

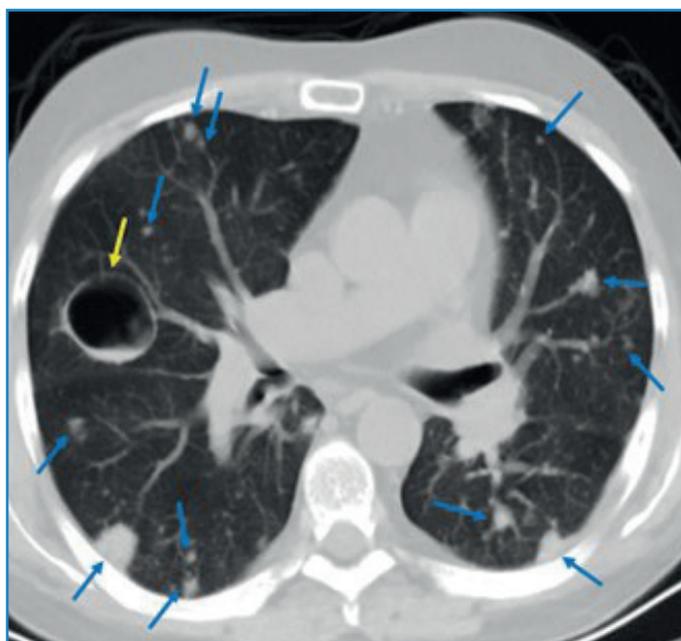
## Images in Infectious Diseases

# Invasive aspergillosis infection in an immunocompromised patient

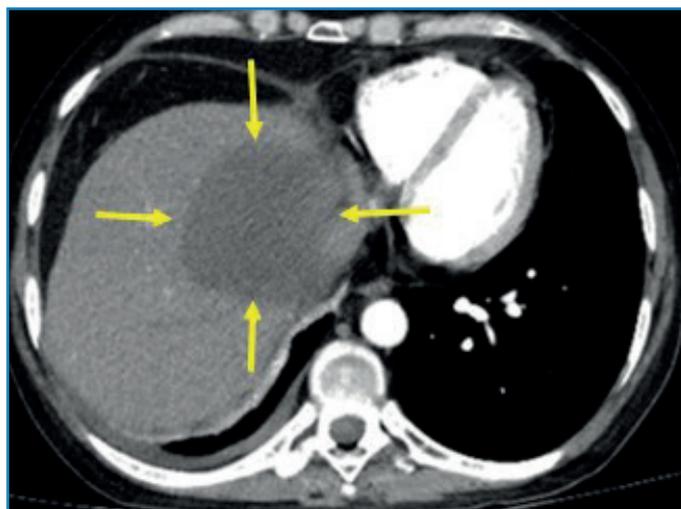
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A 40-year-old male patient was referred to our radiology department complaining of chest pain, fever, and sputum. His medical history included acute lymphoblastic leukemia, bone marrow transplantation, and graft-versus-host disease. Laboratory studies showed a total leukocyte count of  $14.2 \times 10^3$  uL (92.9% of neutrophils), with raised procalcitonin (0.44 ng/ml) and C-reactive protein (75.9 mg/L) levels. Thoracic CT revealed multiple nodules and masses, some in cavitory form, dispersed in both lungs (**Figure 1**). Sputum culture yielded *Aspergillus fumigatus* and *flavus*. At follow-up for invasive pulmonary aspergillosis, a newly developed hypodense lesion was detected in the liver parenchyma on control thoracic CT (**Figure 2**). MRI revealed a heterogeneous (due to hypointense areas) hyperintense lesion on T2-weighted image and a hypointense non-enhancing lesion on T1-weighted images (**Figure 3**). Aspergillosis was confirmed histopathologically. Fungal infections such as invasive aspergillosis are common in patients with severely compromised immune systems, including those with neutropenia, hematologic malignancies, organ transplants, HIV/AIDS, or long-term corticosteroid use<sup>1,2</sup>. Because of inhalation transmission, the lungs are the most commonly affected organs<sup>3</sup>. Liver *Aspergillus* has rarely been reported in case reports<sup>2</sup>. Importantly, although rare, the liver may also be affected in patients with risk factors.



**FIGURE 1:** Thoracic CT showing cavitory (yellow arrow) and multiple solid nodules in both lungs (blue arrows).



**FIGURE 2:** Axial plane CT showing large solitary hypodense lesion in liver parenchyma (yellow arrows).

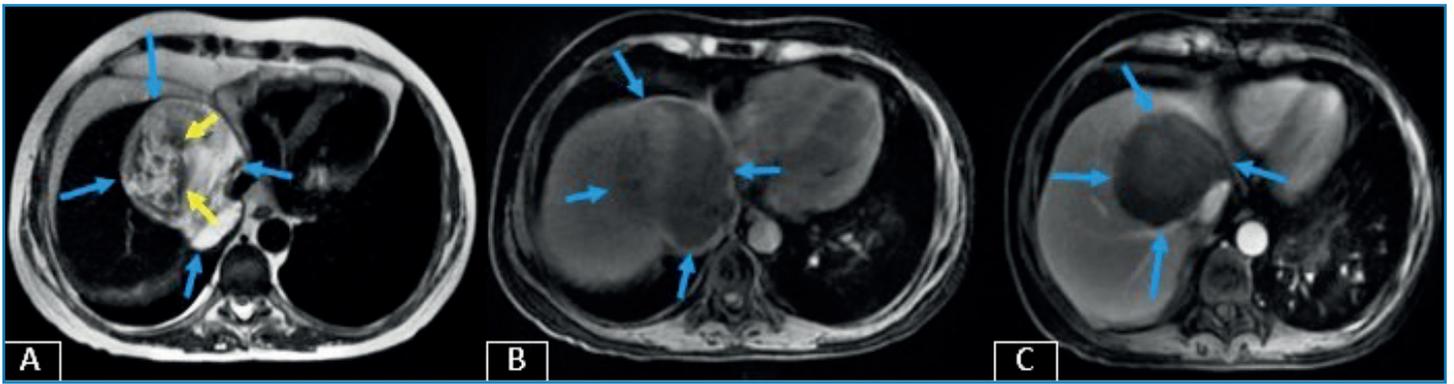
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**Authors' contribution:** EG: Conception and design of the study, Acquisition of data, Drafting the article, Final approval of the version to be submitted; NA: Analysis and interpretation of data, Final approval of the version to be submitted.

**Conflict of Interest:** There is no conflict of interest.

**Financial Support:** No funding was received for this study.

**Received** 6 November 2023 | **Accepted** 14 November 2023



**FIGURE 3:** MRI showing (A) heterogeneous (containing hypointense areas: yellow arrows) hyperintense lesion on T2-weighted image (blue arrows), (B) hypointense on T1-weighted image (blue arrows), and (C) no contrast enhancement on post-contrast T1-weighted image (blue arrows).

### ACKNOWLEDGMENTS

The authors of the manuscript have no acknowledgments.

### REFERENCES

1. Falcone M, Massetti AP, Russo A, Vullo V, Venditti M. Invasive aspergillosis in patients with liver disease. *Med Mycol.* 2011;49(4):406-13.
2. Nauriyal V, Ueberroth B, Zakhia A, Herc E. Invasive Aspergillosis of the Liver in an Immunocompetent Patient. *Infect Dis Clin Pract.* 2019;27(6):370-3.
3. Chasan R, Patel G, Malone A, Finn M, Huprikar S. Primary hepatic aspergillosis following induction chemotherapy for acute leukemia. *Transpl Infect Dis.* 2013;15(5):E201-5.