



## Pseudo Melanosis Gastri and Duodeni in A Young Patient- A Case Report from the Developing World

**Danish Ratnani, Abbas Ali Tasneem, Hina Ismail, Raja Taha Yaseen Khan, Mudassir Laeeq, Nasir Luck, Muhammad Mubarak and Zain Majid\***

*Ministry of Public Health of Ukraine, Bukovinian State Medical University, Ukraine*

**\*Corresponding Author:** Zain Majid, Ministry of Public Health of Ukraine, Bukovinian State Medical University, Ukraine.

**Received:** January 16, 2024

**Published:** February 08, 2024

© All rights are reserved by **Zain Majid, et al.**

### Abstract

Pseudo melanosis of the stomach and duodenum is a rare condition mostly noted in patients on diuretics or those inflicted by specific conditions like hypertension, chronic kidney disease and even in GI bleed. We hereby present the case of a young female who was evaluated for generalized weakness and later on after extensive workup was found to have pseudo melanosis of the stomach and duodenum.

**Keywords:** Pseudo Melanosis of Stomach; duodenum; Chronic Kidney Disease; GI Bleed

### Introduction

Pseudo melanosis of stomach and duodenum is an unusual endoscopic finding, rarely found in the duodenum, known as pseudo melanosis duodeni [1] and very rare in stomach [2], known as pseudo melanosis gastri whereas melanosis of the lower GI tract i.e., melanosis coli, is a common finding on colonoscopy [3]

### Case

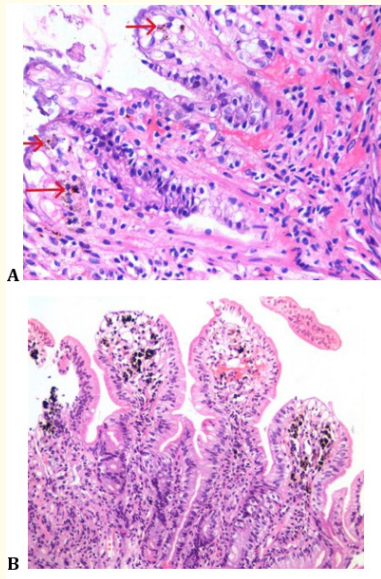
A 30-year-old female known hypertensive, chronic kidney disease (on furosemide) presented to our outpatients' department with complains of generalized weakness along with shortness of breath. There was no history of loose stool, nor any history of milk or food intolerance. There was no history of blood loss from any site nor any history of heavy menstrual bleeding. On examination, she was looking pale while rest of her examination findings were unremarkable. On laboratory investigation, her hemoglobin was 6.6 g/dl with MCV 62.9 fL. Her liver function tests (LFTs) were normal. Her baseline creatinine was 2.58 mg/dl. HBsAg was non-reactive but anti-HCV was reactive. HCV RNA PCR was negative. Based upon these findings, her iron profile was sent and an esophagogastroduodenoscopy (EGD) was performed. Her EGD showed

blackish/brownish mottling in gastric as well as duodenal mucosa. Biopsies of antrum and duodenum revealed golden brown pigmentation within macrophages in lamina propria (Figure 1,2) on hematoxylin and eosin stain. Figure 2 shows iron staining on Prussian blue stain. Duodenal biopsy also showed features of sprue (Marsh class 2). Her celiac serology (TTG Ig A and IgG) was negative. Based upon these findings, she was managed as a case of pseudomelanosis of the stomach and the duodenum. She was advised to change from furosemide to amlodipine and managed with hydration and IV iron replacement.

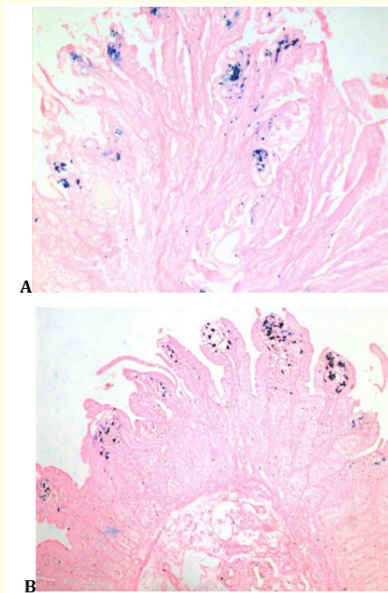
### Discussion and Conclusion

Melanosis refers to excessive pigmentation of any body part due to disturbance in the melanin production. While pseudo melanosis is the pigment that appears like melanin but is actually due to the deposition of another pigment material [4].

Pseudomelanosis of the lower GIT is of common occurrence, however pseudomelanosis of the upper GIT is rare [5].



**Figure 1:** Gastric (A) and duodenal (B) mucosa with golden brown pigmentation on hematoxylin and eosin stain.



**Figure 2:** Gastric (A) and duodenal (B) mucosa with golden brown pigmentation on hematoxylin and eosin stain.

This condition is usually diagnosed on endoscopy and biopsy, with its classic endoscopic appearance being of speckled dark pigmentation seen in the stomach. These pigmentations are depositions of iron in the macrophages which lie in the lamina propria and are visualized are staining with the Perl's stain [6].

The underlying mechanism remains unclear with associations being established between pseudomelansiosis with CKD, HTN, DM along with certain drugs like furosemide, hydralazine, propranolol along with ferrous sulphate [7].

Although a benign condition, biopsy is needed to establish diagnosis and differentiate from other etiologies like hemochromatosis, hemosiderosis, brown bowel syndrome and metastatic malignant melanoma [8].

The natural course of the disease and prognosis is not yet documented in the medical literature [9].

With most cases resolving on discontinuation of the drug.

### Bibliography

1. Rustagi T, et al. "Pseudomelanosis of stomach, duodenum, and jejunum". *Journal of Clinical Gastroenterology* 49.2 (2015): 124-126.
2. Mohamed MW, et al. "An Incidental Finding of Gastric and Duodenal Pseudomelanosis: A Case Report". *Case Reports in Gastroenterology* 16 (2022): 264-269.
3. Cruvelhier J. "Cancer avec melanosis". In: *Anatomie Pathologique du Corps Humain*. Paris, France: Ballière (1892).
4. Tsai YN, et al. "Magnifying endoscopy for pseudomelanosis duodeni". *Journal of Gastroenterology and Hepatology* (2016): 31.
5. Rustagi T, et al. "Pseudomelanosis of stomach, duodenum, and jejunum". *Journal of Clinical Gastroenterology* 49.2 (2015): 124-126.
6. Thure Caire M, et al. "Pseudomelanosis of the stomach and duodenum: an uncommon endoscopic finding". *Endoscopy International Open* 2.3 (2014): E191-192.

7. Rana NK, *et al.* "A Rare Case of Duodenal Melanosis: Case Report". *Cureus* 12.9 (2020): e10475.
8. Abumoawad A, *et al.* "Pseudomelanosis duodeni: a short review". *The American Journal of Digestive Diseases* 2 (2015): 41-45.
9. Rawal KK. "Pseudomelanosis duodeni". *Tropical Gastroenterology* 37.4 (2017): 301-302.