Work-Up of Hemoptysis and Interstitial Lung Disease Leading to the Diagnosis of Celiac Disease

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Introduction

Hemoptysis is the coughing up of blood that originates in the bronchial tree. Hemoptysis has a variety of etiologies including infections, vasculitides, malignancy, trauma and many others. The workup can be broad and should be guided by the clinical history and physical exam. We present a case of a patient in whom workup for hemoptysis and interstitial lung disease led to the diagnosis of celiac disease.

Case Presentation

Patient is a 47-year-old male with history of interstitial lung disease, emphysema, and chronic tobacco use who presented due to hemoptysis. Inflammatory markers and autoimmune workup were ordered and revealed positive celiac serologies. Patient had no GI complaints aside from occasional reflux and denied diarrhea. He underwent EGD which showed erythematous mucosa in the antrum, erythematous duodenopathy, and mucosal changes concerning for Barrett's esophagus. Histologic examination of the biopsies of the esophagus, stomach and duodenum showed Barrett's esophagus with no dysplasia, positive H. Pylori staining, and duodenal mucosa with mild villous blunting and increased intraepithelial lymphocytes. Due to hemoptysis and celiac disease, there was concern for Lane-Hamilton Syndrome. The patient underwent bronchoscopy with bronchoalveolar lavage (BAL) which was negative for hemosiderin. CT imaging of the chest showed worsening of his known interstitial lung disease with no acute abnormalities. He was placed on a gluten free diet which can result in improvement in both gastrointestinal and pulmonary symptoms.

Discussion

Celiac disease should be suspected in patients with symptoms of diarrhea and bloating which are worse when eating gluten-containing foods. Lane-Hamilton syndrome is a rare disorder in which pulmonary hemosiderosis coexists with celiac disease. Our patient has a history of interstitial lung disease and was diagnosed with celiac disease during the workup of his hemoptysis, raising suspicion for Lane-Hamilton syndrome. Although our patient's bronchoscopic evaluation was negative for pulmonary hemosiderosis, there have been reports of a possible association between interstitial lung disease and celiac disease in the absence of pulmonary hemosiderosis. Our patient will be followed closely to ensure resolution or improvement in pulmonary symptoms following treatment of his celiac disease.

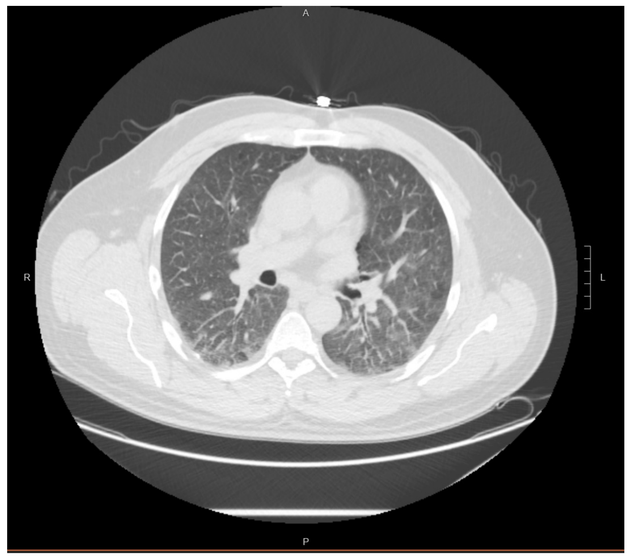

Figure 1: CT scan of our patient showing interstitial lung changes and ground-glass opacities

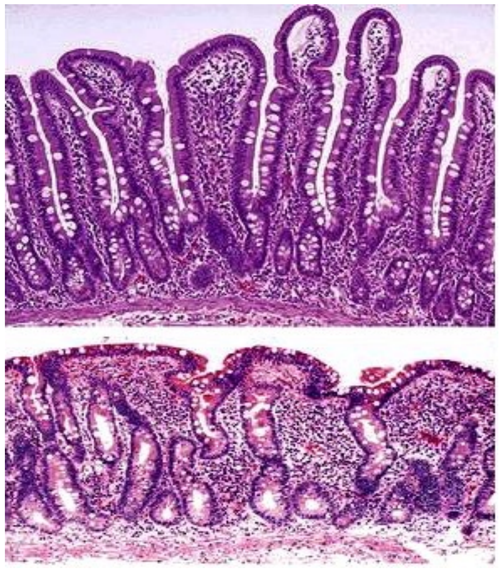

Figure 2: Example of normal intestinal villi (top) and a patient with celiac disease (bottom)[1]

[1]https://celiac.org/about-the-foundation/featured-news/2015/03/biopsy-samples-diagnosis-celiac-disease/