

A Rare Finding of Herpes Simplex Virus Esophagitis Concomitant With Duodenitis in an Immunocompetent Host

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ABSTRACT

Herpes simplex virus (HSV) esophagitis and duodenitis are well-known features of herpes virus reactivation in immunosuppressed patients. We discuss the case of HSV esophagitis concomitant with duodenitis in an immunocompetent individual. A 77-year-old male patient, previously healthy, was found to have on upper endoscopy several ulcers in the esophagus and second portion of the duodenum. A diagnosis of HSV esophagitis concomitant with duodenitis was made. The patient was started on intravenous acyclovir, and 48 hours after treatment, his symptoms significantly improved. He was then discharged on acyclovir per os for a total of 14 days. Endoscopy 1 month later showed complete resolution of both esophageal and duodenal ulcers. Physicians should keep the diagnosis of HSV esophagitis with duodenitis in the differentials in the setting of odynophagia, dysphagia, and epigastric pain, even in the case of an immunocompetent individual. Further research is needed to strengthen the literature on this topic.

KEYWORDS: herpes simplex virus; esophagitis; duodenitis; immunocompetent

INTRODUCTION

Herpes simplex virus (HSV) is a double-stranded DNA virus known to cause gingivostomatitis and pharyngitis in children and young adults.¹ HSV esophagitis is mainly found in immunosuppressed patients, such as organ transplant patients, chemotherapy patients, and human immunodeficiency virus patients.² Initial symptoms include odynophagia and dysphagia as well as fever and retrosternal chest pain in half of the cases.² Healthy patients most commonly suffer from fungal esophagitis, specifically people on antibiotics or diabetic patients.³ The pathogenesis of HSV esophagitis includes a reactivation of the latent virus and its spread to the esophagus through the vagus nerve.² HSV has been shown to cause gastritis and colitis in immunosuppressed patients, but HSV duodenitis is yet to be reported.⁴ We document the case of a previously healthy patient presenting with concomitant HSV esophagitis and duodenitis.

CASE REPORT

A 77-year-old, previously healthy male patient, with no known drug or food allergies, presented to the emergency department suffering from generalized weakness with severe epigastric pain postprandially, odynophagia, alongside nausea, and vomiting of 1-month duration. The patient also reported bloating during this period and a decrease in appetite and a sensation of fullness after small consumption of food. He has no medical or surgical history and does not take any home medications regularly. On admission, his vitals were normal. A biochemical workup including complete blood count, C-reactive protein, electrolytes, renal function, and hepatic function was normal. Laboratory results showed a normal white count, confirming the patient's immunocompetent status. The patient denied any signs of hematochezia or hematemesis. The decision of an upper endoscopy was subsequently made, which showed ulcerations in both the esophagus and the second portion of the duodenum (Figures 1 and 2). Two separate biopsies were taken separately from the esophagus and the duodenum and sent to pathology. Esophageal and duodenal ulcers revealed marked mononuclear cell infiltrate adjacent to the infected squamous epithelium with Cowdry type A intranuclear inclusions. A diagnosis of

HSV esophagitis and duodenitis was made. The patient was then started on intravenous acyclovir at a dosage of 5 mg/kg every 8 hours. His symptoms improved within 48 hours. Thereafter, the patient was discharged home on acyclovir per os for a total of 14 days, and his symptoms abated. The patient was asked to come to the office after 1 month for a checkup, and endoscopy showed complete resolution of ulcers in both the esophagus and the duodenum (Figures 3 and 4).

DISCUSSION

In this unique case report, we present a rare case of ulcerations in both the esophagus and the duodenum in an immunocompetent, healthy individual. This article underscores a case of HSV esophagitis concomitant with duodenitis. HSV esophagitis is a well-known disease in immunocompromised hosts, which can happen as a primary infection or as a reactivation of a latent virus.⁵ On the other hand, HSV infections in the stomach and the duodenum are much less common than those in the esophagus, rectum, and perineum.⁴ Patients with HSV esophagitis concomitant with duodenitis can present with a myriad of symptoms. Those symptoms can range from mild epigastric pain postprandially associated with nausea and vomiting to severe abdominal pain, hematochezia, and a severe drop in hemoglobin in case of bleeding from the ulcers. Our patient's presenting symptoms may point to a wide differential diagnosis: peptic ulcer disease, gastroesophageal reflux disease, and gastritis. Given its low prevalence in the population and knowing that our patient is healthy and does not take any home medications, HSV esophagitis concomitant with duodenitis was not in our differential diagnosis.

