

# *H. pylori* May Protect Against Barrett's Esophagus

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FROM GASTROENTEROLOGY

**H**elicobacter pylori infection, chronic active gastritis, and intestinal metaplasia share similar epidemiologic patterns, and are significantly associated with each other, Dr. Amnon Sonnenberg and colleagues reported.

Moreover, all three diagnoses are inversely associated with the presence of Barrett's metaplasia, they found.

Dr. Sonnenberg of the Portland (Ore.) VA Medical Center and Oregon Health and Science University, Portland, and colleagues looked at histology reports from 78,985 patients who had gastric and esophageal biopsies between April 2007 and March 2008. Patients were treated by approximately 1,500 gastroenterologists distributed throughout the United States (Gastroenterology 2010 December

Additionally, there was a higher concentration of all three diagnoses in Puerto Rico, New York, South Carolina, and New Mexico, compared with the rest of the country, possibly because of "an underlying variation in the socio-economic well-being among populations from different states," Dr. Sonnenberg and associates noted.

According to the authors, although an inverse relationship between *H. pylori*-

induced gastritis and Barrett's esophagus has already been suggested in multiple studies, many of those analyses "were based on small population samples, clinical observations, or indirect evidence of opposing epidemiologic trends among *H. pylori* or peptic ulcer versus gastroesophageal reflux disease."

In contrast, the current study offers a "direct and inverse relationship between the histologic findings of Barrett's mu-

cosa and *H. pylori*-induced gastritis," they wrote.

"Using histological findings to assess the underlying epidemiology represents a new way to study epidemiologic patterns," the investigators added.

However, the researchers conceded that the study was not without limitations. For one, it "lacks any data to assess the influence of *H. pylori*-induced gastritis on hyposecretion of acid," they wrote. ■

## VITALS

**Major Finding:** Based on histology reports, patients with chronic active gastritis were extremely likely to have *H. pylori* infection (OR, 457), more than twice as likely to have intestinal metaplasia (OR, 2.10), and half as likely to have Barrett's metaplasia (OR, 0.48).

**Data Source:** A retrospective database analysis from a national sample of gastric biopsy samples from 78,985 unique patients.

**Disclosures:** Lead author Dr. Sonnenberg disclosed being supported by a grant from Takeda Pharmaceutical Co. Two other investigators are employees of Caris Life Sciences.

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All samples were processed by Caris Life Sciences Inc., a gastrointestinal laboratory that works with private outpatient endoscopy centers, at facilities in Phoenix, Boston, and Irving, Tex.

The researchers found that patients who were positive for *H. pylori* infection had a startlingly high odds ratio for chronic active gastritis: 456. They were also twice as likely to have intestinal metaplasia (OR, 2.00).

However, having *H. pylori* was apparently protective against a diagnosis of Barrett's metaplasia, in the esophagus: The OR for having the latter among *H. pylori*-positive patients was 0.42.

Similarly, patients who were histologically positive for chronic active gastritis were extremely likely to have *H. pylori* (OR, 457), more than twice as likely to have intestinal metaplasia (OR, 2.10), and roughly half as likely to have Barrett's metaplasia (OR, 0.48). Analyses linking intestinal metaplasia to these conditions revealed an OR of 2.07 for *H. pylori*, 2.15 for chronic active gastritis, and 0.61 for Barrett's esophagus.

Dr. Sonnenberg and colleagues also found that all three diagnoses were more common among men than women, and that "compared with other insurance types, Medicaid was more common in patients with all three diagnoses."

## Easy to teach<sup>1</sup>

- Can be used in 6 straightforward steps

## Easy to use<sup>1</sup>

- Only long-acting insulin pen in which dose can be set from 1 to 80 units in 1-unit steps, dialed both up and down
- Once opened, Lantus<sup>®</sup> SoloSTAR<sup>®</sup> can be used for up to 28 days and is not refrigerated

## Easy to inject<sup>1</sup>

- Dose cannot be dialed past the number of units left in the pen
- It is important to keep the injection button pressed all the way in and to **slowly count to 10 before withdrawing the needle from the skin**. After a full injection, the number in the dose window will return to zero. These steps help ensure that the full dose has been delivered
- To help ensure an accurate dose each time, patients should follow all steps in the Instruction Leaflet accompanying the pen; otherwise they may not get the correct amount of insulin, which may affect their blood glucose

## Important Safety Information for Lantus<sup>®</sup>

### Contraindications

Lantus<sup>®</sup> is contraindicated in patients hypersensitive to insulin glargine or one of its excipients.

### Warnings and precautions

Monitor blood glucose in all patients treated with insulin. Insulin regimens should be modified cautiously and only under medical supervision. Changes in insulin strength, manufacturer, type, or method of administration may result in the need for a change in insulin dose or an adjustment in concomitant oral antidiabetic treatment.

Do not dilute or mix Lantus<sup>®</sup> with any other insulin or solution. If mixed or diluted, the solution may become cloudy, and the onset of action/time to peak effect may be altered in an unpredictable manner. Do not administer Lantus<sup>®</sup> via an insulin pump or intravenously because severe hypoglycemia can occur. Insulin devices and needles must not be shared between patients.

Hypoglycemia is the most common adverse reaction of insulin therapy, including Lantus<sup>®</sup>, and may be life-threatening.

Severe life-threatening, generalized allergy, including anaphylaxis, can occur.

A reduction in the Lantus<sup>®</sup> dose may be required in patients with renal or hepatic impairment.

### Drug interactions

Certain drugs may affect glucose metabolism, requiring insulin dose adjustment and close monitoring of blood glucose. The signs of hypoglycemia may be reduced in patients taking anti-adrenergic drugs (e.g., beta-blockers, clonidine, guanethidine, and reserpine).

### Adverse reactions

Other adverse reactions commonly associated with Lantus<sup>®</sup> are injection site reaction, lipodystrophy, pruritus, and rash.

## Indications and Usage for Lantus<sup>®</sup>

Lantus<sup>®</sup> is a long-acting insulin analog indicated to improve glycemic control in adults and children (6 years and older) with type 1 diabetes mellitus and in adults with type 2 diabetes mellitus. Lantus<sup>®</sup> should be administered once a day at the same time every day.

Important Limitations of Use: Lantus<sup>®</sup> is not recommended for the treatment of diabetic ketoacidosis. Use intravenous short-acting insulin instead.

Lantus<sup>®</sup> SoloSTAR<sup>®</sup> is a disposable prefilled insulin pen.

**Please see brief summary of full prescribing information for Lantus<sup>®</sup> on the next page.**

References: 1. Data on file, sanofi-aventis U.S. LLC. 2. Lantus Prescribing Information. September 2009.