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Case Report

Herpetic Esophagitis in Immunocompetent Host: Case Report

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Abstract

Introduction: Esophagitis is an entity mainly caused by noninfectious etiologies, most commonly gastroesophageal reflux disease. The majority of infectious cases are seen in immunocompromised patients and are mainly due to herpes simplex virus (HSV), cytomegalovirus (CMV) and Candida. Herpes simplex esophagitis has only been reported on few occasions in immunocompetent hosts.

Case: We report a case of a young 28-year-old immunocompetent male presenting for agitation and hematemesis admitted to the hospital with eventual final diagnosis of herpetic esophagitis. Treatment with acyclovir resulted in good patient outcomes.

Discussion and Conclusion: Herpes simplex esophagitis is common in immunocompromised patients but has only been reported on few occasions in immunocompetent hosts. Such a rare condition should be on the differential for any diffuse esophagitis of possible infectious etiology. Prompt diagnosis and treatment can lead to excellent outcomes in such patients.

Keywords: Esophagitis; Herpes Simplex Virus (HSV); Cytomegalovirus (CMV)

Introduction

Esophagitis is an entity mainly caused by noninfectious etiologies, most commonly gastroesophageal reflux disease. The majority of infectious cases are seen in immunocompromised patients and are mainly due to herpes simplex virus (HSV), cytomegalovirus (CMV) and Candida [1]. Herpes simplex esophagitis has only been reported on few occasions in immunocompetent hosts [2-6]. We report a case of a young immunocompetent male with herpetic esophagitis.

Case

This is the case of a 28-year-old man, admitted for agitation and hematemesis of 2 days duration. Past medical history includes bipolar disorder. He takes chronically Lithium 800 mg once daily and Pregabalin 100 mg once daily. He is a 5 pack-year smoker and has no past surgical history.

The patient reported having 2 days history of fever, reaching 39 degrees celsius, associated with intermittent epigastric pain. In

addition, he notes 1 episode of blood-tinged vomitus as well as 2 episodes of melena. He denies any NSAIDs intake or weight loss or diarrhea. One and a half years prior to presentation, the patient underwent gastroscopy for dyspepsia associated with epigastric pain. At the time, gastroscopy revealed Helicobacter Pylori induced gastric ulcers which were treated with PPI and antibiotics with successful eradication at the time.

Upon presentation, the patient was hemodynamically stable, afebrile but tachycardic with a heart rate of 109 beats per minute. On physical examination, the abdomen was soft, non-tender to palpation with positive bowel sounds. DRE was positive for melena. EKG was normal. Initial laboratory investigations were pertinent for Leukocytosis with white blood cell count of 22x10^3ul (neutrophils 83%), hemoglobin 13.7 g/dL and creatinine 1.28 mg/dL. Other investigations including but not limited to Platelet count, PT, PTT, urine analysis, chest X-ray, LFTs and TSH, PCR-covid 19 and HIV testing were not pertinent. Basic laboratory trends are summarized in table 1.

	Day 1	Day 2	Day 3	Day 4
Wbc ($x10^9$/L)	22.35	19.7	20.24	10.49
Neutro (%)	83.3	81	72	56
Lymph (%)	7.5	11	16.8	30
Hemoglobin (g/dl)	13.7	13.4	10.5	9
Platelets ($x10^9$/L)	288	269	241	206
BUN (mg/dl)	22	-	-	-
Creatinine (mg/dl)	1.28	-	-	-
Na^+ (mEq/L)	140	-	-	-
K^+ (mEq/L)	4.3	-	-	-
Cl^-(mEq/L)	106	-	-	-
Co^2 (mEq/L)	18	-	-	-
CRP (mg/dl)		83		62

Table 1: Laboratory findings during the patient stay.

Patient was started empirically on intravenous continuous proton pump inhibitor (PPI) intravenously (Esomeprazole 8 mg per hour), antibiotics (Levoflocxacin 500 mg intravenous daily) and was planned for endoscopy on the next day. Gastroscopy was done and was pertinent for diffuse and severe esophageal ulcerations as seen in Figure 1, in addition to a 4 cm hiatal hernia and erythematous bulbitis. Sucralfate 1 g was added to the treatment regimen; 1 sachet per os three times daily. Due to high suspicion, testing for Cytomegalovirus (CMV) and Herpes simplex virus (HSV) were ordered. One day later, preliminary biopsy result, showed a severely, nonspecific, active and ulcerated esophagitis with positive immunohistochemical staining for HSV. No PCR HSV was performed due to patient financial restrictions.

