

Transradial Complex Percutaneous Coronary Intervention Using a Sheathless Guide Catheter

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Background: Transradial angioplasty has been demonstrated to have significant benefits over traditional transfemoral approach, particularly due to reduced access site bleeding and patient comfort. Due to the smaller diameter of radial artery, the use of large caliber guiding catheters is limited as it results in increased pain, spasm and radial artery attrition. The development of the Sheathless guiding catheter with a hydrophilic coating, allows for the use of a 6 or 7F equivalent guiding catheter with access site equivalent to 4 and 5F sheaths.

Methods: In 200 cases the Sheathless guiding system was used. Following a diagnostic study with 4 or 5F, either a 6.5 or 7.5 Sheathless catheter was used. Patient and procedural demographics as well as complications were collected prospectively.

Results: PCI was performed to 92(45%) LAD, 50 (25%) Cx, 51 (25.4%) RCA, 54 (26%) SVGs, 9 (4.4%) LM and 1 renal artery in 164 male and 36 female patients. 129 (63.2%) of patients were non elective including 34 (16.4%) undergoing primary PCI. Twenty (10%) patients had mechanical clot extraction. A range of additional hardware including protection devices, aspiration catheters, kissing balloons, snares, MGuard, Cutting Balloons, Tornus, Tryton and Twinpass catheters, were all used without limitation. In all cases the catheter was removed at the completion of the procedure without any resistance. Two mild and 1 moderate-sized hematoma were noted, all in patients treated with 2B3A inhibitors. In the first 50 patients 2 proximal guide catheter induced dissections occurred and were successfully treated. Following these the distal catheter tip was made softer. No patients required an intervention, blood transfusion, or delayed discharge. Overall procedural success was 97% and no cases required conversion to the femoral approach.

Conclusion: The use of the sheathless radial approach in both routine and complex PCI is feasible with a high rate of success and minimal complications.