

Colonic Melanosis: Watch Out for the Dangers of Senna Leaves

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Abstract

Case Report

Colonic melanosis is a benign condition characterized by dark brown pigmentation of the colon mucosa, typically caused by excessive use of laxatives containing anthraquinone and senna. This article presents a case study of a 61-year-old female with a history of type 2 diabetes who developed chronic constipation and subsequently abused senna-based medicinal plants for treatment. Colonoscopy revealed widespread pigmentation throughout the colon, confirming the diagnosis of colonic melanosis. Histopathological examination confirmed the presence of lipofuscin deposits and melanophages. The treatment involved discontinuation of the laxatives and implementation of dietary measures. Colonic melanosis is generally reversible upon discontinuation of the offending agents, but regular monitoring is recommended. This case highlights the importance of recognizing the potential risks associated with the chronic use of herbal laxatives containing anthraquinones.

Keywords: Colonic Melanosis, Senna Leaves, Anthraquinone, Laxatives, Pigmentation, Colonoscopy, Lipofuscin Deposits, Melanophages, Herbal Medicine.

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INTRODUCTION

Colonic melanosis, or colonic nigrosinosis, is a condition characterized by a dark brown pigmentation of the colon due to excessive consumption of laxatives containing anthraquinone and senna [1]. Its diagnosis is based on exploration through colonoscopy and histopathological examination of colonic biopsies [2]. Colonoscopy shows the presence of pigmented deposits on the colonic mucosa [2]. Colonic melanosis is a benign condition that is generally reversible upon discontinuation of laxatives [3].

CASE REPORT

We report the case of a 61-year-old female patient with a history of type 2 diabetes under insulin therapy. The patient reported chronic constipation

without other digestive or extra-digestive manifestations. The medical history revealed the abusive and prolonged use of medicinal plants containing senna leaves to treat constipation. Physical examination was unremarkable. Colonoscopy (Figure 1) revealed pigmentation of the mucosa, black in color, separated by fine streaks of healthy mucosa, located in all colonic segments explored, from the cecum to the rectum, suggesting generalized colonic melanosis, with the presence of several uncomplicated diverticula in the left colon (Figure 2). Histopathological study of the biopsies confirmed the presence of lipofuscin deposits in the chorion and melanophages. Treatment consisted of discontinuing medicinal plants, all laxatives, and implementing hygienic-dietary measures, with a follow-up colonoscopy scheduled in 5 years.

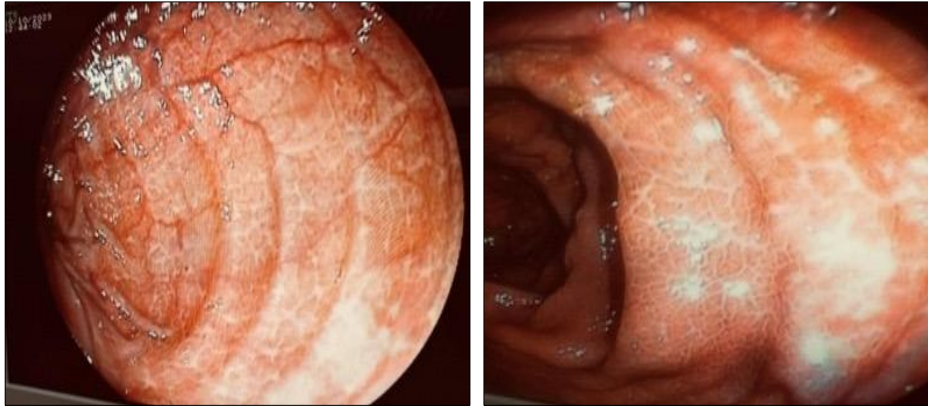


Figure 1: Endoscopic images of colonic mucosa showing brownish pigmentation.

