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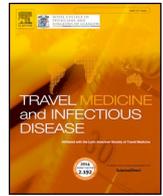
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Histoplasmosis in an immunocompetent man returning from Brazil: A diagnostic challenge helped by 18 FDG PET CT

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A 43-year-old French man presented with fever, arthralgia, headache, night sweats and dry cough, 3 weeks after returning from Brazil. Physical examination was normal. He reported a visit at the botanic garden of Rio de Janeiro during a 7-day-trip. Blood tests revealed lymphocytosis (5.28G/L), C-reactive protein at 50mg/L, and cholestatic hepatitis (ASAT 148UI/L, ALAT 319UI/L, gamma-GT: 523UI/L, alkaline phosphatase: 234UI/L). Microbiological investigations were negative for the following: blood cultures, malaria quick test, *Legionella pneumophila*, *Streptococcus pneumoniae* antigenuria; serology for HIV, *Histoplasma*, *Brucella*, *Leptospira*, blood PCR for *C. burnetii*, *Histoplasma*, *Leptospira*, culture and PCR for *Mycobacterium tuberculosis*. Chest CT-Scan showed bilateral lower lobes pulmonary condensations, two upper left supracentimetric nodules, a right hilar lymphadenopathy and a minimal bilateral pleural effusion.

Because of no improvement after 2 weeks, malignancy was suspected, and 18-FDG-PET-CT was performed (Fig. 1a) showing intense FDG uptake affecting mediastinal and hilar lymph nodes, pulmonary nodules, hepatic hilar lymph nodes, spleen, and bone marrow. A

bronchoalveolar lavage and transbronchic lymph node aspiration were performed. The lymph node showed a lymphocytosis and a positive *Histoplasma capsulatum*-specific PCR. Culture on Sabouraud chloramphenicol gentamicin agar yielded one fluffy white colony identified as *H. capsulatum* via both MALDI-TOF and ITS2 rRNA region sequencing. The patient condition improved under itraconazole. After a 12-week treatment, 18-FDG-PET-CT (Fig. 1b) showed a complete regression of pathologic uptake.

H. capsulatum (a dimorphic fungus) is endemic in America, spread by droppings of birds of bats. It is transmitted to humans by the inhalation of contaminated spores. It induces disseminated infection in immunocompromised hosts and is symptomatic in 10% of cases in immunocompetent patients. In this report where malignancy was suspected, 18-FDG-PET-CT helped guiding the diagnosis. Clinicians in Europe should consider histoplasmosis in the differential diagnosis of hypermetabolic lymphadenopathy or lung nodules in immunocompetent travelers returning from endemic countries.

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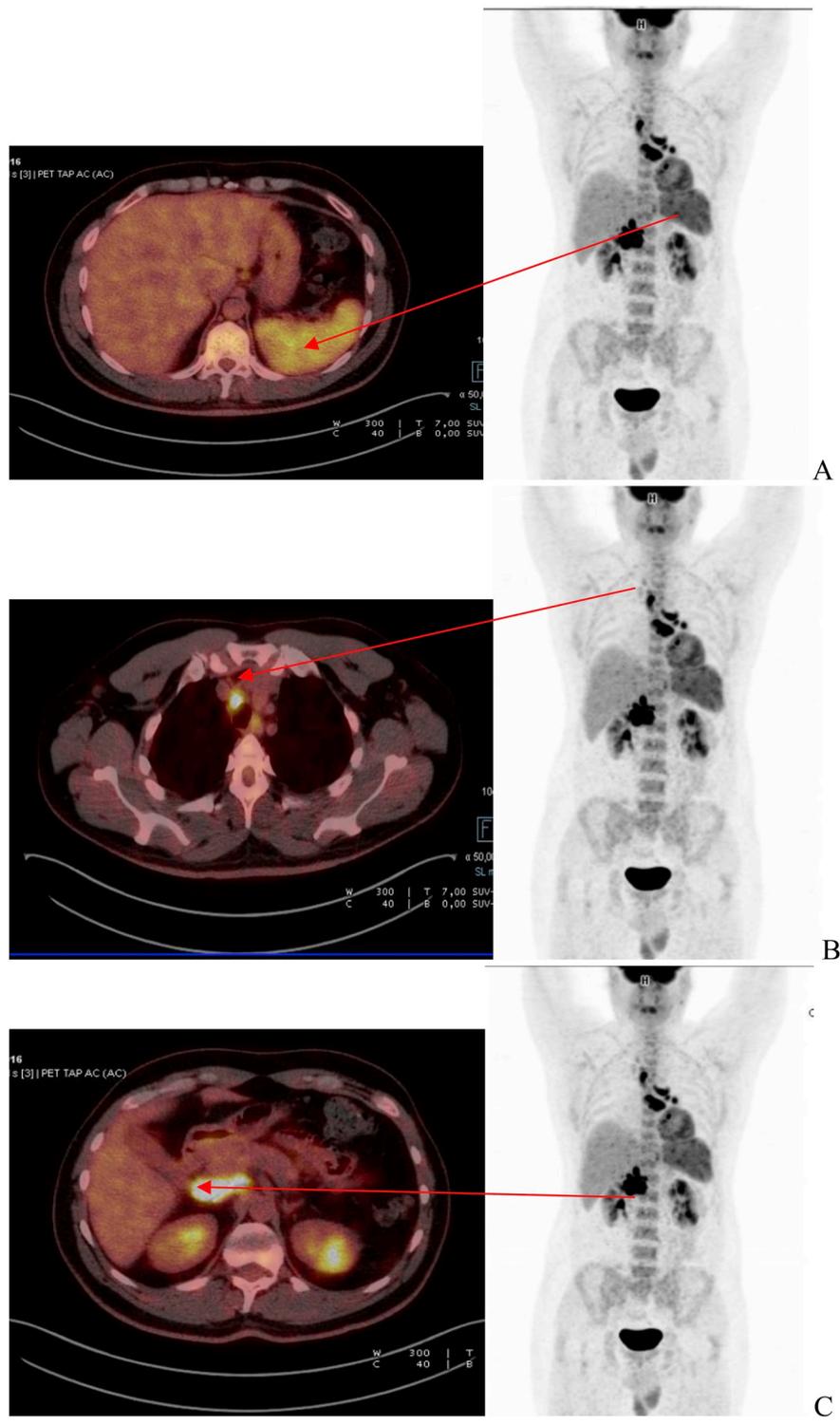


