Efficacy and safety of oral atypical antipsychotics for schizophrenia: A meta-analysis including paliperidone extended-release

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OBJECTIVES: Atypical antipsychotics are widely used in the pharmacologic management of schizophrenia. A meta-analysis of oral atypical antipsychotics was conducted to assess the relative effectiveness of a newly introduced agent, paliperidone extended-release (ER).

METHODS: Randomized placebo-controlled studies of risperidone, olanzapine, quetiapine and aripiprazole were identified via a database search (MEDLINE, Embase, the Cochrane Library, PsyINFO and the Cumulative Index to Nursing & Allied Health Literature). Baseline demographic, efficacy and safety data were extracted and combined in the meta-analysis using the DerSimonian and Laird approach [1]. Random effects meta-regression was used to assess potential confounding by patient mean age, gender ratio and duration of therapy on variability in efficacy and safety.

RESULTS: Atypical antipsychotics as a group had lower odds of withdrawal for any reason than placebo treatment (OR 0.52, 95% CI 0.46, 0.58), with paliperidone ER having lower odds than the antipsychotic class as a whole (OR 0.43, 95% CI 0.34, 0.53). Odds of withdrawal due to adverse events were lower with paliperidone ER (OR 0.88, 95% CI 0.71, 1.15) than with risperidone (OR 2.09, 95% CI 0.80, 5.41) and with the atypical antipsychotics as a class (OR 1.02, 95% CI 0.83, 1.25). Paliperidone ER was associated with a lower odds of somnolence (OR 1.33, 95% CI 0.92, 1.94) than the atypical class (OR 1.70, 95% CI 1.39, 2.09) and a lower odds of weight gain (OR 1.75, 95% CI 1.29, 2.37) than all of the atypical antipsychotics, including risperidone (OR 3.08, 95% CI 1.53, 6.20). The predominant factor in the observed variability in efficacy was the specific antipsychotic, rather than patient-related factors or duration of therapy.

CONCLUSIONS: Within the spectrum of efficacy and safety of the class, Paliperidone ER demonstrates a unique efficacy and tolerability profile. Owing to the heterogeneity within the class, information on individual benefit/risk profiles of atypical antipsychotics is necessary for selecting a specific treatment for each patient. [1] DerSimonian R, Laird N. Meta-analysis in clinical trials. Control Clin Trials 1986;7:177–88.