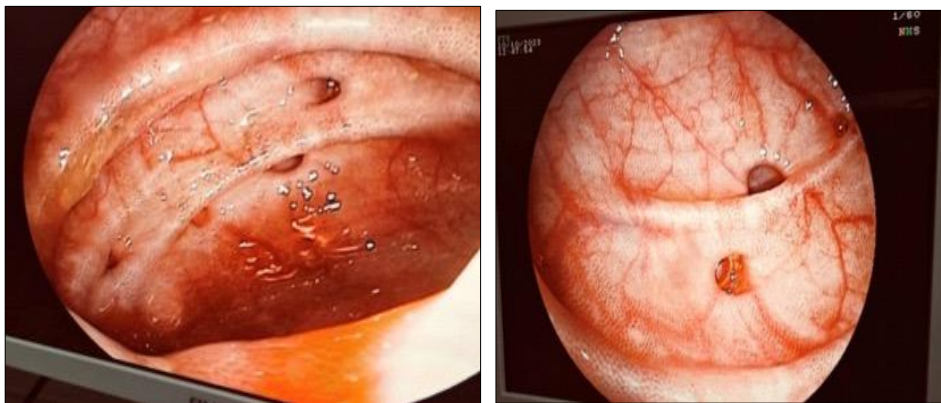


Figure 2: Endoscopic images of colonic mucosa showing brownish pigmentation with the presence of several uncomplicated diverticula in the left colon.

DISCUSSION

Colonic melanosis was first described by Andral and Cruveilhier in 1830 as hyperpigmentation of the colorectal mucosa. It was in 1857 that Virchow named it 'melanosis coli' [4, 5]. Colonic melanosis corresponds to a brownish, even blackish, discoloration of the colorectal mucosa, related to the deposition of lipofuscin pigment in the lamina propria and not melanin as its name suggests. Also known as pseudomelanosis coli, colonic melanosis was named because it was originally believed that the color change was due to melanin pigment. Its incidence is higher in the elderly and in those suffering from irritable bowel syndrome and chronic constipation, probably due to excessive consumption of medicinal plants containing anthraquinones [6, 7]. Colonic melanosis is more common in the elderly and twice as common in women as in men [8]. Anthraquinone-containing herbal laxatives have been described as the main cause of colonic melanosis, and the underlying mechanisms involved in the development of a brownish colonic mucosa are well documented [9, 10]. The intake of these laxatives induces cecal bacteria to convert anthracene from its glucuronated form to its active form, causing damage and apoptosis of colonic epithelial cells. The remaining apoptotic bodies are phagocytized by intraepithelial macrophages and transported from the epithelial basement membrane to the lamina propria. Here, the

digestion of apoptotic bodies is completed, and they are transformed into typical lipofuscin pigments by enzymatic action in macrophage lysosomes, giving melanosis its characteristic black appearance [1-10]. The use of medicinal plants in the treatment of gastrointestinal and hepatic pathologies is a relatively ancient phenomenon [10]. Plant extracts are commonly used to treat the classic symptoms of constipation, but excessive consumption of herbal laxatives containing anthraquinones such as senna, aloe, and rhubarb may be responsible for the high incidence of colonic melanosis [5-10]. The role of these substances in the occurrence of colonic melanosis has been well demonstrated experimentally [5]. In our series, the most likely causes of colonic melanosis were chronic use of irritating laxatives including senna. Colonic melanosis is considered a benign and harmless condition of the colon, the diagnosis of which is made by colonoscopy and confirmed by histopathological examination of colonic biopsies [2]. This condition is reversible after discontinuation of anthraquinone-containing plant intake. In addition to regular monitoring by colonoscopy, we recommend to constipated patients: discontinuation of anthraquinone laxatives and implementation of a high-fiber diet [1, 2], as was the case for our patient.

CONCLUSION

Colonic melanosis, or colonic nigrosinosis, is a rare condition characterized by a dark brown pigmentation of the colon due to excessive consumption of laxatives containing anthraquinone and senna. In our case, it was secondary to excessive use of medicinal plants containing senna leaves. Endoscopy and histopathological study of colonic biopsies allow diagnosis. The course is generally favorable after discontinuation of laxatives, but segmental biopsies of pigmented and non-pigmented areas should be performed to avoid overlooking other colonic pathologies.

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