Rare Late Disseminated Histoplasmosis in a Liver Transplant Patient

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Background

- Histoplasmosis capsulatum is a dimorphic fungus found throughout the world and in the United States is particularly endemic to the Ohio and Mississippi river valleys.
- It is often found in soil and associated with bat guano and bird droppings.
- Disseminated histoplasmosis infection is rare, but commonly associated with immunosuppressed states.
- Disseminated histoplasmosis infection is particularly rare in patients who underwent orthotopic liver transplantation (OLT) and most commonly occurs within 1 to 2 years post transplantation.

Case Presentation

History of Presenting Illness:

- A 63-year-old male with history of OLT (21 years prior to presentation) from hepatitis C virus cirrhosis presents with complaints of fevers, chills, fatigue, & abdominal distention for three months.
- Resides in Missouri

Vitals and Physical Exam:

- Temperature: 101.2 F
- Blood pressure: 110/60 mmHg
- Heart rate: 90 bpm
- Physical Exam: Abdominal distention & scleral icterus

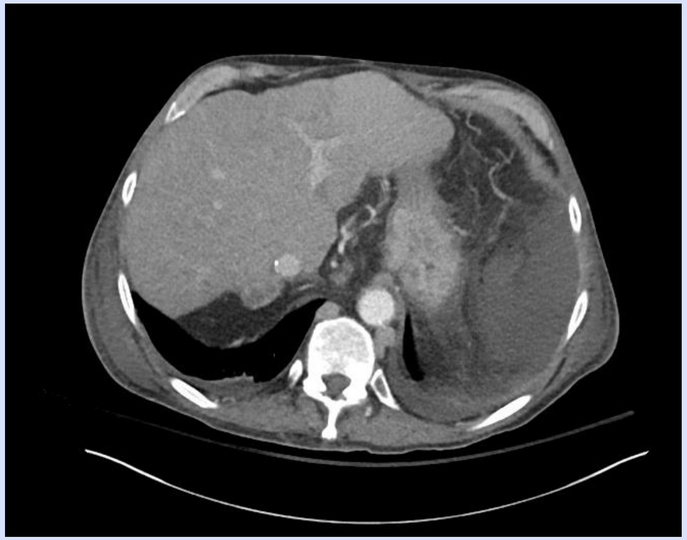
Labs

- Alanine aminotransferase: 71 U/L
- Aspartate aminotransaminase: 98 U/L
- Total bilirubin: 6.2 mg/dL
- Conjugated bilirubin: 4.4 mg/dL
- Alkaline phosphatase: 300 U/L

Hospital Course

- With the constellation of symptoms, differential was broad and included infectious and non-infectious causes (including post-transplant lymphoproliferative disorder)
- Due to elevated liver enzymes and bilirubin, liver and gallbladder were evaluated with imaging
- Magnetic resonance cholangiopancreatography was performed which demonstrated cirrhotic changes in the graft liver and a 4.4 cm right adrenal mass and 3 cm left adrenal mass
- A biopsy of the adrenal mass was performed
  - Pathology showed: fungal forms consistent with histoplasma species, background necrosis, & acute inflammation.
- A biopsy of the liver was also performed
  - Pathology showed: granulomatous hepatitis with fungal forms consistent with histoplasma species and advanced bridging fibrosis.
- Infectious disease recommended broad workup including transthoracic echocardiogram, computed tomography of the chest, urine histoplasma antigen, blood histoplasma antigen, and histoplasma antibodies
- CT chest showed bilateral ground glass opacities
- Ultimately the patient was treated with amphotericin B with a plan to transition to itraconazole for 12 months of therapy
- Surveillance was to be performed with urine histoplasma antigen level
- Unfortunately, the patient's hospital course was complicated by acute kidney injury with acute tubular necrosis, klebsiella pneumonia, and lower GI bleed
- A goals of care conversation resulted in the patient transitioning to comfort care and they passed peacefully

Imaging



Discussion

- In this case, we present a unique case of disseminated histoplasmosis with histoplasmosis hepatitis in a patient who underwent OLT greater than 20 years prior
- While any immunosuppressed patient is at a higher risk of disseminated histoplasmosis it remains relatively rare among patients who have undergone solid organ transplantation
- Remain vigilant against all opportunistic infections in the post-transplant patients at any time post transplantation and particularly those that are endemic to the patient's area of residence