Review: Some therapies for treating the irritable bowel syndrome may be effective for symptom improvement


**Question**
In patients with the irritable bowel syndrome (IBS), which available therapies are effective?

**Methods**


Study selection and assessment: Fully published studies in the English language were selected if they were placebo-controlled studies on the treatment of IBS. Studies were assessed for quality on a 5-point scale, including definition of IBS, double-blinding, sample size, study design (crossover or parallel), and intention-to-treat analysis. Meta-analyses were done, including all studies and including only high-quality studies (studies with quality score ≥ 3).

**Outcomes:** Improvement of IBS symptoms.

**Main results**

51 studies on bulking agents, antidiarrheal agents, antispasmodics, gastroprokinetics, antidepressants, alosetron, and tegaserod were included in a meta-analysis. 12 studies showed that antidepressants globally improved IBS symptoms (Table) but were associated with severe side effects. 5 trials showed a benefit of alosetron for relieving IBS symptoms in patients with diarrhea only (Table). 4 trials showed a benefit of tegaserod for relieving IBS symptoms in patients with constipation (Table), but the studies were mainly done in women. 5 of 13 studies of fiber showed a benefit in global IBS symptom improvement, but this effect was lost after excluding low-quality studies from the meta-analysis. Loperamide was an effective anti-diarrheal agent in patients with IBS but did not improve IBS-related pain. Some smooth-muscle relaxants were ineffective in relieving IBS symptoms (e.g., pinaverium bromide and trimetaphane), and the effects of some (e.g., cimetropium bromide, mebeverine, hyosine, and peppermint oil) were lost after excluding low-quality studies from the meta-analysis. 2 of 4 studies showed a benefit of octylonium bromide for global IBS symptom improvement. Overall, the role of smooth-muscle relaxants in the treatment of IBS was unclear. Prokinetics, such as domperidone and cisapride, was ineffective for IBS, and cisapride was associated with cardiac toxicity.

**Conclusions**

In patients with the irritable bowel syndrome (IBS), antidepressants, alosetron, and tegaserod may be effective for relieving IBS symptoms. More data from higher-quality studies are needed to establish the role of fiber and antispasmodics in the treatment of IBS.

Source of funding: Novartis Pharma AG.

For correspondence: Dr. D. Lesbros-Pantoflickova, Clinique Genolier, Genolier, Switzerland. E-mail druba.lesbros@wanadoo.fr.

In addition to accounting for 28% of problems seen in gastroenterology practice (1), IBS is the second leading cause of absenteeism from work or school (2). Lesbros-Pantoflickova and colleagues did an appropriate and rigorous analysis to show that evidence for the effectiveness of current therapies is scant. It is hoped that this will encourage high-quality studies in this field in the future.

Lesbros-Pantoflickova and colleagues note that IBS is a particularly complex topic to study via meta-analysis, at least in part because of its poorly understood pathophysiology and myriad treatment options. A further complexity involves the evolving diagnostic criteria for IBS. When judged by the original Manning criteria, IBS prevalence estimates can be >11 times higher than the more stringent Rome criteria (3). The authors include a measure in their 5-point quality scale for "adequate definition of IBS symptoms," but using only 1 specific set of criteria would likely have left them with too few studies to analyze. The authors apply focus on pharmacologic therapies for IBS because these types of trials are more likely to meet their criteria for inclusion. The patient–provider relationship, however, has also been shown to be an important predictor of treatment success (4). As analytic methods involving study of the patient–provider relationship evolve, this body of evidence may grow as well.

Brian A. Primack, MD, EdM
University of Pittsburgh School of Medicine
Pittsburgh, Pennsylvania, USA

**References**


**Effectiveness of various therapies vs placebo for symptom improvement in the irritable bowel syndrome**

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Number of trials (n)</th>
<th>Weighted event rates</th>
<th>RBI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antidepressants</td>
<td>12 (947)</td>
<td>70% vs 45%</td>
<td>54% (19 to 98)</td>
<td>4 (3 to 9)</td>
</tr>
<tr>
<td>Alosetron</td>
<td>5 (2602)</td>
<td>51% vs 34%</td>
<td>46% (26 to 71)</td>
<td>7 (4 to 15)</td>
</tr>
<tr>
<td>Tegaserod</td>
<td>4 (3564)</td>
<td>42% vs 33%</td>
<td>34% (12 to 60)</td>
<td>11 (7 to 22)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in Glossary; weighted event rates, RBI, NNT, and CI calculated from data in article using a random-effects model. 

©ACP May/June 2005 | Volume 142 • Number 3
ACP Journal Club