Feasibility and safety of distal radial approach in emergency coronary angiography and intervention

Authors:
Y Mizuguchi¹, S Hashimoto¹, T Yamada¹, N Taniguchi¹, S Nakajima¹, T Hata¹, A Takahashi¹, ¹Sakurakai Takahashi Hospital - Kobe - Japan,

On behalf: None

Topic(s):
Acute Coronary Syndromes: Treatment, Revascularization

Citation:

Funding Acknowledgements:
None

Background: The current ESC guidelines recommend the transradial coronary approach for coronary angiography and intervention in patients with ST-segment elevation myocardial infarction (STEMI), because of the advantages in increased safety and patient comfort with reduction of bleeding complications and early ambulation when compared with the transfemoral access. The distal transradial approach (dTRA), a newly developed technique, is expected to enhance such advantage in transradial access due to the nature of the puncture site, however, there is a paucity of available data concerning the feasibility of dTRA in such emergency settings.

Purpose: This study aims to evaluate the feasibility and safety of dTRA in emergency settings.

Methods: From April 2018 to August 2018, 53 consecutive patients, including 10 STEMI, 11 non-STEMI and 5 cardiopulmonary arrest, who had dTRA for emergency coronary angiography and interventions in our hospitals were analysed. We had planned to perform dTRA from right hand for all patients needed emergency catheterization during this period. The puncture success ratio and the puncture time, incidence of hemorrhagic complication and the radial artery occlusion (RAO) after the following day or 1 month after procedure were investigated.

Results: Mean age of patients was 71.1±12.7 years and 68.0% were male. The right dTRA were successfully performed in 48 patients (90.6%). The approach site was converted to same side of forearm radial artery and opposite side of distal radial artery in 4 (7.5%) and 2 (3.8%) patients, respectively. For 2 patients having impalpable distal radial artery due to cardiogenic shock, initial attempt was performed from right forearm radial artery. Time to successful puncture in patients with right dTRA was 206±205 seconds. Average time to hemostasis in patients with dTRA was 3.4±3.5 hours. None of patients experienced the RAO and distal RAO, however 3 patients couldn’t be evaluated RAO by ultrasonography. Mild hematoma was observed in 1 patient, the patient needed no further treatment.

Conclusions: The present study demonstrates that dTRA was feasible and safety in emergency settings, however the difficulty of the arterial puncture becomes the problem in patients with cardiogenic shock.