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Medical Imagery

Acute liver failure linked to *Mycobacterium genavense* in newly diagnosed HIV infection

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A 39-year-old man with newly diagnosed HIV infection was transferred to our intensive care unit after presenting to a peripheral hospital with abdominal pain and reduced consciousness. Two weeks earlier he had commenced bictegravir/emtricitabine/tenofovir alafenamide. Initial laboratory investigations showed bilirubin 10.5 mg/dL, AST 284 U/L, ALT 57 U/L, INR 1.92, platelets 94 × 10^9/L, and cholinesterase 1814 U/L. CD4 + T cells comprised 35% of lymphocytes. CT demonstrated abdominal lymphadenopathy and splenomegaly with infarcts, with an unremarkable liver (Figure 1A). Transjugular liver biopsy was performed. Histology revealed non-caseating granulomas containing rare acid-fast bacilli (Figures B-D). While interferon-γ release assay (T-SPOT.TB) was negative, a 16S rRNA gene PCR of the liver biopsy with subsequent DNA sequencing revealed 100% sequence identity (494 bp) to *Mycobacterium genavense* in BLAST analysis. Mycobacterial cultures were negative after 8 weeks, which is in line with the fastidious nature of *M. genavense*. Upon identification of *M. genavense*, treatment with rifabutin (300 mg, once daily), ethambutol (1200 mg, once daily), azithromycin (500 mg, once daily) and moxifloxacin (400 mg, once daily) was initiated. Due to drug interaction, the antiretroviral therapy was switched to emtricitabine/tenofovir (200/245 mg, once daily) and raltegravir (400 mg, twice daily). The clinical condition improved, and liver parameters normalised (Figures E-G).

Although hepatic involvement is recognised [1], to our knowledge, acute liver failure as the presenting manifestation has not previously been described.

Author contribution

VP and PM wrote the original draft. FK and NT data curation and review. MM and SS review and editing.

Patient consent

Informed consent was obtained from the patient.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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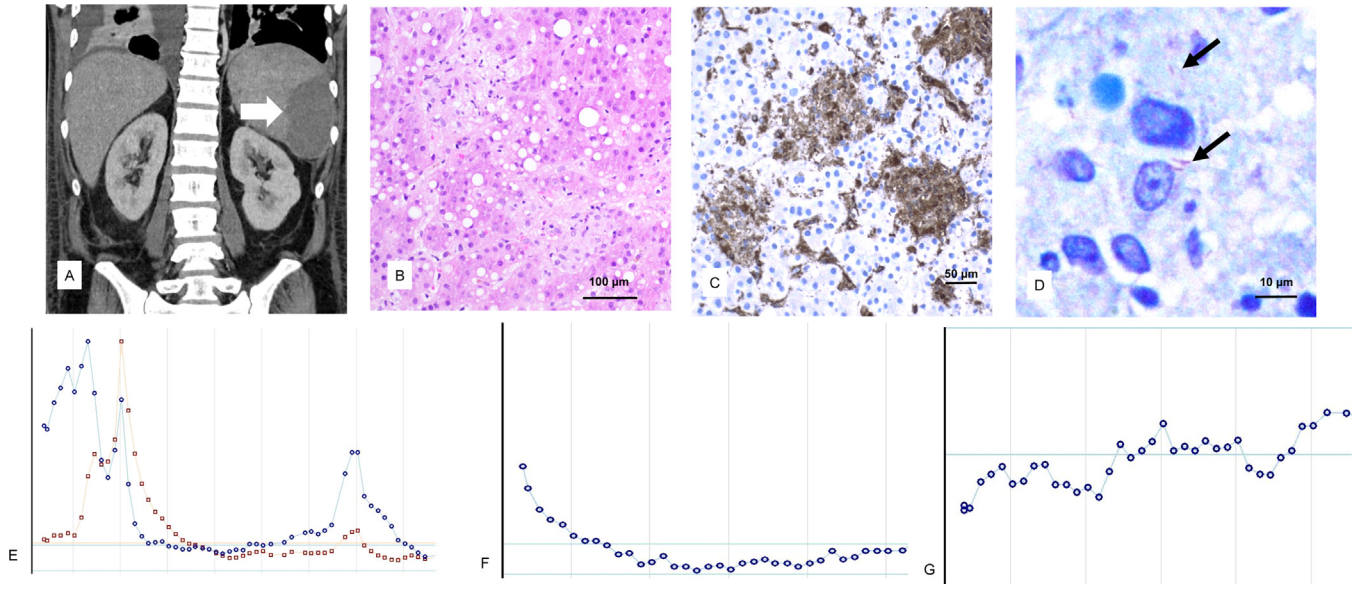

Figure 1. Abdominal CT demonstrating a splenic infarct (A, arrow). Liver biopsy showing multiple non-caseating granulomas (B, H&E), highlighted on CD68 immunohistochemistry (C; clone PGM1). Rare acid-fast bacilli are seen (D, Ziehl–Neelsen; arrows). Time course of transaminases (AST; blue and ALT; red, E), INR values (F) and platelet count over time during ICU stay (G).

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Reference

[1] Baldolli A, Chocron R, Dargere S, Michon J, Daurel C, Thuillier-Lecouf A, et al. *Mycobacterium genavense* infections in immunocompromised patients without HIV: case series of solid organ transplant patients and literature review. *Open Forum Infect Dis* 2022;**9**(10):ofac498.