UNIVERSITY OF SOUTH ALABAMA

Second Time is The Charm: Negative Biopsy Signet Ring Cell Adenocarcinoma

USA HEALTH
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Introduction

Signet ring cell adenocarcinoma is a rare histological subtype of adenocarcinoma that can arise in the gastrointestinal tract.

It can present as malignant gastric outlet obstruction.

Endoscopic biopsy has poor sensitivity to detect the malignancy.

We present the case of a 65-year-old female with gastric outlet obstruction who was found to have malignant signet ring cell adenocarcinoma in the antrum after a first negative biopsy.

Case report

A 65-year-old female presented with acute on chronic anemia, melena, nausea, vomiting, and decreased appetite for 3 weeks. Her abdominal computed tomography (CT) and esophagogastroduodenoscopy (EGD) had findings concerning for gastric outlet obstruction (Figure 1).
Six biopsies were taken from the pylorus, that showed severe chronic active gastritis with ulceration, and no evidence of adenocarcinoma.

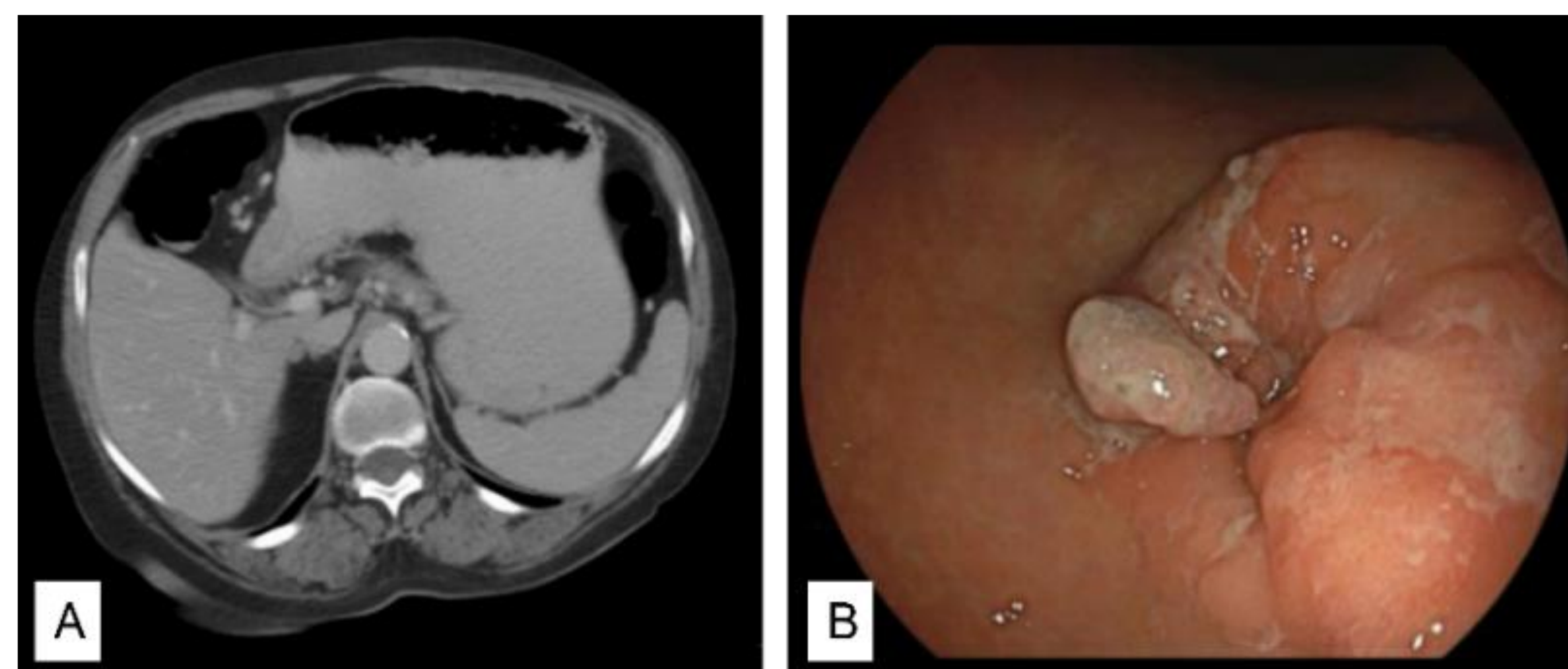

Figure 1. CT scan shows pyloric thickening and distention of the stomach (A). EGD shows circumferential area of erythema and edema in the pylorus that was difficult to pass with adult gastroscope (B).

The patient was discharged with proton pump inhibitor therapy and one month follow up for reevaluation of the pyloric ulceration.
Repeat CT and EGD redemonstrated the distention of the stomach and the pyloric thickening, with adjacent mesenteric lymphadenopathy and possible omental involvement. Multiple biopsies were taken and showed poorly differentiated invasive adenocarcinoma with signet ring cell differentiation.
A diagnostic laparoscopy was performed to obtain cytology and biopsies of the omentum. Pathology of the great omentum was positive for metastatic adenocarcinoma.
An enteral self-expandable metal stent was placed, and patient was referred for palliative treatment.

Discussion

Gastric outlet obstruction can be the result of benign diseases, like peptic ulcer disease which was the most common cause until late 1970s. Malignant causes are responsible for more than 50% of cases currently.

Multiple sources should be considered when diagnosing the etiology of gastric outlet obstruction, including clinical presentation, advanced imaging, laboratory evaluation and endoscopy.

Although endoscopy is a very useful tool to identify masses and obstruction, it has poor sensitivity to detect malignant obstruction (37%) when compared to surgical evaluation.[1] Therefore, negative endoscopic biopsy results should not be used to rule out malignant obstruction, and clinicians should always keep a high index of suspicion for malignancy with any case of gastric outlet obstruction.

References

1. Awan A, Johnston DE, Jamal MM. Gastric outlet obstruction with benign endoscopic biopsy should be further explored for malignancy. Gastrointest Endosc. 1998;48(5):497-500. doi:10.1016/s0016-5107(98)70091-4