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A case report of gastric lymphocytic phlebitis, a rare mimic for malignancy☆

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ABSTRACT

INTRODUCTION: Lymphocytic phlebitis is a benign condition characterised by inflammation of the veins and rarely affects the gastrointestinal tract. Reported cases present as acute abdomen and involve the colon or small intestine. We report the fourth case of gastric lymphocytic phlebitis in the literature.
PRESENTATION OF CASE: A 74-year-old female presented with eight weeks of abdominal pain. Findings at endoscopy were suggestive of a malignant ulcer on the greater curvature of antrum, while biopsies showed chronic gastritis without malignancy. Appearance at diagnostic laparoscopy was consistent with a malignant gastric ulcer with serosal changes. Due to persistent pain and the macroscopic appearance, she proceeded to have an open subtotal gastrectomy and D2 lymph node clearance. Despite macroscopic appearance, the microscopic examination demonstrated no malignancy, and was consistent with lymphocytic phlebitis with overlying ulceration.
DISCUSSION: This case was a mimic for gastric malignancy, with the benign diagnosis only being made after surgical resection. Gastric lymphocytic phlebitis is a rare differential diagnosis for gastric ulcers when biopsies are negative, although preoperative diagnosis is difficult given the lesions do not involve the mucosa.
CONCLUSION: If clinical history and endoscopic findings are suspicious for malignancy, despite normal biopsies, an aggressive surgical resection remains reasonable given the rarity gastric lymphocytic phlebitis.

1. Introduction

Lymphocytic phlebitis of the gastrointestinal tract is a rare condition. Some 50 cases have been reported with most cases presenting with acute abdominal pain and involving the colon or small intestine. [1] This case represents only the fourth reported case of lymphocytic phlebitis found in the stomach. This case has been reported in line with the SCARE criteria. [2]

2. Case report

A 74-year-old female presented to clinic with eight weeks of severe epigastric pain. She had no significant past medical or psychosocial history, was not on any regular medications and had no significant family history. In particular, she had no history of autoimmune disease or vasculitis. Physical examination and blood tests were normal. Endoscopic findings were suggestive of a malignant ulcer on the greater curvature of antrum. Multiple biopsies taken showed necrotic mucosa with active chronic inflammation, without dysplasia or malignancy and no *Helicobacter pylori*. Diagnostic laparoscopy findings were consistent with a malignant gastric ulcer with serosal changes. Due to strong clinical suspicion for malignancy and macroscopic appearance, a subtotal gastrectomy with D2 lymphadenectomy was performed. At the time of surgery, the gastric tumour and an incidental 5 mm posterior fundal wall tumour was also resected. The endoscopy and operation were performed by the consultant upper gastrointestinal surgeon, MAG. The patient had an uneventful postoperative course and routine follow-up at 4 weeks.

Macroscopic appearance was of an ulcerating tumour (Fig. 1). However, microscopic examination demonstrated ulceration with inflammatory infiltrate extending through submucosa and muscularis propria to the serosal surface. The superficial inflammatory infiltrate was predominantly neutrophils, with deeper infiltrate within the muscularis propria predominantly lymphocytes with

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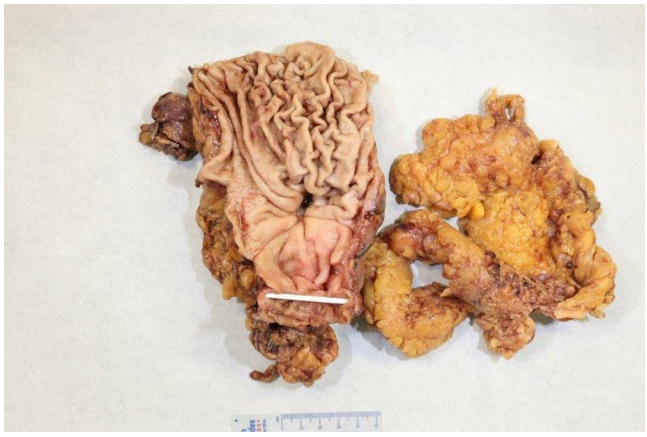

Fig. 1. Anatomical pathology specimen gastric lymphocytic phlebitis.

