

ABSTRACT

Background

Antipsychotics as pharmacological management of behavioral and psychological symptoms of dementia (BPSD) were shown to associate with mortality among elderly patients in previous studies.

Objective

This study aimed to evaluate the mortality risk associated with antipsychotic use among Chinese elderly patients with BPSD in Hong Kong.

Methods

This was a hospital-based retrospective cohort study. Patients who aged ≥ 65 , diagnosed with dementia, and first attended psychiatric service at the Li Ka Shing Psychiatric Centre of the Prince of Wales Hospital in outpatient or outreach settings from 1st January, 2008 to 31st December, 2012, were recruited, further stratified into different groups and had observed till 31st December, 2014. Baseline sociodemographic and clinical characteristics were compared. Mortality risk was studied by means of Cox regression analysis.

Results

716 included subjects were classified into antipsychotic non-users (422), typical antipsychotic users (136) and atypical antipsychotic users (158). Mortality rates for the three groups were 117.2/1000, 159.0/1000, 105.9/1000 person-years respectively. Overall mortality risk of typical or atypical antipsychotic users did not differ from non-user group statistically. The adjusted hazard ratios (HR) of typical and atypical antipsychotic users were 1.031 (95% Confidence Interval [CI]: 0.696-1.528) and 0.96 (95% CI: 0.638-1.445). In subgroup analyses, the crude HR of Haloperidol (Vs non-users) was significantly different (crude HR: 1.679 [95%

CI: 1.128-2.5]), but statistical significance was lost after adjusted to covariates. The effect of timing and duration of drug use was examined; typical antipsychotic users had an increased mortality risk during the initial 90 days of prescription (HR 3.299 [95% CI: 1.232-8.833]), within 90 days from last prescription (HR 2.679 [95% CI: 1.071-6.702]) and with a total duration of prescription ≤ 90 days (HR 3.694 [95% CI: 1.084-12.586]), compared with atypical antipsychotic users. There was no significant difference in the two groups when the time durations extended beyond 90 days. For individual antipsychotic analysis using the same comparison methods, mortality risk was increased significantly in the patients using Haloperidol during the initial 90 days of prescription (HR 4.626 [95% CI: 1.055-20.284]) compared with Risperidone.

Conclusion This study showed that there was no significant increase in overall mortality risk in elderly patients receiving typical and atypical antipsychotics as treatment of BPSD when compared with non-users. However, when timing and duration of treatment was taken into consideration, a significant increase in mortality risk was noted in typical antipsychotic users (Vs atypical antipsychotic users), and Haloperidol (Vs Risperidone) particularly during the initial period of use.

Keywords Antipsychotics; Atypical antipsychotics; BPSD; Dementia; Mortality; Typical antipsychotics