A Rare Cause of Dysphagia in a Pregnant Woman: Herpes Simplex Esophagitis

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ABSTRACT

Herpes simplex esophagitis (HSE) has rarely been reported in immunocompetent individuals. In a search of Medline until October 2012, we found only one case of HSE in a pregnant female. We present the first case of HSE in a healthy 36-year-old female at 27 weeks gestation who recovered without antiviral therapy.

KEYWORDS
Herpes simplex virus; Esophagitis; Pregnancy

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INTRODUCTION

Herpes simplex virus (HSV) is the most common cause of infectious esophagitis after candidiasis. Herpes simplex esophagitis (HSE) in immunocompromised hosts is well documented in the literature, particularly among those diagnosed with human immunodeficiency virus (HIV) infection.[1] However, rare cases have been reported in immunocompetent individuals.[2] In a search of Medline until October 2012, we found only one case of HSE in a pregnant female.[3] We present the first case of HSE in a healthy 36-year-old female at 27 weeks gestation who recovered without antiviral therapy.

CASE REPORT

A healthy 36-year-old (gravida 3, para 3) female presented to the Infectious Diseases Department at 27 weeks gestation with a six day history of fever, epigastric pain and dysphagia. She had difficulty swallowing liquids, solids, and her own saliva. There was no history of medication use or corrosive ingestion. Her temperature was 38.5°C; other vital signs were normal. Physical examination revealed gingivostomatitis, ulcerations and erythema of the gingiva, buccal mucosa and tongue. Laboratory analyses showed a white blood cell count of 15000/mm^3 with 73% neutrophils. Her C-reactive protein was 78 mg/dL. The liver function was normal and HIV serology was negative. Upper endoscopy revealed several white patches and exudates throughout the esophagus with an edematous friable mucosa suggestive of severe candidal esophagitis. Except for mild gastric mucosal erythema, the

endoscopy was otherwise normal. Histological examination of the esophageal biopsies revealed multinucleated giant cells with intranuclear inclusion bodies, typical for HSE (Figure 1). No genital lesions were seen during gynecological examination. Her symptoms resolved completely within five days following the administration of intravenous hydration and a high dose proton-pump inhibitor. She did not receive any antiviral medications. One month later, the patient had no difficulty with swallowing. An esophagogastroduodenoscopy showed a complete resolution of the lesions. At 41 weeks gestation she delivered a healthy daughter that weighed 3100 g, whose Apgar scores were 9 (one minute) and 10 (five minutes). After 14 months of follow-up, the patient and her baby remained in good health.

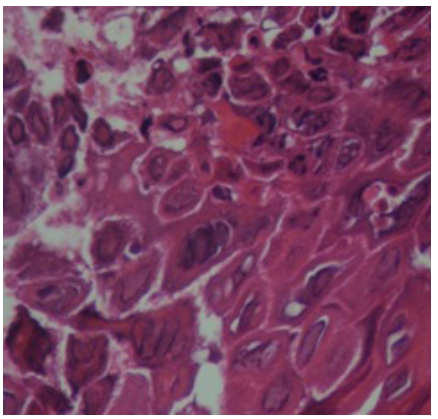

Fig. 1: Histologic section of an esophageal biopsy obtained from a 36-year-old pregnant female showing multinucleated giant cells with intranuclear inclusion bodies, typical for Herpes simplex esophagitis (HSE). (Hematoxylin and eosin stain, magnification: 400x).

