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When gut microbiota escape the barrier

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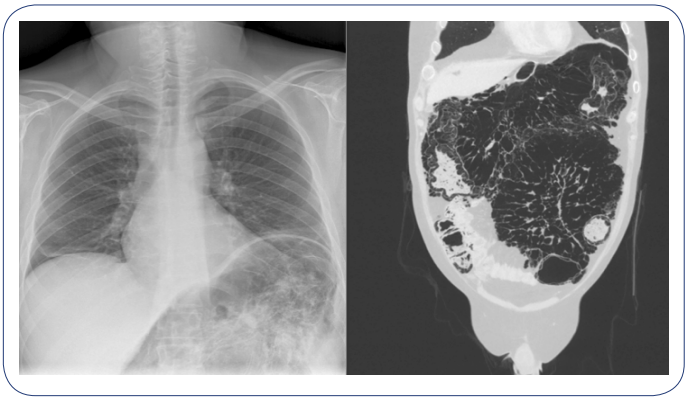
Introduction

A 41-year-old man was admitted to the internal medicine ward for acute cholestatic hepatitis. Eight months earlier, in the context of a wasting syndrome, he was diagnosed with stage C3 HIV associated with disseminated *Mycobacterium avium-intracellulare* (MAC) infection. At the time, antiretroviral therapy including emtricitabine, tenofovir alafenamide, and darunavir boosted with ritonavir was initiated and associated with MAC treatment by clarithromycin, ethambutol and a reduced dose of rifabutin 150 mg three times a week to avoid drug interaction. Immune reconstitution inflammatory syndrome (IRIS) appeared during the course of antibiotic therapy requiring treatment with methylprednisolone in decreasing doses. The patient was also treated with a monthly inhalation of pentamidine 300 mg for the prevention of pneumocystosis and an intramuscular injection of olanzapine 210 mg every 2 weeks.

Liver biopsy samples taken after the patient was admitted showed a relapse of the IRIS. Methylprednisolone was then increased back to 16 mg per day. Three days later the patient developed fever and abdominal perimeter enlargement without tenderness nor pain. Because major digestive tract dilatation and subdiaphragmatic free gas could be seen on the initial work-up chest radiograph, an abdominal CT-scan was immediately requested.

Image and question

Chest radiograph (left) and abdominal CT scan (right) of the patient. How would you manage this patient?



The abdominal CT scan images showed diffuse pneumomesenterium, colic pneumatosis and pneumo-peritoneum. Broad spectrum antibiotherapy was initiated and the patient was given a low-fiber diet. Urine, stool and routine blood cultures were initially negative. Persistent MAC was eventually found in blood cultures despite the patient having been treated for 7 months under the surveillance of a nurse. Fever persisted for 2 more weeks after broad spectrum antibiother-

apy was stopped. Corticosteroids were considered responsible for the anti-mycobacterial treatment failure and were then replaced by substitutive doses of hydrocortisone. Blood cultures became negative for MAC one month later. Colic pneumatosis resolved slowly but was still present 9 weeks later. Colic pneumatosis, which may be associated with pneumomesenterium has been described in late-stage HIV-infected patients but never associated with a pneumoperitoneum [1,2]. Corticotherapy and opportunistic infections such as cytomegalovirus or cryptosporidium, which were not found in this case, seem to be promoting factors. The association with MAC in this case remains presumptive as these bacteria have been associated with inflammatory bowel disease. Faced with such catastrophic radiological findings, and particularly given the recent liver biopsy, surgical intervention is tempting. However, if the clinical status remains stable and indolent, surgery should be avoided and medical treatment preferred.

Declarations

Disclosure: The authors declare no competing interest.

Contributorship

Dr Seghers and Dr Wieers take care of the patient and wrote the paper.

Dr Marot was implicated in the diagnosis and treatment of the patient.

Dr Van Ruyssevelt interpreted the chest radiography and and the CT scanner.

Ms Verbelen was in charge of microbiological samples.

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Conflict of interest: Authors declare no conflict of interest

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