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This series is coordinated by Corey D. Fogleman, MD, Assistant Medical Editor.

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Extended-Release Bupropion for Preventing Seasonal Affective Disorder in Adults

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Clinical Question

Is extended-release bupropion (Wellbutrin XL) more effective than placebo for preventing symptoms of seasonal affective disorder (SAD) in adults?

Evidence-Based Answer

When started in the fall, extended-release bupropion, 300 mg once daily, is effective in preventing recurrent symptoms in high-risk adults with a history of SAD (number needed to treat [NNT] = 5), as well as those at lower risk (NNT = 8). Headaches, nausea, and insomnia may limit adherence to treatment.[1] (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

Practice Pointers

SAD is a recurrent depressive disorder that occurs only during a particular season, typically the winter months.[2] SAD is more common at northern latitudes; the prevalence is estimated at 9% in the northern United States,[3] and two-thirds of patients experience the symptoms every year.[4] Preventive measures are of particular interest for this group of patients.

The authors of this Cochrane review sought studies that compared any second-generation antidepressant with placebo, other medications, or other therapies for the prevention of episodes of SAD.[1] They found only three randomized trials, each comparing extended-release bupropion with placebo. The studies enrolled a total of 1,100 patients with a history of SAD at 151 sites in Canada and the northern United States. Patients were excluded if they had medical problems or any other psychiatric illnesses, including major depression. Treatment began between the months of September and November with extended-release bupropion, 150 mg daily, titrated to 300 mg daily for those who were able to tolerate it. In all three studies, the dosage was weaned to 150 mg per day in the first week of spring and then subsequently stopped.

Participants with confirmed SAD were asymptomatic at the start of all three studies. The primary outcome in two studies was the time to onset of depressive symptoms. In the third study, the primary end point was the difference in depression-free participants between the treatment and placebo groups at the end of the study. Depressive symptoms were measured using the Structured Interview Guide for the Hamilton Depression Rating Scale, Seasonal Affective Disorders (SIGH-SAD). The studies did not address the severity of SAD symptoms, quality of life, or quality of interpersonal/social functioning. Although this review did not specify how risk of recurrence was calculated, investigators considered the number of previous episodes of SAD and a patient-reported history of pattern and symptom severity using the Seasonal Pattern Assessment Questionnaire. Extended-release bupropion prevented episodes of SAD in some patients; its effectiveness increased with higher risk of recurrence. Patients with a 50% risk of episode recurrence were more likely to benefit from therapy (NNT = 5; 95% confidence interval [CI], 4 to 7) than patients with a 30% risk of recurrence (NNT = 8; 95% CI, 6 to 12).

Adverse effects were more common in participants taking extended-release bupropion and included headache (number needed to harm [NNH] = 15; 95% CI, 8 to 75), insomnia (NNH = 16; 95% CI, 9 to 56), and nausea (NNH = 20; 95% CI, 11 to 72). However, the overall discontinuation rate from adverse effects was not significantly different between treatment and placebo groups. None of the included studies compared extended-release bupropion with

nonpharmacologic therapies, including light therapy or psychotherapy. The studies also did not compare extended-release bupropion with other antidepressants. The three studies were sponsored by the pharmaceutical company that manufactures extended-release bupropion.

The United States does not currently have formal guidelines for the treatment or prevention of SAD. The Canadian Consensus Guidelines for the Treatment of Seasonal Affective Disorder discuss pharmacologic and nonpharmacologic treatment options.[5] However, well-designed trials directly comparing pharmacologic with nonpharmacologic options are lacking. When using extended-release bupropion for the prevention of SAD, the possibility of adverse effects should be considered in a shared decision-making process between physician and patient.

The practice recommendations in this activity are available at http://www.cochrane.org.

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Interventions to Facilitate Shared Decision Making to Address Antibiotic Use for Acute Respiratory Tract Infections in Primary Care

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Clinical Question

Do interventions that aim to facilitate shared decision making reduce the prescribing of antibiotics for acute respiratory tract infections in primary care?

Evidence-Based Answer

Interventions to facilitate shared decision making reduce the prescribing of antibiotics for acute respiratory tract infections in the short term (within six weeks of the consultation) without increasing return visits or decreasing patient satisfaction (number needed to treat [NNT] = 6).[1] (Strength of Recommendation: A, based on consistent, good-quality, patient-oriented evidence.)

Practice Pointers

Multiple systematic reviews have shown that antibiotics prescribed for acute respiratory tract infections have minimal benefit because these are predominantly viral infections.[2,3] According to the Centers for Disease Control and Prevention, more than one-half of antibiotic prescriptions in outpatient settings are inappropriately written for viral infections, contributing to resistant bacteria causing more than 2 million illnesses in the United States each year.[4,5] Shared decision making is a process by which the physician and patient share information including risks, benefits, the best available evidence, and personal values, ultimately reaching agreement on a plan of action.[6] This Cochrane review evaluated whether interventions educating physicians on shared decision making for acute respiratory tract infections reduce antibiotic prescribing for these infections in primary care.[1] For the purposes of this review, respiratory tract infections included acute cough, rhinosinusitis, pharyngitis, tonsillitis, laryngitis, otitis media, bronchitis, exacerbated chronic obstructive pulmonary disease, and influenza.

This Cochrane review included approximately 492,000 patients in nine randomized trials and one follow-up of an original trial.[1] Studies varied by the specific type of intervention and number of study arms. All interventions involved educating physicians about shared decision making and how to discuss differences between bacterial and viral infections. All included studies explicitly addressed shared decision making and had interventions that involved training or tools such as decision aids to assist physicians.

Pooled results from eight studies showed that interventions to facilitate shared decision making significantly decreased antibiotic prescriptions in the short term (less than six weeks) with an NNT of 6 (95% confidence interval, 4.8 to 6.7). Thus, for every six encounters for an acute respiratory tract infection with a physician educated on shared decision making, one fewer patient received a prescription for antibiotics. There was no significant increase in reconsultations for the same illness, hospital admissions, incidence of pneumonia, or mortality from respiratory illness, and no significant decrease in patient satisfaction. However, pooled results from three long-term studies showed that interventions did not lead to a sustained decrease in antibiotic prescriptions after 12 months.

Studies did not report on the incidence of infection caused by antibiotic-resistant organisms or the incidence of acute otitis media complications. One

limitation of this study is that the primary outcome is antibiotic prescribing. Because some clinicians may choose to write "wait-and-see" antibiotic prescriptions, data on prescriptions filled or actually taken would be more accurate. Additionally, all trials were conducted in Europe and Canada.

The Institute for Clinical Systems Improvement recommends using patient education measures as the primary treatment for acute respiratory tract infections and reserving antibiotics for bacterial infections.[7] A recent randomized controlled trial implemented clinician-focused interventions to require peer-justification and peer-comparison of antibiotic prescriptions; it showed a significantly lower rate of inappropriate antibiotic prescribing in the intervention group.[8] Additionally, the American Academy of Family Physicians' Choosing Wisely list recommends against prescribing antibiotics for otitis media in children two to 12 years of age when observation is a reasonable option and against prescribing antibiotics for acute sinusitis.[9] Health system leaders should consider interventions to facilitate shared decision making as one effective option to assist primary care physicians in reducing inappropriate antibiotic use for acute respiratory tract infections.

The practice recommendations in this activity are available at http://www.cochrane.org.

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