

Effective Treatment of *Helicobacter pylori* Infection in a High Prevalence Rural Bolivian Population Using Directly Observed Therapy

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Background: Infection with *H. pylori* can cause duodenal ulcers and gastric adenocarcinoma. The definitive mode of transmission is unknown. To confirm previous research showing that using a narrow-mouth water vessel and water disinfectant prevented infection in children, we are determining whether special vessel use can prevent *H. pylori* re-infection in a treated population.

Methods: We tested residents of 2 villages for *H. pylori* using urea breath tests (UBT). Special vessels and water disinfectant were distributed to one village and their use is monitored monthly; the other village received no intervention. Twice daily directly observed therapy (DOT) for the recommended 10 days with lansoprazole, clarithromycin and amoxicillin was offered to persons testing positive. UBTs were repeated at 2 months; *H. pylori*-positive persons were retreated. Village re-infection rates will be determined by UBT and compared after 1 year.

Results: We tested 1,065 (97%) of 1,093 residents of 2 villages; 849(81%) were positive and village prevalence rates were similar. Prevalence ranged from 12% in children <2 years to 93% in persons \geq 14 years. 849 persons with positive tests, 699 (82%) received treatment. Of these, 552 (79%) had follow-up UB Ts, 484 (87%) of which were negative. Eradication rates were 94% with 20 treatment doses, 94% with 15-19 doses and 85% with 10-14 doses. Vessel use rates ranged from 87%-100%.

Conclusions: *H. pylori* treatment in this high-prevalence population was effective with 10 or more doses and DOT, suggesting that, for compliant patients, recommended treatment duration could be shortened to 7 days, thereby reducing costs and improving compliance. Use of the vessel remains high after 6 months; *H. pylori* re-infection rates will be determined in June 2001.

Key words: *Helicobacter pylori*, transmission, treatment, prevalence

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