Late Radial Artery Patency Following Transradial Coronary Catheterization via a 7F Sheath

Dan Levin, Salim Adawi, David Halon, **Ronen Jaffe**
Cardiology, Carmel Medical Center, Israel

Background:
Transradial coronary catheterization (TRCC) reduces vascular access-site bleeding complications compared to the transfemoral approach and is preferred by patients, however it results in radial artery occlusion (RAO) in 1-10% of cases. Large-bore 7F sheaths may be required for complex coronary interventions, however increasing sheath size may increase the likelihood of RAO. We studied the late radial artery patency in a cohort of real-world patients who had undergone TRCC with a 7F sheath.

Methods:
Subjects who had undergone 7F TRCC were identified retrospectively from our prospective catheterization laboratory database. Radial artery patency was assessed by 1. Palpation of the pulse, 2. Reverse Barbeau test (assessment of palmar perfusion by pulse oxymetry while occluding the ulnar artery) and 3. Ultrasound analysis of radial artery flow. The study was approved by the IRB.

Results:
Twenty-two patients were studied. In all patients dual palmar blood supply had been confirmed prior to TRCC by the Barbeau test. Mean age was 66±10 years. A 7F sheath was selected for TRCC for facilitated thrombus aspiration in STEMI in 13 (59%) patients and enablement of complex bifurcation stenting in the rest. Coronary stenting was performed in 20 (91%). All patients received unfractionated heparin during the procedure and mean ACT was 248±63 seconds. Twelve (55%) received a glycoprotein IIbIIIa inhibitor. No vascular site complications occurred following the procedure. Mean time from TRCC to inclusion in the study was 648±301days. The radial artery was patent by ultrasound in 18 (82%) patients and by reverse Barbeau test in 17 (77%). All RAO cases were asymptomatic.

Conclusions:
Transradial coronary catheterization via a 7F sheath was associated with an acceptable rate of late RAO in this selected group of patients. Our findings suggest that need for large-bore 7F sheath does not necessarily rule out the option of transradial access.