

Antidepressants in short-term treatment of binge eating disorder: systematic review and meta-analysis

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CRD summary

The authors concluded that there was insufficient evidence to recommend antidepressants as the sole first-line treatment for patients with binge-eating disorders. This was generally a well-conducted review and the authors' conclusions are likely to be reliable.

Authors' objectives

To evaluate the effects of antidepressants in patients with binge eating disorders (BED).

Searching

MEDLINE, EMBASE, PsycINFO, LILACS, Cochrane Controlled Trials Register and Cochrane Depression, Anxiety and Neurosis Group Database of Trials were searched from 1994 to December 2005. The search strategy was reported. Reference lists of selected papers were screened. The International Journal of Eating Disorders was handsearched from 1994 to December 2005.

Study selection

Randomised controlled trials (RCTs) that compared the effects of antidepressants with placebo in patients with binge eating disorders diagnosed using DSM-IV criteria (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition) were eligible for inclusion. One study with a treatment period of six days was excluded since the treatment period was too short. Studies had to report data for binge eating disorder patients separately. Review outcomes were total remission of binge eating disorder symptoms (defined as 100% reduction in binge-eating episodes by the end of the study), change in binge eating disorder symptoms, change in body weight and discontinuation for any reason. The review also assessed changes in Hamilton Scale for Depression (HAM-D) scores.

All but one of the included studies evaluated a selective inhibitor of serotonin reuptake (fluoxetine 60mg or 71.3mg, fluvoxamine 239mg or 260mg, sertraline 50mg to 200mg and citalopram 57.9mg); one study evaluated the tricyclic antidepressant imipramine (75mg). Some studies included patients with depression at baseline. Most patients (88%) were female. The duration of treatments ranged from six to 16 weeks; most treatments lasted nine weeks or less.

One reviewer screened potentially relevant studies from abstracts and two reviewers independently selected studies for inclusion.

Assessment of study quality

Each study was categorised according to the adequacy of allocation concealment from A (adequate) to C (inadequate). The authors did not state how the validity assessment was performed.

Data extraction

Two reviewers independently extracted data onto a spreadsheet and resolved disagreements through consensus. For each study, relative risks with 95% confidence intervals (CI) were calculated for dichotomous outcomes. For continuous outcomes, means and standard deviations were extracted and differences in mean treatment effects were calculated. If required, study authors were contacted for clarification of data.

Methods of synthesis

Pooled relative risks and standardised mean differences were calculated with 95% CIs (the DerSimonian and Laird random-effects model was used to calculate relative risks). Heterogeneity was assessed using χ^2 and I^2 statistics.

Results of the review

Seven RCTs were included ($n=322$). The authors stated that the overall study quality was good. Six studies were considered to have unclear or doubtful allocation concealment (B) and one study showed adequate concealment (A).

Antidepressants were associated with a statistically significant increase in remission rates compared to placebo: 40.50% versus 22.22% (relative risk 0.77; 95% CI: 0.65 to 0.92). No significant heterogeneity was found ($\chi^2 p=0.29$, I^2 18%). The study with the longest duration (16 weeks) reported a nonsignificant increase in remission rates in the placebo group compared to the antidepressant group (relative risk 1.05, 95% CI: 0.78 to 1.42).

There were no statistically significant differences between antidepressants and placebo for the frequency of binge-eating episodes, discontinuation for any reason or weight change.

Antidepressants were associated with a statistically significant reduction in HAM-D depression scores compared to placebo (standardised mean difference -0.38, 95% CI: -0.74 to -0.03; five studies). No significant heterogeneity was found ($\chi^2 p=0.29$, I^2 18%).

Authors' conclusions

There was insufficient evidence to recommend antidepressants as the sole first-line treatment for patients with binge eating disorders.

CRD commentary

The review question was clearly stated and inclusion criteria defined for study design, participants and intervention; review outcomes were clearly stated. Several relevant sources were searched, but no specific attempts to minimise publication and language biases were reported. Appropriate methods were

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used to minimise reviewer error and bias during study selection and data extraction; it was unclear whether similar methods were used for the validity assessment. The assessment of study quality, being limited to allocation concealment, could be considered inadequate. It was not clear if patients received other treatments in addition to antidepressants. Appropriate methods were used for the meta-analyses. Heterogeneity was assessed. This was generally a well-conducted review and the authors' conclusions are likely to be reliable.

Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors stated that there was a need for larger, longer-term studies (at least 16 weeks) to evaluate the effects of antidepressants on binge-eating disorders. Future studies should be multicentre, use more detailed and uniform binge definition criteria, assess outcomes using standardised tools and assess additional clinical and metabolic measures.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.