Cisapride was effective in the short term for constipation in children

Nurko S, Garcia-Aranda JA, Worona LB, Zlochisty O. **Cisapride for the treatment of constipation in children: a double-blind study.** J Pediatr. 2000 Jan;136:35-40.

QUESTION

In children with constipation, what is the effectiveness of cisapride (a prokinetic agent)?

DESIGN

12-week randomized (allocation concealed*), blinded {clinicians, patients, outcome assessors, and statisticians}†,* placebo-controlled trial.

SETTING

Gastroenterology clinic of a hospital in Mexico City, Mexico.

PATIENTS

40 children who were 2 to 16 years of age, had a history of chronic constipation, and had < 3 bowel movements per week during a 2-week observation period before enrollment. Exclusion criteria were Hirschsprung disease, other congenital abnormalities of the gastrointestinal tract, or pelvic floor dyssynergia. Data were available for 36 patients (90%) (mean age 6 y, 67% boys).

INTERVENTION

Patients were disimpacted and allocated to cisapride (n = 17) or placebo (n = 19) for 12 weeks. The medications were given as an oral suspension, 0.2 mg/kg of body weight per dose, 3 times daily; the dose was increased to 0.3 mg/kg if no response was seen at 8 weeks. Patients were asked to sit on the toilet for 5 minutes/d. Patients were to take Senokot if no bowel movement occurred after 48 hours of treatment; a daily enema was added to the treatment regimen if Senokot was unsuccessful.

MAIN OUTCOME MEASURE

Clinical response (> 3 spontaneous bowel movements [SBMs]/wk with no fecal soiling and no use of other laxatives for ≥ 2 wk).

MAIN RESULTS

At 12 weeks, more patients who received cisapride met clinical response criteria than did patients who received placebo (P < 0.03) (Table). Patients who received cisapride had an increase from baseline in number of SBMs/wk (from 0.9 to 4.1, P < 0.05), fewer fecal-soiling episodes/d (from 1.8 to 0.08, P < 0.05), and fewer doses of laxatives/wk (from 10.3 to 0.8, P < 0.05). Placebo-group patients had a decrease in fecal-soiling episodes/d (from 1.3 to 0.4, P < 0.05) and doses of laxatives (from 11.5 to 2.1, P < 0.05) but no increase in the number of SBMs/wk. Mean time to response was 9.1 weeks in the cisapride group compared with 11 weeks in the placebo group (P < 0.04).

CONCLUSION

In children with constipation, cisapride increased the number of spontaneous bowel movements and reduced fecal soiling and the use of laxatives.

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*See Glossary.

†Information provided by author.

Cisapride vs placebo for children with constipation at 12 weeks‡

Outcome	Cisapride	Placebo	RBI (95% CI)	NNT (CI)
Clinical response	76%	42%	82% (4 to 244)	3 (2 to 60)

‡Clinical response = > 3 spontaneous bowel movements/wk, no fecal soiling, and no use of other laxatives for ≥ 2 weeks. Abbreviations defined in Glossary; RBI, NNT, and CI calculated from data in article.

COMMENTARY

Constipation is a common childhood problem, accounting for about 2% of referrals to general pediatric clinics and 25% of those referrals to gastroenterology clinics. Treatment may include dietary fiber, stool softeners, stimulant laxatives, suppositories, enemas, and psychosocial interventions. Initial therapy is directed toward emptying the large bowel and then maintaining regular bowel movements. The ultimate aim is withdrawal of drug treatment without subsequent relapse of constipation. Despite such interventions, some children are refractory to treatment. The prokinetic agent cisapride is known to have an effect on colonic motility and to reduce transit time in the bowel. However, evidence of benefit in constipation has been conflicting.

In the study by Nurko and colleagues, patients had a mean age of 6 years and a mean duration of constipation of about 4 years. Details of previous treatments were not provided, but all patients had been advised by a dietitian about optimal dietary fiber intake before enrollment in the study. Children with identifiable causes of constipation were excluded, as were those found to have outlet obstruction on anorectal manometry. Cisapride was effective, although patients with fecal soiling were less likely to respond. Patients with a higher number of baseline bowel movements were more likely to respond.

Cisapride has been implicated in causing cardiac arrhythmias and has important drug interactions (1) and its manufacturer has stopped marketing it in the United States (2) and the United Kingdom. Whether it will successfully resolve constipation in the long term has yet to be investigated. Clinicians will need to take these additional considerations into account when making decisions about managing children with chronic constipation.

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Reference

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2. Janssen Pharmaceutica Stops Marketing Cisapride in the US. FDA Talk Paper 00-14. 23 March 2000. Available from http://www.fda.gov/opacom/hpnews.html.

