Invasive aspergillosis of the liver in an immunocompetent patient

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Introduction:

- Invasive aspergillosis is most often seen in immunocompromised patients, although there are rare case reports of infection in immunocompetent hosts.
- We present a case of an immunocompetent patient with isolated hepatic aspergillosis.

Case Presentation:

A 77 y/o male with chronic kidney disease stage III and history of Whipple procedure for a benign pancreatic mass 12 years prior presented with 1.5 months of fatigue, decreased appetite, chills, nausea, vomiting and diarrhea. Prior to the onset of his illness he was active and functional. Exam was pertinent for right upper quadrant tenderness. Imaging at an outside institution revealed a large heterogeneous liver mass, which on biopsy showed granulomatous inflammation and fungal forms identified as aseptate hyphae concerning for mucormycosis. He was transferred to our hospital for surgical resection. A review of the pathology slides and repeat biopsy revealed fungal forms identified as acute angle branching septate hyphae most consistent with *Aspergillus*. Concurrent cultures grew *Aspergillus fumigatus*. Extensive work-up including imaging of the sinuses, lungs and abdomen, along with bronchoscopy, colonoscopy, and endoscopy were negative. He was started on amphotericin B and anidulafungin but amphotericin was changed to voriconazole when diagnosis of aspergillosis was confirmed. He was deemed high risk for surgery, given the extent of resection that would be required. Work up for malignancy was negative. His hospital course was complicated with worsening respiratory, liver and renal failure, and he expired on day 25.

Discussion:

Hepatic invasion by *Aspergillus* is uncommon, including in the immunocompromised. Our patient was immunocompetent but did have altered anatomy from his Whipple procedure and underwent regular instrumentation every few years with upper endoscopy. It is feasible that this allowed a portal of entry for *Aspergillus* to his GI tract. Another possibility is that he ingested food highly contaminated with *Aspergillus* which has been reported. Given the paucity of data for hepatic aspergillosis, optimal therapy remains unclear, and a rational approach is to combine medical and surgical therapy.

References:

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Image 1. MRI abdomen showing a heterogeneous, infiltrative process with innumerable hypovascular to avascular, nodular foci preferentially involving the right lobe

Image 2. Liver biopsy pathology demonstrating necrotizing granulomatous inflammation within which lies fungal hyphae with dichotomous branching at 45 degree angles