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ENDOMETRIOSIS CAN CAUSE GASTRIC OBSTRUCTION

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ABSTRACT

Introduction: Gastric outlet obstruction is commonly associated with malignancies and benign conditions such as peptic ulcer disease and Crohn's disease. This report presents an uncommon instance of gastric endometriosis leading to gastric outlet obstruction, a condition that should be considered in the differential diagnosis.

Case description: A 37-year-old female presented with persistent postprandial vomiting occurring approximately 30 minutes after meals, along with significant weight loss of 25.4 kg over 2.5 months. Her medical history included a subtotal colectomy with ileo-distal sigmoid anastomosis for slow transit constipation and a total abdominal hysterectomy with bilateral salpingo-oophorectomy for endometriosis. Clinical examination revealed abdominal tenderness and a vague epigastric mass. An abdominal CT scan identified a 5 cm mass arising from the pylorus and duodenal wall, with associated pathological lymph node enhancement. Despite multiple endoscopic biopsies, histological results were non-diagnostic due to the submucosal nature of the lesion; technical limitations prevented the capture of endoscopy images. Due to the severity of symptoms and a strong clinical suspicion of a gastrointestinal stromal tumour (GIST), the patient underwent a Whipple's resection. Histopathological analysis of the resected specimen unexpectedly confirmed gastric endometriosis.

Conclusion: This case highlights the need to consider endometriosis in the differential diagnosis of gastric outlet obstruction, particularly in women with a history of endometriosis or prior gynaecological surgeries. The discrepancy between imaging findings and negative biopsy results underscores the limitations of standard endoscopic biopsy in diagnosing submucosal lesions. Endoscopic ultrasound-guided biopsy or laparoscopic biopsy should be considered when standard biopsies are non-diagnostic. Early recognition of this rare condition can prevent delays in treatment and improve patient outcomes.

KEYWORDS

Gastric outlet obstruction, endometriosis, submucosal gastric lesion, endoscopic ultrasound, histopathology, Whipple's resection

LEARNING POINTS

- Endometriosis can cause gastric obstruction and should be considered in the differential diagnosis, especially in women with a history of endometriosis.
- Endoscopic biopsy may miss the diagnosis due to the submucosal nature of gastric endometriosis.
- Endoscopic ultrasound-guided fine-needle aspiration or laparoscopic biopsy should be considered before proceeding with major surgery.
- A trial of medical therapy, such as hormonal suppression, may be an option in some cases before considering surgical intervention.

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INTRODUCTION/BACKGROUND

Gastric outlet obstruction is characterised by a mechanical blockage impairing gastric emptying, leading to symptoms such as nausea, vomiting, abdominal pain and significant weight loss[1]. It is typically caused by malignancies, peptic ulcer disease or Crohn's disease, but rare causes such as gastric endometriosis must also be considered[2,3].

Endometriosis, a chronic oestrogen-driven inflammatory disorder, typically involves pelvic organs but can rarely affect extrapelvic sites, including the gastrointestinal tract[4]. Gastric involvement is exceptionally rare and presents a diagnostic challenge due to its submucosal location. This report describes a unique presentation of gastric endometriosis causing gastric outlet obstruction, highlighting the diagnostic limitations of standard biopsies and discussing alternative diagnostic and therapeutic approaches.

CASE DESCRIPTION

A 37-year-old female was referred to the gastroenterology clinic in August 2016 with a 2.5-month history of recurrent postprandial vomiting and significant weight loss of 25.4 kg. Her medical history included a subtotal colectomy in 2014 for slow transit constipation and a total abdominal hysterectomy with bilateral salpingo-oophorectomy in 2003 for endometriosis. Her current medications included oestradiol, lansoprazole, metoclopramide, oxybutynin and paracetamol. Oestradiol was prescribed for hormone replacement therapy following the hysterectomy.

On physical examination, the patient appeared cachectic. Abdominal examination revealed a well-healed surgical scar, epigastric tenderness and a vague, non-tender palpable mass in the same area. Routine blood tests were within normal limits, including haemoglobin, C-reactive protein (CRP), and renal and liver function tests.

