POSTERS

Jong Hyun Choi1, Taek Jong Hong1, Hye Yoon Jang1, Hye Won Lee1, of hANP on left ventricular (LV) function in patients with reperfused acute MI using since 1994, is an established management for ST-segment elevation myocardial infarction (STEMI).

Background: To evaluate infarct size, LV end-diastolic and end-systolic volume and LV ejection fraction (LVEF).

Methods: Patients were randomized to either PCI with thrombectomy (TB: n=58) or PCI without thrombectomy (non-TB: n=58), with blinding of the operator for the OFDI results. The primary endpoint was minimal flow area (Min FA) post-procedure assessed by OFDI, and three-dimensional analysis of Six-month OFDI follow-up.

Results: Between January 2008 and October 2011, STEMI admissions to a regional hospital were randomized to either PCI with thrombectomy (TB: n=71) or without thrombectomy (non-TB: n=70), with blinding of the operator for the OFDI results. The primary endpoint was minimal flow area (Min FA) post-procedure assessed by OFDI, defined as: (Stent area + incomplete stent apposition [ISA] area) – (intraluminal defect + tissue prolapse area). Sample size was based on the expected difference of 0.72mm² in MinFA. Fifty-one patients repeated invasive angiographic and OFDI follow-up at 6 months.

Results: Baseline demographics, preclinical QCA and procedural characteristics were well matched between the two groups. Immediately after stenting on OFDI, the average stent area, the amount of prolapse, intraluminal defect and ISA area were similar in both groups. In the population with a serial OFDI follow-up at Baseline and 6M, the post-procedural minFA were numerically larger in TB than in non-TB, but the difference did not reach statistical significance (TB 6.05 ± 2.18 vs. non-TB 2.06 mm², p=0.06 vs. non-TB 0.06 vs. non-TB 0.037). Cox-proportional hazard model also showed implanted stent number is associated with MACE significantly (HR=1.90, 95% CI: 1.157-3.119, p=0.011).

Conclusions: This study demonstrated that multiple stent implantation is associated with increased one-year cumulative incidence rate of MACE and is a predictor for clinical outcomes independent of stent length, diameter or type in Korean populations with STEMI.

TCT-519

Randomized study to assess the effect of Thrombosis aspiration on flow area in STEMI patients: an Optical Frequency Domain Imaging study (TROFI). Two- and Three-dimensional analysis of Six-month OFDI follow-up.

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Background: Primary coronary intervention (PCI) with thrombectomy seems to reduce the thrombus burden measured with optical frequency domain imaging (OFDI) resulting in a better stent expansion and less late malapposition, when compared to PCI without thrombectomy.

Methods: In a prospective multi-centre study, 141 patients with STEMI <12 hours from onset were randomized to either PCI with thrombectomy (TB: n=71) or without thrombectomy (non-TB: n=70), with blinding of the operator for the OFDI results. The primary endpoint was minimal flow area (Min FA) post-procedure assessed by OFDI, defined as: (Stent area + incomplete stent apposition [ISA] area) – (intraluminal defect + tissue prolapse area). Sample size was based on the expected difference of 0.72mm² in MinFA. Fifty-one patients repeated invasive angiographic and OFDI follow-up at 6 months.

Results: Baseline demographics, preclinical QCA and procedural characteristics were well matched between the two groups. Immediately after stenting on OFDI, the average stent area, the amount of prolapse, intraluminal defect and ISA area were similar in both groups. In the population with a serial OFDI follow-up at Baseline and 6M, the post-procedural minFA were numerically larger in TB than in non-TB, but the difference did not reach statistical significance (TB 6.05 ± 2.18 vs. non-TB 2.06 mm², p=0.06 vs. non-TB 0.06 vs. non-TB 0.037). Cox-proportional hazard model also showed implanted stent number is associated with MACE significantly (HR=1.90, 95% CI: 1.157-3.119, p=0.011).

Conclusions: This study demonstrated that multiple stent implantation is associated with increased one-year cumulative incidence rate of MACE and is a predictor for clinical outcomes independent of stent length, diameter or type in Korean populations with STEMI.

TCT-517

Effects Of Intravenous Human Atrial Natriuretic Peptide On Left Ventricular Function In Patients With Reperfused Acute Myocardial Infarction: An Assessment By Cardiac Magnetic Resonance Imaging

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Background: Cardioprotective effects of human atrial natriuretic peptide (hANP) in patients with acute myocardial infarction (MI) have been suggested by randomized clinical trials, however, no reports used surrogate endpoints offered by cardiac magnetic resonance (CMR), the current gold standard imaging modality. We evaluated the effects of hANP on left ventricular (LV) function in patients with reperfused acute MI using CMR.

Methods: Forty-nine patients with first-time acute MI reperfused with percutaneous coronary intervention were studied. Continuous intravenous infusion of hANP was initiated before reperfusion therapy and continued for at least 2 days in 21 patients (hANP group). The remaining 28 patients received no adjunctive pharmacological therapy (no hANP group). CMR was performed at the acute phase and after 6 months (6M) to evaluate infarct size, LV end-diatastic and end-systolic volume and LV ejection fraction (EF).

Results: We observed no difference in age, gender, coronary risk factors, maximum levels of creatine phosphokinase, time to reperfusion and baseline CMR parameters between the 2 groups. However, at 6M, a significant improvement in LVEF in hANP group was seen compared to no hANP group (baseline: 48.1 ± 11.4% vs. 6M: 52.8 ± 10.6% vs. baseline: 49.9 ± 13.6% to 6M: 50.0 ± 10.7%, p = 0.015).

Conclusions: These results assessed using CMR suggest that intravenous hANP infusion can improve LV systolic function in patients with reperfused acute MI.