Lansoprazole reduced recurrence of ulcer complications in long-term use of low-dose aspirin

Lai KC, Lam SK, Chu KM, et al. **Lansoprazole for the prevention of recurrences of ulcer complications from long-term low-dose aspirin use.** N Engl J Med. 2002; 346:2033-8.

QUESTION

In patients receiving continuous treatment with low-dose aspirin, is *Helicobacter pylori* eradication plus lansoprazole more effective than *H. pylori* eradication alone for preventing the recurrence of ulcer complications?

DESIGN

Randomized {allocation concealed*}†, blinded (clinicians, patients, outcome assessors, monitoring committee, and data analysts),* placebo-controlled trial with a median follow-up of 12 months.

SETTING

A university hospital in Hong Kong, China.

PATIENTS

123 patients who were 18 to 80 years of age (mean age 70 y, 72% men) and had ulcers (gastric, duodenal, or gastroduodenal), were receiving low-dose aspirin for > 1 month before developing ulcers, had a disease such as stroke or ischemic heart disease that required long-term continuous treatment with low-dose aspirin, and had *H. pylori* infection that was objectively diagnosed. Exclusion criteria included esophagitis; a history of gastric or duodenal surgery other than oversewing of a perforation; allergy to study drugs; *H. pylori* infection that could not be eradicated after 2 attempts with eradication therapies; and concomitant treatment with nonsteroidal anti-inflammatory drugs, corticosteroids, or anticoagulants. Follow-up was 92%.

INTERVENTION

After healing of the ulcers and eradication of *H. pylori* infection, 62 patients were allocated to aspirin (100 mg/d) plus lansoprazole (30 mg/d), and 61 patients were allocated to aspirin (100 mg/d) plus placebo, all taken once daily for 12 months.

MAIN OUTCOME MEASURES

Recurrence of ulcer complications (bleeding, perforation, or obstruction).

MAIN RESULTS

Analysis was by intention to treat. Fewer patients in the lansoprazole group than in the placebo group had a recurrence of ulcer complications (Table).

CONCLUSION

In patients receiving continuous treatment with low-dose aspirin, *Helicobacter pylori* eradication plus lansoprazole was more effective than *H. pylori* eradication alone for preventing the recurrence of ulcer complications.

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*See Glossary.

†Information provided by author.

Lansoprazole vs placebo in continuous treatment with low-dose aspirin at 12 months‡

Outcome	Lansoprazole	Placebo	RRR (95% CI)	NNT (CI)
Recurrence of ulcer complications	1.6%	14.8%	89% (37 to 98)	8 (5 to 24)

‡Abbreviations defined in Glossary; RRR, NNT, and CI calculated from data in article.

COMMENTARY

Even low doses of aspirin can cause serious ulcer complications. *H. pylori* infection, which is a risk factor for aspirin-associated ulcers (1), is more prevalent in Hong Kong (where the study by Lai and colleagues was done) than in North America. Lai and colleagues showed that eradication of *H. pylori* infection alone was inadequate for preventing recurrence of ulcer complications in Chinese patients who were restarted on low-dose aspirin after ulcer healing. The combination of *H. pylori* eradication and subsequent maintenance with lansoprazole was substantially superior to *H. pylori* eradication alone in preventing ulcer complications within 1 year. We do not know the "natural" rate of recurrent ulcer complications without either of these interventions because the inclusion of a control group in which patients were not offered treatment for *H. pylori* infection would have been unethical.

A recent multinational study (currently only available in abstract form) found a point prevalence of endoscopic ulcers of 11% in patients who were receiving aspirin, 75 to 325 mg/d, but not nonsteroidal anti-inflammatory drugs, proton-pump inhibitors, or H_2-antagonists (1). Advancing age and *H. pylori* infection were risk factors for ulcers, while dyspepsia was a negative predictor. Therefore, some patients receiving low-dose aspirin (particularly elderly and asymptomatic persons) will have ulcers and will be at risk for complications. This does not mean that they all require long-term treatment with proton-pump inhibitors. However, those who have an ulcer complication should be tested for *H. pylori* infection, which should be treated if present. For such patients who are resuming low-dose aspirin because of a medical necessity, long-term proton-pump inhibitor co-therapy after documented ulcer healing and *H. pylori* eradication is recommended.

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Reference

1. **Yeomans ND, Hawkey C, Lanas A, et al.** Prevalence of gastric and duodenal ulcers during "low dose" aspirin. Gastroenterology. 2002;122:A-87.

