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# Iron Pill-Induced Gastropathy in Elderly Patients: A Case Series Report

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## Introduction

- ✓ Iron deficiency anemia is a global health problem with an estimated two billion cases worldwide.<sup>1</sup>
- ✓ Oral iron supplementation is considered the first line treatment.<sup>1</sup> However, recent studies favor the use of short-term IV iron especially in patients with drug tolerance and efficacy concerns.<sup>1,2</sup>
- ✓ In this report, we present three cases of iron pill gastropathy in patients whose clinical courses were complicated by gastric erosion, ulcer or gastrointestinal (GI) bleeding.

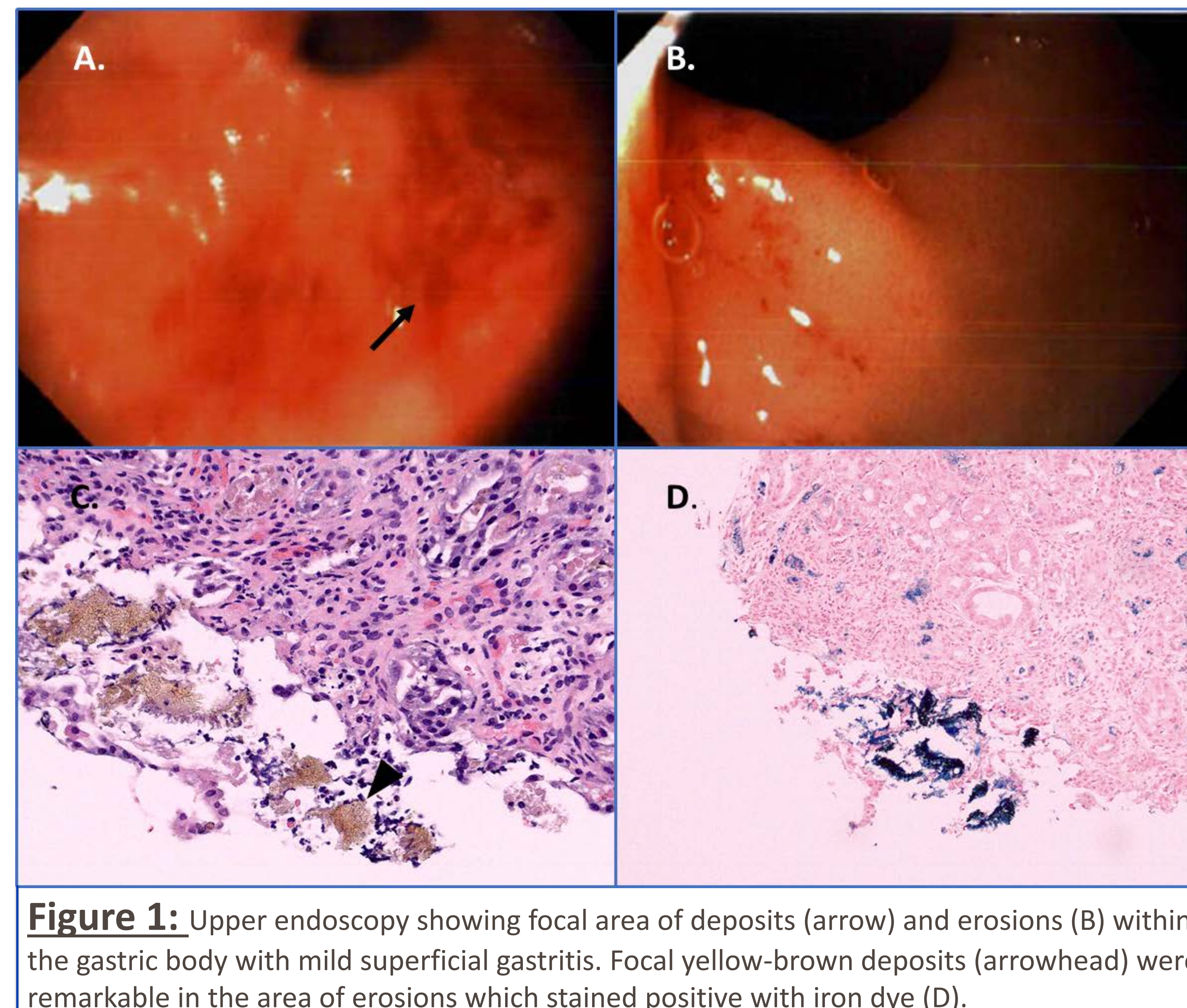
## Case Presentation

Table 1. Baseline characteristics of the patient population

	Case 1	Case 2	Case 3
<b>Age/sex</b>	72/M	81/M	90+/F
<b>Other Comorbidities*</b>	HTN, CKD, CAD, Gastric AVM, renal cell cancer s/p left nephrectomy, GERD	HTN, DM	HTN, CAD, Afib on Warfarin
<b>Clinical presentation</b>	Chest pressure, NSTEMI	Abdominal pain, gastritis	Shortness of breath
<b>Hgb (gm/dL)</b>	7.9	7.1	8.1
<b>Htc (%)</b>	29.5	25.7	25.4
<b>MCV (fL)</b>	70.6	59.5	67.7
<b>TIBC (mcg/dL)</b>	412	465	429
<b>Ferritin (ng/ml)</b>	18	3.2	1.9
<b>Iron supplement</b>	Ferrous sulfate 325 mg daily	Ferrous sulfate 325 mg twice a day	Ferrous sulfate 325 mg daily
<b>Location of iron deposits</b>	Antrum	Gastric body	Gastric body
<b>Histopathology</b>	Reactive gastritis with chronic inflammation and focal intestinal metaplasia. iron deposition within the intramucosal layer.	Oxyntic type mucosa with chronic active gastritis and focal erosions that stained positive with iron.	Mild chronic superficial gastritis and focal yellow deposits that stained positive for iron.
<b>Complications</b>	Severe antral erosions	An ulcer formation	Gastric erosions with chronic gastritis

F= female; M = male; HTN = hypertension; CKD = chronic kidney disease; CAD= coronary artery disease; DM = diabetes mellitus; AVM = arteriovenous malformation; GERD = Gastroesophageal reflux disease; gm= gram; mcg = microgram; fL= femtoliter; ml= milliliter; ng = nanogram; dL =Deciliter; hgb = hemoglobin; htc = hematocrit; MCV = mean corpuscular volume; TIBC = total iron binding capacity. \*All of three cases had history of iron deficiency anemia.

