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Endoscopic Mucosal Resection of a Gastric Perineurioma

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CASE REPORT

A 47-year-old woman with no significant medical history presented to an outside hospital with a 3-week history of intermittent nausea, vomiting, abdominal pain, and one episode of hematemesis. Laboratory evaluation was unrevealing. Upper endoscopy revealed a 12-mm umbilicated subepithelial lesion with a reddish depression located at the incisura (Figure 1). Superficial biopsies demonstrated mild chronic gastritis. Computed tomography of the abdomen and pelvis revealed no suspicious lesions. Her symptoms resolved shortly after her outside hospital admission and were believed to be due to a viral gastroenteritis. She was referred to our institution for endoscopic ultrasound (EUS) and possible resection. EUS revealed a 12-mm hypoechoic subepithelial lesion originating from the deep mucosa (layer 2) (Figure 2). Endoscopic submucosal dissection was considered, although endoscopic mucosal resection (EMR) was believed to be adequate because the lesion was small enough to fit into a cap. Band EMR was performed with complete resection of the lesion. Histology revealed bland spindle cells in a myxoid stroma arranged in small fascicles with a whorling appearance (Figure 3). Immunohistochemical (IHC) staining revealed that the tumor cells were positive for GLUT-1 but were negative for desmin, CD117 (c-KIT), CD34, epithelial membrane antigen, and S-100 consistent with gastric perineurioma. Interval upper endoscopy and EUS were performed at 4 months without evidence of residual or recurrent lesion.

Gastric perineuriomas are exceedingly rare and should be distinguished from other spindle cell/mesenchymal lesions. The differential diagnosis for a perineurioma includes gastrointestinal stromal tumors (GISTs), inflammatory fibroid polyps, Schwann cell hamartomas, fibromatosis, and inflammatory myofibroblastic tumors.¹ IHC testing can help differentiate these

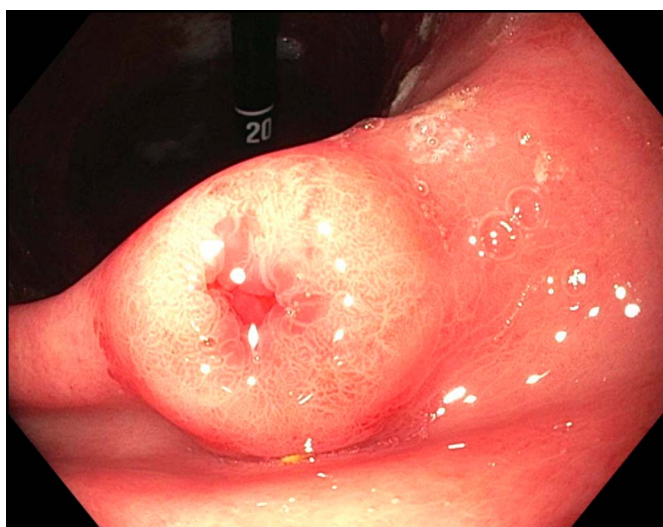


Figure 1. Esophagogastroduodenoscopy demonstrated a 12-mm umbilicated subepithelial lesion at the incisura.

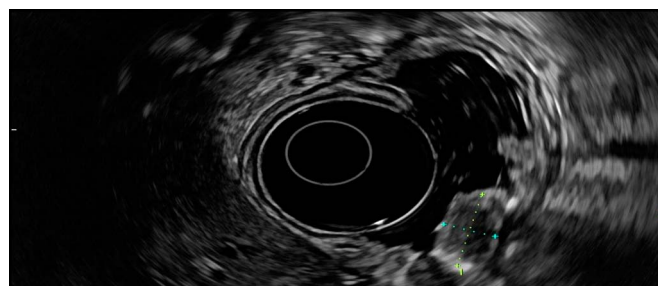


Figure 2. Endoscopic ultrasound demonstrated a 12-mm hypoechoic lesion in the deep mucosa (layer 2).

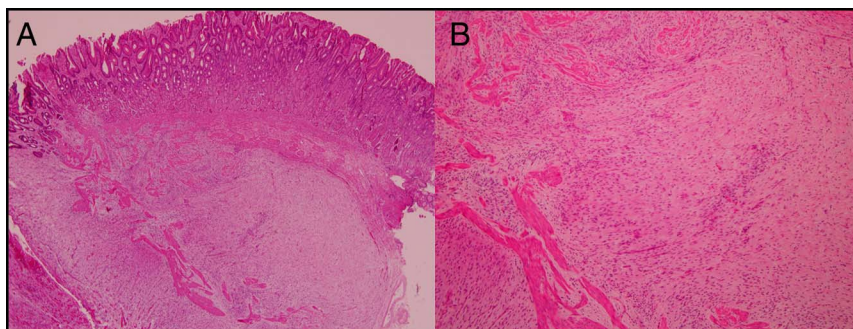


Figure 3. Histology demonstrated bland spindle cells in a myxoid stroma with a whorling appearance.

lesions because GIST typically stain positive for CD117, CD34, and DOG1, whereas neuronal lesions express S100 which is negative in perineuriomas.² GLUT-1 has been demonstrated to be a reliable IHC marker for perineurial cells.³ It is important to differentiate a gastric perineurioma from the more common GIST because gastric perineuriomas are benign, whereas GIST can be more aggressive.

To our knowledge, this is the fifth reported case of gastric perineurioma and second reported case in the United States. Furthermore, these benign lesions can be managed endoscopically with EMR. Given the rarity of this lesion, there are currently no standard recommendations for follow-up endoscopy.

DISCLOSURES

Author contributions: M. Weaver wrote and revised the manuscript for intellectual content and is the article guarantor. R. Rais and J. Ritter edited the manuscript. V. Kushnir revised the manuscript for intellectual content and approved the final version.

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