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# Clinical Impact of Delirium and Antipsychotic Therapy: 10-Year Experience from a Referral Coronary Care Unit

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**Abstract :** Introduction: Little is known about the safety of antipsychotic therapy for delirium in the coronary care unit (CCU). Our aim was to examine the effect of delirium and antipsychotic therapy among CCU patients. Methods: Pre-study Confusion Assessment Method-Intensive Care Unit (CAM–ICU) criteria were implemented in screening consecutive patients admitted to Mayo Clinic, Rochester, the USA from 2004 through 2013. Death status was prospectively ascertained. Results: Of 11,079 study patients, the incidence of delirium was 8.3% (n=925). Delirium was associated with an increased risk of in-hospital mortality (adjusted OR 1.49; 95% CI, 1.08-2.08; P=.02) and one-year mortality among patients who survived from CCU admission (adjusted HR 1.46; 95% CI, 1.12-1.87; P=.005). A total of 792 doses of haloperidol (5 IQR [3-10] mg/day) or quetiapine (25 IQR [13-50] mg/day) were given to 244 patients with delirium. The clinical characteristics of patients with delirium who did and did not receive antipsychotic therapy were not different (baseline corrected QT [QTc] interval 460±61 ms vs. 457±58 ms, respectively; P = 0.57). In comparison to baseline, mean QTc intervals after the first and third doses of the antipsychotics were not significantly prolonged in haloperidol (448±56, 458±57, and 450±50 ms, respectively) or quetiapine groups (459±54, 467±68, and 462±46 ms, respectively) (P > 0.05 for all). Additionally, in-hospital mortality (adjusted OR 0.67; 95% CI, 0.42-1.04; P=.07), ventricular arrhythmia (adjusted OR 0.87; 95% CI, 0.17-3.62; P=.85) and one-year mortality among the hospital survivors (adjusted HR 0.86; 95% CI 0.62-1.17; P = 0.34) were not different in patients with delirium irrespective of whether or not they received antipsychotics. Conclusions: In patients admitted to the CCU, delirium was associated with an increase in both in-hospital and one-year mortality. Low doses of haloperidol and quetiapine appeared to be safe, without an increase in risk of sudden cardiac death, in-hospital mortality, or one-year mortality in carefully monitored patients.

**Keywords :** arrhythmias, haloperidol, mortality, qtc interval, quetiapine
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