

Gastric Mucormycosis: A Case Of A Rare Infectious Cause Of Upper GI Bleeding

Christopher Kim, MD, Frank Meriano, MD

Division of Gastroenterology, Department of Medicine, Houston Methodist Hospital



INTRODUCTION

- Gastric mucormycosis is a rare clinical entity that mandates upper endoscopic evaluation and specific histopathologic findings for a diagnosis
- Due to its non-specific clinical presentation, it poses a diagnostic challenge for providers
- We present a case of gastric
 mucormycosis in a critically ill and
 immunosuppressed patient that was
 discovered in the setting of evaluation of
 upper gastrointestinal bleeding

CASE

- A 66-year-old man with a history of a kidney transplant two years prior, with a recent diagnosis of post-transplant lymphoproliferative disorder (PTLD) and s/p cycle 1 of R-CHOP chemotherapy four weeks prior was admitted to the hospital with altered mentation and neutropenia
- His hospital course was prolonged with multiple cardiac arrests in the setting of septic shock from his profound neutropenia

CASE CONTINUED

- He was noted to have dark blood from his nasogastric tube and a concomitant drop in his hemoglobin, for which the inpatient GI service was consulted
- He underwent urgent upper endoscopic evaluation and was found to have both significant clot in his stomach and an ulcerated fungating lesion along the greater curvature of the stomach which was biopsied (Figure 1). Pathology results showed fungal organisms with special GMS stain showing morphologic features consistent with mucormycosis (Figure 2).

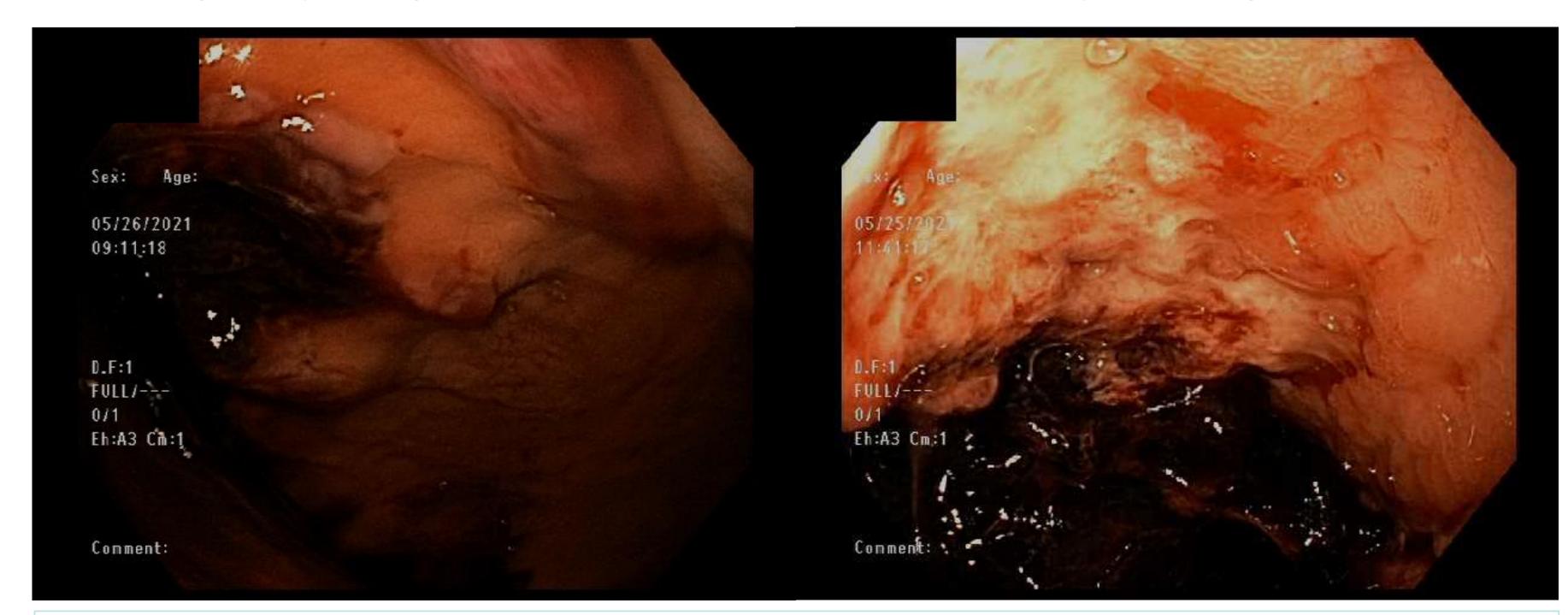


Figure 1. EGD findings which demonstrated erythematous, hemorrhagic-appearing and ulcerated mucosa in the gastric body, and an ulcerated mass was visualized along the greater curvature.

