A Rare Case of Plummer-Vinson Syndrome Treated with Pneumatic Dilations and Iron Supplementation

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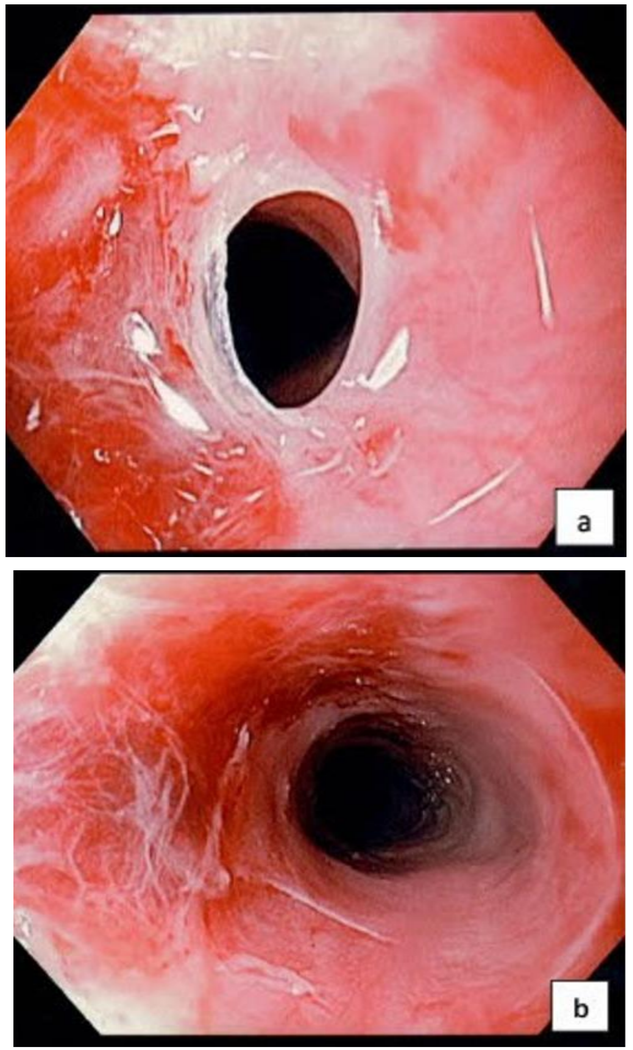
INTRODUCTION

Plummer-Vinson Syndrome (PVS), also known as Paterson-Kelly syndrome, presents with a classic triad of dysphagia, iron-deficiency anemia and esophageal webs. Although this triad of disease is increasingly less prevalent, early detection and intervention are imperative to reduce mortality given increased risk of malignant transformation.

Case Description

A 22-year-old female with a history of iron deficiency anemia presented to the emergency department with syncope in the setting of palpitations and dyspnea. The patient endorsed alarm symptoms including hematochezia over the past 6 weeks, 20-lb unintentional weight loss and dysphagia. Initial labs were remarkable for a hemoglobin of 11.1 g/dL, and microcytic indices, with an MCV of 72.4 fL. The patient underwent esophagogastroduodenoscopy (EGD) to investigate the etiology of iron deficiency anemia. EGD revealed a prominent esophageal web (Image a) in the proximal esophagus with associated erythema and mucosal friability. Significant narrowing impeded safe passage of the endoscope and thus serial pneumatic dilations to 10 mm were performed. Following pneumatic dilation, the endoscope was successfully advanced beyond the web (Image b) to the gastroesophageal junction. The patient tolerated the procedure well and had immediate resolution of dysphagia following EGD with pneumatic dilation. She was then instructed to taking her iron supplementation as previously prescribed at discharge.

Images



Esophageal Web pre dilation (a) and post dilation (b)

DISCUSSION

Plummer-Vinson Syndrome comprises the pathological triad of dysphagia, esophageal web, and iron deficiency anemia. Other signs and symptoms can include glossitis, angular cheilitis, and koilonychia. The decreased incidence of this syndrome parallels the decreased prevalence of iron deficiency in the developed world. Iron deficiency induces an iron-dependent enzyme dysfunction which causes oxidative stress, mucosal DNA damage and ultimately potentiates the formation of esophageal webs. Without intervention, patients with this syndrome may develop absolute dysphagia, aspiration pneumonia and other complications.

While Plummer-Vinson Syndrome is rare and becoming increasingly less prevalent due to the treatment of iron deficiency anemia, any patient who presents with iron deficiency anemia and dysphagia should undergo radiological studies to rule out this diagnosis. Such studies include barium swallow and EGD. Plummer-Vinson Syndrome should remain high on the list of differential diagnoses for these patients because of the risk of developing esophageal squamous cell carcinoma if left undetected and untreated. These patients should have prompt follow up with serial EGDs and further imaging. These follow up EGDs are crucial to evaluate for signs of esophageal carcinoma after a diagnosis of Plummer Vinson Syndrome.

REFERENCES

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