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A Rare Case of Gastrointestinal histoplasmosis-case report

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ABSTRACT
Histoplasmosis gastritis is an exceedingly rare manifestation of histoplasmosis, a fungal infection caused by *Histoplasma capsulatum*. It primarily affects immunocompromised individuals and presents with non-specific gastrointestinal symptoms. This article presents a detailed case study of a patient with histoplasmosis gastritis, discussing the clinical presentation, diagnostic challenges, and management strategies. The case highlights the importance of considering histoplasmosis in the differential diagnosis of gastrointestinal disorders in immunocompromised patients.

I. INTRODUCTION

Histoplasmosis is a fungal infection endemic to certain regions, including the Ohio and Mississippi River valleys in the United States. It is caused by inhalation of spores from *Histoplasma capsulatum*, a dimorphic fungus that thrives in soil contaminated with bird or bat droppings. While pulmonary histoplasmosis is the most common form, disseminated histoplasmosis can involve multiple organ systems, including the gastrointestinal (GI) tract. Histoplasmosis gastritis is an uncommon presentation, often occurring in immunocompromised patients, such as those with HIV/AIDS, organ transplant recipients, or patients on long-term corticosteroid therapy. The rarity and non-specific symptoms of this condition pose significant diagnostic challenges.

II. CASE PRESENTATION

A 60-year-old male with a history of HIV/AIDS, poorly controlled with a low CD4 count, presented to the emergency department with a three-month history of progressive epigastric pain, nausea, intermittent vomiting, and significant weight loss. The patient reported no history of travel outside the United States, recent hospitalizations, or antibiotic use. He had been experiencing night sweats and low-grade fevers but denied any respiratory symptoms.

On physical examination, the patient appeared cachectic with mild tenderness in the epigastric region. Initial laboratory tests revealed anemia (hemoglobin 9.2 g/dL), mild leukopenia (white blood cell count 3.2 x 10^9/L), and elevated liver enzymes (AST 85 U/L, ALT 72 U/L). An abdominal ultrasound was unremarkable, and chest X-ray showed no abnormalities. Given his immunocompromised status and symptoms, an upper gastrointestinal endoscopy was performed.

Endoscopy revealed multiple erosions and ulcerations in the gastric mucosa, with biopsies taken for histopathological examination. The initial differential diagnosis included opportunistic infections such as cytomegalovirus (CMV) gastritis, fungal infections, and malignancies like lymphoma.

Histopathological examination of the gastric biopsies revealed granulomatous inflammation with yeast-like organisms visible on hematoxylin and eosin (H&E) staining. Further staining with Gomori methenamine silver (GMS) and Periodic acid-Schiff (PAS) confirmed the presence of small, oval yeast forms consistent with *Histoplasma capsulatum*. Fungal cultures of the biopsy specimens grew *Histoplasma*, confirming the diagnosis of histoplasmosis gastritis. Additionally, a serum histoplasma antigen test was positive, supporting the diagnosis of disseminated histoplasmosis.

Given the disseminated nature of the infection and the patient's immunocompromised status, a broader evaluation for other potential sites of infection was undertaken. A bone marrow biopsy showed no evidence of histoplasmosis, and a CT scan of the chest, abdomen, and pelvis revealed no additional sites of fungal infection.

The patient was started on intravenous liposomal amphotericin B (5 mg/kg daily) for two weeks, followed by oral itraconazole (200 mg three times daily for three days, then 200 mg twice daily) as a step-down therapy. Given his underlying HIV infection, antiretroviral therapy (ART) was also optimized to improve his immune function.

