

FPIN's Clinical Inquiries

H. pylori Screening Before Initiation of Long-term NSAIDs

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Clinical Question

Should clinicians perform laboratory screening for and eradicate *Helicobacter pylori* in patients before initiating long-term therapy with non-steroidal anti-inflammatory drugs (NSAIDs) to reduce the risk of peptic ulcer disease?

Evidence-Based Answer

Physicians should perform laboratory screening for and eradicate *H. pylori* before initiating long-term NSAID therapy in NSAID-naïve patients to reduce the risk of peptic ulcer disease. (Strength of Recommendation [SOR]: A, based on meta-analyses of randomized controlled trials [RCTs].) Physicians should screen for and eradicate *H. pylori* before initiating long-term NSAID therapy in patients with a history of peptic ulcers. (SOR: B, based on a meta-analysis of case-controlled studies.)

Evidence Summary

A 2012 meta-analysis of seven RCTs (N = 1,254) examined whether eradication therapy for *H. pylori* infection decreased the incidence of peptic ulcer disease in adults receiving long-term NSAID therapy.¹ Western and Asian populations were represented. The primary end point was the development of peptic ulcer disease during follow-up. Most participants were female (61% to 81%). Peptic ulcer disease developed in

6.4% of participants who underwent eradication therapy compared with 11.8% of those who did not (odds ratio [OR] = 0.50; 95% CI, 0.36 to 0.74; number needed to treat [NNT] = 18). In a subanalysis of three studies of NSAID-naïve patients (n = 532), a significant risk reduction was noted in the eradication group: 10 of 262 participants (3.8%) in the eradication group developed a peptic ulcer vs. 37 of 270 (13.7%) in the noneradication group (OR = 0.26; 95% CI, 0.14 to 0.49; NNT = 10). In a subanalysis of participants receiving long-term NSAID therapy (n = 822), there was no statistical difference between the eradication and noneradication groups (OR = 0.74; 95% CI, 0.46 to 1.20).

A 2002 meta-analysis of 16 case-control or cross-sectional studies of adults (N = 1,625) linked *H. pylori* infection to development of peptic ulcer disease. NSAID users with ulcers were more likely to have *H. pylori* infection (OR = 2.12; 95% CI, 1.68 to 2.67). In a subanalysis of five controlled trials, *H. pylori* infection conferred additional risk beyond NSAID use alone (OR = 3.53; 95% CI, 2.16 to 5.75). A subanalysis of six case-control studies revealed that the risk of ulcer bleeding was greater when both NSAID use and *H. pylori* infection were present (OR = 6.13; 95% CI, 3.93 to 9.45).² Long-term NSAID use was defined in most studies as at least four weeks.

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CLINICAL INQUIRIES

Recommendations from Others

The American College of Gastroenterology (ACG) recognizes *H. pylori* infection as a significant modifiable risk factor for NSAID-induced ulcers and ulcer complications (e.g., bleeding). The ACG recommends testing for *H. pylori* infection before initiating long-term NSAID therapy and offering eradication therapy to those with positive results. The ACG recommends testing all patients who have active peptic ulcer disease or a history of peptic ulcers and no documentation of cure.³ The Japanese Society of Gastroenterology recommends eradication of *H. pylori* for prevention of ulcers in NSAID-naïve patients who are beginning treatment with NSAIDs, but not in those already being treated with NSAIDs.⁴ The Maastricht V/Florence Consensus Report, which included input from 43 experts from 24 countries, recommends testing for *H. pylori* in patients with a history of peptic ulcers who are receiving aspirin and other NSAIDs.⁵

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