## Case Presentation (cont'd)



**Figure 1:** Upper endoscopy showing focal area of deposits (arrow) and erosions (B) within the gastric body with mild superficial gastritis. Focal yellow-brown deposits (arrowhead) were remarkable in the area of erosions which stained positive with iron dye (D).

**Case 1:** A 72-year-old male with multiple comorbidities, who was admitted to the hospital for NSTEMI. During his hospital stay, he underwent an EGD which showed several erosions in the antrum with no active hemorrhage or visible vessels. Biopsy taken from the erosions was consistent with iron gastropathy. After establishing the diagnosis the patient was transitioned to IV iron.

**Case 2:** An 83-year-old male presented with a 3-day history of abdominal pain associated with nausea and vomiting. The patient was treated symptomatically for suspected acute gastritis with complete resolution of the symptoms. Severe anemia on initial labs prompted an EGD, which showed a superficial ulcer in the gastric body with a caustic appearance. Microscopically, focal iron deposits in the area of erosions and were consistent with iron gastritis.

## Case Presentation (cont'd)

**Case 3:** A 90+-year-old female presented with acute shortness of breath. Initial labs revealed worsening iron deficiency anemia. An EGD showed erosions within the gastric body with mild superficial gastritis. Microscopically, biopsied erosions showed yellow deposits within the mucosa, which stained positive for iron.

## Discussion

Iron pill gastropathy is an underrecognized condition particularly in the elderly.<sup>3,4</sup> The liquid form of oral iron has been shown to be less toxic to the gastric mucosa compared to the tab formulation.<sup>3-5</sup>

★ **Transition to liquid or IV iron** should be considered in patients with iron gastropathy as use of iron pills can lead to gastric erosions, ulcers, and GI bleeding, which can worsen the underlying anemia and result in cardiovascular symptoms related to severe anemia.<sup>4,5</sup>

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