FPIN's Clinical Inquiries

Appetite Suppressants as Adjuncts for Weight Loss

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Clinical Inquiries provides answers to questions submitted by practicing family physicians to the Family Physicians Inquiries Network (FPIN). Members of the network select questions based on their relevance to family medicine. Answers are drawn from an approved set of evidence-based resources and undergo peer review. The strength of recommendations and the level of evidence for individual studies are rated using criteria developed by the Evidence-Based Medicine Working Group (http://www.cebm.net/?o=1025).

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Clinical Question

Are appetite suppressants appropriate as adjunct therapy for weight loss?

Evidence-Based Answer

Phentermine and diethylpropion are appetite suppressants approved for use in the United States as adjuncts in the treatment of obesity. These agents demonstrate a modest weight loss benefit when combined with dietary modifications and exercise. (Strength of Recommendation: B, based on a randomized trial and a meta-analysis.) No current evidence is available on the long-term risks and benefits of these medications, or the most appropriate time to initiate appetite suppressant therapy as part of a comprehensive weight management program.

Evidence Summary

Studies have estimated that 25 percent of men and 45 percent of women are trying to lose weight at any given time.[1] Prescription weight loss medications may be appropriate for use in patients without comorbidities (e.g., hypertension, diabetes mellitus, hyperlipidemia) who have a body mass index of 30 kg per m^2 or greater, and in patients with comorbidities who have a body mass index of 27 kg per m^2 or greater.[2] The effectiveness of appetite suppressants has been studied, but the optimal time for initiating therapy has not been clearly defined.

Phentermine and diethylpropion are the only appetite suppressants approved by the U.S. Food and Drug Administration; sibutramine was voluntarily withdrawn by the manufacturer in 2010 because of data showing an increased risk of cardiovascular events.[3] Phentermine and diethylpropion are contraindicated in patients with cardiovascular disease, moderate to severe hypertension, glaucoma, hyperthyroidism, a history of drug abuse, or hypersensitivity to sympathomimetic amines, and in those who have used a monoamine oxidase inhibitor within the previous 14 days.

Few studies have evaluated the effectiveness of phentermine, a sympathomimetic agent approved for 12 weeks of use as an adjunct to diet and lifestyle modification. In a randomized trial, diethylpropion, also a sympathomimetic agent, was compared with phentermine over 12 weeks in patients restricted to 1,500 calories per day (n = 99).[4] To participate in the trial, patients had to be 20 percent above an undefined desirable weight. Patients were excluded if they had taken any anorectic agent within one month of the start of the study. After 12 weeks of treatment, patients taking 30 mg of phentermine per day had a mean weight loss of 1.96 kg more than patients taking 75 mg of diethylpropion per day ($P < .01$). Patients taking diethylpropion trended toward a lower baseline weight. Patients taking diethylpropion experienced more dizziness/giddiness (number needed to harm [NNH] = 25) and dry mouth (NNH = 17) compared with patients taking phentermine; however, those taking phentermine had more drowsiness (NNH = 25) and constipation (NNH = 25).

A meta-analysis found a modest degree of weight loss in patients taking sibutramine, phentermine, or diethylpropion.[5] A mean difference in weight loss of 4.45 kg (95% confidence interval, 3.62 to 5.29) was found at 12 months in patients taking sibutramine. In patients taking phentermine or diethylpropion, there was a reported pooled mean

difference in weight loss at six months of 3.6 kg (95% confidence interval, 0.6 to 6.0) and 3.0 kg (95% confidence interval, –1.6 to 11.5), respectively. The study did not provide information about when appetite suppressant therapy should be used for weight loss.

Recommendations from Others

Clinical guidelines from the Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults support using appetite suppressants approved by the U.S. Food and Drug Administration in patients with a body mass index of 30 kg per m^2 or greater if no obesity-related risk factors are present. In patients with comorbidities, appetite suppressants are appropriate in those with a body mass index of 27 kg per m^2 or greater. The guidelines specify that pharmacotherapy should be used only in conjunction with a weight loss plan that includes dietary modifications and physical activity. The guidelines also emphasize the ongoing need for evaluation of the safety and effectiveness of these drugs.[6]

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