Antidepressants for irritable bowel syndrome

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Clinical question

Do antidepressant medications improve irritable bowel syndrome (IBS) symptoms?

Bottom line

Both tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs) might improve overall IBS symptoms. About 55% of patients treated with TCAs or SSRIs will benefit compared with about 35% with placebo. Only TCAs improved abdominal pain for about 60% of patients compared with about 30% with placebo. Studies of TCAs reported more side effects (drowsiness and dry mouth) than studies of SSRIs did.

Evidence

- The most recent systematic review included 18 RCTs of 1127 adult patients (42% to 100% women); the IBS subtype was usually not specified. Patient-reported outcomes are presented where available.[1]
  - -Twelve RCTs of TCAs (787 patients) studied amitriptyline, imipramine, desipramine, trimipramine, doxepin, and nortriptyline versus placebo over 6 to 12 weeks.
    - —Global IBS symptom improvement was 57% for TCAs versus 36% for placebo (number needed to treat [NNT] of 5).
    - —Abdominal pain improvement was 59% for TCAs versus 28% for placebo (NNT = 4).
    - —Adverse events (mostly drowsiness and dry mouth) were 36% for TCAs versus 20% for placebo (number needed to harm of 7).
  - -Seven RCTs of SSRIs (356 patients) studied fluoxetine, paroxetine, and citalopram over 6 to 12 weeks.
    - —Global IBS symptom improvement was 55% for SSRIs versus 33% for placebo (NNT = 5).
    - —Abdominal pain improvement was 45% for SSRIs versus 26% for placebo (not statistically different).
    - —Adverse events were 37% for SSRIs versus 27% for placebo (not statistically different).
  - -Evidence was limited by small sample sizes, short study duration, and likely publication bias. Adverse events were not reported in all studies.
- Older systematic reviews show similar results.[2,3]

Context

- Up to 5 million Canadian adults might have symptoms compatible with IBS.[4]
- Canadian guidelines recommend TCAs or SSRIs irrespective of whether patients have depression or anxiety.[5]
- Evidence for antidepressants appears stronger than for antispasmodics,[6] fibre,[4] low FODMAP diet,[7] or probiotics.[4]
- Newer treatments are limited by cost (linaclotide costs $560 for 90 days[8] and rifaximin $330 for 14 days[9]) and lack of long-term safety data.[10]

Implementation

The fecal calprotectin test might help differentiate inflammatory bowel disease from IBS[11] and appears cost effective at a 100 µg/g cutoff.[12]

The choice of antidepressant and dosing can be based on potential side effects. Consider TCAs for diarrhea-predominant IBS and give at night (owing to constipating and sedation effects). Consider SSRIs for constipation-predominant IBS and give during the day. Doses varied in the studies; starting low and increasing slowly based on response seems reasonable.

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Competing interests
None declared

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