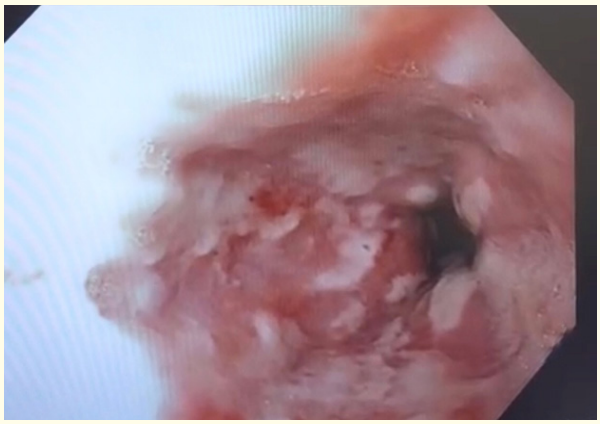

Figure 1: Snapshot from gastroscopy showing severe ulcerated esophagitis.

Consequently, patient was started on acyclovir 500 mg IV every 8 hours. After 48 hours of treatment initiation, the patient condition started to improve, he was stable and off fever. Hospital stay was smooth and he was discharged 5 days later on acyclovir 400 mg five times daily for a total duration of 14 days treatment.

Discussion

Esophagitis is an entity mainly caused by noninfectious etiologies, most commonly gastroesophageal reflux disease. The majority of infectious cases are seen in immunocompromised patients and are mainly due to herpes simplex virus (HSV), cytomegalovirus (CMV) and Candida [1]. Herpes simplex esophagitis is rare in immunocompetent hosts. It may present as a primary disease or as a reactivation of a latent infection. Patients are commonly younger than 40 years and present with the complaint of odynophagia and/or dysphagia with heartburn. However, fever, pharyngitis and retrosternal chest pain can also be prodromal symptoms [3].

The diagnosis of HSV esophagitis is done endoscopically and is confirmed histopathologically on biopsies. Endoscopically, the lesions are usually in the squamous mucosal layer in the distal

esophagus. In the early stage, they start as small vesicles and might not be seen on endoscopy. Then, these vesicles coalesce forming well circumscribed, "volcano like" appearing ulcers with interspersed normal-appearing mucosa. Exudates, plaques, or diffuse erosive esophagitis are also possible presenting features. Mucosal necrosis is a late-stage disease feature [1].

Confirmation of the above-mentioned endoscopic findings by histological examination still remains the "gold standard" for HSV esophagitis diagnosis [7]. It is completed with immunohistochemical staining of the biopsy specimens from the ulcer edges where viral cytopathic effects are maximal. Histologic findings are variable and characteristic for multinucleated giant cells, with ground-glass nuclei and eosinophilic inclusions known as Cowdry type A inclusion bodies [3].

A study assessing the role of quantitative real-time PCR assay in the diagnosis of HSV-1 showed that viral load assessment is useful whenever histopathological results are missing or inconclusive. with a cutoff of 2.5×10^4 HSV-1 DNA copies/μg, the test showed an 83% sensitivity and 100% specificity [7]. However, in our case, this type of testing was not possible due to financial restraints and thus detection of HSV subtype was not possible.

To treat herpetic esophagitis, many regimens have been described, most popular was IV acyclovir, followed by transition to oral valacyclovir due to its better bioavailability, taken for a total 14 to 21 days [6]. In our case, valacyclovir was not available due to economic crisis in Lebanon, so acyclovir was used instead with good patient outcomes.

Conclusion

Herpes simplex esophagitis is common in immunocompromised patients but has only been reported on few occasions in immunocompetent hosts. Such a rare condition should on the differential for any diffuse esophagitis of possible infectious etiology. Prompt diagnosis and treatment can lead to excellent outcomes in such patients.

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Conflicts of Interest

The authors declare that they do not have any conflicts of interest.

Declaration of Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the case.

Patients or the public WERE NOT involved in the design, or conduct, or reporting, or dissemination plans of our research.

Bibliography

1. AL Bonis P and Kotton C. "Herpes simplex virus infection of the esophagus". UpToDate (2024).
2. Eymard D., *et al*. "Herpes simplex esophagitis in immunocompetent hosts". *Canadian Journal of Infectious Diseases* 8.6 (1997): 351-353.
3. Geraci G., *et al*. "Herpes simplex esophagitis in Immunocompetent Host: A case report". *Diagnostic and Therapeutic Endoscopy* (2009): 1-3.
4. Shah R., *et al*. "Herpes Simplex Virus Esophagitis in an Immunocompetent Patient". *Cureus* 15.9 (2023): e44668.
5. Upadhaya Regmi B., *et al*. "Herpes simplex esophagitis in an immunocompetent host: a case report". *Oxford Medical Case Reports* 2021.10 (2021): omab091.
6. Naqvi HA., *et al*. "Herpes simplex virus-2-associated esophagitis in immunocompetent host". *Przeglad Gastroenterologiczny* 16.3 (2021): 248-251.
7. Jazeron J-F., *et al*. "Virological diagnosis of herpes simplex virus 1 esophagitis by quantitative real-time PCR assay". *Journal of Clinical Microbiology* 50.3 (2012): 948-952.