

Gastric Schwannoma Diagnosed by Gastric Biopsy

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INTRODUCTION

- Schwannomas are an uncommon subtype of benign gastrointestinal mesenchymal tumor found most frequently in the stomach originating from the Auerbach myenteric nerve plexus.
- Gastric schwannoma is frequently mistreated as it shares many similarities with GIST.
- We present the case of a patient with early satiety and iron deficiency anemia who was found to have gastric schwannoma on upper endoscopy.

CASE DESCRIPTION

- A 59-year-old female with endometriosis and iron deficiency anemia on oral iron supplementation presented to our clinic with complaints of fatigue, frequent post-prandial cough, early satiety, and dark stools.
- She reported chronic NSAID use and denied abdominal pain, dysphagia, nausea, and unexplained weight loss.
- Initial CBC demonstrated a hemoglobin of 9.2 g/dL with positive stool guaiac testing. Cessation of NSAIDs led to hemoglobin improvement within normal limits.
- EGD revealed a roughly 5 cm smooth submucosal mass in the distal gastric body along the greater curvature with firm consistency and a central depression (Figure 1-A).
- Colonoscopy was unremarkable.
- Abdominal CT demonstrated an exophytic mass within the gastric wall with relatively homogenous attenuation and enhancement (Figure 1-B).
- The patient resumed a normal diet 2 days after surgery without complications.

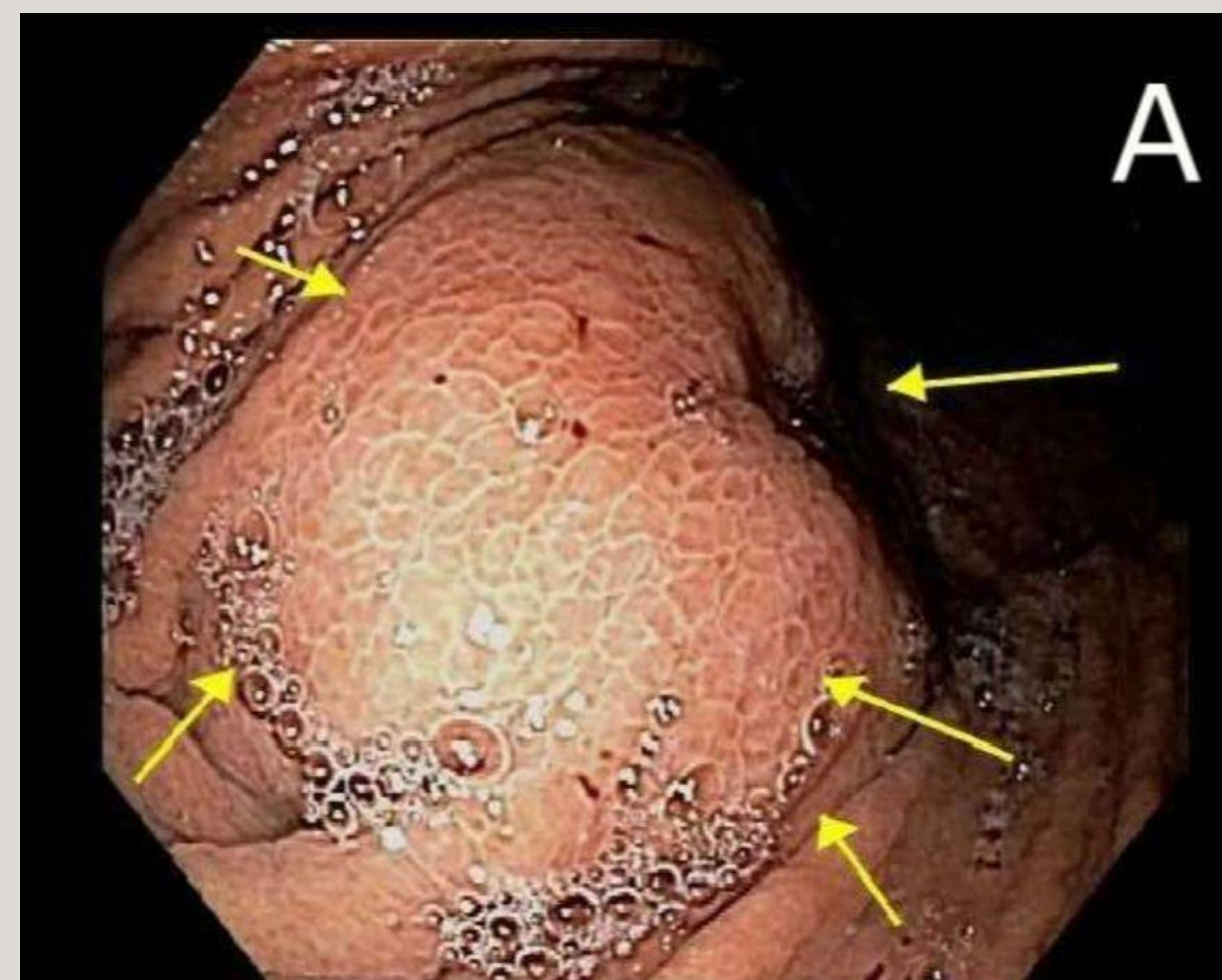


Figure A: Endoscopic imaging revealing a 5 cm smooth submucosal mass in the distal gastric body along the greater curvature with firm consistency and a central depression.

