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THORACIC ENDOVASCULAR AORTIC REPAIR LOWERS MORTALITY AND ISCHEMIC EVENTS

Meta-Analysis Shows a Significant Benefit When Compared to Standard Open Repair

Orlando, FL – TEVAR (Thoracic Endovascular Aortic Repair) reduces early death and ischemic events including stroke, paraplegia, renal insufficiency and myocardial infarction compared with open surgery though long-term mortality is similar with the two techniques, according to research presented during the i2 Summit at the American College of Cardiology's 58th annual scientific session.

The analysis of 41 comparative studies with 4,918 patients showed a decided early mortality benefit for TEVAR. There was an overall 76 percent reduction in early all-cause mortality (30 days); however, after one, two and three years, there was no proven mortality difference between the two procedures.

Paraplegia was reduced by 56 percent and stroke was reduced by 54 percent for TEVAR vs. open surgery. Myocardial infarction, arrhythmia, renal insufficiency and allogeneic blood transfusion rates were also significantly reduced after TEVAR compared with open surgery.

“We are very encouraged looking at these data. This is probably the most comprehensive analysis in the literature as of today looking at TEVAR vs. open surgical repair of the thoracic aorta. There appears to be increasing data demonstrating that TEVAR is indeed beneficial for patients,” said Davy Cheng, M.D., Professor and Chair of Anesthesia & Perioperative Medicine at the University of Western Ontario, London, Ontario, Canada. “Nonetheless, we do need to emphasize that the sustained benefit of survival more than one year has not yet been proven.”

Traditionally, open surgery has been used to treat thoracic aortic pathologies but the procedure is associated with a very high risk for serious adverse events. TEVAR, a less invasive approach,

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has been used since the early 1990s, but to date, no randomized controlled trials have been done to test the relative merits of the two techniques.

“A lot of those studies are retrospective reviews or observational studies, and most have not compared TEVAR with open surgery, the standard of care,” Cheng said. “Our purpose, working with the European Association for Cardiothoracic Surgery Working Group led by Dr. Marko Turina, was to evaluate all comparative studies published from the early 1990s to October 2008, to get a full picture of the merits and disadvantages of the two techniques.”

All data from controlled trials of TEVAR vs. open repair of thoracic aortic pathologies were obtained from medical databases and conference abstracts and combined through meta-analyses. Meta-regression was then performed to evaluate the impact of baseline risk factor imbalances, study design and thoracic pathology.

Dr. Cheng will present the study “Endovascular Versus Open Surgical Repair of Thoracic Aortic Disease: A Meta-regression Analysis” on Monday, March 30 at 8:40 a.m. in the Valencia Ballroom W415.

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The American of Cardiology’s Innovation in Intervention: i2 Summit 2009 features the latest in interventional science and is the leading forum and exposition for interventional cardiology. A platform for the world’s leading interventional cardiologists to share knowledge, discuss new ideas and discover new innovations, the i2 Summit 2009, in partnership with the Cardiovascular Research Foundation, is being held in conjunction with ACC.09, the American College of Cardiology’s 58th annual scientific meeting. The American College of Cardiology (www.acc.org) works to influence health care policy and represents the majority of board certified cardiovascular care specialists through education, research, promotion, and the development and application of standards and guidelines.