Gastrointestinal Disseminated Histoplasmosis in a Patient with a History of Kidney Transplant

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Introduction

- *Histoplasma capsulatum* is a fungus commonly found in bird and bat droppings in the Ohio and Mississippi river valley regions of the United States, and it is the most prevalent endemic mycosis
- Infections primarily involve the lungs, and most are asymptomatic or mild. However, immunosuppressed individuals are at a higher risk for disseminated disease with extrapulmonary involvement[1].
- We present a rare case of Histoplasma colitis in a young, post-kidney transplant female patient

Discussion

- *Histoplasma capsulatum*, while often implicated in pulmonary disease, rarely is found as a causative organism for infectious colitis[1, 2]
- Symptoms are non-specific and can mimic intestinal CMV, tuberculosis or Crohn's disease clinically[2, 3]
- Diagnosis of gastrointestinal Histoplasmosis requires a high index of suspicion and the use of special fungal stains on tissue biopsies
- Disseminated Histoplasmosis if left untreated can often prove fatal. For immunosuppressed patients especially, it is important to consider Histoplasmosis within the differential for acute and chronic diarrhea.
- Prompt treatment with amphotericin B followed by long term itraconazole is recommended[4]

Case Presentation

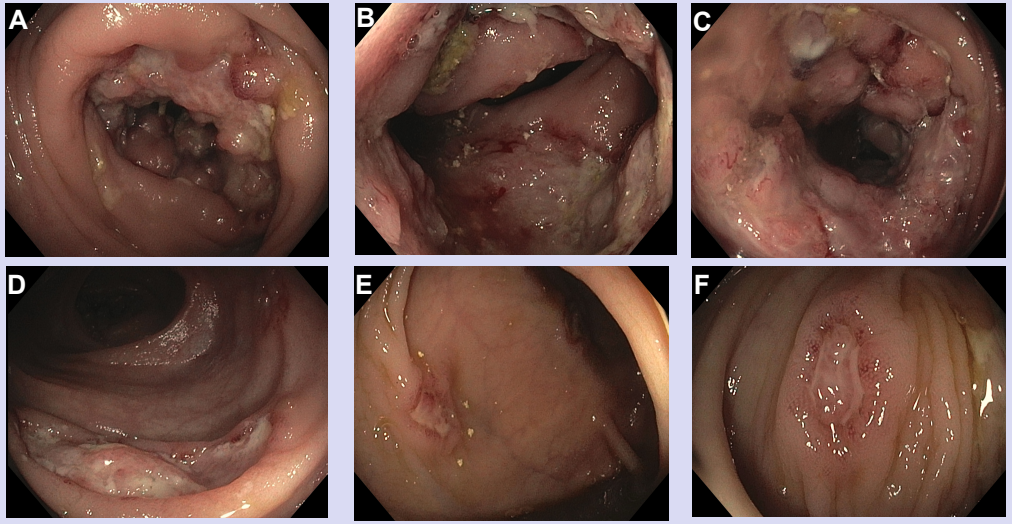

Figure 1. Colonoscopy revealed a large circumferential and mass-like ulcer in the ascending colon (**A-C**) along with scattered ulcers in the transverse colon (**D**), descending colon (**E**), and sigmoid colon (**F**).

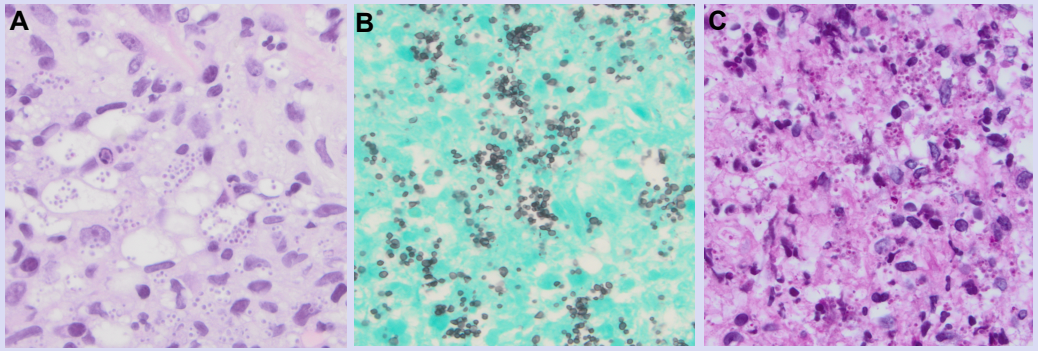

Figure 2. Colonic biopsies stained with hematoxylin and eosin (**A**), Grocott methenamine silver (**B**), and Periodic acid-Schiff (**C**) showing intracytoplasmic capsulated microorganisms morphologically consistent with *Histoplasma capsulatum* (magnification x60).

A 38-year-old Brazilian female with a history of kidney transplant in 2010 on chronic immunosuppression with prednisone, tacrolimus and mycophenolic acid presented with intermittent low-grade fevers and watery diarrhea. She reported multiple episodes of large volume watery diarrhea daily for the past year with associated weight loss (~25lbs). Her outpatient records showed numerous negative bacterial and parasitic stool studies. Her symptoms were thought to be related to mycophenolic acid at one point and it was held. However, her symptoms failed to improve, and she did not respond to anti-diarrheal medications. No colonoscopy was ever performed.

Inpatient stool culture and PCR testing of *Clostridium difficile*, Ebstein-Barr virus (EBV) and Cytomegalovirus (CMV) were negative. She underwent a colonoscopy that revealed numerous ulcers scattered throughout the colon (size: 5-20mm) with normal appearing mucosa in between. A very large ulcer was seen in the ascending colon that was circumferential with a mass-like appearance (**Figure 1**). The terminal ileum appeared normal.

Biopsies revealed fragments of ulcerated colonic mucosa with inflammation. Grocott methenamine silver (GMS) and Periodic acid-Schiff (PAS) special stains were positive and showed extensive infiltration of colonic mucosa by organisms morphologically compatible with *Histoplasma capsulatum* (**Figure 2**). CMV immunostain was negative.

Patient was treated with liposomal amphotericin B and had significant improvement in diarrhea. She was transitioned to itraconazole with a plan for 12 months of therapy.

References

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