

Transradial versus Transfemoral Intervention in ST-Segment Elevation Myocardial Infarction Patients Undergoing Primary Percutaneous Coronary intervention in the Korean population

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Background: TRI is the lower incidence of major bleeding and vascular complications compared with TFI. However, there have been very limited published data regarding clinical outcomes of TRI versus TFI in Asian STEMI patients(pts).

Methods: A total 689 consecutive STEMI pts who underwent primary PCI with DESs from nine major PCI hospitals were enrolled. Angiographic outcomes and cumulative clinical outcomes up to 12-months were compared between TRI group(n=220) and TFI group(n=469).

Results: Baseline characteristics showed that TFI group had more smokers, higher incidence of hypertension, diabetes, multi-vessel disease, left circumflex lesion, type B2 or C lesion and chronic total occlusion lesion. In-hospital complications showed that TRI group had lower incidence of major and minor hemorrhage. Clinical outcomes up to 12-months showed that the incidence of recurrent myocardial infarction, target lesion revascularization(TLR), and target vessel revascularization(TVR) were lower in the TRI group. There were no significant differences in in-hospital and 1-yr mortality rates between the two groups. After propensity score matched analysis, TRI was an independent predictor of reducing TVR(OR: 0.09 95% CI: 0.01-0.67, p-Value=0.019), major adverse cardiac events(MACE, OR: 0.37, 95% CI: 0.15-0.86, p-Value=0.022), and major adverse cardiac and cerebrovascular events(MACCE, OR: 0.33, 95% CI: 0.14-0.76, p-Value=0.010) at 12 months.

Conclusions: In our study, TRI in STEMI pts undergoing primary PCI was associated with less incidence of access site hematoma and lower 12-months TVR, MACE and MACCE compared with TFI. We suggest that TRI play an important role in improving mid-term major clinical outcomes of STEMI pts undergoing primary PCI.