

Transfemoral Intervention with an Arterial Closure Device Versus Transradial Intervention in Acute ST Elevation Myocardial Infarction

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Background: Transradial intervention (TRI) and transfemoral intervention (TFI) with arterial closure device (ACD) have been demonstrated to reduce access site bleeding complications. However, no study performed to compare their safety and efficacy in STEMI. **Aim:** We evaluated the outcomes between TFI with ACD and TRI in acute STEMI with primary PCI. **Methods:** 132 patients who diagnosed STEMI and underwent primary PCI without cardiogenic shock were analyzed retrospectively from February 2011 to July 2013. TFI with ACD was achieved by the suture-based arterial closure device, Proglide™ (Abbott Vascular, US) and TRI puncture site was compressed with TR Band™ (Terumo, Japan). Basic demography, procedural characteristics, and clinical outcomes including major and minor bleeding complications at access site are evaluated. **Results:** Among 132 patients, TFI with ACD was 44 patients and TRI was 88 patients. The incidence of major and minor bleeding complications and MACE at 30 days was similar in both groups. However, the major bleeding and MACE are significantly higher in TFI with ACD group after the inclusion of cardiogenic shock (minor bleeding, TFI with ACD vs. TRI; 19.4% vs. 4.0%, $p = 0.001$, major bleeding, TFI with ACD vs. TRI; 13.4% vs. 4%, $p = 0.024$). The independent predictive values for the major bleeding events were drop of hemoglobin (OR 16.4, 95% CI 2.890-93.653; $p = 0.002$) and hemoglobin level (OR 0.363, 95% CI 0.193-0.683; $p = 0.002$). **Conclusions:** TFI with ACD show similar hemostatic efficacy compared with TRI in patients with STEMI.