

## Introduction

Abdominal manifestations of tuberculosis (TB) can involve the peritoneum, gastrointestinal tract, pancreas, perianal region, hepatobiliary region, and surrounding lymph nodes in patients with associated risk factors. We present a patient with an unusual presentation of a gastric mass with associated lymphadenopathy (LAD), later determined to be secondary to gastric tuberculosis.

## Case Description

- Patient is an 18 year old female with no past medical history who presented with several months of nausea, vomiting, and upper abdominal pain exacerbated by deep breathing
- Initial laboratory workup: Unremarkable
- Initial CT: irregular thickening along the lesser curvature of the stomach
- Initial endoscopy: subepithelial nonbleeding mass identified in the gastric cardia, with biopsy findings of mild chronic gastritis
- Patient was referred to advanced endoscopy for further workup
- Repeat esophagogastroduodenoscopy (EGD) at our center revealed a subepithelial gastric cardia lesion with an overlying non-bleeding clean-based ulcer (Figure 1)
- Further evaluation with endoscopic ultrasound (EUS) revealed peri-gastric retroperitoneal and portocaval LAD (Figure 2)
- Biopsy of the gastric mass revealed granulomatous inflammation with focal necrosis (Figure 3), with rare acid fast bacilli seen on Fite stain (Figure 4)
- FNA revealed mixed inflammation with multiple poorly formed granulomas
- Further history on follow up revealed a close household contact had recently tested positive for TB
- Diagnosis of gastric tuberculosis was established and the patient was referred to infectious disease
- Treatment: Rifampin, Isoniazid, Pyrazinamide, and Ethambutol (RIPE) for gastric TB
- Outcome: patient had improvement in symptoms, with repeat EGD and EUS showing improvement in retroperitoneal LAD and no organisms seen on biopsy

