Helicobacter Pylori Eradication in Children with Ranitidine Bismuth Citrate - Based Triple Therapy Given for 4 Days versus 7 Days: A Prospective Randomised Study

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Helicobacter pylori infection is common in paediatric population. The overall prevalence varies from 10% in developed countries to 80% in developing countries at the age of 10. The association of this infection with gastritis, peptic ulcerations and gastric cancer has warranted guidelines on the treatment of this infection in children. **Aim of study:** To determine an effective eradication regimen for *H. pylori* in children with the shortest duration to promote compliance. **Patients and methods:** We conducted a prospective randomised study comparing ranitidine bismuth citrate (RBC) - based triple therapy given for 4 days vs 7 days in 200 children with mean age 12.5 years (92 boys, 108 girls). *H. pylori* infection was diagnosed by $^{13}$C-urea breath test ($^{13}$C-UBT). Children with body weight >40 kg received amoxicillin 1 g bid plus clarithromycin 500 mg bid plus RBC 400 mg bid. Dosages of antibiotics were reduced by half in those patients with body weight less than 40 kg while that of RBC remained the same. Outcome measures included success of eradication determined by repeat $^{13}$C-UBT in 6 weeks, drugs adverse effects and patients' compliance. **Results:** Ninety-three (46.5%) and 107 (53.5%) of children were randomised to receive 7-day and 4-day regimen respectively. All 200 children completed the prescribed treatment according to the protocol. 89.2% of children who had received treatment for 7 days showed successful eradication comparing with 78.5% in those who received treatment only for 4 days (p-value <0.05). There was no statistical difference in terms of side effects between the two regimens. **Conclusions:** RBC-based triple therapy is an effective and well tolerated treatment for eradication of *H. pylori* in children. Seven days of treatment is the shortest duration to ensure effective eradication with the currently available therapeutic agents. (HK J Paediatr (new series) 2003;8:341-345)

**Key words:** Children; Eradication; *Helicobacter pylori*