In the literature and to the best of our knowledge, no cases of both HSV esophagitis and duodenitis in an immunocompetent patient

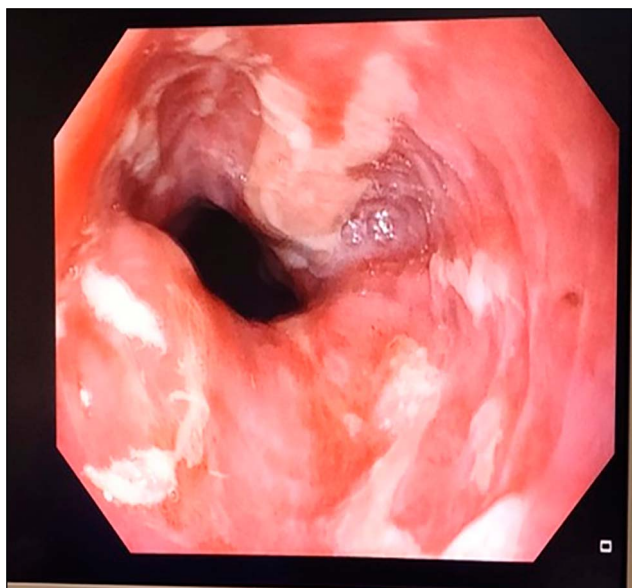


Figure 1. Ulcerations in the esophagus interspersed with normal esophageal mucosa.

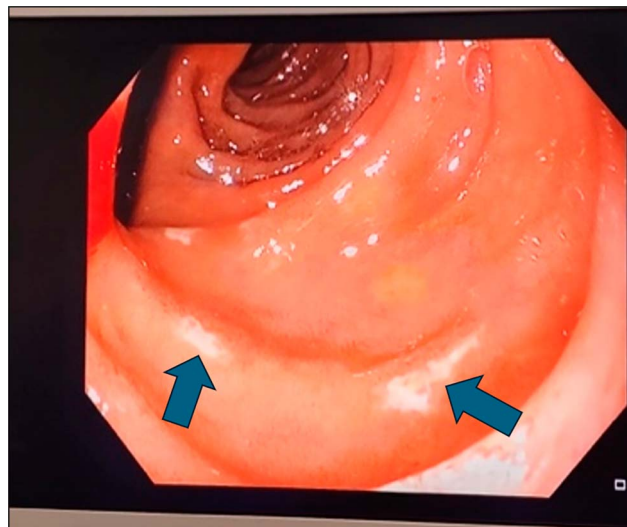


Figure 2. Ulcerations in the duodenum interspersed with normal duodenal mucosa (arrows).

have been reported to date. In a case report by Lee et al, a 74-year-old female patient was found to have HSV duodenitis.⁴ To note that this patient was known to have Crohn's disease 3 years ago and was being treated accordingly.⁴ On the other hand, Shah et al reported the case of a 27-year-old male patient on anabolic steroids who was found to have HSV esophagitis.⁵ A similar presentation was seen in 4 cases reported by Galbraith et al.⁶ In fact, the authors described 4 cases with few similarities to ours, but not the same.⁶ The first case addressed the case of a 19-year-old man, previously healthy, who presented with similar symptoms as our patient, but was found to have only HSV esophagitis on biopsy.⁶ The second and third cases also described the experiences of patients having HSV esophagitis.⁶ Notably, the 32-year-old male patient presented in the second case had a high risk of HSV exposure from close contact with his wife and child.⁶ By contrast, the patient in the third case was a 76-year-old man who presented with HSV esophagitis only, but was not treated with acyclovir.⁶ The fourth case described a 68-year-old woman who developed HSV esophagitis several days after her kidney surgery, making her immunocompetent status



Figure 3. Normal esophagus with complete resolution of ulcers after treatment.

