**Scholars Journal of Medical Case Reports**
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

**Hepato-Gastro-Enterology**

# Melanosis Coli: A Case Report of a Rare and Harmless Entity

Jihane Rizkou[1*], Fatimaezzahra Chakor[1], Hala Aouroud[1], Khadija Krati[1]

[1]Department of Hepato-Gastro-Enterology, Arrazi Hospital, Mohammed VI University Hospital Center, Marrakesh, Morocco

**DOI:** 10.36347/sjmcr.2023.v11i05.007 | **Received:** 08.03.2023 | **Accepted:** 24.04.2023 | **Published:** 03.05.2023

***Corresponding author:** Jihane Rizkou
Department of Hepato-Gastro-Enterology, Arrazi Hospital, Mohammed VI University Hospital Center, Marrakesh, Morocco

**Abstract** **Case Report**

Melanosis coli (MC) is a non-inflammatory, rare, benign, and reversible colonic disorder. That refers to pigmentation of the colonic mucosa, shown by colonoscopy, and Confirmed by the anatomopathological study of colon biopsies. It results from excessive and prolonged use of anthraquinone laxatives, and usually resolves within a few months after discontinuing the laxatives. We present the case of a 60 year old woman presenting with chronic abdominal pain constipation, and revealing Melanosis Coli following prolonged use of laxatives.

**Keywords:** Melanosis Coli-Colon-Laxatives-Anthraquinones.



## INTRODUCTION

Melanosis coli (MC) is a non-inflammatory bowel entity that corresponds to harmless dark pigmentation of the colonic mucosa related to deposits of lipofuscin in the lamina propria, which was first discovered by Cruveilhier in 1829 [1, 2]. In 1857, Virchow formally defined forward the concept of Melanosis Coli [3]. The most common cause or MC is the long use of herbal laxatives containing anthranoids [4, 5]. It's a benign, reversible lesion that can gradually regress after stopping or discontinuing the use of laxatives [1]. MC may affect the entire colon, and it could also involve the duodenum, ileum and jejunum [6]. The diagnosis is based on colonoscopy and histopathological examination that shows the presence of pigmented cells, located in the chorion of the colonic mucosa. Here we report a case of MC in a 60 year old female patient with chronic constipation and long consumption of anthraquinone laxatives.

## CASE REPORT

A 60 year-old patient with no relevant pathological history, was admitted in our department for chronic moderate atypical abdominal pain and chronic constipation under self-medication with anthraquinone laxatives. Physical examination upon admission was without abnormality. An abdominal ultrasound was performed showing no abnormalities. Laboratory tests with CBC, CRP, and fecal calprotectine were normal. There was no alteration of renal function tests. Serum Calcium and glucose levels were within normal range and her thyroid-stimulating hormone (TSH) and free thyroxine levels were normal. Colonoscopy was performed showing pigmented mucosa, resembling leopard skin, sitting mainly at the level of the ascending, and transverse colon (Figure1) suggesting Melanosis Coli; the descending colon and rectum were of normal appearance. The anatomopathological study of colon biopsies confirmed the presence of lipofuscin deposits in the chorion and macrophages. The treatment consisted of stopping laxatives and establishing hygieno-dietetic measures.

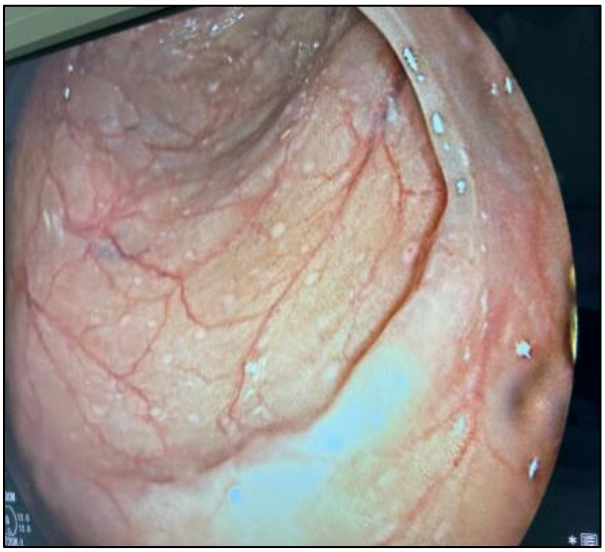

**Figure 1: Pigmented appearance of colonic mucosa on colonoscopy.**

## DISCUSSION

Melanosis coli is an entity in which a brown or black pigment is deposited in the colorectal mucosa with variable degrees of pigmentation [7]. It was first discovered by Cruveilhier in 1829 [2], but it was in 1857 that Virchow described it as "melanosis coli" [3].

It is often caused by the chronic use of anthraquinone derivatives, such Senna, cascara, aloe, and rhubarb [5, 8]. These anthraquinones can induce apoptosis of colonic epithelial cells, which are phagocytosed by adjacent macrophages resulting in lipofuscin deposition in the lamina propria [5, 9, 10]. Therefore, it would be more appropriately named "pseudo-melanosis coli" as the change in pigmentation of the mucosa is caused by lipofuscin and not melanin [4].

