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Case Report

Endoscopic ultrasound guided emergency coil and glue for actively bleeding duodenal varix after failed endoscopy

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Abstract

Management of ectopic variceal bleed may be difficult at times due to anatomical location or presence of collaterals. We present a case of an elderly cirrhotic male with acute upper gastrointestinal bleed due to a large duodenal varix successfully managed by endoscopic ultrasound guided coil placement along with glue (N-butyl-2-cyanoacrylate) injection.

Key words

Coil, duodenum, endoscopic ultrasound, variceal bleed

Introduction

The duodenum can be a site of severe life threatening variceal bleed with high mortality, however, there is no consensus on optimal management.[1] Interventional therapies like placement of embolizing coils in ectopic varices have been rarely reported and as per best of our knowledge, we report the second case in which a bleeding duodenal varix was successfully managed by placing an embolizing coil and concomitant cyanoacrylate glue injection under endoscopic ultrasound (EUS) guidance.

Case Report

A 63-year-old male, known case of decompensated cryptogenic cirrhosis (jaundice, coagulopathy, ascites, and history of hepatic encephalopathy) presented with melena in a different hospital. On gastro-duodenoscopy, large esophageal varices with red color signs were seen; however there was no active bleed. Endoscopic variceal ligation was done, and the patient was treated with intravenous terlipressin and blood products. He had a recurrence of melena 4 days after the procedure and was referred to our unit which is a tertiary level hospital in Northern India. After stabilizing the patient, gastro-duodenoscopy was performed which showed a large, actively bleeding varix at the junction of a second and third part of the duodenum [Figure 1]. Two ml of glue (N-butyl-2-cyanoacrylate) was injected thrice in the bleeding varix; however hemostasis could not be achieved. As the patient was not a candidate for transjugular intrahepatic portosystemic shunt in view of risks of postprocedure encephalopathy and liver failure (namely child's C status, history of encephalopathy, and old age), an option of endoscopic EUS guided coil placement was discussed with family. After obtaining informed consent from the patient, coil embolization of bleeding duodenal varix was planned. The duodenal varix was punctured with a 19 gauge EUS-fine needle aspiration needle under EUS guidance, the stillete was removed and an embolization coil (0.035 inches in diameter) was pushed through needle into varix by stillete under fluoroscopic guidance. Due to the difficult position of varix, the whole length of the coil could not be placed inside varix and some part was left in the duodenal lumen [Figures 2 and 3]; however hemostasis was achieved. A gastro-duodenoscopy done in the same session did not show any bleed; 2 ml glue was injected, and varix solidified immediately [Figure 4]. A computed tomography abdomen done later showed the presence of large

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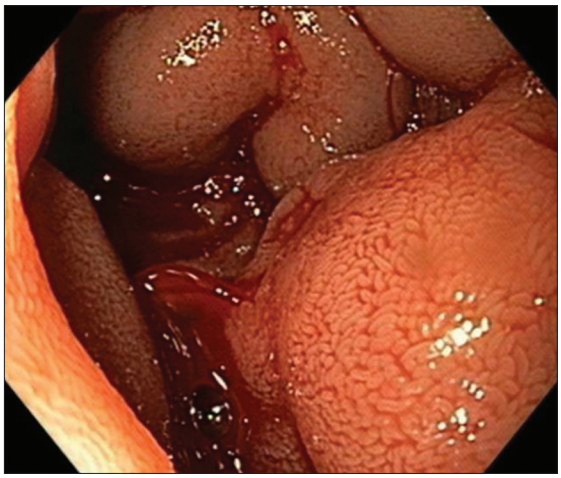

Figure 1: Actively bleeding duodenal varix

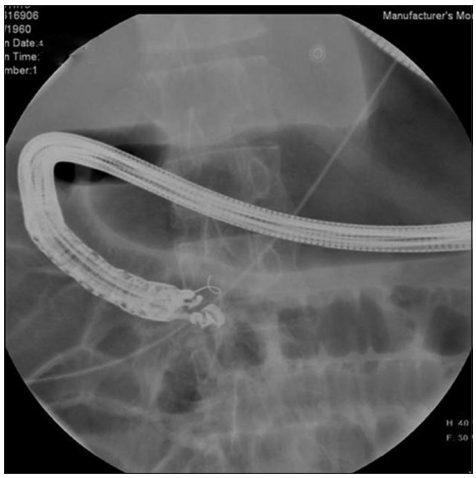

Figure 2: Coil being placed in duodenal varix (at junction of second and third part)

