Sarcoidosis as an Uncommon Cause of Gastritis: A Case Report from Pakistan

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ABSTRACT

Sarcoidosis is a multisystem disorder characterised by chronic non-caseating granulomatous inflammation involving different parts of the body. The gastrointestinal (GI) tract can be affected in very rare cases either in conjunction with systemic involvement or as a separate entity. The stomach is the most commonly affected site in the GI tract. GI involvement is very rarely associated with symptoms that manifest in 0.1 to 0.9% of patients with systemic disease. Here, we present a case of a middle-aged lady with a history of pulmonary sarcoidosis, who was evaluated for symptoms of dyspepsia and was diagnosed to have gastric sarcoidosis based on endoscopy and histology.

Key Words: *Sarcoidosis, Stomach, Epigastric pain*.

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INTRODUCTION

Sarcoidosis is a multisystem disease manifested by chronic non-caseating granulomatous inflammation with multi-organ involvement.[1] Sarcoidosis affects the lungs in approximately 90% of the cases while it can also affect skin, liver, spleen, lymph nodes, upper respiratory tract, heart, and nervous system.[2] The gastrointestinal (GI) tract can be affected in very rare cases, either in conjunction with systemic involvement or as isolated involvement. In the GI tract, the gastric mucosa is the most common site involved.[3] GI involvement is very rarely associated with symptoms that manifest in 0.1 to 0.9% of patients with systemic disease.[4] Here, we present a case of a middle-aged lady with a history of pulmonary sarcoidosis, who was evaluated for symptoms of dyspepsia and was diagnosed with gastric sarcoidosis based on endoscopy and histology.

CASE REPORT

A 45-year lady, with a history of pulmonary sarcoidosis for the last eight years, well-controlled on oral prednisolone 5 mg/day, presented in the GI clinic with complaints of postprandial burning pain in the epigastrium associated with nausea for the last 2 months.

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On examination, there was a mild tenderness in the epigastrium, with the rest of the examination being unremarkable. Her blood tests were normal with the exception of raised angiotensin converting enzyme (ACE) levels of 87 µg/L (Normal range: 8-65 µg/L).

Oesophagogastroduodenoscopy (OGD) showed erythema- tous mucosa of the antrum of the stomach, while the oesophagus and duodenum were normal. Multiple, random biopsies were taken from the body and the antrum of the stomach and were sent for histopathology (Figure 1). The biopsy findings showed features of chronic non-caseating granulomatous inflammation (Figure 2). However, there was no evidence of *H. pylori*, tuberculosis (AFB stain was negative), or dysplasia. Keeping in view the previous history of sarcoidosis, histological findings, and currently raised ACE levels, she was diagnosed as a case of gastric sarcoidosis.

The dose of prednisolone was increased to 30 mg/day (0.5 mg/kg/-day) and tapered weekly to a maintenance dose of 5 mg/day. Her symptoms alleviated within a week. Currently, she is symptom-free and on a regular follow-up at our GI clinic.

DISCUSSION

Sarcoidosis is a multisystem chronic granulomatous disease primarily affecting the lungs but capable of involving multi-organ systems, including the GI tract.[5] However, GI involvement remains exceptionally rare, with an estimated prevalence of 0.1 to 0.9% among sarcoidosis patients. When the GI tract is affected, the stomach is the most commonly involved site, followed by the oesophagus, small intestine, and colon. The involvement can present as an isolated manifestation or in conjunction with systemic sarcoidosis.[6]

