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An Unusual Differential Diagnosis of Gastric Haemorrhage: A Rare Case of Gastrosplenic Fistula

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ABSTRACT

A gastrosplenic fistula is a rare complication of primary splenic lymphoma and a rare cause of massive upper gastrointestinal haemorrhage. We report a case of a spontaneous gastrosplenic fistula secondary to splenic large B-cell lymphoma.

The patient was admitted to the emergency department with haematemesis. Oesophagogastroduodenoscopy showed a deep gastric ulcer, and a subsequent CT scan revealed a gastrosplenic fistula. Gastric biopsy demonstrated gastric mucosa with infiltration by large lymphoid cells. A multidisciplinary discussion on the management of this case was conducted.

Primary surgical treatment of the fistula was not deemed indicated because the bleeding had stopped. The patient was stabilized, transfused, and then transferred to the oncology unit for chemotherapy.

During hospitalization, lung metastases were found but the progressive worsening of the patient's general condition contraindicated chemotherapy. She was transferred to a hospice and died 2 months later of neoplastic cachexia.

Gastrosplenic fistula is a rare condition. Prompt recognition of the underlying pathology can save the patient's life. We aim to highlight this rare complication of splenic lymphoma, discuss the presenting signs and symptoms, and explore the management options.

LEARNING POINTS

- A gastrosplenic fistula is a rare complication of primary splenic lymphoma.
- It can cause massive upper gastrointestinal haemorrhage.
- Our patient was managed without surgery but died 2 months later from neoplastic cachexia.

KEYWORDS

Gastrosplenic fistula, gastric haemorrhage, splenic lymphoma

INTRODUCTION

Gastrosplenic fistula is a rare complication of gastric or splenic malignancies or more rarely of benign pathologies such as Crohn's disease, splenic abscess and trauma, melioidosis or sickle cell disease [1–5]. In neoplastic diseases it can occur spontaneously or after chemotherapy, radiation therapy or their combination. Diagnosis and treatment need a multidisciplinary approach including gastroenterologists, radiologists, surgeons and oncologists [1,6,7]. Gastrosplenic fistula is rare but physicians must be aware of it for prompt recognition.

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CASE DESCRIPTION

An 81-year-old woman presented to the emergency department with a 2-week history of epigastric pain and melena, and haematemesis in the last 24 hours. On admission, she was hypotensive with a blood pressure of 90/50 mmHg, a body temperature of 36.1°C and 97% oxygen saturation on room air. The physical examination revealed a palpable mass in the epigastric region and abdominal tenderness; the spleen tip was palpable, and bowel sounds were normal. Laboratory tests were as follows: WBC 13.92×10^9/l (n.v. 4.0–11.0), Hb 6.8 g/l (n.v. 11.5–14.5), PLTs 226×10^9/l (n.v. 150-450), creatinine 0.8 mg/dl (n.v. 0.5–1.5), urea 53 mmol/l (n.v. 25–78), and blood iron 3 mcg/dl (n.v. 70–300).
Gastroscopy revealed a deep malignant-looking ulcer of the gastric fundus. Bleeding was stopped through endoscopic haemostasis with a local injection of epinephrine.
A CT scan revealed a large collection replacing the spleen and containing gas bubbles, complete breakdown of the stomach with loss of stomach wall integrity, and fistulisation into the spleen with clear communication between the gastric lumen and the air-filled necrotic splenic cavity (*Fig. 1*).

