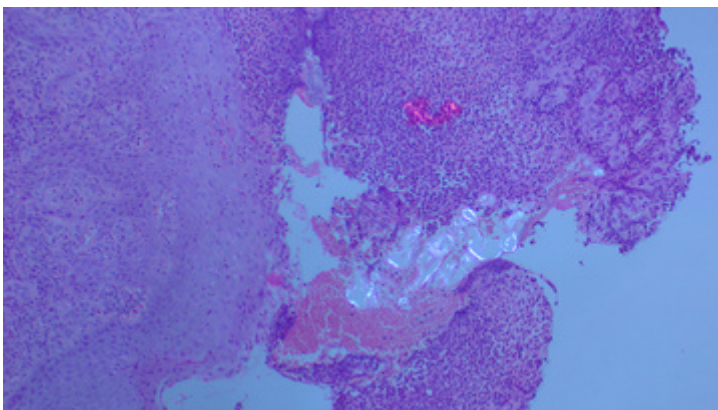
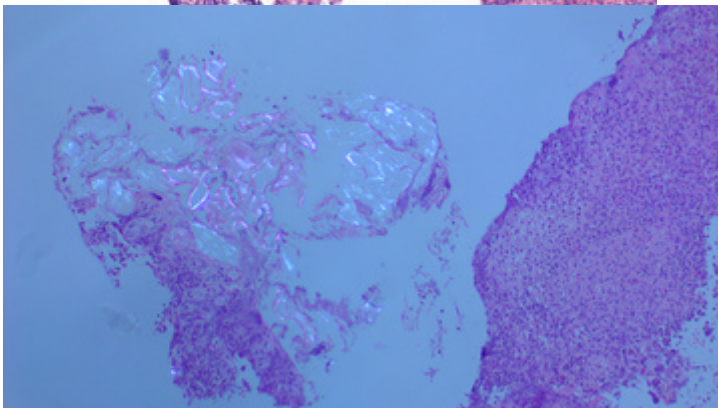
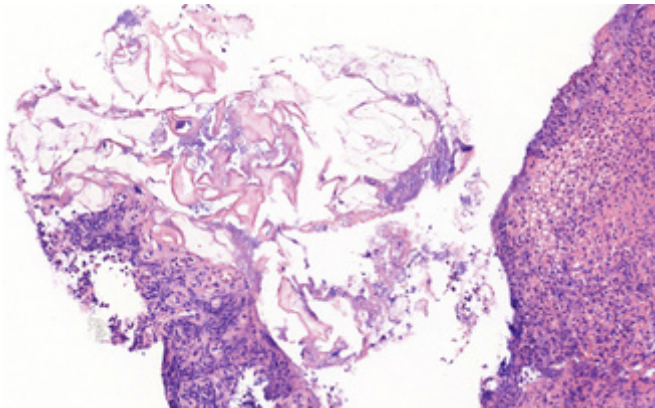
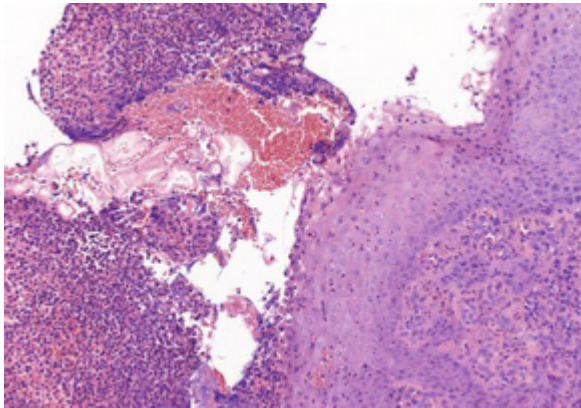
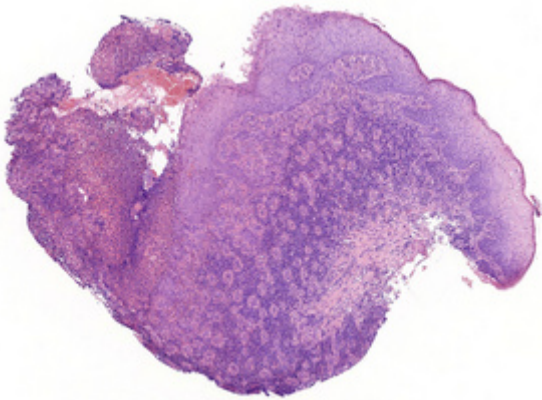


# December 2017

Esophageal biopsies of a 67-year-old female.

What is your diagnosis?



Diagnosis:

Pill esophagitis.

## Comment:

The esophageal biopsy specimen shows intense active inflammation with ulceration, dense lymphoplasmocytic infiltration of the lamina propria and focal granulation tissue formation [Panel A], and luminal inflammatory exudate, necrotic debris. [Panel B and C]. Embedded in the necrotic material polygonal, translucent, polarizable crystals (representing pill fragments) can be appreciated [Panel D and Panel E].

Pill or drug-induced esophagitis is induced by the chemical injury related to pills impacted in the esophagus. An ever-growing list of drugs has been implicated as possible causative agent, the most frequent examples are as follows: NSAIDs/ASA, antibiotics (most importantly doxycycline), ascorbic acid, potassium chloride, iron supplements (ferrous-sulfate), anticancer agents, quinidine, spasmolytic drugs, and bisphosphonates (e.g. alendronate). Pills are usually lodged in the level of one of the four anatomical or any pathological constrictions e.g. fibrotic scars after previous ulcers. Pill esophagitis is more frequent in elderly patients with or without preceding history of esophageal motility problems. The effected patients usually suffer of dysphagia or odynophagia, and more severe complications including permanent strictures, mediastinal hemorrhage, and perforation can also develop.

Gross changes include mucosal erythema, exfoliation, erosions and ulcers with usually abrupt border to the adjacent epithelium. Sometimes evidence of the predisposing stricture can also be seen. Microscopically a nonspecific picture in keeping with the erosive esophagitis pattern can be appreciated with active inflammation, erosion, ulceration, formation of capillary-rich granulation tissue. Although it is not always easy or even possible to find, the presence of polygonal, translucent, polarizable crystals is the pathognomonic feature of this condition. Sometimes drug specific features as brown pigmentation in iron pill induced cases or the insudation of homogenous eosinophilic hyaline material in NSAID related cases can be also present.

Differential diagnosis includes: severe gastroesophageal reflux disease, esophageal candidiasis, herpes simplex esophagitis.

## For further reading:

- › De Petris G, Caldero SG, Chen L, et al. Histopathological changes in the gastrointestinal tract due to medications: an update for the surgical pathologist (part II of II). *Int J Surg Pathol.* 2014;22:202-11.
- › Parfitt JR, Driman DK. Pathological effects of drugs on the gastrointestinal tract: a review. *Hum Pathol.* 2007;38:527–536.
- › Zografos GN, Georgiadou D, Thomas D, et al. Drug-induced esophagitis. *Dis Esophagus.* 2009;22:633-637.

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