

PICTURES IN DIGESTIVE PATHOLOGY

Pseudomelanosis duodeni: is there a common denominator?

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A 76-year-old female patient with a past medical history of diabetes mellitus, stage 3 chronic renal failure and iron deficiency anemia was referred for esophago-gastroduodenoscopy (EGD) for evaluation of solid food dysphagia. She had been on oral therapy with ferrous sulfate for several years. Besides a Schatzki's ring the EGD revealed a duodenal mucosa with black-speckled pigmentation (Fig. 1). Biopsies were performed and disclosed the deposition of brown (hemosiderin) pigment within macrophages in the lamina propria of normal villi (Fig. 2). This endoscopic appearance is called pseudomelanosis duodeni (PD).

This rare but benign condition was first described in 1976, it has female predominance and occurs mostly in the sixth and seventh decades of life (1,2). The most common extracolonic site for pseudomelanosis of the gastrointestinal tract is the duodenum (1,2). Despite PD pathogenesis is still unclear, it has been associated with several illnesses, including end-stage renal disease, hypertension, diabetes mellitus, gastrointestinal hemorrhage and folic acid deficiency (3,4). Some medications have also been linked, such as sulfur-containing antihypertensive agents, furosemide and ferrous sulfate (4).

Although the cause and natural history of the pigment have not been clarified yet, it seems to correspond mainly to an accumulation of iron sulfide and hemosiderin within macrophages in the lamina propria. Likewise, there is no consensus regarding the nature and source of

the pigment accumulation seen in the macrophages but it is thought to contain iron, sulfur, or melanin/melanin-like pigment (2).

In the literature, there are only few cases of PD described, and its etiopathogenesis remains unknown (1-4). Interestingly, in our patient three of the most important conditions (chronic renal failure, diabetes mellitus and history of oral iron supplementation) were also present. Therefore, this case could be a supportive finding regarding the definitive causative factor for this rare endoscopic condition.

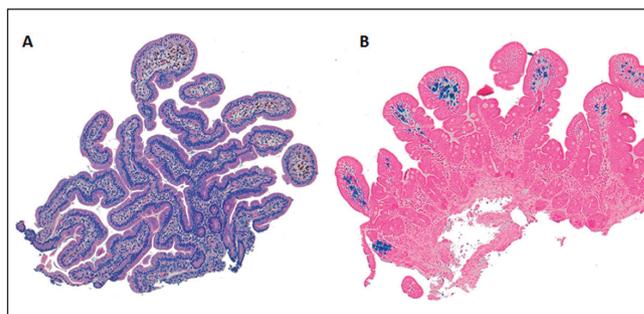


Fig. 2. Duodenal biopsy. A. Brown pigment is present within the cytoplasm of macrophages in the lamina propria of the tips of villi (hematoxylin and eosin 100x). B. Perls' stain confirms the presence of iron in macrophages (Perls' Prussian Blue 100x).

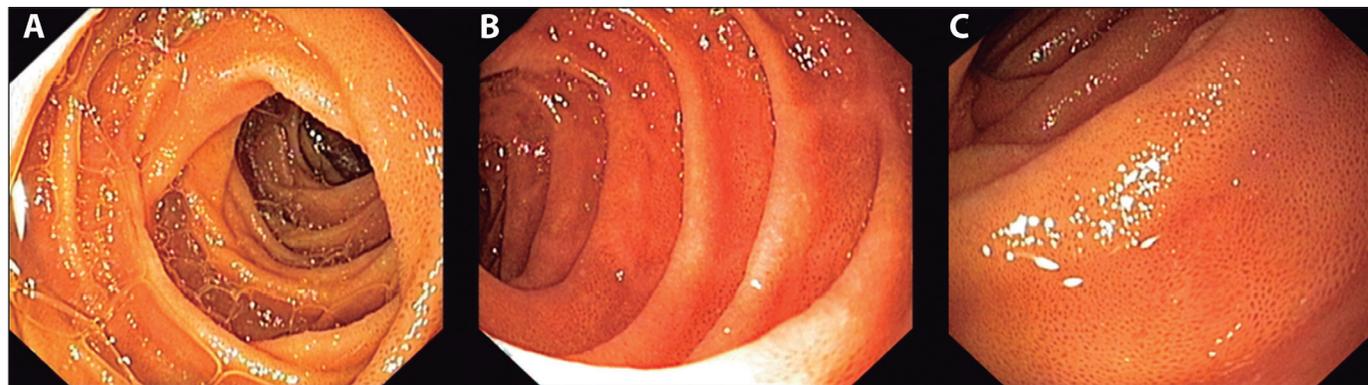


Fig. 1. Endoscopic pictures showing multiple dark brown spots in the duodenum.

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