Primary Percutaneous Coronary Intervention in Patients with Acute Myocardial Infarction: Radial versus Femoral Approach

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Primary percutaneous coronary intervention (PPCI) for myocardial infarction (MI) is associated with increased risk of access site complications due to intense anticoagulation and antiplatelet therapy. The transradial approach although more demanding eliminates such complications.

Objectives: To assess the efficacy and safety of radial versus femoral approach in PPCI.

Methods: We studied 100 patients who underwent PPCI in ADMIT (Aspiration Device in MI Trial): A randomized prospective single center trial. All data were prospectively collected.

Results: In 61 patients (61%) the procedure was performed via femoral and 39 (39%) via radial artery. Results are shown in the table:

	Radial group (n=39)	Femoral group (n=61)	P value
Mean age	57.3±10.7	57.4±13.1	0.975
Women	4(10.3%)	10(16.4%)	0.388
Diabetes mellitus	15(38.5%)	21(34.4%)	0.682
Killip class at presentation	1.33±0.53	1.20±0.48	0.108
IIb/IIIa GP antagonist treatment	35(89.7%)	53(86.9%)	0.521
Procedural results:			
Crossover to alternative entry site	1(2.6%)	0	0.209
Intra-aortic balloon pump insertion	1(2.6%)	11(18.0%)	0.020
Coronary intervention (PCI)	38(97.4%)	55(90.2%)	0.164
PCI failure	1(2.6%)	3(4.9%)	0.305
LAD culprit lesion	22(56.4%)	33 (54.1%)	0.168
Door to wire time (hours:minutes)	0:29±2:04	0:33±3:05	0.339
Door to stent time (hours:minutes)	0:37±2:13	0:38±3:23	0.650
Use of aspiration device	20 (51.3%)	32(52.4%)	0.330
TIMI flow at the end of procedure	2.81±0.54	2.80±0.57	0.650
Significant access site complications*	0	5(8.2%)	0.038
In-hospital death	0	2(3.3%)	0.372
30-day MACE**	6(15.4%)	6(9.8%)	0.340

*Large hematoma, pseudoaneurysm needed blood transfusion or intervention.

** Death, reinfarction or TVR

Conclusion: Transradial is safe and effective as transfemoral approach for PPCI, but with less vascular complications.