

A Hidden Source for Upper Gastrointestinal Bleeding

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A 50-year-old lady presented with bloody vomiting and melena since four days prior to admission. Her medical history was significant only for hypertension which was controlled by a 5 mg daily dose of amlodipine. She occasionally took NSAIDs. On admission, the physical exam revealed only mild tachycardia and pallor. Hemoglobin was 9.7 g/dl, which subsequently declined to 7.9 g/dl. The first upper gastrointestinal (GI) endoscopy was remarkable for a paraesophageal hiatal hernia, with no site of bleeding detected. The second upper GI endoscopy did not find any source for bleeding. A third endoscopic examination revealed a new finding (Figures A and B). What's your diagnosis?

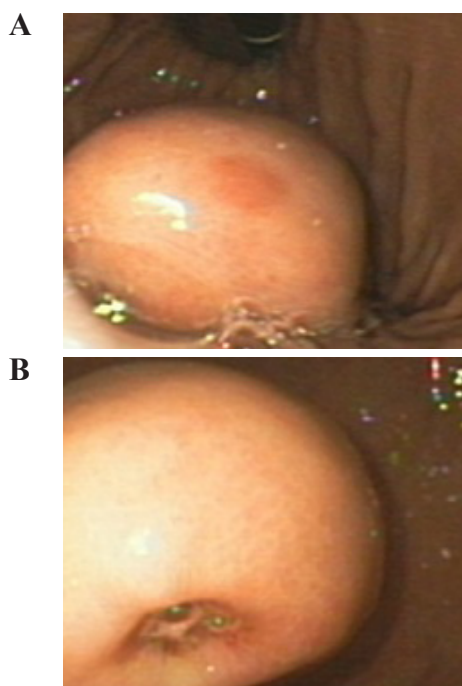


Fig.A,B: Endoscopic view of fundus showing a mass with smooth surface (A) and an overlying ulcer (B)

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Answer:

Gastrointestinal stromal tumor (GIST) in a paraesophageal hiatal hernia

The patient underwent a laparotomy and gastric incision. A 6×6×3 cm mass was detected in the fundus of the stomach without extension to the serosa, which was excised (Figure C). Microscopic examination of the lesion revealed low grade spindle cell gastrointestinal stromal tumor (GIST) with no hypercellularity, hemorrhage, or necrosis. Mitotic activity of 0-1 per 10 high power field was noted (Figure D). Immunohistochemical staining was strongly positive for CD117 antigen (Figure E).

The most common primary site for GISTs is the stomach, more frequently in its fundus. GISTs are more prevalent in males.¹ GISTs (>95% of lesions) characteristically express CD117 on immunohistochemical assays.² The most presenting symptoms are GI bleeding, abdominal mass and abdominal pain.³ In the stomach, these tumors appear as submucosal lesions visualized by endoscopic examination. Endoscopic biopsies from the suspected lesions are not recommended due to low diagnostic yield and the possible risk of bleeding. Endoscopic ultrasound (EUS) is a useful tool for diagnosis and predicting the malignant versus benign behavior of these tumors.⁴ Complete surgical resection is the mainstay of treatment for patients with primary localized GIST.⁵ Surgical resection is recommended for all symptomatic lesions, those larger than 2cm in diameter, and smaller lesions that have high risk EUS features.⁶ Tyrosine kinase inhibitors such as imatinib have a documented role in the treatment of metastatic or unresectable tumors and may also be effective as an adjuvant therapy for prevention of disease recurrence.⁷ It is documented that a 36-month course of adjuvant imatinib is effective to improve recurrence-free and overall survival following surgical resection in high risk GISTs.⁸

This case is an example of a mysterious source of upper GI bleeding. It should be kept in mind that significant lesions such as GISTs may be discovered in the hidden areas of the GI tract. Careful visualization of the stomach with specific attention for a retroflexed endoscopic examination of the cardia

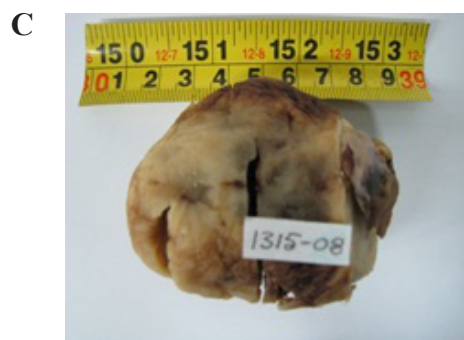


Fig.C: The macroscopic view of the surgically excised gastric mass.

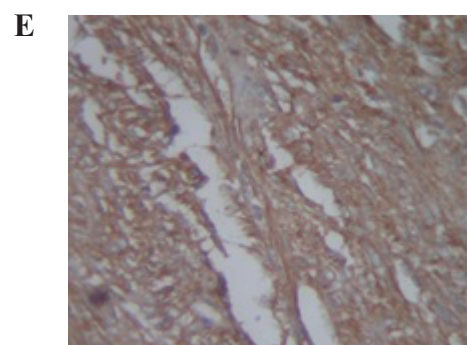
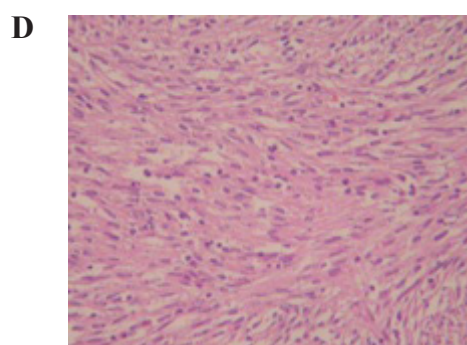


Fig.D,E: The histological section of the resected tumor (H&E×400) (D) and immunohistochemical staining (×400) (E).

and fundus should be emphasized more to decrease missing rates for upper GI bleeding sources.

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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