The long-term use of anthraquinone laxatives is the main cause of Melanosis Coli but other situations may also lead to MC in particular: irritable bowel syndrome, inflammatory bowel disease, and hyperplastic polyps [11-14]. It also has been revealed that MC may be connected to the use of non-steroidal anti-inflammatory drugs (NSAIDs), vitamin E deficiency, the intake of unsaturated fatty acids, environmental factors, family history, psoriasis and Rett syndrome [1]. MC is not associated with greater risk for colorectal cancer, rather, there is an increase in polyp detection rate, due to the optical enhanced effect of the dark background mucosa [7, 15, 16].

Colonoscopy examination is the gold tool for the diagnosis and differential diagnosis of MC, confirmed by pathological examination [1].

MC remains a reversible situation upon stopping the consumption of the causative agent, the pigmentation gradually regress usually within one year of discontinuing anthraquinones [1, 17]. Additionally, patients should start a high fiber diet, developing good living habits, and maintaining a positive attitude [1]. Moreover, regular monitoring by colonoscopy is necessary in order to follow colonic lesions regression [18].

## CONCLUSION

Melanosis coli is a benign and reversible entity that can develop within a few months of excessive anthranoids laxative use. The diagnosis of MC is mainly based on colonoscopy and histopathological examination of colon biopsies. The treatment for MC consists of stopping the causative agent and adopting healthy hygienio-dietetic measures.

## REFERENCES


1. Yang, N., Ruan, M., & Jin, S. (2020). Melanosis coli: A comprehensive review. *Gastroenterología y Hepatología (English Edition)*, *43*(5), 266-272.
2. Cruveilhier, J. (1842). *Anatomie pathologique du corps humain; ou, Descriptions, avec figures lithographiées et coloriées, des diverses altérations morbides dont le corps humain est susceptible*. Chez JB Baillière.
3. Virchow, R. (1847). Die pathologischen pigmente. *Virchows Archiv*, *1*(2), 379-404.
4. Moeller, J., Solomon, R., Kiffin, C., Ditchek, J. J., & Davare, D. L. (2019). Melanosis Coli: A Case of Mistaken Identity—A Case Report. *The Permanente journal*, *23*.
5. Kuriyama, A. (2021). Melanosis coli. *JMA journal*, *4*(3), 291-292.
6. Yuan, S., Wang, P., Zhou, X., Xu, J., Lu, S., Chen, Y., & Zhang, Y. (2020). Differential proteomics mass spectrometry of melanosis coli. *American Journal of Translational Research*, *12*(7), 3133.
7. Abu Baker, F., Mari, A., Feldman, D., Suki, M., Gal, O., & Kopelman, Y. (2018). Melanosis coli: a helpful contrast effect or a harmful pigmentation?. *Clinical Medicine Insights: Gastroenterology*, *11*, 1179552218817321.
8. Nesheiwat, Z., & Al Nasser, Y. (2021). Melanosis coli. In *StatPearls [Internet]*. StatPearls Publishing.
9. Li, X. A., Zhou, Y., Zhou, S. X., Liu, H. R., Xu, J. M., Gao, L., ... & Li, X. H. (2015). Histopathology of melanosis coli and determination of its associated genes by comparative analysis of expression microarrays. *Molecular medicine reports*, *12*(4), 5807-5815.
10. Leung, L., Riutta, T., Kotecha, J., & Rosser, W. (2011). Chronic constipation: an evidence-based review. *The Journal of the American Board of Family Medicine*, *24*(4), 436-451.
11. Coyne, J. D. (2013). Melanosis coli in hyperplastic polyps and adenomas. *International Journal of Surgical Pathology*, *21*(3), 261-263.
12. Sosa, J. L., Cortes, V., & Zeppa, R. (1991). Melanosis coli: a case report in a trauma patient and review of the literature. *The American surgeon*, *57*(6), 378-380.
13. Libby, G., Donnelly, L. A., Donnan, P. T., Alessi, D. R., Morris, A. D., & Evans, J. M. (2009). New users of metformin are at low risk of incident cancer: a cohort study among people with type 2 diabetes. *Diabetes care*, *32*(9), 1620-1625.
14. Liu, Z. H., Foo, D. C. C., Law, W. L., Chan, F. S. Y., Fan, J. K. M., & Peng, J. S. (2017). Melanosis coli: Harmless pigmentation? A case-control retrospective study of 657 cases. *PLoS One*, *12*(10), e0186668.
15. Zhang, Y., Zhan, T. T., Dong, Z. Y., Sun, H. H., Wang, J. W., Chen, Y., & Xu, S. C. (2022). Melanosis coli: A factor not associated with histological progression of colorectal

polyps. *Journal of Digestive Diseases*, *23*(5-6), 302-309.

16. Blackett, J. W., Rosenberg, R., Mahadev, S., Green, P. H., & Lebwohl, B. (2018). Adenoma detection is increased in the setting of melanosis coli. *Journal of Clinical Gastroenterology*, *52*(4), 313-318.
17. Klair, J. S., Chandra, S., & Johlin, F. C. (2019). Melanosis coli due to rhubarb supplementation. *ACG Case Reports Journal*, *6*(5), e00092.
18. Iwamuro, M., Tanaka, T., & Okada, H. (2020). Melanosis coli due to aloe vera consumption. *Internal Medicine*, *59*(20), 2633-2634.