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CASE REPORT

A symptomatic gastric sarcoidosis and asymptomatic pulmonary sarcoidosis: a rare manifestation

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ABSTRACT

Sarcoidosis is a granulomatous disease of unknown etiology which may present with systemic manifestations. The diagnosis of gastric sarcoidosis needs much effort to accomplish as it is exceedingly rare, and the treatment is usually recommended exclusively for symptomatic disease. Here, we present a case of gastric sarcoidosis in a 31-year old black female patient with symptoms of nausea and epigastric pain. A diagnosis of gastric sarcoidosis was mainly based on the presence of non-necrotizing granulomas on biopsy following esophagogastroduodenoscopy (EGD). She was treated with steroid with high dose at first, followed by a slow taper and the symptoms responded to the treatment.

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Gastric sarcoidosis; pulmonary sarcoidosis; granuloma

1. Introduction

A symptomatic gastric involvement as the initial presentation of sarcoidosis has been rarely reported and it may occur in a patient with known sarcoidosis or may be the initial manifestation itself [1]. There are only few well-documented histologic evidences of non-necrotizing granulomas in the literature consistent with gastrointestinal (GI) sarcoidosis [2]. However, the antrum of the stomach is considered as the most commonly involved portion of the GI tract [3,4]. GI symptoms is reported between 0.1 and 0.9% of patients in the patient presenting with systemic sarcoidosis [1]. The confirmatory diagnosis of sarcoidosis is established based on compatible clinical and imaging studies, supported by histologic examination of noncaseating epithelioid granulomas in the absence of other causative micro-organisms mimicking histologically.

2. Case presentation

A 31-year-old female presented in the emergency room with intermittent epigastric pain for two weeks. The pain was burning in type with no radiation and was worsened by food intake. she also reported nausea usually during the pain but denied any symptoms of vomiting. The rest of the review of the system was negative. She had multiple visits to the emergency room in the last six months for similar complaints. Past medical history was only significant for cholecystectomy for cholelithiasis four years back. Vital signs at presentation were normal, and the rest of the physical examinations were within normal limits except for mild epigastric tenderness without any rebound, guarding or rigidity. Lab tests were significant for normocytic normochromic anemia with hemoglobin of 10.7 g/dL and hematocrit of 33.7%, normal serum lipase of 48 U/L (normal 22–52 U/L). Serum calcium was 8.7 mg/dL (normal 8.9–10.3 mg/dL). The rest of the complete blood count and metabolic panel were normal.

An abdominal sonogram was unremarkable. Computed tomography (CT) scan of the abdomen showed normal abdominal findings with 7 mm pulmonary nodule in the right lower lobe.

A subsequent CT scan of the chest showed multiple bilateral pulmonary nodules with enlarged mediastinal and hilar lymph nodes. After admission, the patient underwent esophagogastroduodenoscopy (EGD) that revealed mild gastritis while antral biopsy showed acute and chronic inflammation with non-caseating granuloma. Subsequent bronchoscopy with transbronchial biopsy showed benign lung tissue with non-necrotizing granuloma.

However, Serum angiotensin-converting enzyme level (ACE) was normal 49 U/L (normal 14–82 U/L). Based on compatible clinical symptoms and histological evidence of non-caseating granuloma; the patient was diagnosed to have active gastric sarcoidosis (Figure 1) with the simultaneous presence of inactive pulmonary sarcoidosis (Figures 2 and 3). Other potential causes of granuloma including Helicobacter pylori, Mycobacterium tuberculosis,

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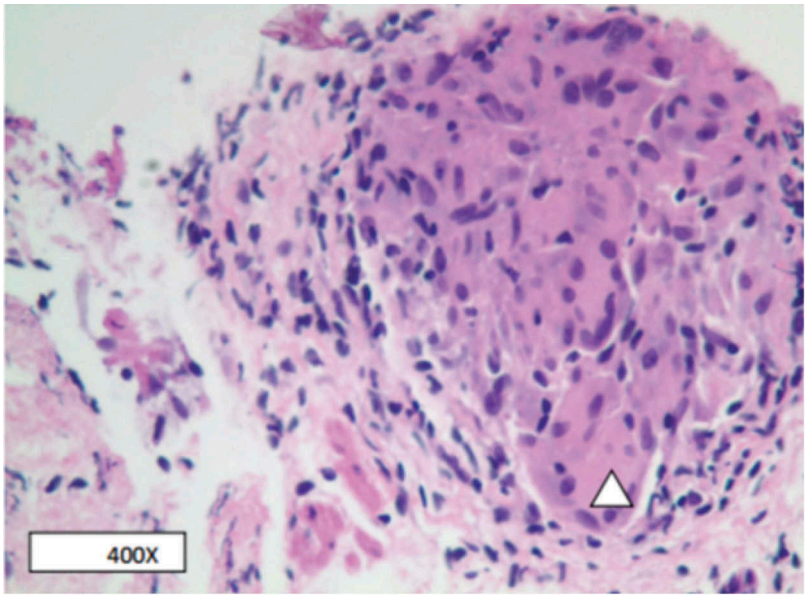

Figure 1. Histopathology of the gastric biopsy showing several small noncaseating epitheloid cell granulomas (arrow head).