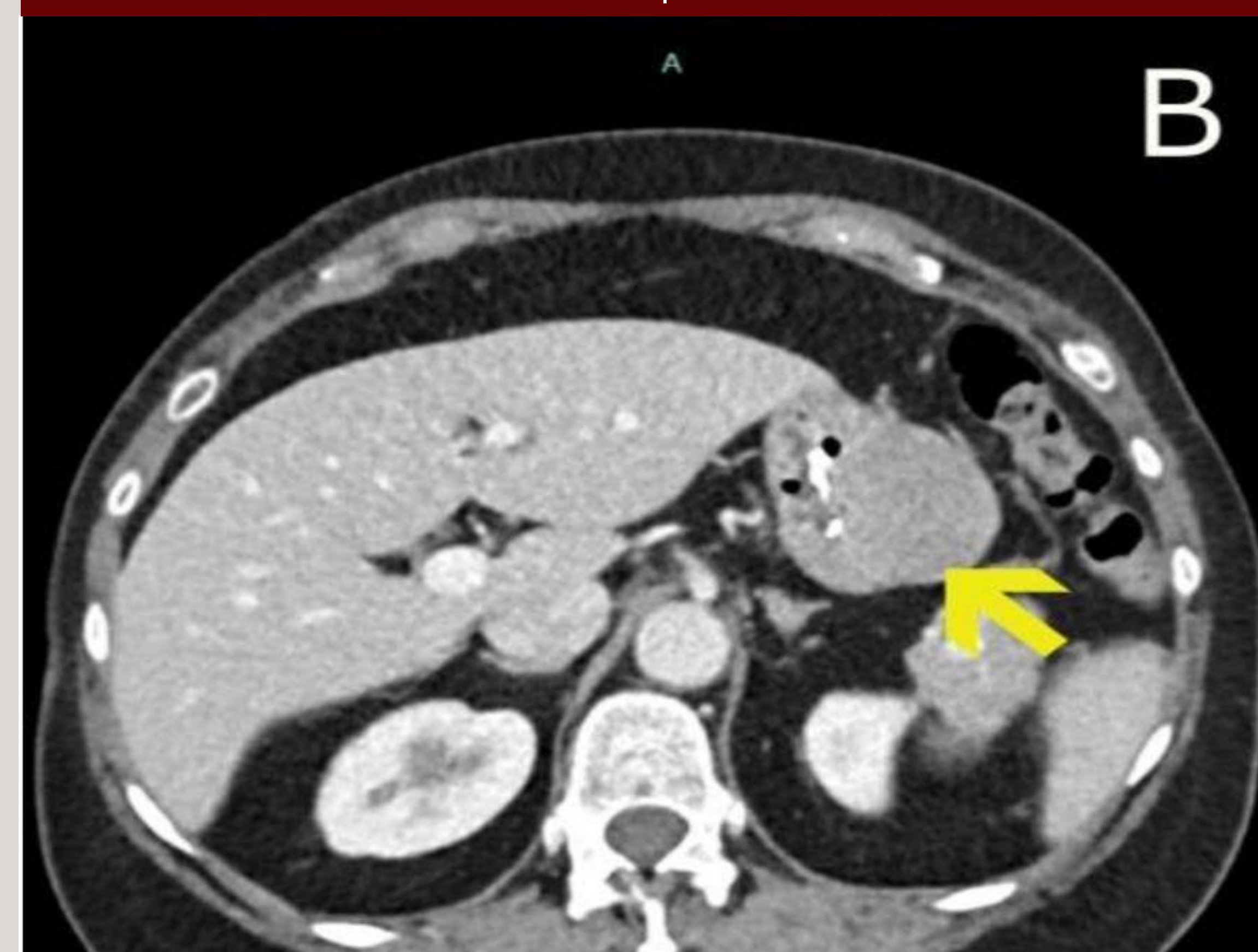


Figure B: Abdominal CT demonstrated an exophytic mass within the gastric wall with relatively homogenous attenuation and enhancement.

PATHOLOGY

- Endoscopic ultrasound with FNA of the mass revealed pathology suspicious for a stromal cell neoplasm and elective laparoscopic partial gastrectomy was performed with findings of a 4.7 x 3.7 x 3.6 cm submucosal mass consistent with schwannoma with Sox10/S100 positivity and DOG-1/c-KIT negativity.

DISCUSSION

- Gastric schwannoma is frequently misdiagnosed as GIST due to similar prevalence, clinical symptoms, and appearance.
- Some studies suggest a misdiagnosis rate of up to 96.7%. Key to the diagnosis is the presence of S-100 positivity in schwannoma as GIST is negative for this marker. Additionally, DOG-1 and c-KIT are markers positive in GIST but negative in schwannoma.
- Most gastrointestinal schwannomas are solitary with sizes ranging from < 1 cm to 28 cm.
- Endoscopic ultrasound with FNA biopsy is recommended to increase chance of preoperative diagnosis by approximately 10%.
- Treatment modalities vary based on tumor size, with endoscopic resection suggested for tumors < 3 cm in diameter and surgical excision for larger sized masses.
- Malignant transformation is extremely rare. It occurs in roughly 2% of cases with S-100 expression decreasing as dedifferentiated Schwann cells form.

REFERENCES

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