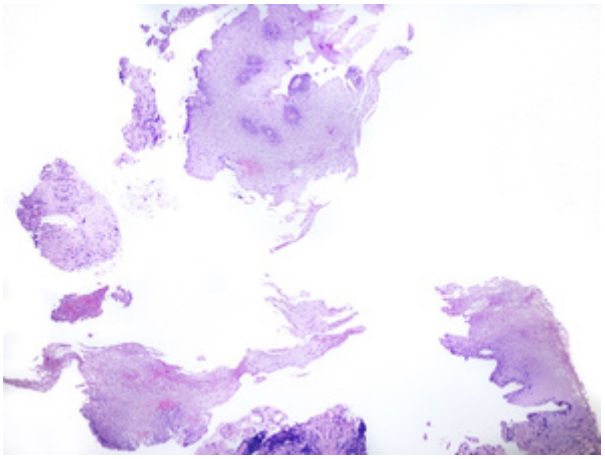
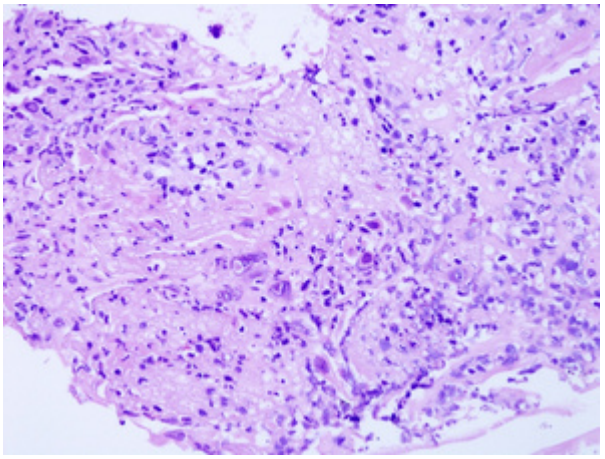
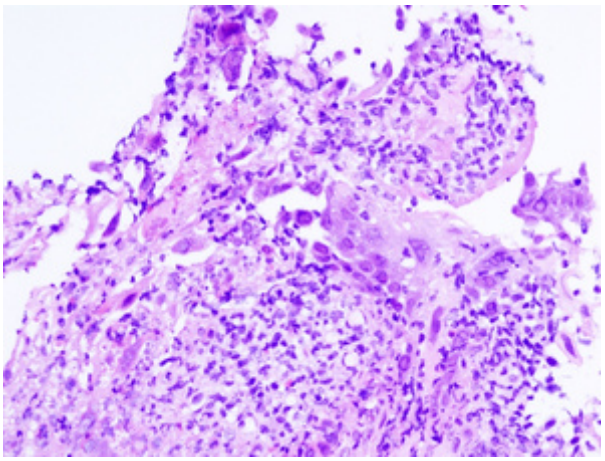
October 2016

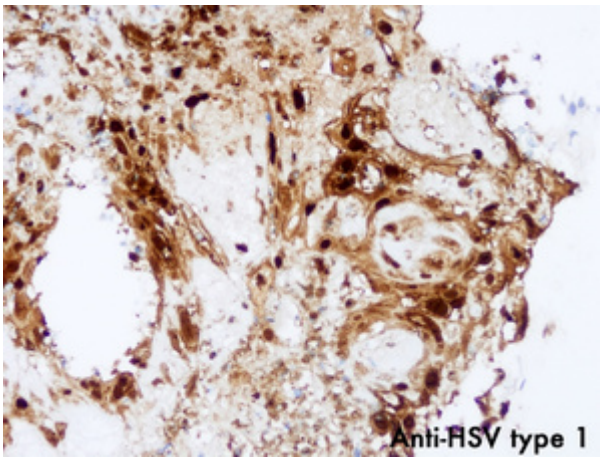
Endoscopic biopsies from distal esophageal ring in a 75-year-old female.

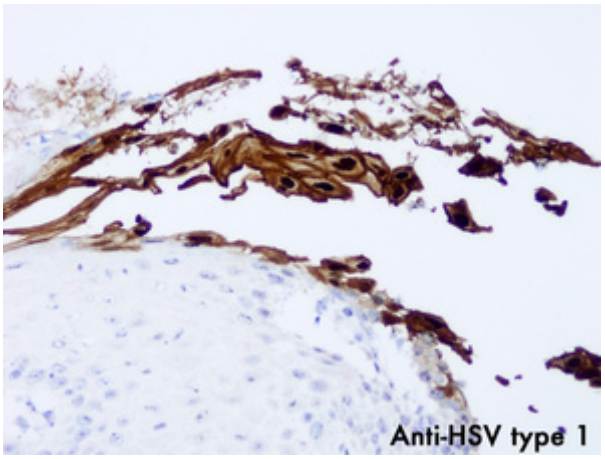
What is your diagnosis?











Diagnosis:

Herpetic esophagitis.

Comment:

A 75-year-old female patient with previous history of GERD was referred for unspecific epigastric pain and abdominal discomfort. On upper endoscopy, a thick lower esophageal mucosal (Schatzki) ring was seen and biopsies were taken (no endoscopic image available).

H&E show squamocolumnar junctional mucosa with dense inflammatory exudate, as well as sloughed epithelial cells (Panel A). Numerous cells with eosinophilic nuclear inclusions with a surrounding clear halo (Panel B), ground-glass intranuclear inclusions, nuclear molding and multinucleated cells were seen within the superficial squamous epithelium and necrotic debris (Panel C). Immunohistochemical stain for Herpes simplex virus (HSV) type 1 showed a strong intranuclear reaction (Panel D & E).

Herpetic esophagitis is caused by HSV. The esophagus is the most commonly affected visceral organ. It is often seen (but not limited to) in the immunocompromised patient. The usual clinical presentation includes acute and intense odynophagia, dysphagia, chest pain and fever. Endoscopically, shallow, sharply demarcated ulcers with associated exudate are the most common findings.

Even though herpetic esophagitis is mostly caused by HSV-1, gross and microscopic appearance can´t differentiate it from HSV-2 infection. Ulceration, exudate with sloughed epithelial cells, neutrofilic infiltrate and aggregates of macrophages are the usual histologic features. Typical inclusions are found in eroded mucosa or at the edge of ulcers. They are exclusively nuclear and could be single or multiple. Two types have been described: Cowdry type A are eosinophilic intranuclear inclusions with a surrounding clear halo and nuclear membrane reinforcement (Panel B), while Cowdry type B are homogeneous ground-glass inclusions (Panel C). Immunohistochemistry with HSV antibody can help to confirm the diagnosis.

The differential diagnosis includes other viral infections, e.g., with cytomegalovirus, adenovirus and herpes zoster. Squamous dysplasia and radiation-induced esophagitis can also mimic herpetic esophagitis. Careful attention to the presence of characteristic Cowdry type A inclusions and ground-glass nuclei, immunohistochemistry, viral culture or PCR enable the correct diagnosis.

The overall prognosis is favorable. Acyclovir is indicated in immunosuppressed patients. In immunocompetent patients, herpetic esophagitis is often a self-limited disease, and the use of acyclovir is therefore controversial.

For further reading:

- Canalejo Castrillero E, García-Durán F, Cabello N, García-Martínez J. Herpes esophagitis in healthy adults and adolescents: report of 3 cases and review of the literature. Medicine (Baltimore). 2010; 89: 204-10.
- Ramanathan J, Rammouni M, Baran J Jr, Kathib R. Herpes simplex virus esophagitis in the immunocompetent host: an overview. Am J Gastroenterol. 2000; 95: 2171-6.

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