**CASE PRESENTATION**

A 66-year-old African-American woman with a history of chronic renal insufficiency on hemodialysis, hypertension, and diabetes mellitus presented with acute worsening of her chronic dysphagia over the past 2 months. Her dysphagia was initially to solids then progressed to liquids. Incidentally, a small mobile mass was found on the right coronary cusp during routine transthoracic echocardiogram. The cardiology service requested an esophagogastroduodenoscopy (EGD), due to her history, prior to their performing a transesophageal echocardiogram to evaluate for endocarditis. The EGD was normal except for what is shown in Figure 1 in the second portion of the duodenum.

**Questions**

1. What is the diagnosis?
2. What medical conditions and medications are associated with this diagnosis?
3. What is the proposed cause of the hyperpigmentation?
4. Is this condition always seen endoscopically when seen on biopsy?

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**Figure 1.** EGD showed speckled hyperpigmentation of the duodenum.

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Biopsy of the hyperpigmentation showed small bowel mucosa with aggregates of pigment-laden mononuclear cells at the apical portion of the villi, consistent with pseudomelanosis duodeni (Figure 2). This rare entity was first described in 1976 and since then the literature has predominately been made up of case reports. Pseudomelanosis duodeni is associated with chronic renal failure, iron supplementation, diabetes mellitus, hypertension, antihypertensive medications, and bleeding upper gastrointestinal lesions (1). It has not been associated with laxative abuse as seen in melanosis coli. The majority of cases have been women over 60 years of age (2). The pigmentation is made up of ferrous sulfide with small amounts of other elements. The proposed mechanism is that absorbed iron is coupled with sulfur. This coupling leads to difficulty in iron transport and accumulation in macrophages in the lamina propria of the duodenum (3). One proposed reason for the association with antihypertensive medications is that some medications, such as furosemide, hydralazine, and hydrochlorothiazide, have the sulfur component necessary to form ferrous sulfide (4,5). Interestingly enough, this patient was taking hydralazine on a regular basis at home. Of the published case reports, a minority of patients were found to have endoscopic evidence of pseudomelanosis duodeni seen on biopsy (3). This case report illustrates the medical conditions and medications associated with the rare entity of pseudomelanosis duodeni.

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References