

Prospective clinical intervention study of aripiprazole and risperidone in the management of postoperative delirium in elderly patients after cardiovascular surgery

Abstract

Background: Delirium, which is a common neuropsychiatric syndrome characterized by acute change in cognition with altered consciousness and impaired attention, is associated with increased morbidity and mortality, cognitive dysfunction, prolonged hospitalization, and decreased in quality of life. The management of delirium in perioperative period is important to improve the prognosis, and aripiprazole, which has unique pharmacological mechanism as a dopamine system stabilizer, could be suitable for the management of postoperative delirium after cardiovascular surgery because of low risks of metabolic dysfunction and arrhythmia. In the present study, we investigated the efficacy and safety of aripiprazole for the management of postoperative delirium in elderly patients after cardiovascular surgery compared to risperidone.

Methods: This study was a 7-day, prospective, comparative clinical observational study of aripiprazole versus risperidone for management of delirium. All eligible subjects were sequentially assigned to gender-matched groups of aripiprazole or risperidone. The primary efficacy was evaluated by the Delirium Rating Scale-Revised-98 (DRS-R-98), and treatment response in this study was defined as $\geq 50\%$ reduction from the baseline score of DRS-R-98. The secondary efficacy was evaluated by the Clinical Global Impression-Severity (CGI-S) scale.

Results: A total of 30 patients were assigned to gender-matched groups of aripiprazole (N=15) or risperidone (N=15). There was no significant difference of DRS-R-98 score and CGI-S scale at baseline between the two groups. The mean DRS-R-98 score and CGI scale were significantly decreased during the study period in both groups, and there were no significant differences in the degree of reduction in mean the mean DRS-R-98 score and CGI scale with time between the two groups. Both aripiprazole and risperidone were well tolerated.

Conclusions: In conclusion, aripiprazole and risperidone was equally effective and safe in the management of postoperative delirium in elderly patients after cardiovascular surgery. Further prospective randomized placebo controlled trials of a larger sample size should be needed to validate our findings.