LETTERS

Eradication of Helicobacter pylori with a metronidazole-containing regimen in a metronidazole-abusing population

Metronidazole is the mainstay of triple-drug therapy regimens for eradication of Helicobacter pylori. Due to inadequate enforcement of drug policy regulations in this region, many patients do not follow the regimen. They take metronidazole without a physician's prescription. The use of such a drug would lead to higher occurrence of metronidazole-resistant H. pylori strains in Bangladesh. Butt et al. have observed a very high prevalence (20-30%) of metronidazole resistance among the Bangladeshi residents in east London.

Better H. pylori eradication rates have been reported when a bismuth compound or a proton pump inhibitor was compared with metronidazole and amoxicillin or clarithromycin, in patients harboring metronidazole-resistant H. pylori strains.4,5 Similar eradication rates have been obtained with a combination of ranitidine with clarithromycin and metronidazole given for 7 days.4 Clarithromycin is an expensive agent and resistance to it affects treatment success. Since ranitidine and metronidazole preparations are cheaply available and reasonably effective in Bangladesh, it was decided to undertake a trial with ranitidine, amoxicillin and metronidazole as a triple-drug regimen for H. pylori eradication in patients with peptic ulcer.

Sixty-eight consecutive patients (59 duodenal ulcer, 9 gastric or duodenal ulcers; aged 15-65 years, median 36; 62 men) with H. pylori infection (confirmed by rapid urease test and histology of antral biopsy specimen) were given ranitidine (OralID®) 150 mg bid, amoxicillin (OralID®) 500 mg qid and metronidazole (OralID®) 400 mg bid for 14 days. Forty-six patients were smokers, and 56 and 12 belonged to the lower and middle socioeconomic classes. Fifteen patients had history of hematemesis and/or melena. Refusal of informed consent, concurrent disease, pregnancy or lactation, continuous use of anti-inflammatory drugs, and treatment with antibiotics or bismuth compounds in the previous two months were the exclusion criteria.

Follow-up endoscopy was performed at 6 weeks (4 weeks after completion of therapy). Either complete epithelialization or formation of white scar was used as the criterion for ulcer healing. H. pylori eradication was defined by the absence of the microorganism in the antral biopsy specimen by rapid urease test and histology.

Of the 68 patients, 15 did not follow up. The results were evaluated by per-protocol and intention-to-treat analysis methods. H. pylori eradication rates were 83% (44/53) and 65% (44/68), respectively. Ranitidine 150 mg bid was given for a further 4 weeks to 5 patients whose H. pylori were eradicated but ulcer had not healed in 6-week endoscopy. However, they did not follow up. Smoking signficantly hampered ulcer healing (77% [27/35] in smokers vs. 95% [17/18] in non-smokers; p<0.05), but did not influence H. pylori eradication. There was no significant difference in H. pylori eradication among the smoking and non-smoking ulcer patients.

Impaired healing of both gastric and duodenal ulcers and enhanced ulcer recurrence in smokers have been found in controlled trials.6 On the other hand, no significant influence of tobacco smoking was found on H. pylori eradication in the present study, which is consistent with the findings reported by Cutter and Schabert.6 Despite abuse of metronidazole in this region, we obtained 92% and 83% per-protocol H. pylori eradication and peptic ulcer healing rates with a metronidazole-containing regimen. We cannot explain the absence of ulcer healing in 5 patients despite H. pylori eradication. False-negative H. pylori test (due to sampling error) or, high acid-secretory states and ulcer due to other diseases may be explanations.

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References

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