SURGERY CASE REPORTS INTERNATIONAL

OPEN ACCESS

Case Presentation

Compiled Date: October 31, 2026

Gastric Glomangioma Presenting with Hematemesis: A Rare Cause of Upper Gastrointestinal Bleeding

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Abstract

Background: Glomangiomas are rare benign neoplasms arising from the glomus body, typically found in the dermis and subcutis of extremities. Visceral involvement, particularly of the stomach, is extremely uncommon and may mimic more common submucosal lesions such as gastrointestinal stromal tumors (GISTs). Clinical presentation with upper gastrointestinal bleeding is rare but clinically significant.

Case report: We report a case of a 30-year-old female who presented with acute hematemesis, malena and epigastric discomfort. Upper gastrointestinal endoscopy revealed a large submucosal mass like lession noted in the distal body of stomach with red colour sign. Contrast-enhanced CT showed a well defined polypoidal lesion measuring 3.8*2.4*3.2 cm seen in distal body of stomach, suggestive of a stromal tumor. The patient underwent laparoscopic resection of the lesion. Histopathological examination revealed a well-circumscribed tumor, richly vascular and shows sheets and nest of cells admixed with multiple vessels. Consistent with glomangioma. Immunohistochemistry was positive for smooth muscle actin (SMA) and Caldesmon and negative for CD117 and S100, confirming the diagnosis. Postoperative recovery was uneventful, and the patient remained asymptomatic at 6-month follow-up.

Conclusion: Gastric glomangioma is a rare benign vascular tumor that can present with gastrointestinal bleeding and mimic GIST radiologically and endoscopically. Awareness of this entity and histopathological confirmation are crucial for accurate diagnosis and management.

Keywords: Glomangioma; Stomach; Hematemesis; Submucosal tumor; Gastrointestinal bleeding

Introduction

Glomus tumour is a mesenchymal tumour composed of modified smooth muscle cells, representing a neoplastic counterpart of the perivascular glomus bodies, which regulates arteriolar blood flow [1]. Glomus tumor can occur almost anywhere in the body but commonly in the skin and soft tissue of distal extremities, particularly in the sub-ungual region where glomus bodies are abundant [2]. Gastrointestinal tract involvement is uncommon, the stomach is almost exclusively affected.[Pre-operative diagnosis of a gastric Glomus tumor can be challenging given its rarity and overlapping features with other mesenchymal lesions [3]. The great majority of glomus tumors are benign and are cured by simple local excision, as presented in our case. However, a 10% risk of local recurrence is likely because of incomplete extirpation. Glomus tumor proper (also known as solid glomus tumor), the most common variant (75%), has poor vasculature and scant smooth muscle component. Glomangioma, the second most common variant (20%), has a prominent vascular component. Glomangiomyoma, which is the rarest variant (5%), has prominent vascular and smooth muscle components [4]. Here, we present a rare case of gastric glomangioma mimicking Gastrointestinal Stromal Tumour (GIST) clinically and radiologically.

Patient Information

Demographics: 30-year-old female.

Main Concerns: Blood in vomitus, associated with malena.

Medical History: No significant comorbidities

Clinical Findings

A 30-year-old female came to emergency with blood in vomitus since 4 days associated with malena. Patient HB 4.6 gm/dl on admission and not having co-morbidities and any previous medical and surgical history. Examination revealed - She was afebrile, hemodynamically unstable (P-120/min; BP-80/50 mmHg, Spo2-98% RA), Mild epigastric tenderness with no obvious lump on palpation and no evidence of guarding and rigidity. Digital rectal examination suggestive of malena. No lymphadenopathy. Patient was admitted in Intensive care unit and stabilized, 3.PCV -blood transfused given, investigated and optimised for elective surgery.

Timeline

Day	Event
4 days	Complaint of mild pain in epigastrium, with blood in vomitus.
Day 0	Admission to emergency department with epigastric pain and hemetemesis. **HB-4.6 g/dl**
Day 1	3.PCV transfused and patient was stabilized. Upper GI endoscopic evaluation revealed a large sub-mucosal mass like lesion in distal body of stomach with red colour sign - suggestive of GIST.
Day 2	Taken for Elective Surgery. Mass was excised.
POD 3	Started on Oral Sips. Daily HB monitored
POD 7	Drain removed, Hb 12.2 g/dl
POD 9	Discharge

Diagnostic Assessment

Laboratory Tests: HB 4.6 g/dl, WBC- 8800, Plateletes-3 lakh. Normal serum creatinine (0.8 mg/dL) and normal electrolytes.