Fig. 1. Legend

- 1a
- 18F FDG PET CT scan at diagnosis.
- A. Intense splenic FDG uptake
- B. Intense mediastinal lymph node uptake
- C. Intense hilar hepatic lymph node uptake
- 1b
- 18F FDG PET CT scan after treatment
- A. Regression of splenic uptake
- B. Regression of mediastinal uptake
- C. Regression of hilar hepatic lymph node uptake.

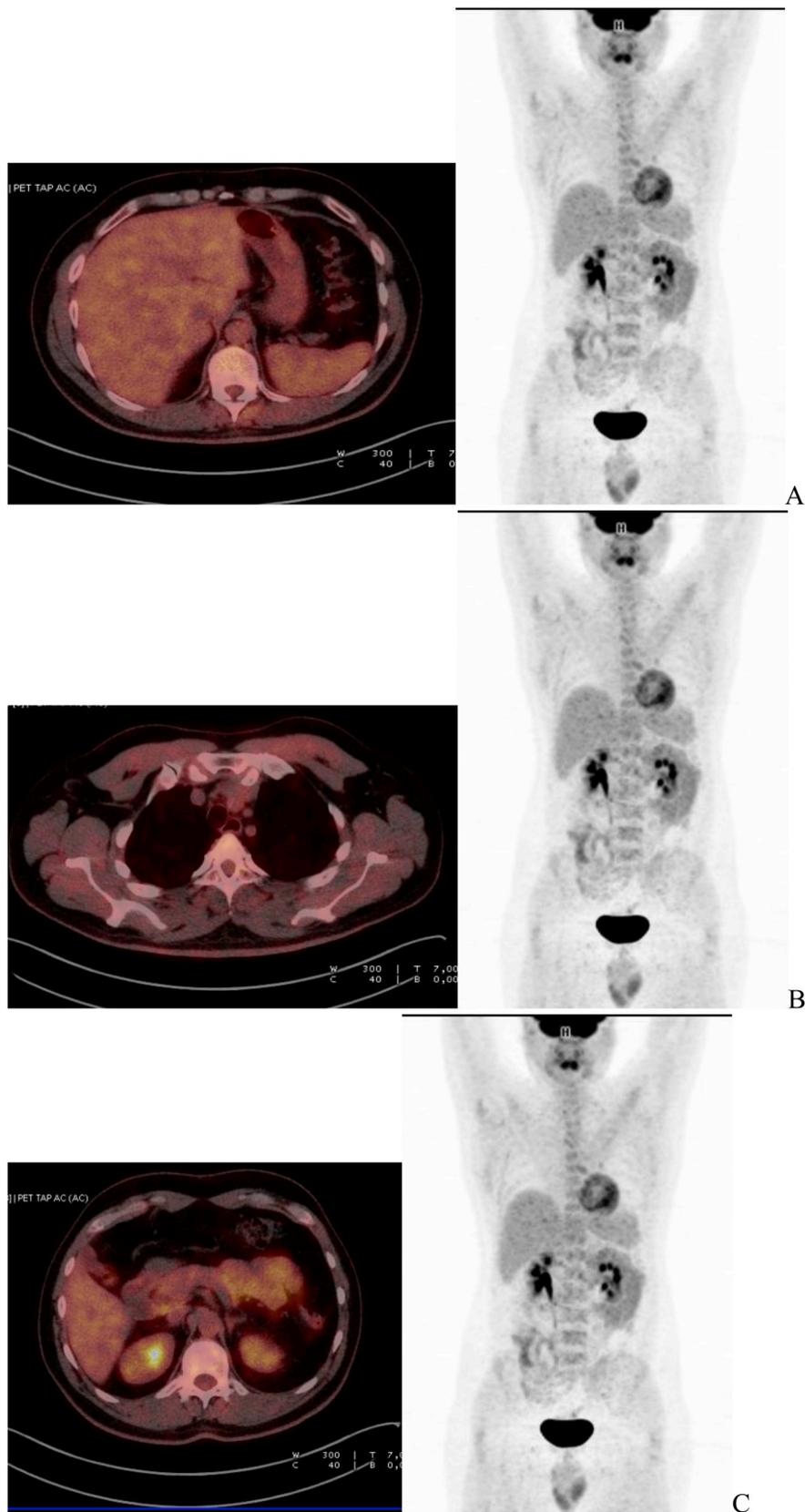


Fig. 1. (continued)

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