

The Xiphisternum Mimicking a Gastric Subepithelial Lesion

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INTRODUCTION

The xiphisternum is a cartilaginous structure surrounding a core of bone. It is located inferior to the sternal body and enlarges with age. The process is usually directed anteriorly relative to the sternal body and the abdominal cavity. However, in approximately 10% of individuals the bony structure is angulated more than 10 degrees posterior to the orientation of the sternal body.

CASE PRESENTATION

A 66-year-old man presented to an outpatient gastroenterology clinic for assessment of diarrhea and bloating. He had a background medical history significant for colon adenocarcinoma with prior right hemicolectomy, prostate cancer, and B Cell lymphoma. During diagnostic EGD, an incidental medium-sized gastric subepithelial lesion was identified (Figure 1).

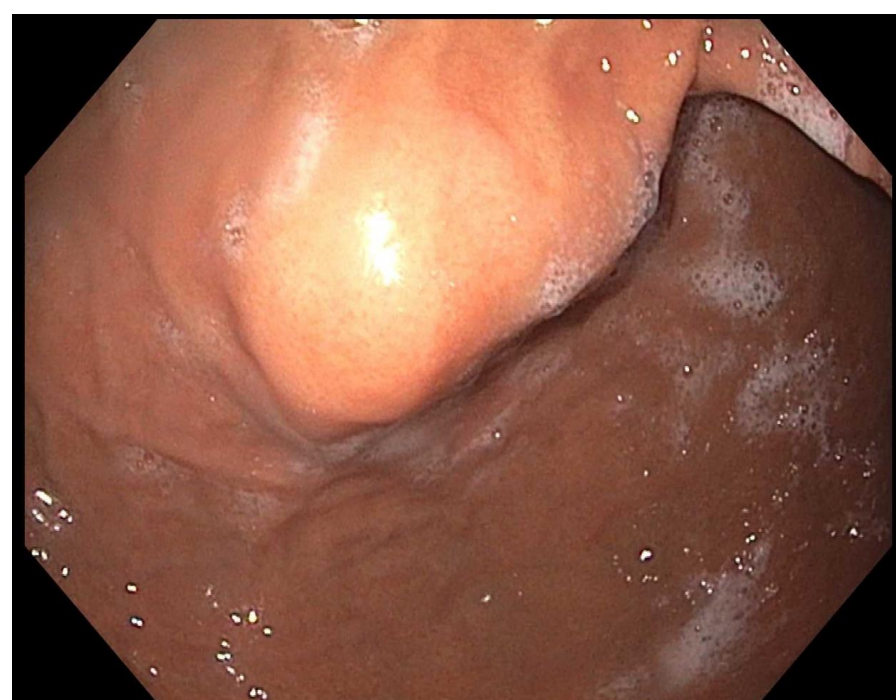


Figure 1: Subepithelial lesion anterior to gastric wall noted during EGD.

CASE MANAGEMENT

Close visual inspection during EGD demonstrated no mucosal abnormalities. With palpation of the epigastrium, the lesion was visualized causing indentation on the anterior wall of the gastric body. With respiration, the stomach “rolled over” this lesion, suggesting that the origin was extramural. Biopsy of the lesion demonstrated gastric mucosa with foveolar hyperplasia and minimal chronic inflammation. Endoscopic ultrasound was obtained for further characterization and demonstrated a hyperechoic, multilayered, shadowing lesion external to the stomach. (Figure 2).

A review of a prior abdominal CT, performed for unrelated reasons, clarified the underlying etiology for the lesion identified during endoscopy (Figure 3). The CT image demonstrates a posteriorly directed xiphisternum adjacent to the gastric body, causing protrusion of the gastric wall into the stomach which appeared as a subepithelial lesion during endoscopy. This anatomical variant was not related to his presentation, so no intervention was pursued.

