) patients and two coils were placed in two (34%) patients. The median volume of cyanoacrylate glue injected was 1 mL (range 1–2 mL). There were no immediate postprocedure complications, and the GV obliteration was documented on EUS in all the patients. Patients with co-existent pseudocyst underwent successful EUS-guided

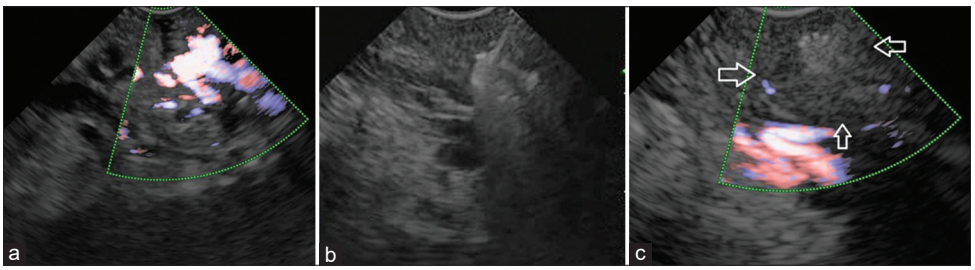

Figure 1. (a) EUS: Gastric varices with flow on Doppler. (b): EUS-guided coil injection into the gastric varices. (c) EUS after 5 min injection of coil and glue demonstrates the absence of flow on Doppler (arrows)

Table 1. Profile of patients of chronic pancreatitis with bleeding gastric varices

Age (years)	Sex	Etiology of CP	Number of coils	Amount of glue injected (mL)	Recurrence	Follow-up (months)
42	Male	Alcohol	2	1	No	8
38	Male	Alcohol	1	1	No	14
31	Male	Alcohol	1	1	No	18
28	Male	Alcohol	1	1	No	21
47	Male	Alcohol	2	2	No	25
31	Male	Alcohol	1	1	No	17

CP: Chronic pancreatitis; GV: Gastric varices

transmural drainage with plastic stent after obliteration of the GV. The GVs were obliterated in all the patients on follow-up EUS done at 3 and 6 months. Over a mean follow-up period of 17 months, none of the treated patients had either early or delayed re-bleeding. There were no septic or embolic complications. In conclusion, EUS-guided combined coil and glue injection using an FVE seems to be safe and effective treatment for bleeding GV due to SVT in patients with CP.

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Conflicts of interest

Surinder Singh Rana is an Editorial Board Member of the journal. The article was subject to the journal's standard procedures, with peer review handled independently of this editor and his research groups.

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