Pharmacological and psychological treatments for depressed older patients: a meta-analysis and overview of recent findings


Authors' objectives
To evaluate data comparing rates of treatment response, as well as tolerability of specific pharmacological and psychological treatments of depression, in the older person.

Searching
MEDLINE was searched from January 1974 to February 1998 for articles on depression and related terms, published in English, German or French. Reference lists of relevant articles were examined for additional studies.

Study selection
Study designs of evaluations included in the review
Double-blind, randomised controlled trials (RCTs) with placebo (n=13) or comparison drugs (n=28). The minimum number of participants was 15.

Specific interventions included in the review
Antidepressant drug treatments: tricyclic antidepressants (amitriptyline, imipramine, doxepin, nortriptyline, dothiepin, clomipramine and desipramine); selective serotonin-reuptake inhibitors (paroxetine, fluoxetine, sertraline, fluvoxamine and citalopram); and others (including trazodone, mianserin, maprotiline, buproprion, nomifensine and monoamine oxidase inhibitors).

Non-drug treatments: cognitive-behavioural therapy; behavioural therapy; and psychodynamic therapy. Studies of drug therapy with concurrent psychotherapy were excluded.

Participants included in the review
Elderly patients (minimum age 55 years) with a diagnosis of major depressive disorder or unipolar depression using DSM diagnostic criteria (see Other Publications of Related Interest).

Outcomes assessed in the review
The main outcome of interest was treatment response, measured using the Hamilton Rating Scale for Depression (HAM-D). The total number of drop-outs (for any reason) and side-effects was also recorded for each study.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
The authors formulated a list of minimum inclusion criteria that the study had to meet in order to be included. These were: number of participants greater than or equal to 15; description of dose regimen in treatment and control groups; specification of drop-outs in each group; documentation of side-effects by systematic questionnaire or by self-report; and statistical evaluation. The authors do not state how the papers were assessed for validity, or how many of the reviewers performed the validity assessment.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction. Information was extracted on age, minimum age of entry into the study, study duration, sex, treatment type, type of therapy, sample size, number of drop-outs, and average HAM-D score.
Methods of synthesis

How were the studies combined?

For the primary analysis, the results from a particular treatment arm were weighted by the sample size in that treatment arm. Weighted mean and standard deviation of estimates were calculated from the separate studies for baseline HAM-D score, decline in HAM-D score, final HAM-D score, percentage drop-out from the study, and percentage drop-out due to side-effects. Adjusted differences in outcomes across the various types of treatments were estimated using regression analyses that controlled for minimum age at entry into the study, duration of the study, and percentage of women in the sample.

How were differences between studies investigated?

Sensitivity analyses addressed the possibility of aberrant results in small studies through both weighted and unweighted analyses on the subset of 28 studies that had at least 15 patients.

Results of the review

A total of 45 RCTs were included in the review: 41 studies (n=4,311) were on antidepressant drug treatments and 4 (n=220) were on non-drug studies.

Pharmacological treatments: the mean percentage decline in HAM-D scores was significantly greater for drug treatments than for placebo (48.0 versus 31.3%, respectively, in analysis weighted by sample size; F=44.00, d.f.=1,49, p=0.0001; 50.6 versus 21.4% unweighted; F=83.14, d.f.=1,52, p=0.0001). Adjusting for minimum age at entry, study duration, and percentage women did not change the results.

No single drug or group of drugs was superior in terms of efficacy, and no statistically-significant differences in tolerability emerged between tricyclic antidepressants and selective serotonin-reuptake inhibitors, whether measured by total drop-outs or by drop-outs due to side-effects.

Psychological treatments: data on the outcomes of psychological treatments are very limited. Existing data indicate that cognitive-behavioural, behavioural and psychodynamic therapies are significantly better than placebo.

Authors' conclusions

The literature does not provide the robust data needed to underpin clinical recommendations in favour of any one drug group or psychological treatment, whether based on treatment response or on tolerability. In light of the heterogeneity in measuring instruments and populations, and considering that study populations have not been representative of the general elderly population, arriving at firm conclusions is difficult.

CRD commentary

Overall, the methodological quality of the review was sufficient. The inclusion criteria were good though the authors should have searched additional databases. There was no formal assessment of validity. The authors claim to have analysed 28 studies separately which met additional inclusion criteria, although these analyses are not clearly presented in the results. The tables of study details were satisfactory and generally complete.

The authors report sound conclusions based on the nature of the evidence.

Implications of the review for practice and research

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

Research: The authors state that new strategies need to be explored in order to enhance both the response to and the tolerability of existing treatments. Treatment-outcome studies, rigorously designed and carefully executed to meet the requirements of evidence-based medicine, are necessary for both psychological and pharmacological approaches, and for combinations of the two. A minimal set of standardised instruments to evaluate treatment effects and side-effects,
and to record drop-outs, should be specified for all outcome evaluations of antidepressant treatment in the elderly.

**Bibliographic details**

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**Other publications of related interest**

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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.