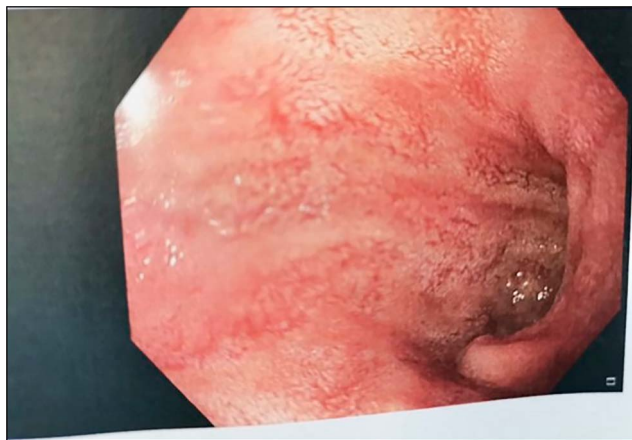


Figure 4. Normal duodenum with complete resolution of ulcers after treatment.

debatable.⁶ Like the previous situation, Ramanathan et al described the case of a 63-year-old man who presented with similar symptoms as our patient and was found to have HSV esophagitis.⁷ To note that this patient had a long-standing history of hepatitis C and was in close contact with his grandchild who had fever and stomatitis days before.⁷ In concordance with our case, a case report by Rajasekaran et al reported the case of a 17-year-old adolescent boy, previously healthy, who was found to have HSV esophagitis.³ In the same spirit, Patel et al described the case of a 37-year-old Nigerian man, previously healthy and immunocompetent, who was suffering from dysphagia and odynophagia.⁸ Two months later, the patient was found to have multiple erosions in his esophagus, which turned out to be HSV esophagitis.⁸ Another case report by Wang et al disclosed the case of a 61-year-old male patient who was found to have HSV esophagitis and duodenitis on upper endoscopy.⁹ In contrast with our case, this patient was known to have metastatic renal cell carcinoma and was being treated with nivolumab and ipilimumab, clearly making the patient immunosuppressed and susceptible to such conditions.⁹

Literature still has not documented a case of HSV esophagitis concomitant with duodenitis in an immunocompetent patient yet. In light of this, our case report underscores the possibility of this entity in a healthy individual and that this diagnosis should be kept in our differentials when approaching a patient with HSV-related gastrointestinal symptoms. From a different perspective, this case report raises many concerns in terms of treatments and management options. In view of the shortage of data on this subject, the same management and treatment were used as if the patient had HSV esophagitis without duodenitis. Physicians should keep in mind that, HSV duodenitis might require systemic antiviral if normal acyclovir did not work out. Noting also that the presence of ulcers in the duodenum might raise concerns about the possibility of having a masked inflammatory bowel disease or high chances of developing one. To note also that because of the paucity of data, and given the patient's age, immunosenescence might have played a role in our patient developing HSV esophagitis concomitant with duodenitis.

In conclusion, HSV esophagitis concomitant with duodenitis is an exceedingly rare condition in immunosuppressed patients, as well as in healthy individuals. Patients usually present with symptoms of both esophagitis and duodenitis or one of them, which might be confusing and pose a diagnostic challenge.

HSV esophagitis and duodenitis should be considered in the differential diagnosis even in a healthy, immunocompetent patient.

Contrary to what was assumed before, HSV could manifest as esophagitis with duodenitis even in a healthy individual. Thus, further studies should be conducted to evaluate the likelihood of such conditions and physicians should keep this diagnosis in the back of their minds.

DISCLOSURES

Author contributions: S. Sbeih, GC Haddad, N. Moussallem, and K. Karam: data curation, literature review, and drafting the original manuscript; E. Fiani: supervision, reviewing, editing original draft, and manuscript guarantor.

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