Given the clinical suspicion of gastrointestinal stromal tumour (GIST) or malignancy, the patient was referred to a multidisciplinary team in Liverpool. She was readmitted with severe vomiting and initiated on parenteral nutrition. Due to progressive worsening of symptoms, a Whipple's resection was performed. Histopathological analysis of the resected specimen unexpectedly confirmed gastric endometriosis.

Given the diagnosis of gastric endometriosis, the patient was referred to a gynaecologist for further evaluation of her hormone replacement therapy (HRT) regimen. Adjustments to her HRT were considered to reduce the risk of further endometriotic growth.

DISCUSSION

Endometriosis is characterised by the presence of endometrial-like tissue outside the uterus, typically involving pelvic organs. Gastrointestinal involvement occurs in approximately 5–12% of cases, most commonly affecting the recto-sigmoid colon[5]. Gastric endometriosis is extremely rare and presents diagnostic difficulties due to its non-specific symptoms and submucosal location[6].

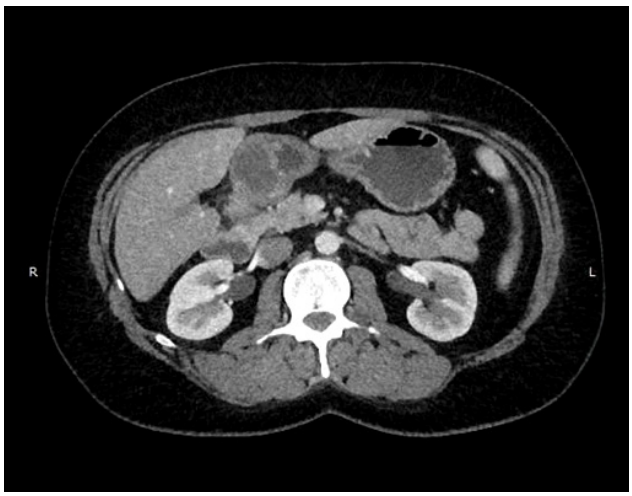


Figure 1. Abdominal CT scan imaging depicts the location of the mass in the pylorus/D1 area, highlighting its extension and associated lymph nodes.

Assessment	Findings
Laboratory tests	Routine blood tests were within normal limits
CT scan	A 5 cm mass at the pylorus/D1 with wall thickening and pathological lymph nodes; no liver metastasis
OGD findings	Large submucosal lesion with normal mucosa, causing gastric outlet obstruction; biopsies were normal (due to a technical issue, it was not possible to capture images).

Table 1. Summary of diagnostic assessments.

The presence of negative biopsy results despite imaging evidence of a significant lesion *(Fig. 1)* highlights the limitations of standard endoscopic biopsy in diagnosing submucosal conditions. Alternative diagnostic approaches, such as endoscopic ultrasound-guided fine-needle aspiration, laparoscopic biopsy or MRI should be considered in similar cases before resorting to major surgery[7,8]. Studies indicate that endoscopic ultrasound-guided fine-needle aspiration has higher sensitivity in diagnosing submucosal lesions compared to standard biopsy techniques[9].

Surgical resection remains the gold standard for both diagnosis and treatment in such cases. The presence of a large, obstructive mass on imaging, combined with pathological lymph node enhancement, raised strong concerns for malignancy or GIST, justifying the surgical approach. Given the oestrogen-dependent nature of endometriosis, a trial of medical therapy such as GnRH agonists, aromatase inhibitors or progestins could have been considered before surgery[10]. However, in this case, the severity of gastric obstruction symptoms necessitated urgent surgical intervention; due to the severity of gastric outlet obstruction, urgent surgical intervention was required in this case. Postoperative management should include hormonal therapy to suppress residual endometriosis and prevent recurrence. In this case,

the patient was referred to a gynaecologist for adjustment HRT to reduce the risk of endometriotic growth.

This case underscores the importance of maintaining a high index of suspicion for endometriosis in women of reproductive age presenting with unexplained gastrointestinal symptoms, especially when initial investigations are inconclusive. Early consideration of endometriosis can lead to more timely diagnosis and management, ultimately improving patient outcomes.

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