CASE REPORT

MANAGEMENT OF ECTOPIC VARIX WITH HISTOACRYL

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Upper gastro-intestinal (GI) bleed is one of the most serious situations encountered in the emergency department. There is consensus regarding management of common causes of upper GI bleed but for rare causes no such consensus exists. We present a case of a 35 year old male who presented with 5–6 episodes of hematemesis associated with melena in 24 hours. On examination he was in hypotensive shock with no stigmata of chronic liver disease. Doppler studies showed portal vein thrombosis with cavernous transformation and varices in peripancreatic region and around duodenum. His upper GI endoscopy showed a large varix with ulceration in the duodenal bulb, indicating it as the source of bleeding. The varix was injected with 1cc of cyanoacrylate. The patient's final diagnosis was non-cirrhotic portal hypertension secondary to portal vein thrombosis. At immediate and long term follow-up the patient had no complications. We conclude that cyanoacrylate injection effectively manages ectopic duodenal varices and can be used with a simple application technique.

Keywords: Ectopic varices, hematemesis, upper gastro-intestinal endoscopy

J Ayub Med Coll Abbottabad 2014;26(4):618–20

INTRODUCTION

Upper gastro-intestinal (GI) bleed is one of the most serious situations encountered in the emergency department. Incidence of upper GI bleed is between 5–150 per 100,000 with overall mortality being 14%.[1,2] Common cause of upper GI bleed in developed countries is peptic ulcer disease and in developing countries, it is variceal bleed. There is consensus regarding management of common causes of upper GI bleed but for rare causes no such consensus exists. We present a case with a rare cause of upper GI bleed from duodenal varix which was successfully managed with cyanoacrylate injection.

CASE REPORT

A 35 year old male presented in emergency department of Ayub Medical College, Abbottabad, with history of 5–6 episodes of hematemesis associated with melena within 24 hours of presentation. At the time of presentation he was hypotensive with a systolic blood pressure of 70mmHg, low volume pulse with carotid pulse 120/min, markedly pale with rest of the general physical examination being unremarkable. On abdominal examination he had moderate ascites with splenomegaly. Rest of the systemic examination was normal. In the past he was treated for 9 months for pulmonary tuberculosis in 2005 and in 2008 he was admitted with acute pancreatitis and endoscopic retrograde cholangio-pancreatography (ERCP) was done. ERCP showed mildly dilated common bile duct (CBD) with a worm in the CBD which was removed at that time and discharged in stable condition. The patient was not taking any medicines and had no known drug allergies. He was a farmer by profession, non-smoker and non-addict. His family history was unremarkable and he also had no history of travel abroad.

He was immediately resuscitated with intravenous normal saline; four units for blood were transfused and shifted into the intensive care unit. He was started on subcutaneous terlipressin1mg every 8 hourly and intravenous ceftriaxone 1gm 12 hourly. Vital signs and urinary output was monitored hourly.

His initial investigations showed haemoglobin of 4.8 g/dL (reference range 11.6–16.5 g/dL, total leucocyte count of 4600/uL (reference range 4000–1100/uL), platelet count 166,000 (reference range 150,000–400,000/uL), HbsAg and anti HCV were negative. Renal function tests and serum electrolytes were normal. Ultrasound with Doppler scan of the abdomen showed normal texture and span of liver with multiple foci of calcification in liver parenchyma with moderate ascites. Doppler studies showed portal vein thrombosis with cavernous transformation and varices in peripancreatic region and around duodenum. Computed tomography scan reported extensive hepatic calcification (possibly healed granulomas), splenomegaly and ascites with dilated and tortuous vessels in regions of peripancreatic, posterior to stomach and first part of duodenum.

His upper GI endoscopy showed grade-II oesophageal varices with no stigmata of recent bleed. In duodenal bulb there was a large varix with ulceration, indicating it as the source of bleeding (Figure-1). The varix was injected with 1cc of

cyanoacrylate. Lipodoil was used initially to flush the needle and later to push cyanoacrylate. No immediate complication occurred. Post-endoscopy X-ray erect abdomen was done showing cyanoacrylate in the region of duodenum within varix (Figure-2). The patient's final diagnosis was non-cirrhotic portal hypertension secondary to portal vein thrombosis. His thrombophilia profile was normal. The patient was discharged after a week of hospital admission in stable condition. Patient was followed up after 4 weeks and didn't have hematemesis or melena during this period.