Imaging: Chest and abdomen xray- normal.

USG: polypoidal mass in gastric antrum. No calcification. Shows internal vascularity.

Upper GI endoscopic evaluation revealed a large sub-mucosal mass like lesion in distal body of stomach with red colour sign - suggestive of GIST **(Figure 1)**.

Contrast-Enhanced CT Abdo: Showed well defined polypoidal lession measuring 3.8*2.4*3.2 cm seen in distal body of stomach. The lesions are arterially hyper enhancing suggestive of GIST **(Figure 2)**.

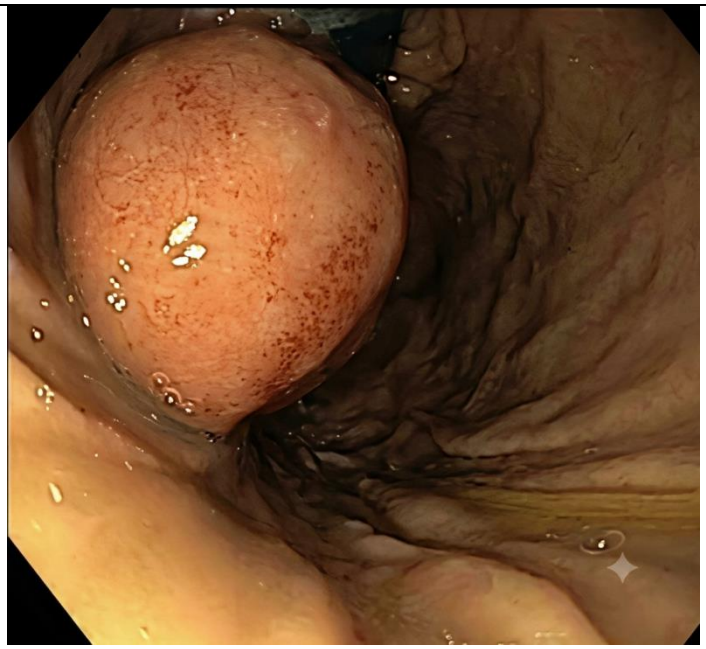


Figure 1: Endoscopy photo - Large submucosal mass in distal greater curvature of stomach with red color sign.



Figure 2: CT Scan- showed well defined polypoidal lession measuring 3.8*2.4*3.2 cm seen in distal stomach.

Surgical Intervention

Patient taken for elective laparoscopic excision of mass. Intraoperative 4*3*2.5 cm mass seen in lower greater curvature region with mucosal erosion, well defined, capsulated smooth margin, exophytic **(Figure 3)**. For removing it - linear stappler fired along greater curvature -tumor excised.

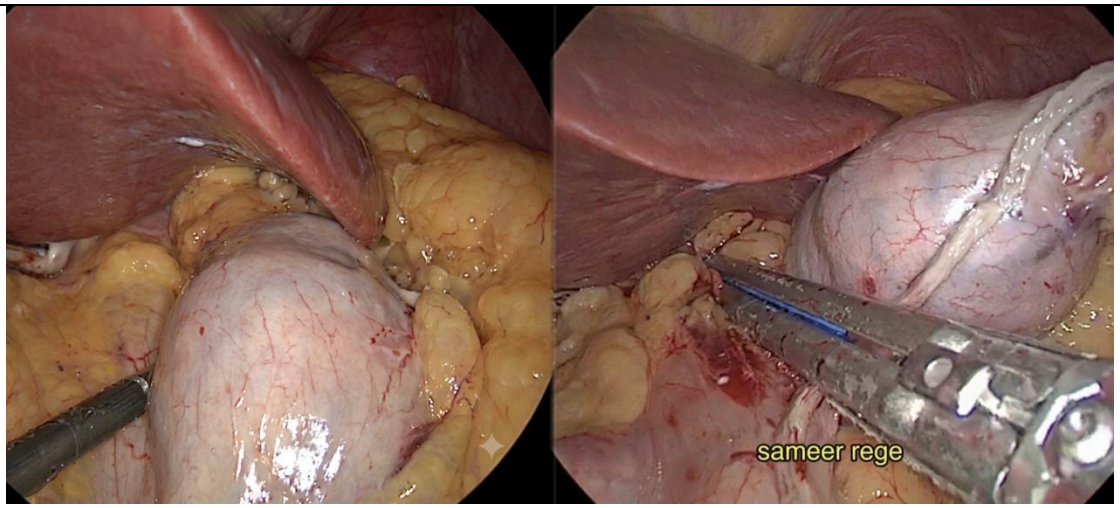


Figure 3: Intraop Photo- Blue color stappler fired along greater curvature of stomach - Laparoscopic excision of Gastric Glomangioma.

