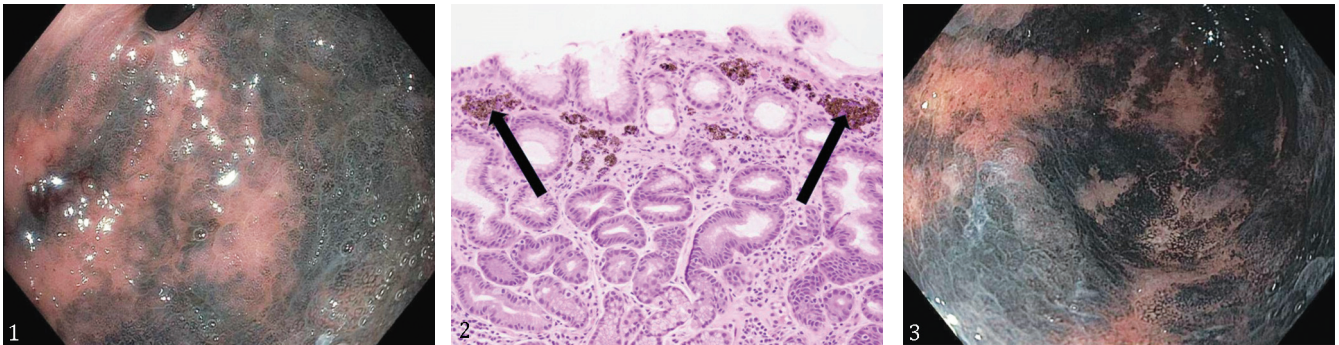


Pseudomelanosis Gastri: The Dark Side of Antihypertensives

William King¹, Arvin Daneshmand², Neha Gupte³, Charles Middleton⁴, Anil Sharma¹

1) University of Florida, Division of Gastroenterology, Hepatology, and Nutrition; 2) University of Florida, Department of Medicine; 3) Eastside High School, Gainesville, FL; 4) University of Florida, Department of Pathology, USA



A 72-year-old man was referred for dyspepsia. His medication list included allopurinol, amlodipine, aspirin 81 mg, clonidine, clopidogrel, hydralazine, hydrochlorothiazide, isosorbide mononitrate, montelukast, pravastatin, and ramipril. He did not use nonsteroidal anti-inflammatory drugs (NSAIDs).

Index esophagogastroduodenoscopy (EGD, not pictured) revealed atrophic gastric mucosa and pyloric stenosis, dilated to 15 mm with a through-the-scope balloon. Histopathology showed gastric intestinal metaplasia. Repeat EGD six months later revealed persistent pyloric stenosis and diffuse melanic discoloration of the gastric mucosa (Fig. 1). It should be noted that these images are captured using standard white light imaging. Histopathology on gastric biopsies revealed pseudomelanosis and abundant stromal iron deposition (Fig. 2). Repeat EGD twelve months after initial presentation (Fig. 3) redemonstrated these findings, consistent with progression of pseudomelanosis.

Pseudomelanosis was most probably from hydralazine, as several groups including ours have previously reported [1-3]. Thiazide-type diuretics and intermittent gastric bleeding due to dual antiplatelet therapy remain possibilities as well [4]. Stromal iron deposition preceded endoscopically visible changes by six months. This patient's worsening pyloric stenosis and gastric emptying time allowed for increased gastric contact time for hydralazine. This phenomenon may explain the apparent temporal association between pyloric stenosis and pseudomelanosis.

Although positive iron staining appears not to be ubiquitous among pseudomelanosis cases [5], one proposed

mechanism of pseudomelanosis is that medications containing sulfur moieties such as hydralazine and thiazides cause iron sulfide to accumulate in macrophages of intestinal villi [6]. This raises an interesting, albeit untestable, hypothesis – that the patient's gastric intestinal metaplasia provided a nidus for pseudomelanosis to occur in the stomach.

Corresponding author: William King, william.king@medicine.ufl.edu

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