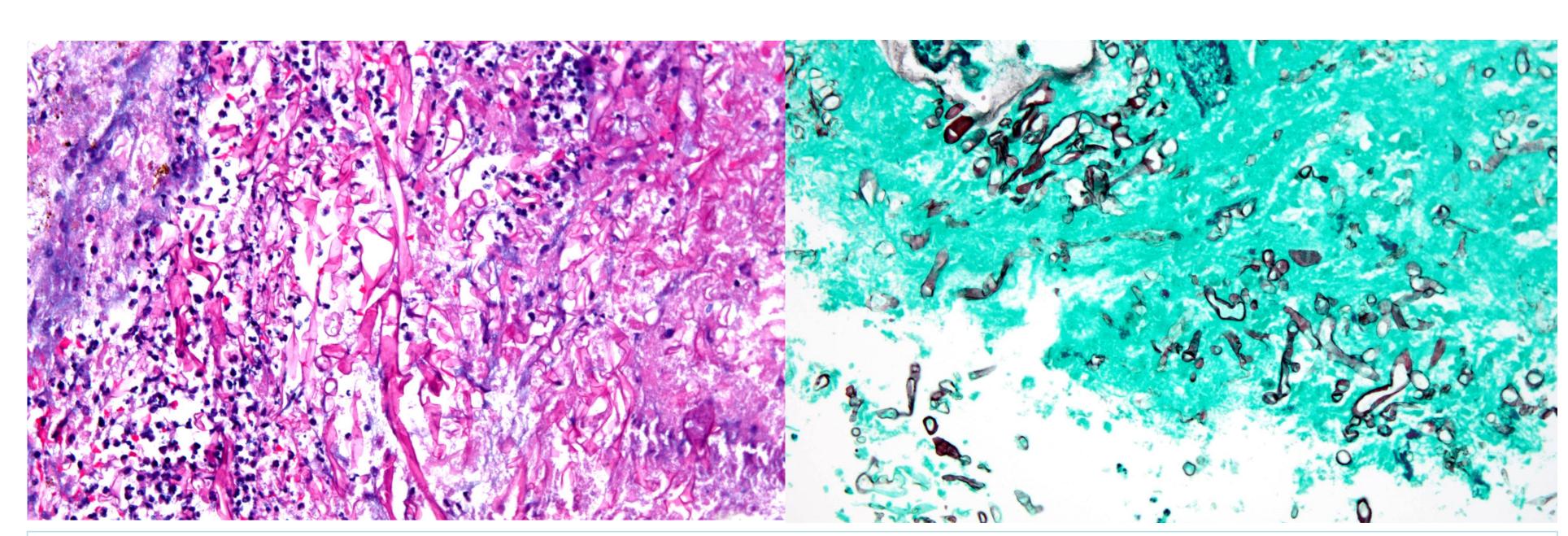


Figure 2. Biopsy of mass showed antral type gastric mucosa with marked reactive changes and ulceration with fibrinoexudate associated with fungal organisms (left). Special stain with GMS showed morphologic features consistent with mucormycosis (right).

- The Infectious Diseases service was urgently consulted and he was started on triple anti-fungal therapy with amphotericin, micafungin and Posaconazole. Otolaryngology evaluated the patient due to these endoscopic findings, with laryngoscopy negative for head and neck involvement of this infection. Surgery was consulted for evaluation of subtotal gastrectomy given the high failure rate of medical management for this diagnosis, but was deemed an unsuitable surgical candidate
- The patient eventually succumbed to this and passed away during his hospitalization

DISCUSSION

- Gastric mucormycosis is rare infection that often results in fatal outcomes
 - Mortality reaches upward of 96% in those
 with disseminated disease, and 85% with GI
 infection
- It most often manifests in the setting of immunosuppression as seen in solid organ transplant recipients or in patients with diabetes
 - Risk factors include DM, treatment with glucocorticoids, hematologic malignancies, history of stem cell transplant, iron overload, AIDS and malnutrition
- The most often clinical manifestation is upper gastrointestinal bleeding, and thus endoscopic evaluation is part of the work-up to exclude other diseases that could mimic its presentation
- Early recognition is ultimately critical for both medical management with antifungal therapy and surgical management if clinically feasible

REFERENCES

- Raviraj KS, Miglani P, Garg A, Agarwal PK. Gastric Mucormycosis with Hemolytic Uremic Syndrome. J Assoc Physicians India. 2015 Oct;63(10):75-6. PMID: 27608699.
- Alfano G, Fontana F, Francesca D, Assirati G, Magistri P, Tarantino G, Ballarin R, Rossi G, Franceschini E, Codeluppi M, Guaraldi G, Mussini C, Di Benedetto F, Cappelli G. Gastric Mucormycosis in a Liver and Kidney Transplant Recipient: Case Report and Concise Review of Literature. Transplant Proc. 2018 Apr;50(3):905-909. doi: 10.1016/j.transproceed.2017.11.036. Epub 2018 Mar 22. PMID: 29573830.
- Peng H, Xiao J, Wan H, Shi J, Li J. Severe Gastric Mycormycosis Infection Followed by Cytomegalovirus Pneumonia in a Renal Transplant Recipient: A Case Report and Concise Review of the Literature. Transplant Proc. 2019 Mar;51(2):556-560. doi: 10.1016/j.transproceed.2018.12.023. Epub 2019 Jan 3. PMID: 30879589.