

Intestinal Spirochetosis in an HIV-positive Patient

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Doi: 10.12890/2021_002686 - European Journal of Case Reports in Internal Medicine - © EFIM 2021

Received: 01/06/2021

Accepted: 09/06/2021

Published: 07/07/2021

How to cite this article: Trinidad Pereira MG, Martínez Antolinos C, Canosa Fernandez A, Martínez Alfaro E, Solís García del Pozo J. Intestinal spirochetosis in an HIV-positive patient. *EJCRIM* 2021;8: doi:10.12890/2021_002686.

Conflicts of Interests: The authors declare there are no competing interests.

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ABSTRACT

We present the case of an HIV-positive patient admitted because of costal pain secondary to neoplasia. During investigations, a colonoscopy showed non-specific ulcerations. Histological examination resulted in a diagnosis of intestinal spirochetosis. This infection can be asymptomatic or cause non-specific symptoms such as diarrhoea or abdominal pain. Intestinal spirochetosis should be included in the differential diagnosis of colon lesions in patients with HIV infection.

LEARNING POINTS

- Intestinal spirochetosis is associated with chronic diarrhoea and often with normal colonoscopy.
- This infection should be included in the differential diagnosis of HIV patients with digestive symptomatology in the absence of other more frequent causes.

KEYWORDS

Intestinal spirochetosis, HIV infection, colon biopsy

INTRODUCTION

Intestinal spirochetosis (IS) is an infection of the apical membrane of the colon mucosa by spirochetes. The most commonly identified agents of this condition in humans are *Brachyspira aalborgi* and *Brachyspira pilosicoli*^[1]. However, the clinical significance of these agents is uncertain, and it is unclear whether they are pathogenic or commensal microorganisms^[2]. Here we describe a patient with HIV infection and IS.

CASE DESCRIPTION

A 64-year-old patient was admitted to hospital following consultation with the infectious diseases unit because of costal pain. The patient had been diagnosed with C3 HIV infection in 1996 and was currently being treated with dolutegravir and lamivudine.

The patient reported the pain was mainly in the right costal region and had originated 6 weeks previously and then spread to the right hypochondrium and the ipsilateral lumbar region. There was no fever or other associated clinical symptoms. General examination was unremarkable, including cardiopulmonary auscultation as well as physical examination of the abdomen and limbs.

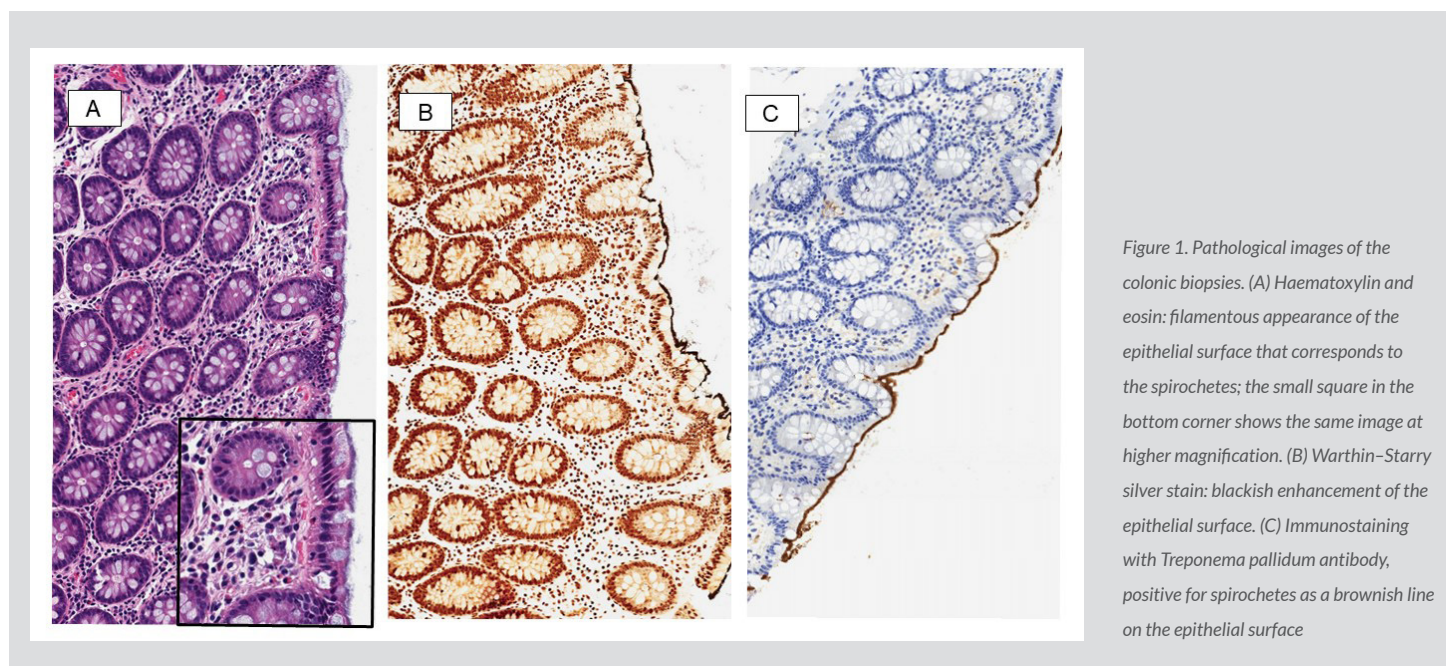
Blood biochemistry and blood count were normal. The CD4 count was 893/mm³ and the HIV viral load was undetectable. Serology for syphilis, HBV and HCV was negative. Serology for toxoplasma and HAV showed positive IgG and negative IgM in both cases. Tumour

