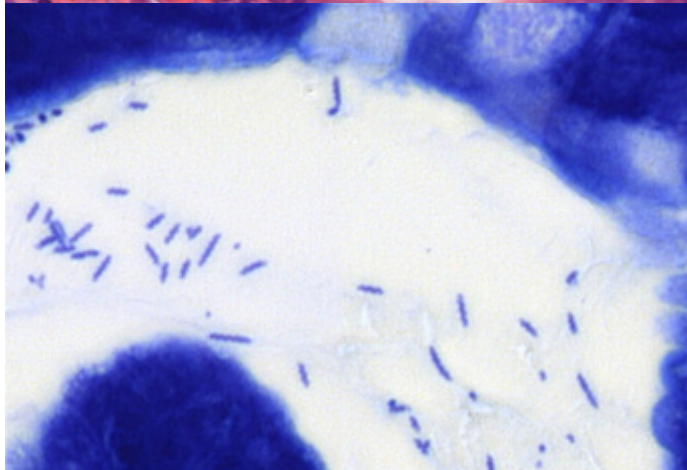
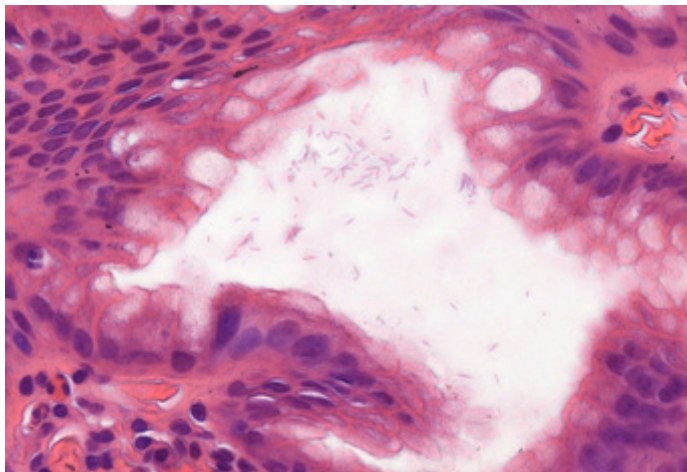
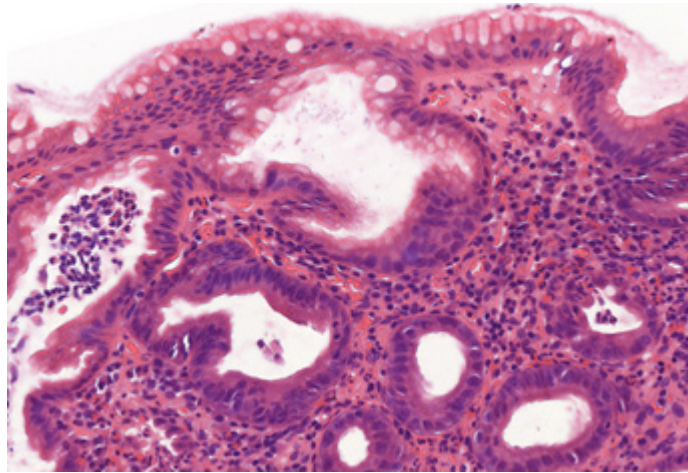
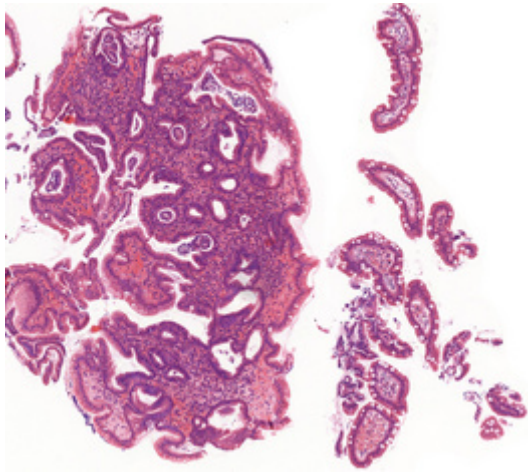
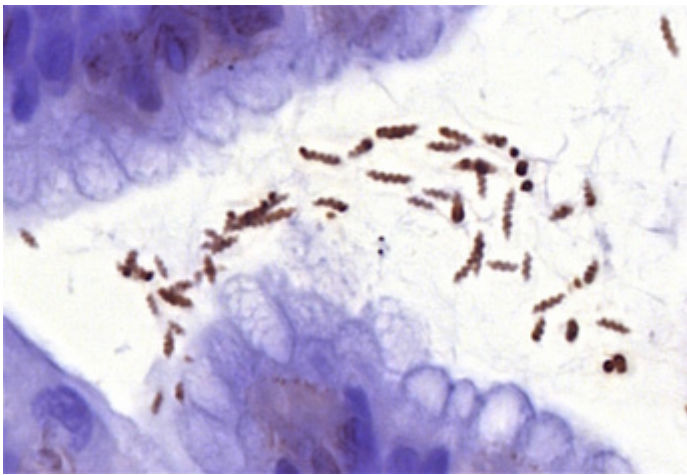