## Endoscopic Imaging



Figure 1) Gastric cardia ulcer seen on EGD

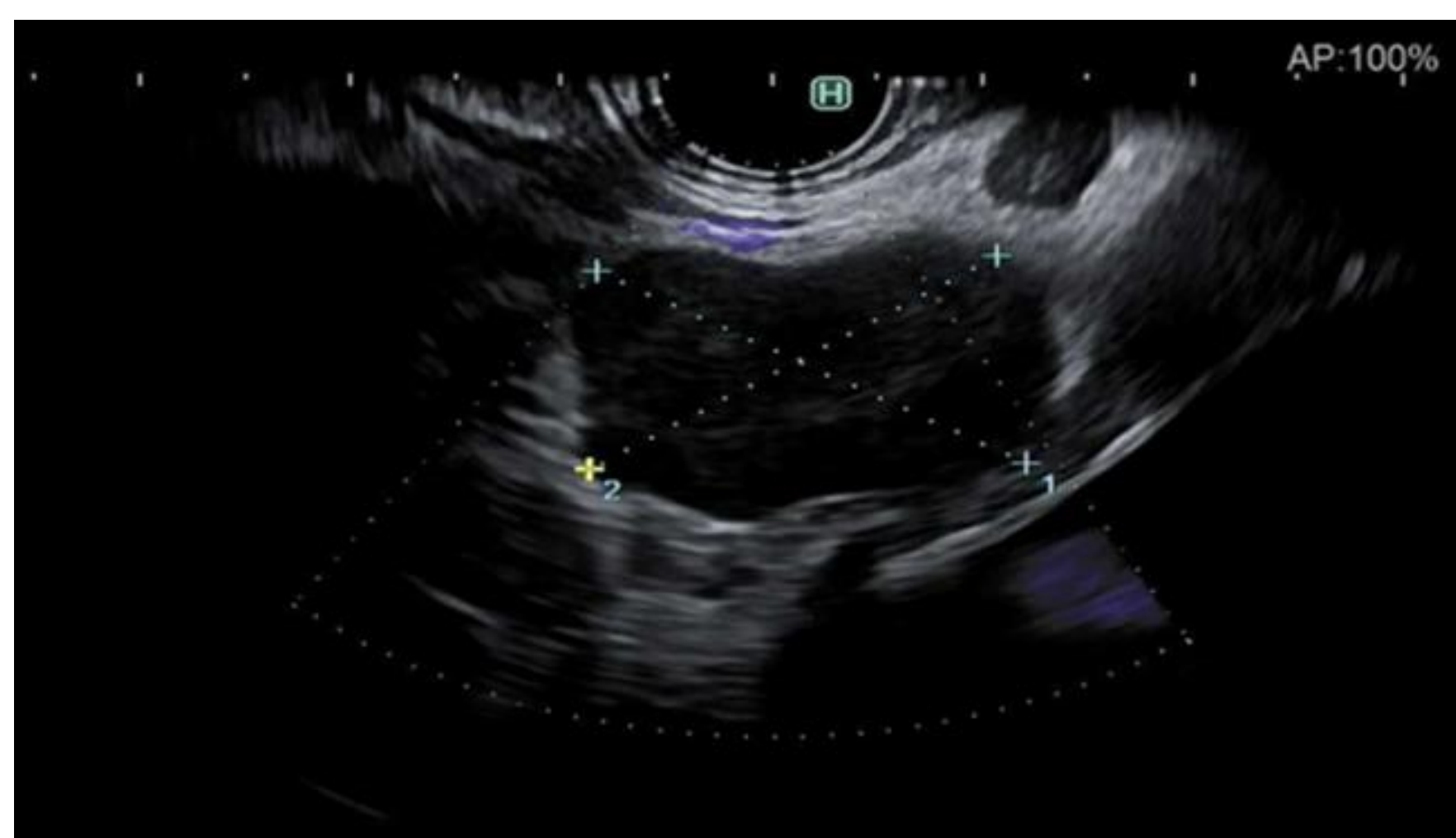


Figure 2) Peri-gastric lymphadenopathy seen on EUS

## Pathology

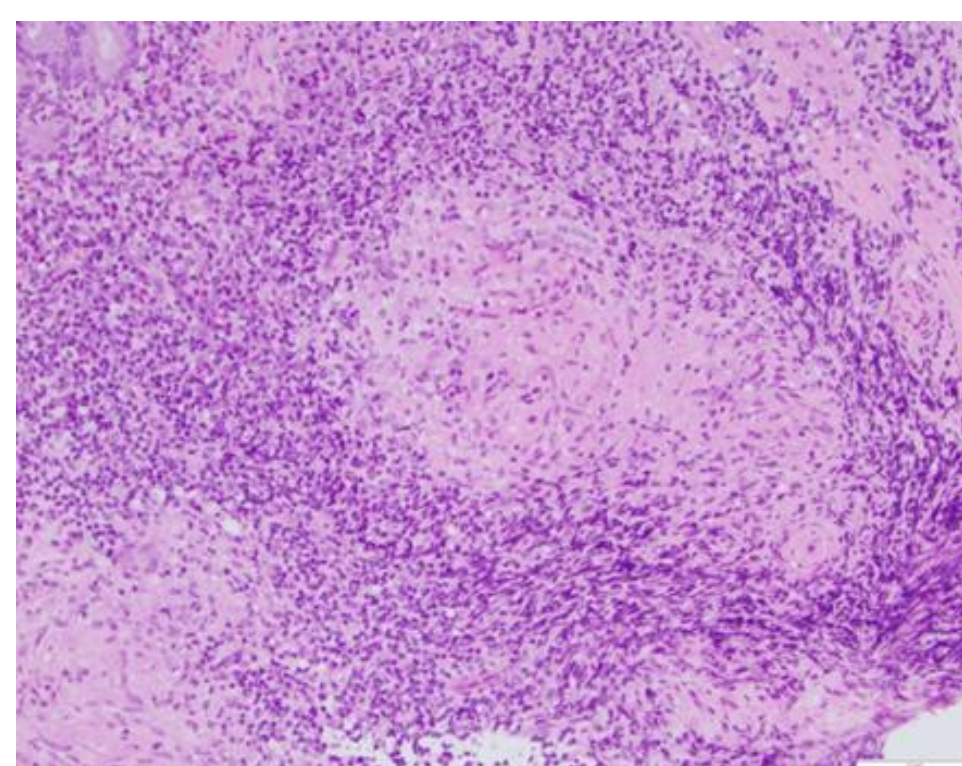


Figure 3) 10x Hematoxylin & Eosin (H&E) stain of gastric tissue showing granulomatous inflammation

