

POEMs

Patient-Oriented Evidence That Matters

Gabapentin and Pregabalin Not Effective for Low Back Pain with or Without Radiculopathy

Clinical Question

Are anticonvulsants an effective treatment for low back pain?

Bottom Line

The use of anticonvulsants like gabapentin (Neurontin) for painful conditions has increased greatly in recent years. This review finds good evidence that these drugs are not an effective treatment for low back pain with or without radiculopathy, and are associated with an increased risk of adverse events. (Level of Evidence = 1a)

Synopsis

Particularly in this era of heightened awareness of the potential harms of opioids, anticonvulsants are often prescribed for the treatment of painful conditions. Although there is evidence of their effectiveness, primarily for peripheral and diabetic neuropathy, anticonvulsants are increasingly prescribed for other conditions, including low back pain. This systematic review included a comprehensive search of the literature, and the authors identified nine randomized trials (three of which were crossover studies) that compared topiramate (Topamax), pregabalin (Lyrica), or gabapentin with placebo in patients with low back pain with or without radiculopathy. They excluded studies

of pregnant women; preoperative patients; and patients with mixed conditions, such as neck and back pain. The trials were assessed for risk of bias, and only one was at high risk. The studies used a range of pain scales, so the standardized mean difference in pain scores between treatment and placebo groups was the primary outcome. The nine studies reported a total of 14 comparisons, with only two showing a statistically significant benefit. One was a small study of high-dose gabapentin (3,600 mg per day) in 43 patients with lumbar radicular pain, and the other was a study of topiramate (300 mg per day) in 96 patients with low back pain. The other studies of topiramate, pregabalin, or gabapentin found no benefit. Where results could be pooled, there was no difference between groups. There was no difference in serious adverse events: four in the pregabalin group and six in the placebo group (although these were reported in only two studies with a total of 423 patients). Any adverse events were significantly more common with active treatment (relative risk = 1.4; 95% CI, 1.2 to 1.7).

Study design: Meta-analysis (randomized controlled trials)

Funding source: Self-funded or unfunded

Setting: Various (meta-analysis)

Reference: *Enke O, New HA, New CH, et al. Anticonvulsants in the treatment of low back pain and lumbar radicular pain: a systematic review and meta-analysis. CMAJ. 2018;190(26):E786-E793.*

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Increased Water Intake Decreases UTI Recurrence in Women

Clinical Question

Does increased water intake decrease urinary tract infection (UTI) recurrence in women?

Bottom Line

Drinking an additional 1.5 liters per day of water halved the recurrence of UTI in women with a history of at least three episodes per year. (Level of Evidence = 1b-)

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This series is coordinated by Sumi Sexton, MD, Editor-in-Chief.

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Synopsis

The researchers enrolled 140 premenopausal women with three or more documented episodes of lower UTI, but not pyelonephritis, in the previous year. In this nonblinded study, the women were randomized, using concealed allocation, to continue their normal levels of water intake or to drink an additional 1.5 liters (three bottles) of Evian-branded water daily for 12 months, which participants on average were able to maintain. Women in the extra water group had approximately one-half as many infections as the usual intake group, with an average of 1.7 documented UTIs over the year compared with an average of 3.2 infections in the usual intake group ($P < .001$). The extra water resulted in an average of two additional trips to the bathroom each day compared with the usual intake group.

Study design: Randomized controlled trial (nonblinded)

Funding source: Industry

Allocation: Concealed

Setting: Outpatient (any)

Reference: Hooton TM, Vecchio M, Iroz A, et al. Effect of increased daily water intake in premenopausal women with recurrent urinary tract infections: a randomized clinical trial. *JAMA Intern Med.* 2018;178(11):1509-1515.

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Lorcaserin Is Safe, But Only Modestly Effective for Weight Loss

Clinical Question

Is lorcaserin (Belviq) a safe and effective aid for weight loss in obese patients?

