Results of the TATORT-NSTEMI trial presented

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According to a new study, aspirating blood clots does not significantly reduce microvascular obstruction or reduce the risk of death in patients with non-ST-elevation myocardial infarction (NSTEMI), when compared to standard percutaneous coronary intervention (PCI) without thrombectomy.

Findings from the TATORT-NSTEMI clinical trial were presented today at the 25th annual Transcatheter Cardiovascular Therapeutics (TCT) scientific symposium. Sponsored by the Cardiovascular Research Foundation (CRF), TCT is the world's premier educational meeting specializing in interventional cardiovascular medicine.

Thrombus aspiration, or the removal of blood clots, is frequently used for patients with ST-elevation myocardial infarction (STEMI, the most serious type of heart attack). However, there are no randomized data to unequivocally support thrombectomy in patients with NSTEMI. TATORT-NSTEMI is a prospective, controlled, multicenter, randomized trial that compared adjunctive thrombectomy to conventional PCI in patients with thrombus containing lesions.

The trial randomized 460 patients in a 1:1 fashion to thrombectomy and standard PCI. The primary endpoint was the extent of microvascular obstruction assessed by cardiac magnetic resonance (CMR) within four days after randomization and measured by the percentage of the left ventricle (LV). Clinical endpoints including death, myocardial reinfarction, target vessel revascularization and new congestive heart

failure were analyzed at six months.

Microvascular obstruction was not different between the thrombectomy and standard PCI groups (1.7 percent LV vs. 1.6 percent LV, respectively, p=0.65).

Similarly, no significant differences were observed in infarct size, myocardial salvage index, or angiographic parameters such as blush grade or TIMI flow grade.

Clinical follow up at six months also revealed no differences in the combined clinical endpoint between the thrombectomy and the standard PCI group (p=0.85).

"TATORT-NSTEMI is the first randomized trial in NSTEMI testing the efficacy of additional manual aspiration thrombectomy," said lead investigator Holger Thiele, MD. Dr. Thiele is Deputy Director of the University of Leipzig Heart Center in Leipzig, Germany.

"Aspiration thrombectomy in patients with NSTEMI undergoing early PCI in thrombus containing lesions does not reduce the extent of no-reflow in comparison to standard PCI without thrombectomy."

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