

EUS-Guided Coil Embolization and Absorbable Hemostatic Gelatin Sponge Is a Safe and Efficacious Treatment of Rectal Varices

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Background

- Rectal varices are abnormally dilated collateral vessels that may occur from systemic portal hypertension.
- The endoscopic management of bleeding rectal varix is often challenging; endoscopic band ligation has limited efficacy, and patients are often unsuitable for interventional radiology-guided procedures or surgical ligation.
- Our group has previously reported positive results of EUS-guided injection of coils and absorbable gelatin sponge (i.e. "Gelfoam") for treatment of bleeding gastric varices.
- Here we present a case series of endoscopic ultrasound (EUS) guided coil embolization combined with Gelfoam for management of bleeding rectal varices.

Case Description/Methods

- Four cases of bleeding rectal varices were successfully treated with EUS-guided coil embolization and Gelfoam between 10/2018 and 3/2022 at a single tertiary center.
- Patient demographic and procedure characteristics are listed below. All 4 cases (100%) presented with active lower GI bleeding, with rectal varices marked as the most likely etiology.
- The average age was 67, 3/4 (75%) were female, and mean MELD-Na score was 10. One patient required 3 units of packed red blood cell (pRBC) transfusion prior to lower EUS.
- Following multidisciplinary discussion with hepatology, interventional radiology, and surgery, it was decided to pursue endoscopic therapy in all 4 cases.
- All cases underwent EUS-guided puncture of rectal varices (specifically targeting perforator veins) with a 22G FNA needle to serially deploy 0.018" Nester Embolization Coils (Cook Medical, Bloomington, IN) of length ranging from 7-14cm total. Gelfoam was then injected as a liquid slurry for hemostatic reinforcement following coil embolization.

Results

- All cases (100%) achieved technical success, along with EUS confirmation of significant and immediate diminution of Doppler flow in the rectal varices.
- There were no procedural-related adverse events. One patient had follow-up EUS at 1 month that demonstrated both endoscopic and sonographic evidence of obliteration of rectal varices.

Case ID	Age (years)	Sex	Etiology of Portal Hypertension	Bleeding Presentation	Charlson Comorbidity Index	Child Pugh Classification	MELD-Na score	Hemoglobin (g/dL)	Platelets (k/ul)	INR	Pre-procedure # Units of pRBC Transfused	Maximum Cross Sectional Diameter of Varices (mm)	Simultaneous Presence of hemorrhoids	No of coils injected	Total Length of Coil Injected (cm)	Post procedure blood transfusion
1	79	F	NASH Cirrhosis	Hematochezia	7	A	10	10.7	96	1.2	0	3.5	Y	4	28	0
2	59	F	Oxaliplatin Induced Liver Injury	Hematochezia	8	B	9	7.2	114	1.3	3	2.5	Y	1	7	0
3	59	F	Nodular Regenerative Hyperplasia	Hematochezia	8	A	11	8.4	159	1.1	0	4	Y	2	14	0
4	71	M	Alcoholic Cirrhosis	Melena and hematochezia	11	B	12	8	78	1.7	0	5	Y	2	27	0

Conclusions

- EUS-guided coil embolization combined with absorbable gelatin sponge appears to be a safe and efficacious treatment option for bleeding rectal varices.