Review: non-pharmacological interventions reduce antipsychotic induced weight gain

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QUESTION

Question: Are non-pharmacological interventions effective in controlling antipsychotic induced weight gain in people with schizophrenia spectrum disorders?

Outcomes: Primary: change in body weight; change in body mass index (BMI) post-treatment; secondary: body weight and BMI at follow-up.

METHODS

Design: Systematic review with meta-analysis.

Data sources: The following databases were searched in May 2007: Cochrane Central Register of Controlled Trials, Medline, EMBASE, PsycINFO, CINAHL, UMI Proquest Digital Dissertations, Information Science Citation Index Expanded Information Social Sciences Citation Index, Information Arts and Humanities Citation Index, registers of ongoing clinical trials, ISI Science and Technology proceedings and ISI Information Social Sciences and Humanities proceedings. Hand searching of reference lists and key journals (from January 2000 to May 2007) was used to identify additional articles.

Study selection and analysis: The review included randomised controlled trials (RCTs) comparing the efficacy of non-pharmacological interventions to care as usual or an active comparator in preventing or reducing weight gain associated with antipsychotic use (typical or atypical) in patients with schizophrenia (chronic or recent onset, inpatient or outpatient). Exclusions: less than 75% of participants meeting diagnostic criteria for schizophrenia spectrum disorders (DSM or ICD criteria). Studies were meta-analysed using the fixed effects methods; random effects methods were used if there was significant heterogeneity. Heterogeneity was assessed using the I 2 statistic. Meta-analyses were carried out for specific subgroups of trials (eg, those in recent onset or chronic schizophrenia) and differences between these subgroups assessed by looking at overlap between the 95% CIs for the weighted mean differences (WMDs) for each subgroup and by looking at heterogeneity using the χ² statistic. A funnel plot was used to check for publication bias.

MAIN RESULTS

Ten RCTs met the inclusion criteria (n = 482), with the duration of intervention varying between 8 weeks and 6 months. Six RCTs assessed the effects of cognitive behavioural therapy (CBT), three assessed nutritional counselling and one assessed a combination of nutritional counselling and exercise. Non-pharmacological interventions significantly reduced weight and BMI compared with treatment as usual (WMD in weight: −2.56 kg, 95% CI −3.2 to −1.9 kg; p < 0.001; I² = 28.9%; WMD in BMI: −0.91 kg/m²; 95% CI −1.1 to −0.7 kg/m²; p < 0.001; I² = 28.9%). The reduction in weight with non-pharmacological interventions was maintained at 2–3 months of follow-up (three RCTs; WMD = −4.1 kg, 95% CI −5.8 to −2.5 kg; p < 0.001). Analyses of subgroups found no statistically significant differences in the treatment effect sizes between trials that aimed to prevent weight gain (four trials) and those that aimed to produce weight loss (six trials); between group (five trials) and individual (five trials) forms of intervention; between CBT (six trials) and nutritional counselling (four trials); or between trials in recent onset (one trial) and chronic (nine trials) schizophrenia patients.

CONCLUSIONS

Non-pharmacological interventions are effective in managing weight gain related to antipsychotic use in people with schizophrenia spectrum disorders.

ABSTRACTED FROM


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Alvarez-Jimenez and colleagues’ meta-analysis of interventions to reduce antipsychotic associated weight gain in individuals with schizophrenia and related psychotic disorders found a statistically significant reduction in mean body weight for those in the intervention group compared with control. Improvement in quality of life was also noted in individuals successful at reducing weight. The translational value of 2.56 kg in body weight is significant insofar as a weight loss of 5% in individuals at risk of metabolic syndrome has been reported to reduce morbidity and mortality.

The implications of this study for practitioners are protean. The pathophysiology of mood and psychotic disorders may overlap with the causative factors subserving metabolic abnormalities, and there is a need for primary prevention strategies for weight gain associated with psychotropic agents. Hitherto, most practitioners, and studies, have evaluated interventions in individuals who have accrued clinically significant weight gain. In light of the hazards posed by weight gain related to psychotropic medications, a clarion call for primary prevention seems axiomatic. The ignominious mortality rates in patients with mood and psychotic disorders are largely accounted for by cardiovascular disease of which metabolic syndrome is a risk factor.

Mood and psychotic disorders are pronounced to be chronic medical syndromes with the need for chronic disease management approaches, including patient self-management. The results from this analysis provide unequivocal support to the recommendation that all patients should be educated on the risk for antipsychotic induced weight gain and appropriate management strategies. It would be considered ineffable for a patient without mental illness who presents with advanced coronary artery disease to not receive routine counselling, education and interventions regarding their somatic health. In keeping with that view, and the established risks of comorbid medical disorders in psychiatric patients, routine surveillance and care of somatic health is warranted.

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Competing interests: RM is on the advisory boards of, and has been an invited speaker for, a number of pharmaceutical companies.