Dieulafoy's Lesion: An uncommon cause of Upper Gastrointestinal Bleeding

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Introduction

Dieulafoy's lesion (DL) is an uncommon cause of massive and recurrent gastrointestinal bleeding. It refers to an anomalous dilated artery that penetrates through the mucosa. Bleeding occurs when the vessel ruptures. Endoscopy plays a major role in diagnosis and therapy. We report a case, where endotherapy failed to achieve haemostasis and emergency surgery was required to save the life of the patient. The patient also had associated acute viral hepatitis. The characteristics of the Dieulafoy's lesion, its current diagnosis and treatment are discussed.

Case Report

23 year-old serving soldier presented with non-cholestatic jaundice of seven days duration. There was no abdominal pain or fever. The day prior to his admission, he had four bouts of hematemesis with no postural symptoms or malena. Patient had not taken any non steroidal anti inflammatory drugs (NSAID's). There was no past history of liver, pancreatico-biliary or peptic ulcer disease. He was a non-smoker and did not consume alcohol. Clinically, patient was icteric, haemodynamically stable and had mild hepatomegaly. Nasogastric aspirate was clear. On investigation haemoglobin was 10g/dl, platelets 2,00,000/cmm, prothrombin time 13/16 second (INR 1.2), bilirubin 6.5 mg/dl, aspartate amino transferase/alanine amino transferase 1340/1800 u/l and serum alkaline phosphatase 170 u/l. Endoscopy revealed clots in stomach but no gastroduodenal lesion could be identified. Ultrasonography of the abdomen was normal. Patient was managed symptomatically and observed for any recurrence of bleed. On second day, patient had a re-bleed with hypotension. Endoscopy revealed stomach full of blood and an actively spurting vascular stump just below the gastroesophageal junction on the lesser curvature suggestive of Dieulafoy's lesion. Endoscopic injection with adrenaline followed by polidocanol was given and haemostasis was achieved. Patient stabilised, but after 12 hours he had

recurrence of bleeding and lapsed into hypovolaemic shock and hypoxic encephalopathy. Haemoglobin dropped to 2g/dl with a hematocrit of 10%. Patient was taken up for emergency surgery. A vessel seen 6 cm below the gastroesophageal junction on the lesser curvature was ligated. Patient required a total of 10 pints of blood along with fresh frozen plasma in the preoperative and postoperative period. Post-surgery recovery was uneventful. Acute viral hepatitis regressed over next 4 weeks without any complications. IgM hepatitis E virus was positive.

Discussion

DL refers to an abnormally large artery that retains the large calibre of its feeding vessel as it approaches the mucosa [1]. The large vessel compresses the mucosa and causes erosion and eventually ruptures into the lumen.

DL's are mostly found in the stomach, though they have been reported from the entire gastrointestinal tract and bronchus [2]. Reported incidence varies from 1.2-6% of all cases of upper gastrointestinal haemorrhage [3,4]. In one large series from India, out of 900 cases of

Fig. 1 : Pre-operative view of bleeding Dieulafoy's lesion

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upper gastrointestinal haemorrhage, only six were due to DL (0.67%) [5]. The commonest site, is 6cm below the gastroesophageal junction on the lesser curvature of the stomach [3,6]. In Mayo series [4], of 89 patients with DL, a third were in extra-gastric locations with duodenum as the commonest site (18%) followed by colon (10%), jejunum (2%), and oesophagus (2%). There is predilection for elderly age group with mean age varying from 61-70 years in different studies [3,6,7]. In contrast, our patient was young. The Duke's study raised the possibility that the associated co-morbidities act as stress factors for precipitating bleed in DL [7]. Our patient had acute viral hepatitis. Whether acute viral hepatitis constitutes a stress for precipitating a bleed, needs further understanding of the pathophysiology of DL. The coagulation parameters were normal in our patient.

Bleeding from DL's are massive and recurrent and it is usually difficult to identify the lesion endoscopically, unless it is actively bleeding. Endotherapy is the treatment of choice for DL, with haemostasis being achieved in over 90-95% cases [3,4,6,7]. Endotherapy includes injection therapy with adrenaline or sclerosants like polidocanol, heated probe, laser photo coagulation, hemoclips and band ligation, either as monotherapy or in combination. The choice depends on locally available facilities and expertise. Surgical ligation is an alternative to endotherapy but with the success of endotherapy, it is required in less than 5% of cases [4,7,9]. Angiography with selective arterial embolisation is an option but results have been conflicting [7,8]. Endotherapy had achieved

initial haemostasis in our case but failed to prevent re-bleed. Injection therapy with adrenaline and polidocanol was done and it was not combined with heater probe coagulation or hemoclips due to non-availability.

Conflicts of Interest

None identified

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