

## **Helicobacter pylori eradication in peptic dyspepsia**

### **Abstract:**

To evaluate whether eradication therapy is more effective in peptic ulcer disease (PUD) than in non-ulcer dyspepsia (NUD). Methods : We retrospectively studied 481 patients with NUD (183 patients) or PUD (298 patients) infected with *Helicobacter pylori* included in several prospective clinical trials. Three eradication regimens were given: (1) proton pump inhibitor (PPI) plus clarithromycin, plus either amoxicillin or metronidazole for 7 days (297 patients); (2) ranitidine bismuth citrate (RBC) plus clarithromycin plus amoxicillin for 7 days (79 patients); and (3) RBC plus clarithromycin plus amoxicillin plus metronidazole for 5 days (105 patients). *H. pylori* eradication was defined as a negative <sup>13</sup>C-urea breath test 4 weeks after completing treatment. Results : *H. pylori* eradication rates were 82% (95% CI 78-87%) with PPI plus two antibiotics for 7 days, 85% (95% CI 75-91%) with RBC plus two antibiotics for 7 days, and 91% (95% CI 86-97%) with RBC plus three antibiotics for 5 days ( $P < 0.05$  compared with the first regimen). Overall, the *H. pylori* eradication rate in patients with NUD was 78% (95% CI 71-84%), while in patients with PUD it was 89% (95% CI 86-93%) ( $P < 0.001$ ). Both the combination of PPI plus two antibiotics for 7 days and the combination of RBC plus three antibiotics for 5 days were more effective in PUD than in NUD patients. However, RBC plus clarithromycin plus amoxicillin for 7 days was equally effective in both diseases. RBC plus two antibiotics for 7 days achieved better results than the same therapy with PPI only in NUD patients (84% v. 59%,  $P < 0.01$ ), but both regimens were similar when prescribed in PUD patients (86% v. 88%). In the multivariate analysis, the type of therapy, the diagnosis (NUD v. PUD), and the product variable of therapy (with RBC plus 2 antibiotics for 7 days) and diagnosis (interaction variable) were the only variables that influenced *H. pylori* eradication. The odds ratio (OR) for the effect of RBC versus PPI plus two antibiotics for 7 days in patients with NUD was 4 (95% CI 1.7-9.7;  $P < 0.01$ ), whereas in patients with PUD no statistical significance was achieved (OR 0.79; 95% CI 0.2-3.9). Conclusion : Overall, *H. pylori* eradication therapy is more effective in PUD than in NUD patients. This advantage of eradication therapies in PUD patients seems to be observed with 7-day PPI-based triple regimens, and with 5-day RBC-based quadruple therapy, while the 7-day RBC-based triple regimen seems to be equally effective in both diseases.