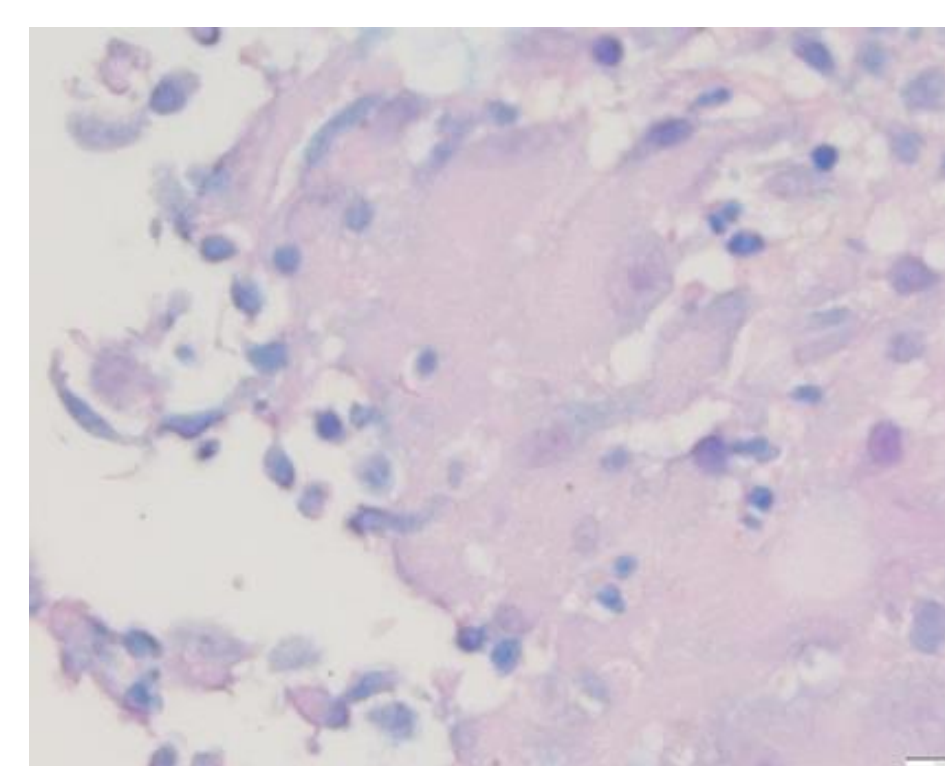


Figure 4) 60x Fite stain of gastric tissue showing acid fast bacilli

## Discussion

- This case illustrates a unique presentation of gastric TB in a patient that was exposed to a close contact
- The presenting symptom of non-remitting abdominal pain along with prior endoscopic findings of a submucosal gastric ulcer prompted further evaluation, which led to the histologically confirmed diagnosis of gastric TB and the initiation of appropriate treatment
- Gastrointestinal (GI) tract involvement of TB occurs in about 11% of cases, and is associated with concomitant pulmonary TB infection in only about 25% of cases
- Mechanism: Mycobacterium tuberculosis is thought to infiltrate the GI tract by adhering to submucosal lymphoid tissue, with caseous necrosis leading to ulceration over 2-4 weeks
- Diagnostic findings: circumferential ulceration surrounded by inflammation with submucosal granulomas seen on biopsy, as seen in this case
- Management: Patients often clinically improve after treatment with RIPE, though surgical management is warranted when complications exist
- Key takeaway: GI manifestations of TB should be considered in patients with positive risk factors and unexplained persistent abdominal symptoms, with treatment initiated as soon as the diagnosis is confirmed

## References

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2. Rathi P, Gambhire P. Abdominal Tuberculosis. *J Assoc Physicians India.* 2016 Feb;64(2):38-47. PMID: 27730779.