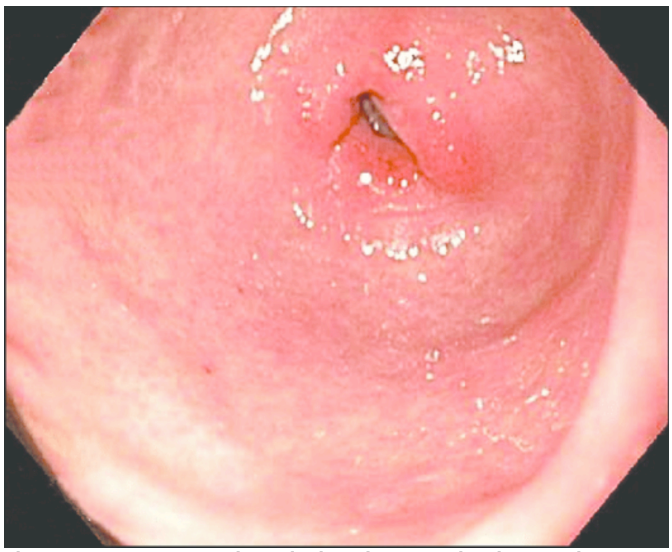

Figure 1: Upper gastrointestinal endoscopy showing erythematous mucosa of the gastric antrum.

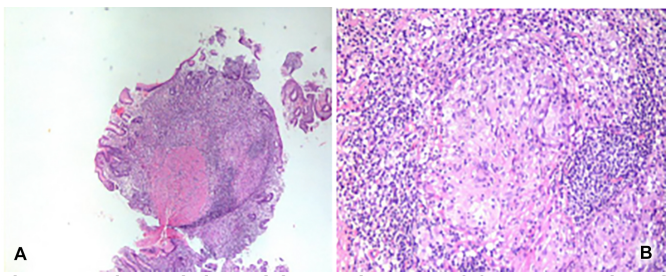

Figure 2: Histopathology of the gastric antrum. (A) Low power view of gastric mucosa showing dense inflammatory cell infiltration in the mucosa (HE, ×50). (B) High power view of gastric mucosa showing non- caseating granuloma in the centre of the field (HE, ×200).

GI sarcoidosis is often underdiagnosed due to its nonspecific symptoms, which can include epigastric pain, nausea, vomiting, early satiety, and weight loss.[7] In most reported cases, gastric sarcoidosis is an incidental finding during endoscopy performed for dyspepsia or other upper GI complaints. The endoscopic findings in gastric sarcoidosis are highly variable and can range from mucosal erythema and thickening to ulcerations and mass-like lesions, mimicking malignancy. Histopathological confirmation remains the gold standard for diagnosis, characterised by chronic non-caseating granulomas in the gastric mucosa, as observed in this case.[8]

Compared to patients with pulmonary sarcoidosis, those with GI involvement present unique challenges. While pulmonary sarcoidosis is often asymptomatic or presents with respiratory complaints such as cough and dyspnoea, gastric sarcoidosis can manifest with significant upper GI discomfort, potentially leading to complications such as gastric outlet obstruction or perforation.[9] Furthermore, systemic markers such as serum ACE levels are frequently elevated in both pulmonary and extrapulmonary sarcoidosis, aiding in the diagnostic process.[10] This patient demonstrated this classical feature with raised ACE levels.

The treatment approach for gastric sarcoidosis typically involves corticosteroids as a first-line therapy, which has shown efficacy in symptom relief and histological improvement. In previous studies, high-dose corticosteroids followed by a tapering regimen have resulted in significant symptomatic relief in affected patients.[8] In this case, an increased dose of prednisolone (30 mg/day) followed by tapering led to the resolution of symptoms, highlighting the responsiveness of gastric sarcoidosis to steroid therapy.

Given the rarity of gastric sarcoidosis, a high index of suspicion is required in patients with known sarcoidosis who present with persistent GI symptoms. Clinicians should consider endoscopic evaluation and histological examination to prevent misdiagnosis and ensure appropriate management. Further research is needed to better understand the pathophysiology, clinical spectrum, and long-term outcomes of gastric sarcoidosis.

The symptoms of dyspepsia in a patient with a history of sarcoidosis should undergo proper investigation with endoscopy and histopathology to rule out gastric sarcoidosis. It should also be considered in differential diagnosis for patients presenting with dyspepsia symptoms associated with rheumatological conditions.

PATIENT'S CONSENT:

Informed consent was obtained from the patient.

COMPETING INTEREST:

The authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:

MQP: Article writing and collection of material.
RTYK, GA: Writing of the case report.
NHL: Conceptualisation.
RTYK, NHL: Critical analysis and revision of the case report.
MM: Interpretation of the data.
All authors approved the final version of the manuscript to be published.

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