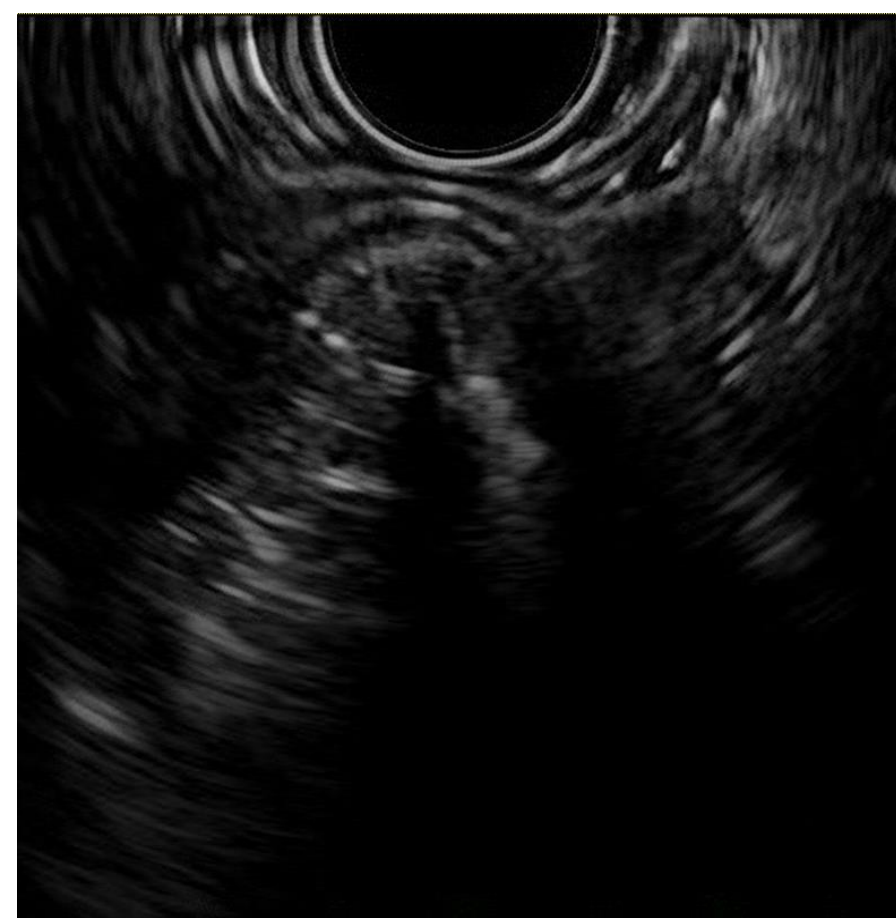


Figure 2: Endoscopic ultrasound of gastric lesion demonstrating a hyperechoic, multilayered, shadowing lesion external to the stomach



Figure 3: Computed Tomography of abdomen, sagittal view, demonstrating a posteriorly directed xiphisternum adjacent to the gastric body.

CONCLUSIONS

In this case, a 66-year-old male underwent upper endoscopy, with an incidental finding of an anterior, medium-sized, gastric subepithelial lesion. Further imaging revealed this was due to a posteriorly oriented xiphisternum exerting mass effect and causing protrusion of the anterior gastric wall into the stomach. This anatomical variant was not causing the patient any symptoms, and so no intervention was pursued.

Given this patient's history, it would also be important to consider lymphoma or compressive lymphadenopathy as a differential diagnosis. However, biopsy obtained during EGD was not consistent with such.

Awareness of this anatomical variant amongst Gastroenterologists is important to prevent unnecessary investigations. In this instance, an endoscopic finding was referred for biopsy and endosonographic evaluation. It is likely that with thoughtful clinical evaluation during the EGD (e.g., location, probable extramural location, palpation), these additional steps could have been avoided.

REFERENCES

1. Maigne J, Vareli M, Rousset P, Cornelis P. Xiphodynia and prominence of the xyphoid process. Value of xiphosternal angle measurement: three case reports. Joint Bone Spine 2010 Oct;77(5):474-6. doi: 10.1016/j.jbspin.2010.04.009. Epub 2010 Jun 2. PMID: 20627792.