Risk of death associated with the use of conventional vs. atypical antipsychotic medications: evaluating the use of the Emilia-Romagna Region database for pharmacoepidemiological studies

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WHAT IS KNOWN AND OBJECTIVE

Since 2005, a mounting base of evidence has identified that conventional antipsychotic medications are associated with an increased risk of mortality among elderly patients when compared to atypical antipsychotics. This study sought to explore the feasibility of using the Emilia-Romagna Region (RER) database for comparative safety analyses by replicating and refining risk estimates of this well-known drug safety example through meta-analysis.

METHODS

We identified a cohort of 23 681 Italian RER patients (aged ≥65) who initiated treatment with a conventional or atypical antipsychotic between 1 July 2009 and 30 June 2011. We compared 180-day mortality using Cox proportional hazards models adjusted for risk factors for death, use of other medications and measures of health services utilization intensity, all measured before antipsychotic initiation. We conducted a meta-analysis of studies with similar methods against which to compare our results.

RESULTS

Among 14 462 and 9219 patients prescribed conventional and atypical antipsychotics, respectively, we observed 2402 (16·6%) and 821 (8·9%) deaths during follow-up. Conventional antipsychotic initiators were older and generally had higher prevalence of outcome risk factors and higher baseline health service use intensity. The crude hazard ratio (HR) was 1·95 [95% confidence interval (CI), 1·80-2·11], which decreased to 1·47 (95% CI, 1·35-1·60) after full adjustment. We identified seven published studies that examined this association using similar methods. The pooled HR from these studies was 1·34 (95% CI, 1·28-1·39). Including our study, the meta-analysis yielded a summary estimate of 1·35 (95% CI, 1·31-1·40) and did not introduce any heterogeneity (I(2) = 0%; P = 0·455).

WHAT IS NEW AND CONCLUSIONS

Our results support the use of the RER database for pharmacoepidemiological studies and provide an up-to-date and pooled estimate of the magnitude of the association between mortality and conventional vs. atypical antipsychotics.