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Case report

A challenging gastrointestinal hemorrhage after gastric bypass treated with interventional radiology

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Gastrointestinal hemorrhage post–gastric bypass surgery can be difficult to manage due to modifications in the patient's anatomy. Endoscopic, radiological, and surgical interventions can be used to achieve hemostasis. This report discusses a case of a life-threatening upper gastrointestinal bleeding in a patient 2 years after Roux-en-Y gastric bypass (RYGB), which could not be controlled endoscopically. The dilemmas faced, together with the risks and benefits of each management approach, are discussed.

Case presentation

A female 33-year old patient who had a laparoscopic RYGB 2 years previously presented with dysphagia, odynophagia, and vomiting due to stenosis at the gastrojejunal anastomosis. She was admitted electively for an esophagogastric duodenoscopy (EGD) and balloon dilation of the gastrojejunal anastomosis to treat her symptoms. Her past medical history included hypertension, RYGB, and an EGD balloon dilation of the gastrojejunal anastomosis 2 years earlier.

The elective EGD confirmed a stenosis at the gastrojejunal anastomosis, which was successfully dilated using a 20-mm balloon catheter with no intraoperative complications. The procedure was uneventful with no evidence of acute bleeding, and the patient was discharged on the same day. Twenty-four hours after the EGD, the patient presented at the emergency department with hematemesis and epigastric pain. She was hemodynamically stable and her initial hemoglobin was 89 g/L (reference range 114–150 g/L). The patient was admitted to the hospital and she was resuscitated with intravenous fluids and 2 units of blood transfusion, which kept her hemodynamically stable. Her hematemesis persisted and her hemoglobin dropped to 74 g/L on repeat testing.

Management

The patient underwent an emergency EGD under general anesthesia. A small bleeding point caused by a mucosal tear from the upper part of the gastric pouch was identified. There was no bleeding at the site of the previously dilated gastrojejunal anastomosis. Attempts made to stop the bleeding endoscopically included placement of multiple clips along the tear, injection of adrenaline, and application of a foam layer, but these were all unsuccessful. The endoscopic intervention was not effective in controlling the bleeding because the tear was in the most proximal part of a very small pouch, making it difficult to visualize and control with multiple clips. At this point, a multidisciplinary team discussion was made on how to proceed and the risks and benefits of surgery were considered.

A decision was made to proceed instead with angiography and, if the arterial source of bleeding was identified, to embolize the source of bleeding. The patient remained under general anesthesia and was transferred to the radiology department. Angiography identified the bleeding point to be a small branch of the left gastric artery (Figs. 1 and 2); this was successfully embolized with multiple coils and provided hemostasis (Fig. 3). The patient made a full

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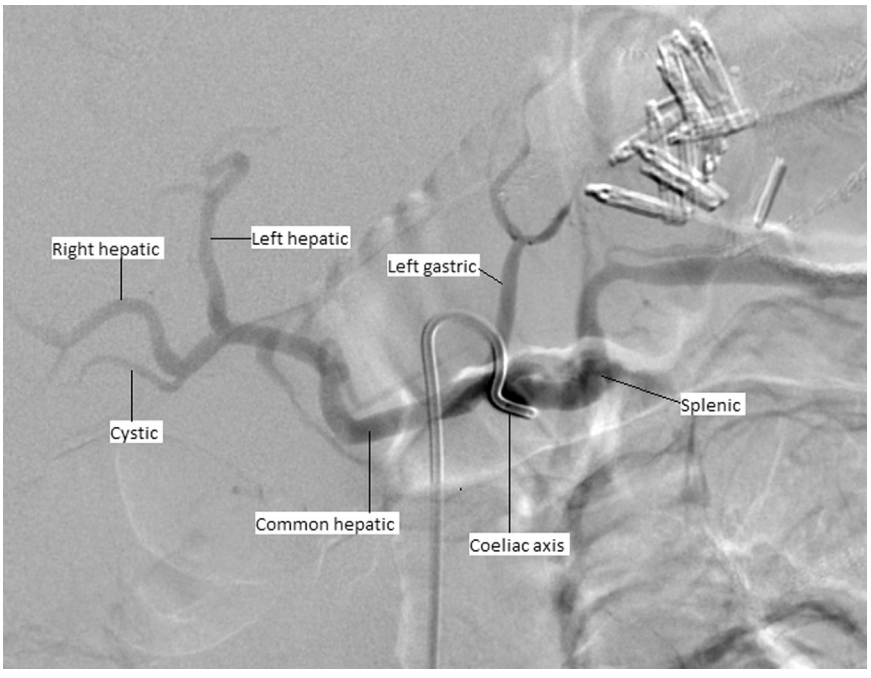

Fig. 1. Angiography depicting the arterial anatomy.

recovery without complications and was discharged after 4 days. She was followed up in the clinic, where she was eating well without difficulty and had no further complications.

Discussion

Bleeding after gastric bypass is a serious complication that occurs in the range of .8% to 4.4% of patients [1,2]. The identification of the site of bleeding is important in determining subsequent management. Intraluminal gastrointestinal bleeding may occur from staple lines at the gastrojejunostomy, gastric pouch, jejuno-jejunostomy, or the bypassed remnant stomach [1]. Hematemesis suggests bleeding at the gastrojejunostomy or the gastric pouch, whereas bright red rectal bleeding or melena may indicate bleeding from the gastric remnant or the jejunal–jejunal anastomosis. Gastrointestinal bleeding in the immediate

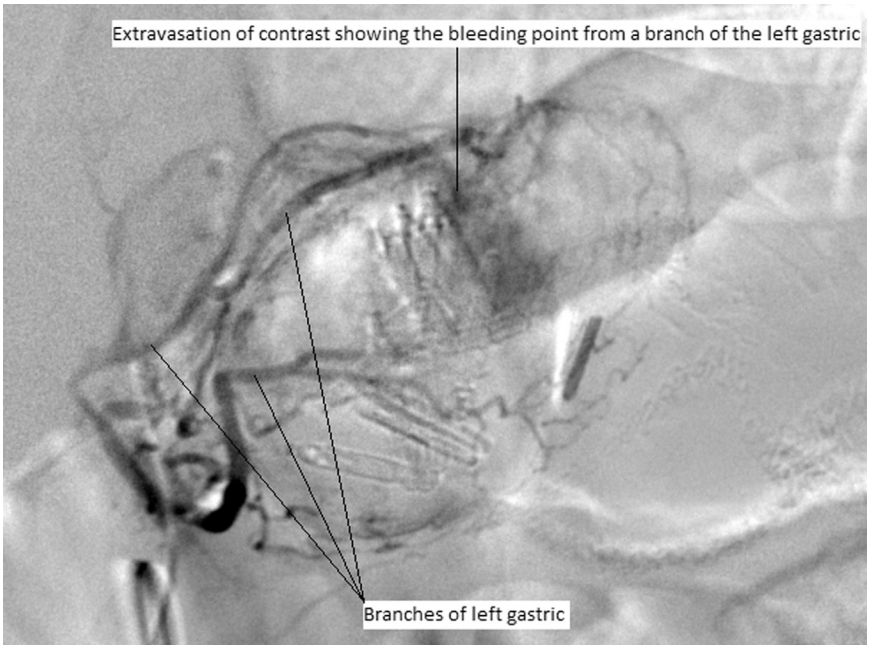

Fig. 2. Angiography showing the source of the bleeding to be a small branch of the left gastric artery.