

Pace and cardiac electrophysiology

[gw22-e0272]

THE EFFECT OF STATINS ON PREVENTION AND THERAPY OF ATRIAL FIBRILLATION: A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

Chen Weijie *The Second Affiliated Hospital of Chongqing Medical University*

10.1136/heartjnl-2011-300867.501

Objective To investigate the effect of statins on prevention and therapy of atrial fibrillation.

Method The authors searched the electronic databases from inception to 14 April 2011 for publicly published randomised controlled trials evaluating the effect of statins on prevention and therapy of atrial fibrillation. The quality of trials were evaluated by title and abstract of literature according to the eligibility criteria. If the clinical RCTs conformed to the inclusive criteria without the exclusive criteria items, they would be enrolled in this meta-analysis. The authors conducted the meta-analysis of the data collected from included studies with the software of review manager 5.1.

Results After searching of electronic databases and evaluating of the RCTs according to the inclusive criteria and exclusive criteria, thirteen RCTs with 4902 subjects were included in this meta-analysis. There were seven high quality studies with Jadad scores of three to five points and six low quality studies with Jadad scores of one to two points of the thirteen included RCTs. As the results of heterogeneity test showed significant heterogeneity, we chosen random effect model to analyse the data. The meta-analysis of RCTs showed significant effect of statins on the prevention and therapy of atrial fibrillation of patients who just underwent the procedure of cardiac surgery (RR 0.53, 95% CI 0.41 to 0.57, $p < 0.00001$) and also for patients without history of cardiac surgery (RR 0.62, 95% CI 0.47 to 0.81, $p = 0.0006$); The results also showed significant effect of statins on prevention of new onset atrial fibrillation (RR 0.58, 95% CI 0.42 to 0.80, $p = 0.0009$). The results showed significant effect of statins on prevention and therapy of atrial fibrillation of patients who were administered statins for short duration (3 weeks to 1 year) (RR 0.55, 95% CI 0.40 to 0.75, $p = 0.0002$) and also for patients with long-term therapy (more than 1 year) of statins (RR 0.63, 95% CI 0.46 to 0.84, $p = 0.002$); furthermore, the results of this meta-analysis also showed positive effect of statins on the recurrence and progress of atrial fibrillation (RR 0.56, 95% CI 0.38 to 0.81, $p = 0.002$). However, sensitivity analysis showed that the results of statins on the recurrence and progress of atrial fibrillation were unreliable, which could be inverted by excluding the low quality randomised controlled trials. Therefore the effect of statins on the recurrence and progress of atrial fibrillation was uncertain, which need more large scale RCTs to be detected.

Conclusion This meta-analysis of RCTs showed significant effect of statins on prevention and therapy of atrial fibrillation of patients who had history of cardiac surgery, and also showed significant effect of statins on prevention of new onset of atrial fibrillation. Considering the results of sensitivity analysis, however, the effect of statins on the recurrence and progress of atrial fibrillation was uncertain, which require larger scale RCTs for detection.