Beta-blockers may increase adverse cardiac events, patients at risk during noncardiac surgical procedure

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A recent study shows that patients given beta-blockers may actually be at increased risk of having an adverse cardiac event during a noncardiac surgical procedure. Risk of irregular heartbeat and worsening of symptoms in patients with existing heart disease also seemed to increase, but to a lesser degree. Beta-blockers are drugs commonly prescribed to treat high blood pressure and congestive heart failure. The study was presented during CHEST 2013, the annual meeting of the American College of Chest Physicians (ACCP), held October 26-31 in Chicago.

Researchers at State University of New York (SUNY)-Upstate Medical University Hospital analyzed 755 patients who had undergone noncardiac surgery in a single university-based center, with patients randomly chosen and subclassified according to gender, ethnicity, risk of surgery, and whether beta-blockers were used before, during, or after a noncardiac surgical procedure. Six different outcomes were investigated in the study: all-cause mortality, acute coronary syndrome (ACS), irregular heartbeat, cardiac event-related death, worsening of symptoms in a patient who has existing heart disease, and slower-than-normal heart rate. Three variables were used to predict these outcomes: beta-blocker administration, revised cardiac index score (RCRI)—a prediction of assessing risk of cardiac complications, and risk of surgery. Beta-blocker use was found to increase the odds of having an acute coronary event.

"The results from this study become especially important in view of the

fact that beta-blockers are currently recommended by the American College of Cardiology/American Heart Association (ACC/AHA) 2011 guidelines regarding cardiac risk and management before, during and after surgery," said David D. Gutterman, MD, FCCP and past president of the ACCP.

Provided by American College of Chest Physicians