Medical Xpress

Beta-blockers before coronary artery bypass grafting surgery not associated with better outcomes

June 16 2014

Use of beta (β)-blockers in patients who have not had a recent heart attack but were undergoing nonemergency coronary artery bypass grafting (CABG) surgery was not associated with better outcomes.

The use of preoperative β-blockers has been associated with a reduction in perioperative mortality for patients undergoing CABG surgery in previous observational studies. Preoperative β-blocker therapy is a national quality standard.

The authors conducted a retrospective analysis of the Society of Thoracic Surgeons National Adult Cardiac database of U.S. hospitals performing cardiac surgery from 2008 to 2012. The study included 506,110 patients undergoing nonemergency CABG surgery who had not had a heart attack in the previous 21 days or any other high-risk symptoms.

Of the 506,110 patients, 86.2 percent received preoperative β-blockers within 24 hours of surgery. The authors found no difference between patients who did and did not receive preoperative β-blockers in rates of death due to the operation, stroke, prolonged ventilation, any reoperation, renal failure and deep sternal wound infection. Patients who received preoperative β-blockers did have higher rates of new-onset atrial fibrillation than patients who did not.

"β-blockers are an important and effective tool in the care of patients undergoing cardiac surgery in specific clinical scenarios. However, the empirical use of β-blockers as recommended by the National Quality Forum (without physiologic goals i.e., adequate clinical drug levels) in all patients before CABG may not improve outcomes. A prospective randomized trial with careful attention to adequate dosing and specific drug type may help to answer this question," William Brinkman, M.D., of the Cardiopulmonary Research Science and Technology Institute, Dallas, and colleagues said in their JAMA Internal Medicine article.

More information: JAMA Intern Med. Published online June 16, 2014. DOI: 10.1001/jamainternmed.2014.2356
JAMA Intern Med. Published online June 16, 2014. DOI: 10.1001/jamainternmed.2014.155

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