Follow-up and Outcomes

The patient extubated and shifted to ICU for observation. Daily drain output and vitals monitored. Haemoglobin monitored daily.POD 3 started on liquid diet, tolerated well, stepped up to soft diet. Hb-12.2 g/dl. No fresh episodes of hemetemesis. POD 5 patient shifted to general ward. POD-7 drain output was low and serous, it was removed and POD 9-patient discharged with normal Hemoglobulin and without any post op complications.

Histopathology Report

Gross specimen: Nodular mass 4.5*3.6*2.4 of antrum, on cut section, a well circumscribed nodular mass, grey white to yellow in colour and firm in consistency is seen. Mass restricted to wall **(Figure 4)**.



Figure 4: Post op photo- Gross Specimen- Nodular mass 4.5*3.6*2.4 cm.

Microscopy: Mass extending upto overlying mucosa which is ulcerated. Richly vascular and shows sheets and nest of cells admixed with multiple vessels - many showing staghorn appearance. The tumor cell are monotonous have moderate amount of eosinophilic to clear cystoplasm and round small nuclei with fine chromatin. No mitosis and necrosis seen **(Figure 5)**.

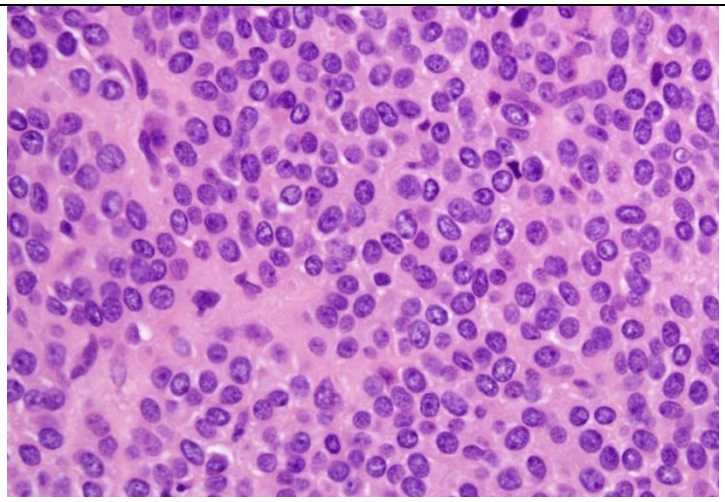


Figure 5: HPE photo- monotonous tumor cells having moderate amount of eosinophilic to clear cytoplasm and round small nuclei with fine chromatin.

Immunohistochemistry (IHC) study- revealed Strongly SMA (smooth muscle actin) and Caldesmon positive. Chromagranin and desmin negative. S 100 and CD 117 was negative. Therefore it strongly suggestive of **Glomangioma.**

Discussion

Pathologically, glomus tumors can be subdivided into three main subtypes. Glomus tumor proper, glomangioma, and glomangiomyoma based on its components. Round glomus cells are characteristic of glomus tumor proper; blood vessels in glomangioma; and spindle cells in glomangiomyoma, the rarest histological subtype **[5]**. Solitary glomus tumors are the most common and are often seen in the third and fourth decades of life **[1,6]**. And gastric glomus tumor with a female to male ratio of 1.6:1 and located in gastric antrum, as is seen in the case reported herein. Gastric Glomus cells show diffuse strong positivity with characteristic accentuation of cell borders for SMA in virtually all cases, h-Caldesmon in >60% of cases **[2,3]**. SMA and h-caldesmon were strongly positive in this case. Most gastric glomangiomas are benign and segmental resection, or partial gastrectomy with clear margins is the treatment of choice and is curative.

Conclusion

Glomus tumor mimics GIST in presentation, difficult to diagnose without HPE and IHC markers.

Our case is unique as patient came to emergency with severe haemoglobin drop and malena with hypotension. Managed with complete laparoscopic excision of lesion without gastrectomy. All features consistent with glomangioma of stomach.

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Citation of this Article

Umare P and Rege S. Gastric Glomangioma Presenting with Hematemesis: A Rare Cause of Upper Gastrointestinal Bleeding. Surg Case Rep Int. 2026;9(10):2001-2007.

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