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Media Contacts Below

RHEOLYTIC THROMBECTOMY BEFORE STENTING FOUND SUPERIOR TO STENTING ALONE IN PATIENTS WITH ACUTE HEART ATTACK

*JETSTENT study finds combination treatment leads to better reperfusion,
fewer adverse events*

Atlanta, GA – Conducting rheolytic thrombectomy before direct infarct-related artery stenting in patients with acute ST-segment elevation heart attack produced better clinical results than performing direct stenting alone, according to research presented today at the American College of Cardiology’s 59th annual scientific session. ACC.10 is the premier cardiovascular medical meeting, bringing together cardiologists and cardiovascular specialists to further advances in cardiovascular medicine.

The randomized, prospective JETSTENT trial enrolled 501 patients at eight sites across Europe and South America between December 2005 and September 2009 to determine how use of a rheolytic thrombectomy system would affect myocardial reperfusion (restoration of blood supply to heart tissue which is ischemic due to decrease in normal blood supply) and clinical outcomes for patients with acute ST-segment elevation heart attack. The trial’s primary endpoints were ST-segment resolution at 30 to 45 minutes post-procedure and final infarct size at 30 days. The trial’s clinical endpoints included a composite of death, heart attack, target vessel revascularization, and stroke at one, six, and 12 months, as well as a composite of death and readmission for congestive heart failure at 12 months.

The study found that significantly more patients receiving rheolytic thrombectomy in addition to direct stenting experienced resolution of their ST-segment elevation in the designated time frame than those patients receiving stenting alone, at 85.8 percent and 78.8 percent, respectively. Additionally, while no significant differences were revealed in infarct size as assessed by 1-month scintigraphy (median infarct size was 11), the researchers found a value of 6 percent in the thrombectomy arm and 12.6 percent in the direct stenting alone arm. The researchers also found a significant decrease in major cardiovascular adverse events both at 1 month and at 6 months for patients randomized to receive rheolytic thrombectomy than patients in the direct stenting alone arm (3.1 percent versus 6.9 percent and 11.9 percent versus 20.6 percent, respectively). The researchers did not find a significant difference between the study’s other surrogate endpoints, including myocardial blush grade and the corrected TIMI frame count.

“These study results support the routine use of thrombectomy in patients with acute ST-segment elevation heart attack and evidence of thrombus,” said David Antoniucci, M.D., head of the Division of Cardiology at Careggi Hospital in Florence, Italy, and the study’s lead researcher.

The JETSTENT data contrast with the outcomes of Possis Medical’s previous study, the AngioJet rheolytic thrombectomy in patients undergoing PCI for acute myocardial infarction (AiMI) trial. Specifically, AiMI found that in a sample of 480 patients, rheolytic thrombectomy did not lead to better

reperfusion and was associated with a significantly higher mortality rate at 30 days and 6 months post-procedure.

According to Antoniucci, the JETSTENT study – which was designed also to address questions raised by the AiMI findings – differs from the AiMI study in three key ways. First, it includes only patients with angiographically visible thrombus. Second, it uses a “single-pass antegrade” technique in which the thrombectomy device is activated before crossing the lesion and moved in a proximal-to-distal approach in order to cut the risk of embolization. Third, it has a narrow temporal definition of ST-segment elevation resolution (defined as more than 50 percent resolution within 30-45 minutes from the procedure) which allows for greater sensitivity than the 90-minute time frame that was used in the AiMI study.

“Early ST-segment resolution was inversely related to the occurrence of major adverse events, suggesting that it is a reliable marker of reperfusion.” Antoniucci said. “Also, multivariable analysis showed that randomization to rheolytic thrombectomy is independently related both to early ST-segment resolution and to the occurrence of major adverse cardiovascular events.”

Medrad Interventional/Possis funded the study. The funding company was not involved in the management, collection, and analysis of data. Dr. Antoniucci has no personal financial relation with the sponsor.

Dr. Antoniucci will be available to the media on Tuesday, March 16 at 12:15 p.m. in Room B201.

Dr. Antoniucci will present the study “Randomized comparison of AngioJet rheolytic thrombectomy before direct infarct artery stenting to direct stenting alone in patients with acute myocardial infarction: The JETSTENT trial” on Tuesday, March 16 at 10:30 a.m. in the Murphy Ballroom.

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The American College of Cardiology (www.acc.org) represents the majority of board certified cardiovascular care through education, research, promotion, development and application of standards and guidelines – and to influence health care policy. ACC.10 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.

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