

Efficacy and Safety of Transradial Multi-vessel Coronary Artery Disease Intervention as compared with Single Vessel Disease Intervention

Purpose: Transradial percutaneous coronary intervention (PCI) has evolved into a alternative to the transfemoral approach. Clinical aspects related to transradial PCI on multi-vessel disease have been seldom investigated. The aim of this study is to evaluate safety and efficacy of transradial intervention (TRI) for patients with multi-vessel disease.

Method: A total of 1,690 consecutive patients underwent TRI were entered into multicenter Korean TRI Registry from Nov 2004 to Oct 2010. The patients were divided into two groups; Multi-vessel PCI group (n=424) and Single vessel PCI group (n= 1266). To adjust potential confounders, propensity score matched (PSM) analysis was performed. After PSM, total of 776 pts (388 pairs) were generated for this analysis. The primary study endpoint was 1-year major adverse cardiac event (MACE) defined as the composite of total death, myocardial infarction, target vessel revascularization and stent thrombosis.

Results: Baseline characteristics were well balanced between the two groups. At 1 year, the incidence of MACE was similar between the two groups (11.0% vs. 10.8 %, p=0.908). Although the multi-vessel radial PCI group had a longer procedure time than the single-vessel PCI group, however, the incidence of contrast induced nephropathy (0.7% vs. 1.0%, p=0.725) and access site complications (1.2% vs 0.7%, p=0.725) was similar between the two groups.

Conclusion: Although procedure time was longer in multi-vessel radial PCI group, transradial PCI was safe and effective in patients with multi-vessel disease. It might be favored over femoral artery as a primary access route for complex PCI.