

Universal Guiding Catheter during Radial Primary Percutaneous Coronary Intervention for STEMI Improves Efficacy and Reperfusion Time

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Background:

Radial primary percutaneous coronary intervention (Rppci) improves safety through bleeding reduction but is technically more demanding and may be more time consuming. The use of a single universal guiding catheter could shorten the procedure and decrease reperfusion time.

Aim:

To investigate the efficacy of an universal guiding catheter during Rppci.

Methods:

Retrospective, single center analysis of 610 STEMI pts who had Rppci via the right radial artery using a universal guiding catheter [Ikari 3.5-4/ Terumo (77 pts)] for both diagnosis and intervention . These patients were compared to 533 STEMI patients who had conventional catheterization using separate diagnostic and interventional guiding catheters. Demographic, clinical, angiographic and therapeutics variables were studied. End points were: Door to device time, angiographic success rate, TIMI grade III flow, fluoroscopy time and volume of dye.

Results:

Both groups were similar in terms of age (58 ± 12 vs 57 ± 12), male gender (83% vs 82%) , risk factors, admission blood pressure (120 ± 16 vs 117 ± 20 mmHg) as well angiographic aspects and therapeutics aspects including use of direct stenting (68% vs 59%, $p=0.08$) and aspiration devices (40% vs 46%, $p=ns$). The universal guiding catheter cohort demonstrated shorter door to device time (85 ± 40 vs. 101 ± 60 min, $p=0.01$), shorter fluoroscopy time (9.7 ± 6 vs. 12.8 min, $p=0.02$) and smaller volume of contrast (116 ± 57 vs 139 ± 60 cc., $p<0.01$). Angiographic success rate (96% vs 92%) and rate or TIMI flow III (93% vs. 93%) was similar in both groups.

Conclusions:

The implementation of the strategy of unique, universal guiding catheter for diagnosis and therapy during radial primary PCI could improve the efficacy of this approach. Prospective evaluation of this approach is needed.