Figure-1: Upper GI endoscopy showing duodenal varices

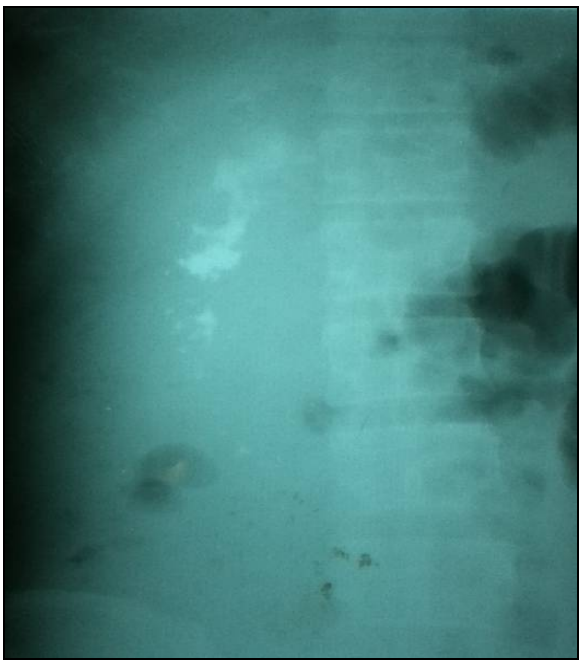

Figure-2: Post Endoscopy X-ray erect abdomen showing cyanoacrylate

DISCUSSION

Ectopic varices which account for 4–5% of upper GI bleed are dilated porto-systemic collateral located anywhere other than gastroesophageal junction. i.e., duodenum, jejunum, ileum, colon, rectum, biliary tree, and at the site of a surgical ostomy. Common causes are portal hypertension (intrahepatic and pre-hepatic), surgical procedures involving abdominal organs and vessels, anomalies in venous outflow vessels, abdominal vascular thrombosis, hepato-cellular carcinoma, secondary to band legation and familial.[3,4]

Duodenal ectopic varies are located submucosally and has afferent and efferent vessels. Afferent vessels arise from superior or inferior pancreato-duodenal vein or superior mesenteric vein and efferent drains through the Retzius's veins into inferior vena cava. Duodenal varices are commonly associated with pre-hepatic portal hypertension but may occur with intrahepatic portal hypertension.[5] Among ectopic varices duodenal varices bleed most commonly but difficult to treat especially as there is no consensus on best treatment.[6]

Bleeding from ectopic varices should always be suspected when bleeding source cannot be identified on endoscopy. Different modalities exist to diagnose ectopic varices, i.e., upper GI endoscopy, angiography, Technetium (TC-99m) labelled red blood cell scintigraphy, video capsule endoscopy, multi-slice helical CT, endoscopic ultrasound (EUS), laparoscopy or laparotomy, and colour Doppler-flow imaging. In patients when there is a suspicion of bleed from ectopic varices and endoscopy cannot identify source of bleed, nuclear magnetic resonance (NMR) with NMR-angiography is the diagnostic tool of choice and allows the identification of ectopic varices in most patients.[7]

No randomized controlled trials regarding the management of ectopic varices have been published. Only case reports using different modalities are available in the published literature. Different centres have used different modalities depending upon facilities and expertise available. Both endoscopic and surgical treatments are available. Among endoscopic treatments cyanoacrylate injection therapy and band legation are simple and effective treatment modalities. None of them appear to be superior to the other. Technically band legation is easier and effective mode of management in bleeding duodenal varices. However there have been incidences of vessel rupture after band legation. Injecting cyanoacrylate is another effective method to achieve haemostasis and causes less tissue damage.[8] Cyanoacrylate injection can also be used in case of re-bleeding after band legation.

Recently management of duodenal varix with hemoclips has been reported.[9] Among non-endoscopic management balloon-occluded retrograde transvenous obliteration (B-RTO) of ectopic varices is another effective mode of management. Recently cyanoacrylate was successfully used as embolizing agent for BRTO to control bleeding from duodenal varix. TIPS and mesocaval shunt are two other non-endoscopic measures effectively used in management of ectopic varices in different studies.[10]

CONCLUSION

Cyanoacrylate injection effectively manages ectopic duodenal varices and can be applied effectively with a simple application technique.

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