Figure 3: Coil after placement in varix

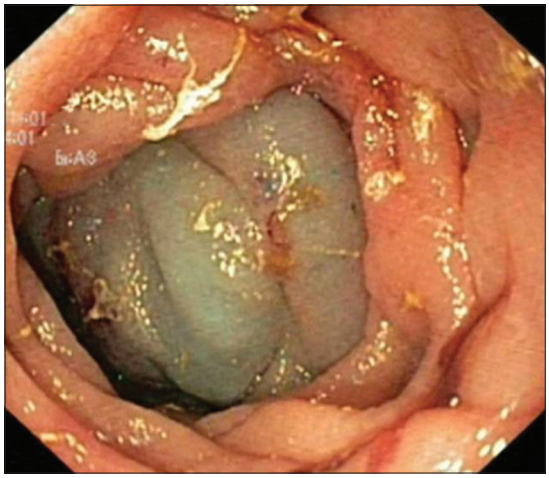

Figure 4: Solidified varix after coil and glue injection

collaterals near the duodenal varix which was the probable reason for the failure of glue alone. Thus, EUS guided coil placement with concomitant glue injection in a large duodenal varix in difficult position stopped life-threatening bleed in the present case.

Discussion

Glue injection had been shown to be an effective treatment for duodenal varices.[2,3] Recently, EUS guided variceal therapy has emerged as a safe and an effective approach. A retrospective multicentric study compared EUS guided cyanoacrylate glue injection (n = 19) and coil placement (n = 11) for gastric varices; authors found EUS guided coil embolization requires fewer sessions and is associated with less adverse events in coil group.[4] In a study by Binmoeller *et al*., EUS guided coil embolization and glue approach was effective in fundal variceal eradication and preventing rebleed (23 out of 24 patients had successful obliteration of varices after a single session of treatment; none had rebleed).[5] Data are limited to single case reports of rectal and duodenal varices being treated by EUS guided coil placement and glue injection in patients with ectopic varices.[6,7] EUS offers several advantages in the management of ectopic varices like establishing a diagnosis, targeted injection of sclerosant into varix, the anatomy of varix or collaterals and confirmation of variceal obliteration.[8] Thus, EUS guided coil embolization and glue therapy can be very useful for ectopic varices as shown in the present case with life-threatening bleed that could not be controlled by conventional endotherapy.

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Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Sato T, Akaike J, Toyota J, Karino Y, Ohmura T. Clinicopathological

features and treatment of ectopic varices with portal hypertension. Int J Hepatol 2011;2011:960720.
2. Liu Y, Yang J, Wang J, Chai G, Sun G, Wang Z, *et al.* Clinical characteristics and endoscopic treatment with cyanoacrylate injection in patients with duodenal varices. Scand J Gastroenterol 2009;44:1012-6.
3. Mora-Soler A, Velasco-Guardado A, Acosta-Materán R, Umaña-Mejía J, Jamanca-Poma Y, Calderón-Begazo R, *et al.* Endoscopic treatment of duodenal varices with cyanoacrylate. Rev Esp Enferm Dig 2013;105:629-32.
4. Romero-Castro R, Ellrichmann M, Ortiz-Moyano C, Subtil-Inigo JC, Junquera-Florez F, Gornals JB, *et al.* EUS-guided coil versus cyanoacrylate therapy for the treatment of gastric varices: A multicenter study (with videos). Gastrointest Endosc 2013;78:711-21.
5. Binmoeller KF, Weilert F, Shah JN, Kim J. EUS-guided transesophageal treatment of gastric fundal varices with combined coiling and cyanoacrylate glue injection (with videos). Gastrointest Endosc 2011;74:1019-25.
6. Kinzel J, Pichetshote N, Dredar S, Aslanian H, Nagar A. Bleeding from a duodenal varix: A unique case of variceal hemostasis achieved using EUS-guided placement of an embolization coil and cyanoacrylate. J Clin Gastroenterol 2014;48:362-4.
7. Weilert F, Shah JN, Marson FP, Binmoeller KF. EUS-guided coil and glue for bleeding rectal varix. Gastrointest Endosc 2012;76:915-6.
8. Rana SS, Bhasin DK, Sharma V, Chaudhary V, Sharma R, Singh K. Clinical, endoscopic and endoscopic ultrasound features of duodenal varices: A report of 10 cases. Endosc Ultrasound 2014;3:54-7.