MIDTERM BENEFITS OF PERIOPERATIVE STATIN THERAPY IN PATIENTS UNDERGOING ISOLATED VALVULAR HEART SURGERY: FIVE-YEAR SURGICAL EXPERIENCE

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Background: Recent data have suggested that statins reduce early mortality and cardiovascular events after valvular heart surgery. The mid-term effects of perioperative statin therapy in the setting of valvular heart surgery are not presently known.

Methods: All patients (n=1855) who underwent a valvular procedure between April 2004 and April 2009 were identified retrospectively. Patients (n=644) undergoing concomitant coronary surgery were excluded. Of the remaining 1211 patients, 361 (29.8%) were administered statins before and after surgery (group 1) and 850 (70.2%) were not (group 2). Late survival was ascertained by the Social Security Death Index and cause of death was verified by database review. Adjusted hazard ratios (aHR), adjusted odds ratios (aOR) and multiple regression coefficients accounted for patient demographics, known preoperative risk factors, surgical characteristics and concomitant medications.

Results: Perioperative statin users were more likely to be older, obese and have severe comorbid conditions and previous cardiovascular events. Despite worse cardiac risk profiles, the crude rates of 30-day mortality were 0.6% (2/361) for statin-treated patients vs. 3.3% (28/850) for statin-untreated patients (P=0.01). The aOR for 30-day mortality was [0.09, 95% CI 0.02-0.45], P=0.003. Similarly, crude mid-term mortality rates (mean follow-up 26 ± 17 months) were 5.5% (20/361) in statin users vs. 9.5% (81/851) in statin non-users (P=0.04). Statin therapy was independently associated with reduced all-cause mortality [aHR 0.37, 95% CI 0.21-0.66, P=0.001], cardiac death [aHR 0.25, 95% CI 0.09-0.68, P=0.007] and non-cardiac death [aHR 0.38, 95% CI 0.20-0.71, P=0.002]. 30-day morbidity was also significantly reduced by statin therapy [aOR 0.25, 95% CI 0.07-0.99, P=0.05]. Adjusted LOS was also independently reduced in valvular patients on statin therapy for the ICU visit (P=0.006) and total hospital visit (P=0.03).

Conclusions: Perioperative statin administration is associated with improved short- and mid-term cardiovascular outcomes in patients undergoing isolated valvular heart surgery, despite worse cardiac risk profiles.