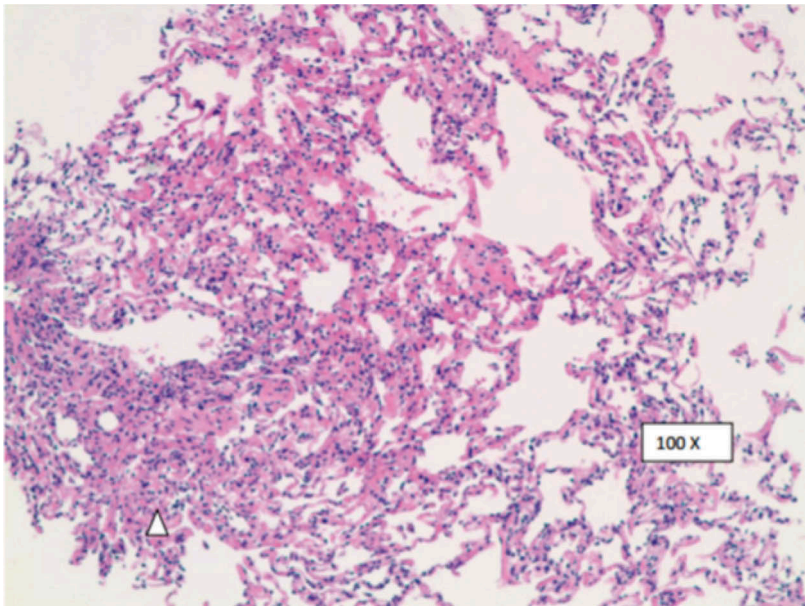

Figure 2. Histopathology of the endobronchial biopsy showing numerous small noncaseating epitheloid cell granulomas (arrow head).

fungal organisms, etc. were excluded on histology. Later, she was started on Prednisone 40 mg per day with a progressive resolution of her GI symptoms.

Subsequently, pulmonary function test was also performed during admission which showed normal spirometry compatible with asymptomatic pulmonary sarcoidosis. She was discharged on a tapering dose of prednisone with no recurrence of symptoms at 3 months of follow up.

3. Discussion

Gastric sarcoidosis is a rare disease and often asymptomatic; its sign and symptoms may mimic other GI diseases resulting in a delay in the diagnosis and therefore treatment is started late in its course (5).

Epigastric pain is the most common presenting symptom; however, nausea and vomiting may also occur in the presence of pyloric obstruction and the severity of nausea and vomiting depend on its degree of stenosis. Weight loss if present often raises a clinical suspicion of malignancy [5,6]. Endoscopic biopsy is the gold standard tool for making a diagnosis of gastric sarcoidosis as it not only confirms non-caseating granulomas but also excludes other granulomatous diseases including possible micro-organisms mimicking granulomas.

Endoscopically, gastric sarcoidosis has several endoscopic findings including mucosal ulcers with or

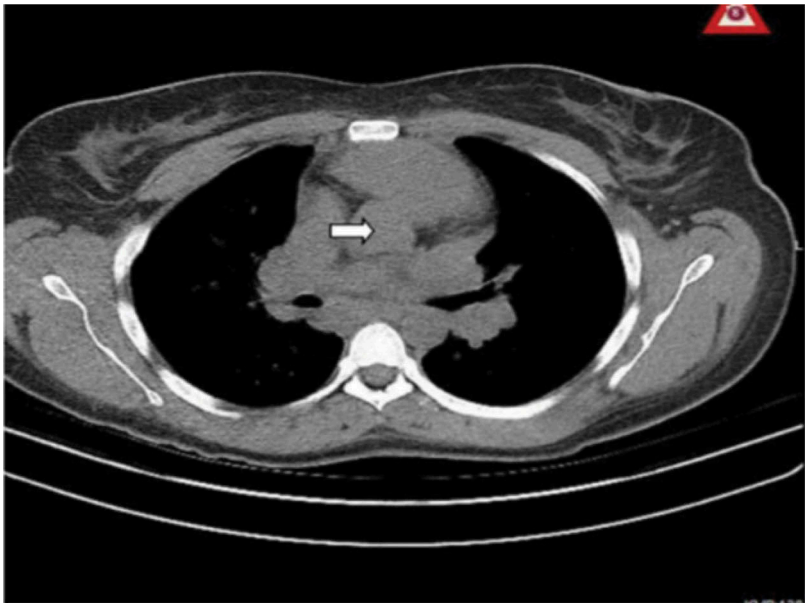

Figure 3. Computed Tomography (CT) showing hilar lymphadenopathy.

without erythema, nodular lesions, narrowing of the gastric lumen, and benign or malignant-appearing ulcers [7, 8]. The diagnosis of gastric sarcoidosis is extremely difficult to establish in the absence of multisystem involvement. Gastric granulomas have coincidentally been reported in up to 10% of patients with pulmonary sarcoidosis. The diagnosis of gastric sarcoidosis depends upon biopsy and histologic evidence of non-necrotizing granulomas after exclusion of other causes of granulomatous. Therefore, it is pivotal that the Gastroenterologist should be aware of this possibility while performing endoscopic procedures and therefore taking biopsy is crucial steps for making its diagnosis during early presentation [9].

For asymptomatic patients diagnosed incidentally, there is no need for any specific therapy however Steroids are the initial treatment of choice in symptomatic patients [10]. As such, there are no established guidelines for the treatment of GI sarcoidosis however, the steroid (Prednisone) is used extensively in a similar way as to pulmonary sarcoidosis.

In conclusion, one needs to be aware of gastric sarcoidosis as a rare presentation and should be considered in any patients with recurrent epigastric pain. The treatment with Prednisolone usually provides symptomatic relief.

Disclosure statement

No potential conflict of interest was reported by the authors.

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