

Transradial Versus Transfemoral Coronary Intervention for Acute ST- Elevation Myocardial Infarction patients undergoing primary PCI

Abstract

Background: Patients with ST-segment elevation myocardial infarction (STEMI) require an urgent revascularization strategy as well as aggressive antiplatelet and antithrombotic pharmacotherapy and thus are particularly susceptible to bleeding complications. This study aimed to assess and compare the feasibility, success and safety of transradial approach (TRA) versus transfemoral approach (TFA) in STEMI patients undergoing 1ry PCI regarding clinical outcomes and vascular complications.

Patients and methods: This randomized controlled study included 80 patients who were admitted to the National Heart Institute in the period between May 2015 to September 2017, because of ST-elevation myocardial infarction (STEMI) and were planned for 1ry PCI. Patients were divided into two groups, each group included 40 patients. Group I; underwent transradial PCI and Group II; underwent transfemoral PCI. We compared between both groups as regards in-hospital major bleeding & vascular complications and followed up for 3 months for (MACE).

Results: The primary end points were statistically insignificant in both groups however large access site hematoma occurred in 3 patients in TFA group compared to none of patients in TRA group. Additionally, one case had gastrointestinal hemorrhage in TFA group compared to none of patients in TRA group. The secondary end points: major adverse cardiac events (MACE) during the in-hospital stay & 3 months follow up were statistically not significant in both groups. However, one case of mortality occurred in TFA group while no cases occurred in TRA group. The range of patients hospital stay was from 1 to 3 days with mean 2.1 ± 0.38 , while in TRA group. While it was from 2 to 6 days with mean 3.9 ± 1.0 in TFA group, and that was statistically highly significant ($P < 0.001$).

Conclusions: 1ry PCI for STEMI can be performed via RA with DTBs clinically equivalent to those performed from FA after adequate experience and training.