DISCUSSION

The first case of HSE was reported in 1940 by Johnson.[4] Affinity of HSV to squamous epithelia predisposes the esophagus to HSE.[5] It has been initially described as an incidental observation during post-mortem examination with an incidence of 1.8%.[6] HSE is an opportunistic infection in immunosuppressed patients with HIV, in cases of underlying malignancies, organ transplantations, inflammatory bowel diseases, and in patients who are prescribed corticosteroids, other immunosuppressive therapy, and radiation therapy.[7] The reasons for not considering this diagnosis in healthy adults may be due to its spontaneous remission and the inability to perform an esophagoscopy due to the presence of severe dysphagia. HSE may represent the reactivation of a latent infection, however it is more often due to a primary infection, with local spread of the virus from an orolabial or pharyngeal focus.[8] Prior exposure to a family member with possible HSV lesions has been reported in about 20% of the cases.[9] Trauma resulting from gastroesophageal reflux, esophageal instrumentation, nasogastric drainage or ingestion of caustics may predispose an immunocompetent individual to HSE.[10-12] Our patient had no history suggestive of gastroesophageal reflux or other predisposing factors.

The most common mode of transmission of an HSV infection is via direct contact of the fetus with infected vaginal secretions during delivery. Transplacental transmission of HSV occurs in less than 5% of cases.[13] The current case had no evidence of genital herpes.

HSE usually affects young males and is typically manifested by the acute onset of odynophagia, dysphagia, retrosternal pain, and fever.[14] Gingivostomatitis with bilateral oropharyngeal lesions, ulcerations and erythema of the gingiva, buccal mucosa and tongue, lymphadenopathy and fever are usual manifestations of primary infection, while unilateral oropharyngeal lesions and cold sores suggest secondary infection.[15]

Esophagoscopy is the diagnostic procedure of choice.[7] HSV causes similar endoscopic findings in the esophagus of both immunocompetent and immunocompromised patients.[2] The disease predominantly affects the distal or mid-esophagus, but can affect the entire esophagus, and even the stomach.[7] The gross appearance may vary depending on the timing of endoscopy. In the early stage, vesicles are seen, which then slough to form discrete, circumscribed ulcers with raised edges; the mucosa is friable.[9,16] These lesions may be punched-out and volcano-like in appearance, or may coalesce to exhibit a cobblestone or shaggy ulcerative appearance. Discrete ulcers may be missing in a few cases.

Exudate is present in the majority of cases16 and mucosal necrosis may be seen later.[17] Microscopically, biopsies from the edge of ulcers provide the best diagnostic yield.[16] Specimens that have been obtained from the base of the ulcer are frequently devoid of epithelial cells.

The most effective diagnostic method for HSE is histology.[9] The characteristic histologic appearance is the presence of multinucleated giant cells with eosinophilic intranuclear inclusions, called Cowdry type A intranuclear inclusions and nuclear chromatin with a groundglass appearance.[9] PCR techniques for the detection of viral genome have demonstrated very high sensitivity and specificity in the diagnosis of a herpetic infection, even greater than those of the viral culture. Serologic tests have limited value, because of the high prevalence of HSV antibodies in individuals, but may be useful in diagnosing primary infections.

In contrast to immunocompromised patients, HSE is usually a self-limited disease that has a favorable outcome in immunocompetent individuals. In these cases, HSE resolves spontaneously within 1 to 2 weeks, and exceptionally may be complicated by gastrointestinal bleeding or esophageal perforation.[18-20]

Acyclovir is a well established treatment for HSE in the immunocompromised host[21] but its efficacy in immunocompetent adults and adolescents is controversial. Therapy with acyclovir in immunocompetent patients may shorten the duration of symptoms although a controlled study has not been performed and may not be feasible because of the rarity of the disease.[22] Acyclovir is safe in pregnant women and infants, with no congenital malformations or infant toxicity.[23,24] Pregnant women are relatively immunocompromised; thus antiviral therapy may be indicated in cases of HSV esophagitis. Our patient recovered promptly without antiviral therapy.

In conclusion, HSE in pregnant woman remains a rare, challenging entity, however it may be underdiagnosed. HSE should be suspected even in healthy patients who present with the triad of symptoms of odynophagia, fever and retrosternal pain. An upper endoscopy with biopsy for histopathology and viral culture should be performed to confirm the diagnosis. Antiviral therapy remains controversial in an immunocompetent host.

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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