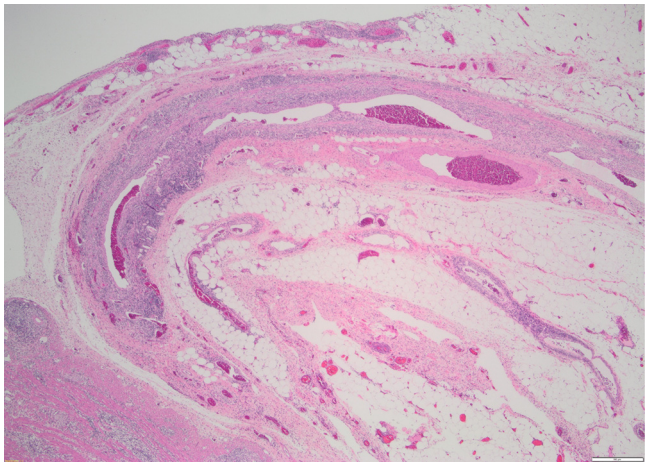

Fig. 2. H&E stain (×2 magnification) Lymphocytic phlebitis of a subserosal medium-sized vein and an uninvolved subserosal artery.

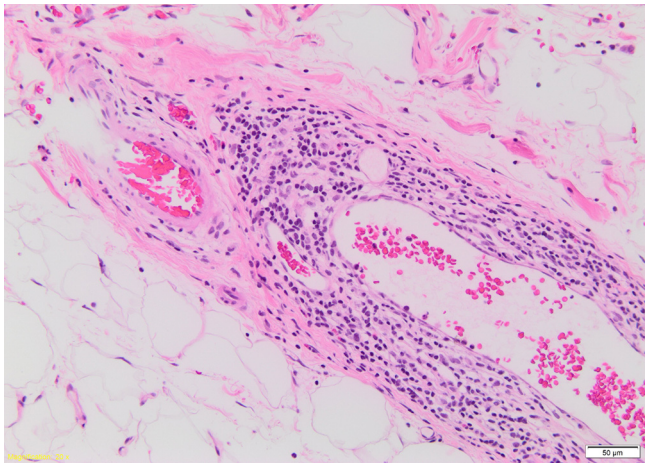

Fig. 3. H&E stain (×20 magnification) High power view of Fig. 2.

numerous eosinophils and some histiocytes. Lymphocytic phlebitis with focal thrombosis and obliterated lumina of veins was noted, but the arteries were uninvolved (Figs. 2 and 3). Immunohistochemistry demonstrated the lymphocytic phlebitis comprised a mix of CD3-positive T-cell lymphocytes (Fig. 4) and CD20-positive B-cell lymphocytes (Fig. 5). There was no evidence of malignancy. The smaller incidental fundal tumour was a well-circumscribed

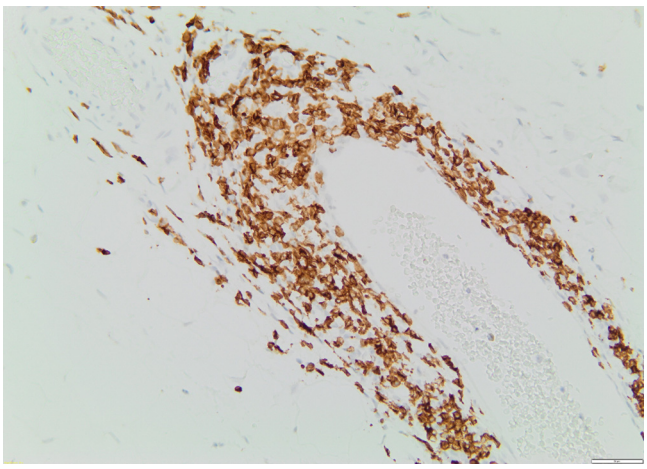

Fig. 4. CD3 stain (×20 magnification) CD3 positive T-cell lymphocytes within the vein wall.

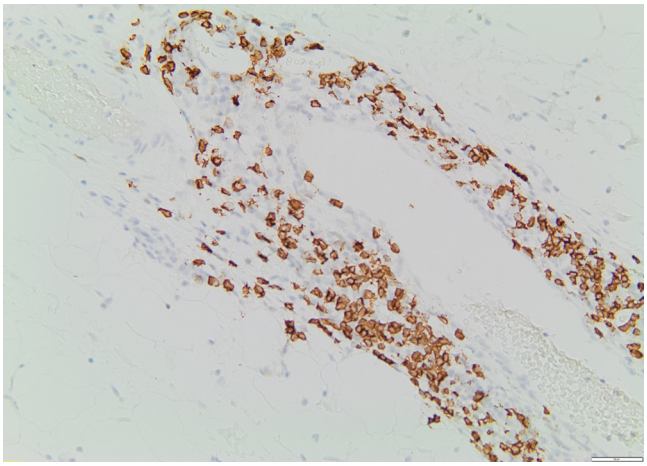

Fig. 5. CD20 stain (×20 magnification) CD20 positive B-cell lymphocytes within the vein wall.

spindle cell lesion, positive for c-kit consistent with a gastrointestinal stromal tumour (GIST).