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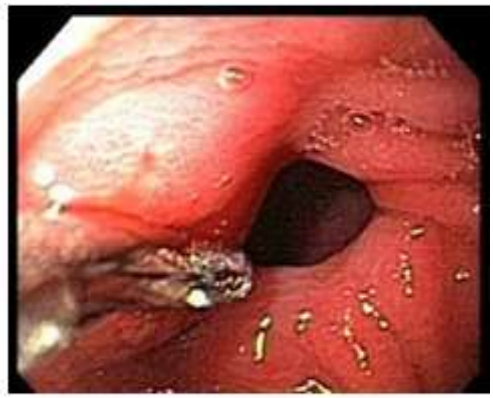
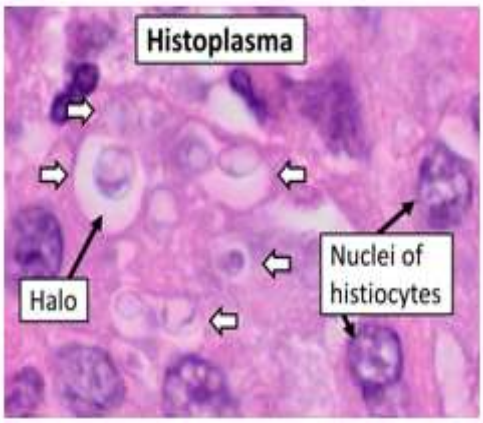
Nutritional support and symptomatic treatment for pain and nausea were provided.

The patient showed significant clinical improvement within two weeks of starting antifungal therapy, with a marked reduction in epigastric pain, resolution of nausea, and gradual weight gain. Follow-up endoscopy after six weeks of treatment demonstrated significant healing of the gastric mucosa, with no visible erosions or ulcerations. Repeat histopathology showed no evidence of *Histoplasma* organisms.

The patient continued on oral itraconazole for a total of 12 months to prevent relapse, given his immunosuppressed state. Regular follow-up visits were scheduled to monitor for potential side effects of the medication and to ensure adherence to both antifungal and antiretroviral therapies.





III. DISCUSSION

Histoplasmosis gastritis is a rare but significant manifestation of disseminated histoplasmosis, particularly in immunocompromised patients. The clinical presentation is often non-specific, with symptoms such as abdominal pain, nausea, vomiting, and weight loss, which can mimic other gastrointestinal disorders. This nonspecific presentation can lead to delays in diagnosis and treatment.

Endoscopic examination and histopathological analysis of gastric biopsies are critical for diagnosis. The presence of granulomatous inflammation and yeast-like organisms on special stains (GMS and PAS) is characteristic of histoplasmosis. Culture and antigen detection tests can further confirm the diagnosis.

Management of histoplasmosis gastritis involves prolonged antifungal therapy. Liposomal amphotericin B is preferred for initial treatment, especially in severe or disseminated cases, due to its efficacy and better tolerability in patients with renal impairment compared to conventional amphotericin B. Itraconazole is the preferred oral antifungal for step-down therapy and long-term treatment to prevent relapse.

Immunocompromised patients, such as those with HIV/AIDS, require careful monitoring and often prolonged treatment courses. In these patients, optimizing ART is crucial to improve immune function and reduce the risk of opportunistic infections. Regular follow-up and adherence to therapy are essential for successful outcomes.

IV. CONCLUSION

Histoplasmosis gastritis is a rare and challenging condition that requires a high index of suspicion, particularly in immunocompromised patients presenting with non-specific gastrointestinal symptoms. Early endoscopic examination and biopsy, coupled with appropriate antifungal therapy, are key to effective management. This case underscores the importance of considering histoplasmosis in the differential diagnosis of gastrointestinal disorders in immunocompromised individuals and highlights the critical role of multidisciplinary care in managing such complex cases.

REFERENCES

- Wheat LJ, Freifeld AG, Kleiman MB, et al. Clinical practice guidelines for the management of patients with histoplasmosis: 2007 update by the Infectious Diseases Society of America. Clin Infect Dis. 2007;45(7):807-825.
- Kauffman CA. Histoplasmosis: a clinical and laboratory update. Clin Microbiol Rev. 2007;20(1):115-132.
- Hage CA, Azar MM, Bahr N, Loyd J, Wheat LJ. Histoplasmosis: Up-to-date evidence-based approach to diagnosis and management. Semin Respir Crit Care Med. 2015;36(5):729-745.

- Antinori S. Histoplasma capsulatum: more widespread than previously thought. Am J Trop Med Hyg. 2014;90(6):982-983.
- Assi MA, Sandid MS, Baddour LM, Roberts GD, Walker RC. Systemic histoplasmosis: a 15-year retrospective institutional review of 111 patients. Medicine (Baltimore). 2007;86(3):162-169.
- Goodwin RA Jr, Shapiro JL, Thurman GH, Thurman SS, Des Prez RM. Disseminated histoplasmosis: clinical and pathologic correlations. Medicine (Baltimore). 1980;59(1):1-33.