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FPIN's Clinical Inquiries

Treatment of Bulimia Nervosa

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Clinical Question

What are the most effective treatments for bulimia nervosa?

Evidence-Based Answer

Cognitive behavior therapy (CBT) is the most effective treatment for bulimia nervosa based on multiple consistent randomized-controlled trials (RCTs). (Strength of Recommendation [SOR]: A). Guided self-help has not been shown to be beneficial in reducing binge and purge episodes, but it may relieve some related symptoms, especially if CBT is not available. (SOR: B, based on RCTs and case-control studies with heterogeneous results). Pharmacotherapy with antidepressants has been shown to be effective in treating bulimia nervosa, with an additive effect when combined with psychotherapy. (SOR: A, based on multiple consistent RCTs). Overall remission rates remain low, and long-term follow-up data are limited.

Evidence Summary

Bulimia nervosa is a common eating disorder characterized by uncontrolled binge eating and compensatory purging behaviors, including self-induced vomiting; misuse of laxatives, diuretics, or enemas; or other nonpurging behaviors (e.g., fasting, excessive exercise).

A manual-based form of CBT in which the patient follows a specific set of tasks with a therapist has been developed to treat bulimia nervosa. A Cochrane review that included 40 RCTs of patients with bulimia nervosa with a mean of 60 patients at randomization (range of 14 to 220 patients) evaluated the effectiveness of CBT compared with other psychotherapies or no treatment.¹ The median duration of therapy was 16 weeks (range of six to 52 weeks), and 75 percent of the RCTs had a median follow-up of 7.5 months. Compared with no treatment, CBT significantly improved mean symptom scores. CBT was also statistically significantly better than other forms of psychotherapy in terms of binge eating abstinence rates (relative risk [RR] = 0.83; 95% confidence interval [CI], 0.71 to 0.97). There was homogeneity among the study results, but an analysis of the funnel plot did raise the possibility of publication bias (e.g., there may be unpublished studies that did not find a benefit with CBT).¹

Guided self-help treatments use written materials based on CBT in conjunction with minimal guidance

from a health care professional or layperson. Another Cochrane review evaluated evidence from 12 RCTs and three case-control studies to compare guided self-help with other psychological treatments or no treatment in patients with bulimia nervosa, binge eating disorder, or an eating disorder not otherwise specified.² Thirteen of the studies had fewer than 50 patients and two studies had 50 to 100 patients. Twelve of the studies reported randomized allocation. Although guided self-help did not differ significantly from no treatment in abstinence from bingeing or purging, there was some decrease in other eating disorder symptoms (standard mean difference = 0.71; 95% CI, -1.01 to -0.41). However, the absence of negative studies again raised the possibility of publication bias.

In contrast, guided self-help did not differ significantly in improving bingeing or purging or eating disorder symptoms compared with other psychological treatments.² Studies included in this review had considerable heterogeneity, small sample size, and were underpowered. There were no subgroup analyses done for patients with bulimia nervosa versus binge eating disorder or an eating disorder not otherwise specified.

A Cochrane review of 17 RCTs involving 827 patients reported three separate meta-analyses that evaluated the comparative effectiveness of antidepressants and psychotherapy for bulimia nervosa. The outcome for effectiveness was full remission of bulimic symptoms (binge and purge episodes). Although psychotherapy alone was more effective than antidepressants alone, combination therapy was superior to either option alone (*Table 1*).³

Table 1. Effectiveness and Drop-out Rates for Antidepressants, Psychotherapy, and Combination Therapy

| <i>Treatment group</i> | <i>Patients who continue to binge and purge after treatment (%)</i> | <i>Patients who dropped out of study (%)</i> |
|--|---|--|
| Antidepressants | 77 to 80 | 40 to 41 |
| Psychotherapy | 61 to 66 | 16 to 18 |
| Combined antidepressants and psychotherapy | 51 to 58 | 30 to 34 |

Information from reference 3.

A Cochrane review evaluated 19 RCTs (16 of which were double-blinded) that compared antidepressants with placebo in 1,436 young adults who satisfied the *Diagnostic and Statistical Manual of Mental Disorders*, 3rd or 4th ed., criteria for bulimia nervosa and who were without major comorbidities.⁴ The review included six trials of tricyclic antidepressants, five of selective serotonin reuptake inhibitors (SSRIs), five of monoamine oxidase (MAO) inhibitors, and three of other antidepressants. The pooled RR for remission of binge episodes was 0.87 (95% CI, 0.81 to 0.93; $P < .001$) favoring antidepressants over placebo, with a number needed to treat (NNT) of 9. The pooled RR for clinical improvement, defined as a 50 percent reduction in binge episodes, was 0.63 (95% CI, 0.55 to 0.74) favoring antidepressants over placebo, with an NNT of 4. There was no statistically significant difference in effectiveness between classes of antidepressants, and there was no evidence of heterogeneity in terms of nonremission.⁴

This Cochrane review also reported on adverse effects. In six trials with a total of 277 patients, those treated with tricyclic antidepressants were more likely to drop out for any reason compared with those treated with placebo (RR = 1.93; 95% CI, 1.15 to 3.25; number needed to harm [NNH] = 7). The opposite was found with fluoxetine (Prozac), the only SSRI studied. Patients treated with placebo were more likely

to drop out compared with patients treated with fluoxetine (RR =0.82; 95% CI, 0.68 to 0.99; NNH = 35). There was no heterogeneity among the three studies (706 patients) that evaluated fluoxetine.⁴

Recommendations from Others

A practice guideline from the American Psychiatric Association says the following: (1) CBT is effective as a short-term intervention when specifically directed at eating disorder symptoms and underlying maladaptive cognitions; (2) CBT is useful in reducing symptoms of binge eating and in improving attitudes about shape, weight, and restrictive dieting; (3) the combination of psychotherapy and antidepressants may be superior to either modality alone; (4) SSRIs have the most evidence for effectiveness and the fewest difficulties with adverse effects; (5) fluoxetine is the only medication currently approved by the U.S. Food and Drug Administration for bulimia nervosa (required dosages may be higher than those used for depression [60 to 80 mg per day]); (6) tricyclic antidepressants, MAO inhibitors, and bupropion (Wellbutrin) should be avoided because of toxicity and lack of effectiveness.⁵

Clinical Commentary

Bulimia nervosa is a devastating disease that causes significant morbidity, especially in women. It is difficult to treat. Despite treatment with CBT and high-dose SSRIs, more than 50 percent of persons with bulimia nervosa continue to have symptoms of bingeing and purging.³

Most eating disorders are rooted in distorted body images and unrealistic cultural icons. Family physicians are well suited to educate young persons about healthy eating and body image. If an eating disorder is suspected, family physicians should promptly evaluate the patient and ensure appropriate treatment for this difficult problem.

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