But I am not Depressed: Antidepressants for Irritable Bowel Syndrome

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

Bottom Line: Both tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs) may improve overall IBS symptoms. About 55% of patients treated with TCAs or SSRIs will benefit compared to ~35% with placebo. Only TCAs improve abdominal pain for ~60% of patients compared to ~30% with placebo. TCA studies reported more side effects (drowsiness and dry mouth) than SSRIs.

Evidence:

- Focusing on the most recent systematic review, which included 18 randomized controlled trials (RCTs); 1127 adult patients; 42-100% female; IBS subtype usually not specified. Patient reported outcomes presented where available.¹
  - Tricyclic antidepressants (TCAs): 12 RCTs (787 patients) of amitriptyline, imipramine, desipramine, trimipramine, doxepin, and nortriptyline, versus placebo. Over 6-12 weeks:
    - Global IBS symptom improvement: 57% TCA versus 36% placebo; number needed to treat (NNT)=5.
    - Abdominal pain improvement: 59% TCA versus 28% placebo; NNT=4.
    - Adverse Events (mostly drowsiness, dry mouth): 36% TCA versus 20% placebo; number needed to harm (NNH)=7.
  - SSRIs: 7 RCTs (356 patients) of fluoxetine, paroxetine, and citalopram. Over 6-12 weeks:
    - Global IBS symptom improvement: 55% SSRI versus 33% placebo; NNT=5.
    - Abdominal pain improvement: 45% SSRI versus 26% placebo; not statistically different.
    - Adverse events: 37% SSRI versus 27% placebo; not statistically different.
- Evidence limited by:
  - Small sample sizes, short study duration, and likely publication bias.
  - Adverse events not reported in all studies.

- Older systematic reviews show similar results.²,³
context:
- Canadian guidelines recommend offering TCAs or SSRIs, irrespective of whether patients have depression or anxiety.²
- Up to 5 million adult Canadians may have symptoms compatible with IBS.²
- Indirectly, evidence for antidepressants in IBS appears stronger than antispasmodics, fiber, FODMAP diet, or probiotics.²
- TCAs may work better for IBS-diarrhea subtype, while SSRIs may work better for IBS-constipation subtype, but this has not been formally studied.²
- Patients suspected of having IBS should have celiac disease ruled-out.

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disclosure:
Authors do not have any conflicts of interest to declare.

references: