Statin Therapy Prior to CABG Surgery May Improve Outcomes

Treatment does not appear as beneficial prior to aortic valve replacement surgery

Chicago – Patients receiving statin therapy before coronary artery bypass grafting (CABG) surgery appear to have a reduced risk of post-surgical mortality, stroke, and atrial fibrillation (irregular or rapid heart rate), according to an article in the October 2013 issue of The Annals of Thoracic Surgery. These same benefits from statins could not be demonstrated for patients undergoing aortic valve replacement (AVR).

“Heart surgery patients typically have a number of other disorders, so we need to optimize the patient’s preoperative condition and help ensure the best possible result,” said Elmar W. Kuhn, MD, from the University of Cologne in Germany.

Statins are commonly used to lower levels of low-density lipoprotein (LDL), also known as “bad” cholesterol, which helps reduce the risk of cardiovascular disease in those at high risk.

Previous research has shown that statin therapy is beneficial for bypass patients in some trials, but other studies failed to confirm this effect. Dr. Kuhn, Oliver J. Liakopoulos, MD, and colleagues analyzed current research to see if preoperative statin therapy improved results for isolated CABG and AVR operations.

The analysis included 36 studies, 32 of which assessed statin treatment before CABG surgery with a total of 36,053 patients, and four that analyzed statin effects in a total of 3,091 patients undergoing AVR surgery.

Overall, the mortality rate among patients taking statins before CABG surgery was lower than the mortality rate among patients not taking statins, and a 19% reduction in the risk of stroke was found.
among patients taking statins compared to the control group. No significant reduction was found in the risk of heart attack or atrial fibrillation.

For AVR, statin therapy before surgery produced no significant differences in any of these post-surgical outcomes.

“Our result underlines the importance of statin therapy before CABG procedures,” said Dr. Liakopoulos. “We therefore hope that more patients are treated with statins prior to bypass surgery, but recognize that our work may not impact the current care for patients undergoing aortic valve replacement. In general, we believe these results can prompt greater efforts to improve preoperative management.”

The American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines recommends statin treatment for all patients undergoing CABG surgery, regardless of their LDL levels before surgery.

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