markers including alpha-fetoprotein (2.8 ng/ml), prostate-specific antigen (2.4 ng/ml), carcinoembryonic antigen (4.5 ng/ml), cancer antigen 15-3 (26.1 U/ml), carbohydrate antigen 19-9 (9.3 U/ml), cancer antigen 125 (28.6 U/ml) and squamous cell carcinoma antigen (1.2 ng/ml) were normal. QuantiFERON-TB and Mantoux tests were negative.

Chest x-ray showed laminar atelectasis in the right hemithorax and right costophrenic obliteration. A computed tomography scan revealed the presence of right predominance nodular pleural thickenings suggestive of tumour implants, as well as pulmonary pseudonodular images. In addition, there was thickening of the hepatic flexure wall at the level of the abdomen, along with images suggestive of peritoneal carcinomatosis.

Colonoscopy showed non-specific and very dispersed canker sores measuring about 1–2 mm in the right colon. Biopsies of the sores were taken and later reported as IS (Fig. 1).

Pleural and omentum biopsies were subsequently taken. Infiltration by signet ring cells in the omentum sample suggested a differential diagnosis with pulmonary and breast carcinoma origin (reported as more likely), but the findings do not support colorectal carcinoma as the origin of the neoplasm.



DISCUSSION

We present a patient with HIV infection for whom a colonoscopy was requested to investigate a probable neoplasm. The colonic biopsy findings were compatible with IS. The prevalence of IS is very high in developing countries (11.4–64.3%) and significantly lower in developed countries (1.1–5%)^[3]. The most likely transmission route is oro-fecal^[4], although sexual transmission has also been suggested due to its higher prevalence in men who have sex with men, where it may be associated with HIV-positive status^[5].

Most cases in population studies are asymptomatic. The most common associated symptoms are non-specific, such as diarrhoea and abdominal pain, alternating diarrhoea and constipation, or bloating. It is uncommon to find mucous alterations on colonoscopy as seen in our case. However, when appropriate, antimicrobials such as metronidazole are helpful for symptom remission^[6].

Human IS should be suspected when the biopsy sample reveals a filamentous supraepithelial band (Fig. 1A)^[1], which is interrupted in the caliciform cells, unlike the mucin with which it is commonly confused. In this case, no biopsy cultures were performed for microbiological identification because of their poor yield and the low pathogenicity of these microorganisms.

In conclusion, IS is associated with chronic diarrhoea and often with normal colonoscopy findings. However, it should be considered in the differential diagnosis of digestive symptomatology in HIV patients, mainly in the absence of other more frequent causes. Finally, the use of antimicrobials will depend on the characteristics of each patient, with an increasing tendency nowadays to initiate treatment even in asymptomatic cases.

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