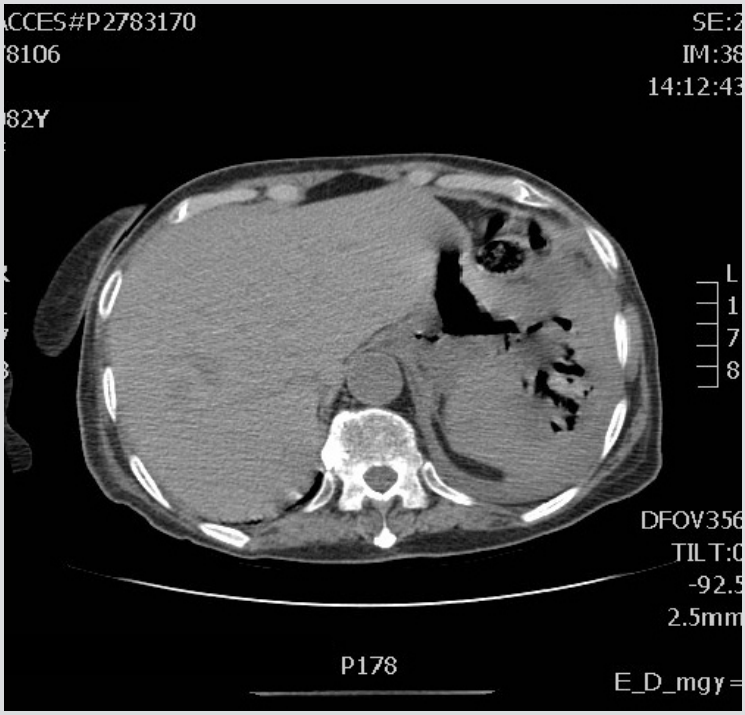

Figure 1. Abdominal CT shows a large necrotic splenic mass with air bubbles and a thin fistulous tract between the gastric lumen and the air-filled splenic necrotic cavity

Biopsy revealed gastric mucosa with infiltration by large B-cell non-Hodgkin's lymphoma.
A multidisciplinary discussion regarding the management of this case was conducted. Primary surgical treatment of the fistula was not deemed indicated because the bleeding had stopped. The patient was not clinically septic so she was stabilized with blood products and volume support, and then transferred to the oncology unit. During hospitalization lung metastases were found but the progressive worsening of the patient's general condition contraindicated chemotherapy. She was then transferred to a hospice and died of neoplastic cachexia 2 months later.

DISCUSSION

Gastrosplenic fistula can occur as a complication of some gastric and splenic diseases. Diffuse splenic large cell lymphoma presents with a characteristic large destructive mass with extensive central necrosis and early capsular invasion, which, it is assumed, also causes gastrosplenic fistula. The close proximity of the gastric fundus to the spleen and the presence of the gastrosplenic ligament facilitate the union of these two organs. If the neoplastic tissue invades the gastric wall vessels, then gastric haemorrhage results. Massive haematemesis is one of the most feared complications of gastrosplenic fistula due to its high mortality. Multislice CT is the most useful tool for imaging diagnosis of gastrosplenic fistula because of its excellent spatial resolution and accurate staging of lesions. Although air bubbles within the spleen can also indicate an abscess, CT visualization of the fistulous tract can suggest the correct diagnosis. Gastroscopy is not essential

for the diagnosis of fistula but is indispensable for the definitive pathological diagnosis of lymphoma and its subtype by means of biopsy. Gastroscopy is also useful for active bleeding control by haemostasis.

Early signs of gastrosplenic fistula that should prompt immediate work-up in a patient who recently had signs of gastric haemorrhage are a history of lymphoma and air bubbles in the spleen. A multidisciplinary approach is fundamental: gastroenterologists, radiologists, oncologists, surgeons and emergency medicine clinicians must work together to manage this rare pathology.

We suggest that surgical resection should be performed only if there is bleeding and endoscopic haemostasis or embolization has failed.

CONCLUSIONS

Gastrosplenic fistula must be considered among the differential diagnoses of gastric haemorrhage and must be suspected in the presence of air bubbles in the spleen. Lymphoma is the most frequent cause of gastrosplenic fistula. Patient with gastrosplenic fistula arising from lymphoma do not necessarily need surgical resection if the gastric haemorrhage is a complication and could be treated endoscopically or with embolization. However, a large multifactorial study should be carried out to determine whether surgical resection or chemotherapy is more effective.

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