

THE EFFECT OF ORAL ADMINISTRATION OF LACTOBACILLUS REUTERI ON ANTIBIOTIC-ASSOCIATED GASTROINTESTINAL SIDE-EFFECTS DURING HELICOBACTER PYLORI ERADICATION THERAPY

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Oral Communication

Abstract

Background

Helicobacter pylori (*H. pylori*) eradication fails in about 25-30% of children, particularly because of the occurrence of resistance to antibiotics and side-effects (Oderda G. Aliment Pharmacol Ther 2000;14(Suppl 3):59-66).

Several studies in adults show that probiotics may prevent side effects during anti-*H. pylori* therapy (Armuzzi A. Aliment Pharmac Ther 2001;15:163-169).

The aim of our study was to determine whether adding the probiotic *Lactobacillus reuteri* (*L. reuteri*) to an anti-*H. pylori* regimen could help to prevent or minimize the gastrointestinal side-effects burden in children.

Methods

Twenty-five *H. pylori*-positive children [13M; median age: 10,2 y (range: 3-16,3y) were consecutively treated with 10-day sequential therapy [omeprazole (1 mg/kg/day) + amoxicillin (50 mg/kg/day) for 5 days, and omeprazole (1 mg/kg/day) + clarithromycin (15 mg/kg/day) + tinidazole (20 mg/kg/day) for other 5 days] and blindly randomised to receive either *L. reuteri* SD2112 (10⁸ CFU) or placebo for 20 days starting from the first day of treatment.

In order to determine the type and severity of side-effects, all children completed the Gastrointestinal Symptom Rating Scale (GSRS) at entry and on day 5 and 10 of treatment and follow-up.

H. pylori status was assessed after 8 weeks by ¹³C-UBT.

Results

At entry, children in both groups were homogeneous for demographic variables and GSRS score. Overall, in all probiotic supplemented children as compared to those receiving placebo there was a significant reduction of GSRS score during eradication therapy (2,4 ± 2,2 vs. 4,1 ± 2,5; p<0,008) and follow-up (1,4 ± 1,8 vs. 3,7 ± 3,6; p<0,005), the effect being more pronounced on day 20 when they refer less frequently abdominal distension (31% vs. 0%; p<0,03), eructation (38% vs. 0%; p<0,016), hard stools (54% vs. 17%; p<0,05) and inappetence (33% vs. 0%; p< 0,04).

There were no differences in adherence to treatment schedules (97% in both groups) and *H. pylori* eradication rates (92,3% vs. 100%; p= NS) between the two groups.

Conclusions

Our study clearly shows that *L. reuteri* given during and after anti-*H. pylori* eradication therapy significantly reduces frequency and intensity of antibiotic-associated side-effects.