Abstract

Introduction: The notion of the favorable outcome related to continuation of statins in the perioperative cardiac surgery settings had gained wide approbation, but the complications related to statins therapy in this period remains a major concern.

Aim of the work: To study whether perioperative treatment with statins could be associated with increased post-operative complications in terms of increased liver enzymes and rhabdomyolysis with possible associated acute kidney injury (AKI).

Methodology: Prospective, observational study with purposive sampling where we analyzed morbidity after cardiac surgery as well as the outcome related to statins therapy in 202 consecutive patients over a period of one year. We collected perioperative individual data including age, gender, race, Euro score, cardiopulmonary bypass time (CPB), aortic cross clamp time (ACC), length of ventilation, length of stay in intensive care unit (ICU), and association of elevation of liver enzymes, rhabdomyolysis, AKI, post-operative atrial fibrillation (POAF), nosocomial infections and post-operative cardiac enzymes. Patients divided into two groups; group I was statins users and group II was non-users. The groups were compared by t-test, or Mann-Whitney U test, as appropriate for interval variables, and Chi square tests used for categorical variables. Data expressed as mean±SD or proportions/percentages for interval and categorical variables respectively. P<= 0.05 (two-tailed) was considered the statistical significant level.

Results: Both groups were matched regarding the age, gender, body mass index, Euro score, preoperative liver enzymes, creatinine, and creatine kinase. Statins group did not show significant elevation in liver enzymes, nosocomial infections or higher association of AKI. The incidence of rhabdomyolysis and POAF were significantly lower in the statins group (p=0.025&0.02 respectively). In addition, initial cardiac troponin and CK-MB were significantly lower in the statins group (p=0.01&0.04 respectively). Statins treated group had significant lower lengths of ventilation, stay in ICU and hospital (p=0.002, 0.05&0.001 respectively).

Conclusions: Therapy with statins before cardiac surgeries was not associated with high incidence of adverse events; moreover statins treated group had a favorable outcome regarding the POAF events and lengths of stay in ICU as well as hospital.


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