AJMAS
https://journal.utripoli.edu.ly/index.php/Alqalam/index eISSN 2707-7179

Case report

Intestinal Mucormycosis in A 44-Year-Old Woman Under Chemotherapy for Acute Myeloid Leukemia

Houssem Harbi[1], Imen Zribi[1], Abderrahmen Masmoudi*[2], Amine Zouari[1], Salah Boujelben[1]

[1]Department of Surgery, Faculty of Medicine of Sfax, University of Sfax, Habib Bourguiba Hospital, Sfax, Tunisia
[2]Department of Surgery, Faculty of Medicine of Sfax, University of Sfax, Tataouine Hospital, Tunisia

ARTICLE INFO

Corresponding Email. *masmoudiabderrahmen@gmail.com*

Received*: 13-03-2023*
Accepted*: 22-03-2023*
Published*: 23-03-2023*

Keywords*. Intestinal Mucormycosis, Immunocompromised Patients, Surgery, Antifungal Therapy.*

ABSTRACT

Intestinal Mucormycosis is a rare fungal disease with high morbidity and mortality, which occurs in severely immunocompromised patients. Early recognition of the infection is crucial to improve the prognosis. Urgent surgical debridement and antifungal therapy are lifesaving. We present a case of intestinal mucormycosis revealed by an occlusive syndrome in a 44- year–old patient undergoing chemotherapy for acute myeloid leukemia.

Cite this article. *Harbi H, Zribi I, Masmoudi A, Zouari A, Boujelben S. Intestinal Mucormycosis in A 44-Year-Old Woman Under Chemotherapy for Acute Myeloid Leukemia. Alq J Med App Sci. 2023;6(1):134-136. https://doi.org/ 10.5281/zenodo.7764942*

INTRODUCTION

Mucormycosis is an infection caused by filamentous fungi known as "Mucorales" affecting preferentially, but not exclusively, patients with poorly controlled diabetes and immunocompromised subjects, including those with hematological malignancies, organ transplant recipients, severe burns and polytraumatized patients [1,2]. We report the rare case of intestinal Mucormycosis revealed by an occlusive syndrome in a patient undergoing chemotherapy for acute myeloid leukemia.

Case report

A 44-year-old patient with a medical history of current chemotherapy for acute myeloid leukemia, presented with an acute intestinal obstruction for two days. Her clinical examination found a distended tympanic abdomen and a diffuse abdominal pain. Blood tests showed a very high leukocytosis at 110 000 elements/mm3 and high CRP level at 40 mg/l. There was neither renal failure nor ionic disorders.

Abdominal computed tomography showed intestinal obstruction related to a jejunal parietal thickening. There was also a lack of contrast enhancement of some jejunal loops and a regular circumferential parietal thickening of the transverse colon.

The patient underwent emergency surgery. There was a pseudo-tumor zone formed of agglutinated intestinal loops under the greater omentum and attached to the transverse colon (figure 1). In addition, there were several oval blackish zones in the intestinal wall of these pathologic small bowel and colon (figure 2). These pseudo necrotic areas were also infiltrating the mesentery fat (figures 2 and 3).

A non-carcinologic intestinal resection was performed. Pathology showed that it was an intestinal Mucormycosis. The postoperative course was uneventful and the patient received amphotericin B for 8 weeks.

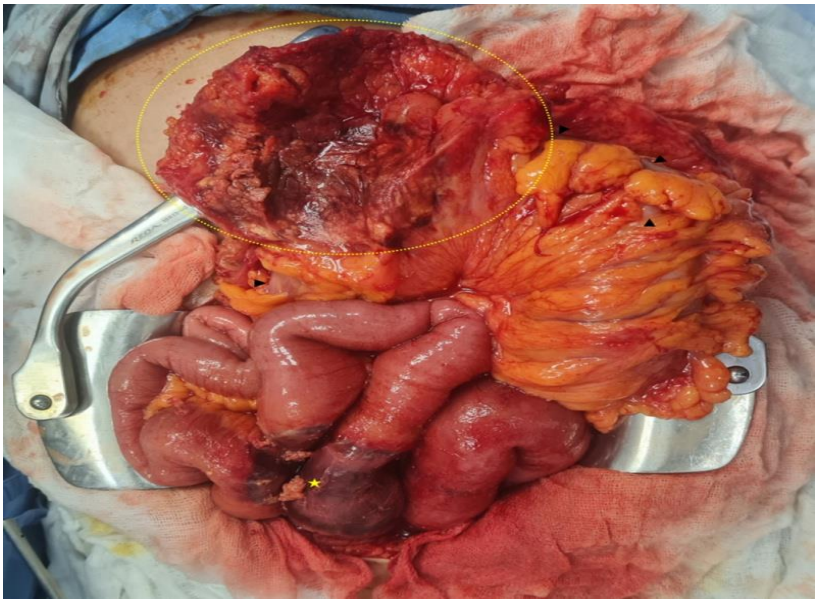

Figure 1. Extensive mucormycosis lesions on the transverse colon (black arrowheads), greater omentum (yellow dotted area) and some intestinal loops (yellow star). These lesions present as blackish necrotic areas. The whole formed a giant pseudo-mass: the greater omentum was covering the pathological intestinal loops before surgical dissection.