Bottom Line

Lorcaserin, 10 mg twice daily, helps some patients lose 10% or more of their body weight (number needed to treat [NNT] = 10) and appears to be safe in terms of cardiovascular events. (Level of Evidence = 1b)

Synopsis

Although lorcaserin has been approved for treatment of obesity by the U.S. Food and Drug Administration, they required a postmarketing randomized trial to assure cardiovascular safety. In this study, patients (N = 12,000) with a body

mass index (BMI) of 27 kg per m² or higher who had heart disease or multiple cardiovascular risk factors were randomized to receive lorcaserin, 10 mg twice daily, or matching placebo. All patients had access to a study nurse by phone. The groups were balanced at the start of the study, with a mean age of 64 years and a mean BMI of 35 kg per m²; 90% were hypertensive and 57% had diabetes mellitus. Approximately one-third of patients in each group stopped taking the study drug or placebo during the median 3.3-year follow-up period. Lorcaserin had a modest effect on weight. Patients who took the drug lost a mean of 2.8 kg (6.2 lb) more than those who took the placebo. More patients in the lorcaserin group lost at least 10% of their body weight (14.6% vs. 4.8%; $P < .001$; NNT = 10). There was no difference in the likelihood of cardiovascular events between the two groups (6.1% for lorcaserin vs. 6.2% for placebo). There was also no difference in serious adverse events between groups. Patients randomized to receive lorcaserin were more likely to experience an adverse event that led to the discontinuation of the drug (7.2% vs. 3.7%; $P < .05$; number needed to treat to harm = 29), mostly dizziness, fatigue, and headache. The overall rates of these events were low, with absolute risk increases of only 0.4% to 1.1%.

Study design: Randomized controlled trial (double-blinded)

Funding source: Industry

Allocation: Uncertain

Setting: Outpatient (any)

Reference: Bohula EA, Wiviott SD, McGuire DK, et al.; CAMELLIA-TIMI 61 Steering Committee and Investigators. Cardiovascular safety of lorcaserin in overweight or obese patients. *N Engl J Med.* 2018;379(12):1107-1117.

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Editor's Note: On February 13, 2020, the U.S. Food and Drug Administration (FDA) requested that the manufacturer of Belviq (lorcaserin) voluntarily withdraw this drug from the market because a safety clinical trial showed an increased occurrence of cancer that outweighed any potential weight loss benefits. See the FDA Drug Safety Communication (<https://www.fda.gov/drugs/drug-safety-and-availability/fda-requests-withdrawal-weight-loss-drug-belviq-belviq-xr-lorcaserin-market>).

Aspirin Plus a High-Dose PPI Prevents Death and Progression in Patients with Barrett Esophagus

Clinical Question

Does aspirin plus a proton pump inhibitor (PPI) prevent death, malignant transformation, or histologic progression in patients with Barrett esophagus?

Bottom Line

In this study, patients with Barrett esophagus were less likely to die or develop esophageal cancer or high-grade dysplasia if they took high-dose esomeprazole (Nexium) alone or in combination with aspirin. (Level of Evidence = 1b)

Synopsis

These authors recruited 2,557 patients with at least 1 cm of Barrett esophagus to participate in a study with a randomized factorial design that included low- or high-dose esomeprazole (20 mg daily or 40 mg twice daily, respectively) with or without aspirin (300 mg in the United Kingdom or 325 mg in Canada). The researchers followed the patients for up to 10 years in person or by telephone. In the even years during follow-up, endoscopy was also performed. Although the patients knew what treatment they received, the pathologists who reviewed the biopsy material were unaware of the patients' treatment allocation. The authors used a composite outcome of all-cause mortality, esophageal adenocarcinoma, or high-grade dysplasia. After a median of 8.9 years, 313 total patients experienced the

composite outcome. Patients who took high-dose esomeprazole had fewer events (11%) than those who took the low dose (14%; number needed to treat [NNT] = 36; 95% CI, 19 to 406). The combination of aspirin plus esomeprazole was more effective: 9% of patients taking aspirin plus high-dose esomeprazole compared with 14% of those taking aspirin plus low-dose esomeprazole (NNT = 20; CI, 12 to 67) experienced the primary outcome. Aspirin alone was ineffective in preventing the primary outcome. A total of 718 patients experienced at least one adverse event (28%), 61 of whom experienced a serious event (2% of the total pool, 8% of adverse events), but the differences among the treatment groups were similar.

Study design: Randomized controlled trial (single-blinded)

Funding source: Industry and government

Allocation: Concealed

Setting: Outpatient (specialty)

Reference: *Jankowski JA, de Caestecker J, Love SB, et al. Esomeprazole and aspirin in Barrett's oesophagus (AspECT): a randomised factorial trial. Lancet. 2018;392(10145):400-408.*

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