In light of this histopathological diagnosis, additional investigations were performed to exclude any underlying systemic vasculitis. Screening for anti-nuclear antibody (ANA); extractable nuclear antigens (ENA); cytoplasmic anti-neutrophil cytoplasmic antibody (c-ANCA) were negative.

3. Discussion

Enterocolic lymphocytic phlebitis has been described as phlebitis of the veins and venules with dense lymphocytic infiltration that spares the arteries. The term was coined by Saraga and Costa in 1989. [3] Most reported cases involve lesions within the small intestinal and right-sided colon. [1] Isolated cases of extracolonic involvement with the duodenum and gallbladder have also been reported. [4] Although the pathogenesis is not known, the disease does not appear to be associated with any systemic vasculitis and lesions do not appear to recur either at the primary site or elsewhere in the digestive tract following resection. [4]

Gastric lymphocytic phlebitis is an exceedingly rare pathology. To our knowledge, this case represents only the fourth to be reported in the literature. [5–7] All cases reported gastric antral ulceration, with one case extending towards the gastric body. Three of the reported cases were female and three of the cases were

Table 1
Summary of reported cases of gastric lymphocytic phlebitis.

Authors	Age/Sex	Presentation	Endoscopy	Biopsy results	Procedure
(current case)	74yo F	2 months of epigastric pain	Gastric antral ulcer	Negative for dysplasia or malignancy. *H.pylori* negative	Subtotal gastrectomy
[7]	29yo F	Several months of severe epigastric pain	Chronic gastric ulcerations, linitis plastic	Negative for dysplasia or malignancy. *H.pylori* negative	Total gastrectomy. Tapered prednisone postoperative.
[5]	73yo F	Dizziness, iron deficiency anaemia	Ulcerated lesion from antrum to body	Intestinal metaplasia. Negative for dysplasia or malignancy. *H.pylori* negative	Subtotal gastrectomy
[6]	68 M	Epigastric pain	Gastric antral ulcer	*H.pylori* negative	Subtotal gastrectomy. Tapered prednisone postoperative.

in elderly patient (68–74 years), with one case occurring in a 29 year-old. None of the cases had any history of systemic vasculitis. Three cases presented with severe epigastric pain and another with symptomatic iron deficiency anaemia. Three of the cases, including this case, were assumed malignancies preoperatively and received surgical resections. Two patients received weaning doses of prednisone. All patients had uneventful perioperative recoveries, with one patient later developing bile reflux and erosive oesophagitis. The incidental finding of a GIST in our case is unique and of unknown significance. A summary of reported cases is provided in Table 1.

4. Conclusion

This case was a mimic for gastric malignancy, with the benign diagnosis only being confirmed after subtotal gastrectomy with D2 lymphadenectomy. Gastric lymphocytic phlebitis is a rare differential diagnosis for gastric ulcers when biopsies are negative, although preoperative diagnosis is difficult given the lesions do not involve the mucosa. If clinical history and endoscopic findings are suspicious for malignancy, despite normal biopsies, a surgical resection with lymphadenectomy is reasonable given the rarity of this pathology.

Conflicts of interest

None.

Funding

None.

Ethical approval

N/A.

Consent

A fully informed written consent has been obtained and documented in paper for the patient that is the subject of this case report.

Author contribution

Dr Daniel L Chan MBBS – concept and design of the study; acquisition of data, assistant surgeon to operation, interpretation of data; drafting manuscript; final approval of submitted version.

Dr Praveen Ravindran BSc (Hons) MBBS MS – concept and design of the study; analysis and interpretation of data; revising manuscript; final approval of submitted version.

Dr Dorothy Chua MBBS – acquisition of data; drafting the manuscript; final approval of the version to be submitted.

Dr Jason D Smith MBBS (Hons) FRCPA FRACGP – analysis and interpretation of data; revising manuscript for critically important intellectual content with regards to histopathological findings; final approval of the submitted version.

Dr King S Wong MBBS FRACS – analysis and interpretation of data; revising manuscript for critically important intellectual content with regards to patient management and surgery; final approval of the submitted version.

Dr Michael A Ghusn MBBS FRACS – concept of the study; acquisition of data; primary surgeon for operations; revising manuscript for critically important intellectual content with regards to patient management and surgery; final approval of the submitted version.

Guarantor

Dr Daniel L Chan, corresponding author.

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