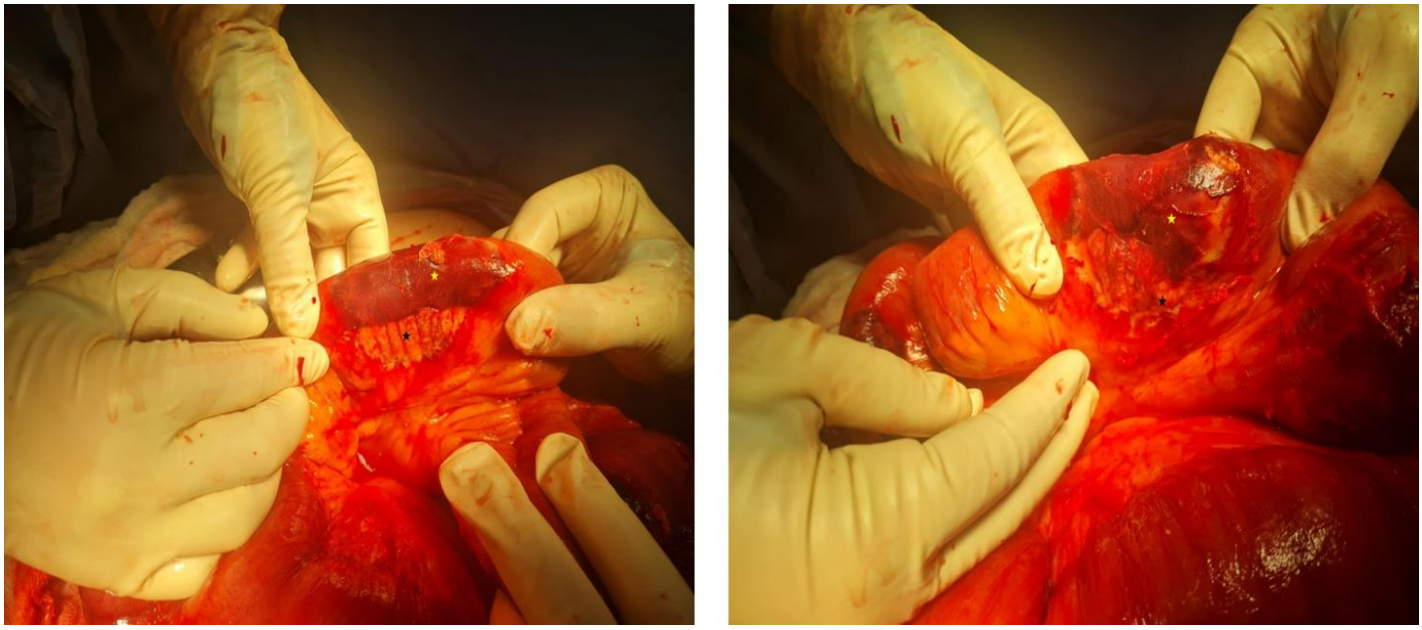

Figure 2. Blackish necrotic lesions (yellow stars) in 2 different intestinal loops. There is a fungal infiltration of the adjacent mesenteric fat (black stars).

DISCUSSION

Mucormycosis is an opportunistic, acute and invasive fungal infection, that preferentially cause vascular infiltration leading to arterial and venous thrombosis with possible tissue infarction [3]. It causes invasive necrotic lesions mainly of the upper and lower airways and, to a lesser degree, of the skin and the digestive tract [3]. Indeed, digestive mucormycosis remains rare (< 10%) [1,4] and occurs by diet contamination. Digestive lesions are mainly found in the stomach and the colon, but they can also be seen in the small intestine and the esophagus.

Intestinal mucormycosis may be complicated by perforation or intestinal obstruction. In these situations, the abdominal scan should only confirm the complication as there is no specific radiologic aspect of mucormycosis. But it may sometimes reveal an ischemic or a pseudo-tumor intestinal lesion. Thus, the diagnosis of mucormycosis is usually evoked intraoperatively provided that the surgeon is familiar with its macroscopic aspect in addition to a particular

clinical presentation based on an immunocompromised patient. Surgical management consists on a non-carcinological intestinal resection removing all the necrotic lesions. Postoperatively, treatment with intravenous amphotericin B is necessary for at least 6 to 8 weeks [5]. Note that the diagnosis can only be confirmed by pathological examination of the surgical specimen.

CONCLUSION

Intestinal localization of mucormycosis remains rare but invasive and often fatal (mortality 50%). Then, radiologists and surgeons should be familiar with intestinal mucormycosis so that an early diagnosis and prompt management could be guaranteed and fatal outcome would be avoided.

Disclaimer

The article has not been previously presented or published and is not part of a thesis project.

Competing interest

There are no financial, personal, or professional conflicts of interest to declare.

Ethics approval and consent for publication

Personal data have been respected. The patients consented to the use of their personal data for the purpose of this case report.

REFERENCES

1. Herbrecht R, Sabou M, Ledoux MP. Aspects cliniques et radiologiques des mucormycoses. médecine/sciences. 2013;29:19-24.
2. Steinbrink JM, Miceli MH. Mucormycosis. Infect Dis Clin North Am. 2021;35(2):435-52.
3. Skiada A, Lass-Floerl C, Klimko N, Ibrahim A, Roilides E, Petrikkos G. Challenges in the diagnosis and treatment of mucormycosis. Med Mycol. 2018;56(suppl_1):93-101.
4. Mooney JE, Wanger A. Mucormycosis of the gastrointestinal tract in children: report of a case and review of the literature. Pediatr Infect Dis J. 1993;12(10):872-6.
5. Cornely O, Alastruey-Izquierdo A, Arenz D, Chen S, Dannaoui E, Hochhegger B, et al. Global guideline for the diagnosis and management of mucormycosis: an initiative of the European Confederation of Medical Mycology in cooperation with the Mycoses Study Group Education and Research Consortium. Lancet Infect Dis. 2019;19(12):e405-21.