July 2017

Duodenal biopsies in a 54 year-old male.

What is your diagnosis?





Diagnosis:

Helicobacter heilmannii induced active bulbitis.

Comment:

The microscopic picture shows a biopsy specimen from the duodenal bulb (Panel A) with active inflammation (Panel B) and widespread gastric foveolar metaplasia. Floating in the mucin that covers the mucosal surface abundant long, thick, very orderly coiled microorganisms were recognized (Panel C), in keeping with the morphology of *Helicobacter heilmannii*. The bacteria were highlighted using Giemsa stain (Panel D) and polyclonal anti-*Helicobacter pylori* immunohistochemistry (Panel E).

H. heilmannii is the commonly used umbrella term for a family (approximately 50 different species) of animal pathogen bacteria, which were formerly known as *Gastrospirillum hominis* and have meanwhile been designated as Non-*Helicobacter pylori* *Helicobacter* Species (NHPH). NHPHs are known to cause rare sporadic chronic gastritis in human, most frequently in children, due to zoonotic infection. Gastritis triggered by NHPHs is usually characterized by a milder and also patchier inflammatory infiltrate. Erosions and/or ulcerations are infrequent.

NHPHs are straight, longer (5-9 μm), thicker (0.5-1 μm), more regularly coiled and tend to be less numerous than the usually more abundant, comma-shaped, shorter and thinner *H. pylori*. NHPHs can be highlighted with any of the histochemical stains (Giemsa, silver impregnation) routinely used for the identification of *H. pylori*. As concerns immunohistochemistry, most of the polyclonal and some of the monoclonal antibodies developed against *H. pylori* are also able to stain NHPHs.

Although the risk of gastric carcinoma development seems to be equal in *H. pylori* and *H. heilmannii* caused gastritis, some publications demonstrated a closer association between NHPH infection and MALT lymphoma. Clinically, the conventional eradication therapy used to treat *H. pylori* infection is identically effective in NHPH gastritis.

For further reading:

- › Bento-Miranda M, Figueiredo C. *Helicobacter heilmannii* sensu lato: an overview of the infection in humans. *World J Gastroenterol*. 2014; 20: 17779-87.
- › Okiyama Y, Matsuzawa K, Hidaka E, et al. *Helicobacter heilmannii* infection: clinical, endoscopic and histopathological features in Japanese patients. *Pathol Int*. 2005; 55: 398-404.
- › Stolte M, Kroher G, Meining A, et al. A comparison of *Helicobacter pylori* and *H. heilmannii* gastritis. A matched control study involving 404 patients. *Scand J Gastroenterol*. 1997; 32: 28-33.

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