

Cardiogenic shock and radial access in patients with an acute ST elevation myocardial infarction

R. Zahn¹, M. Hochadel², B. Schumacher³, M. Pauschinger⁴, C. Stellbrink⁵, V. Schaechinger⁶, S. Behrens⁷, H. Mudra⁸, A. Elsaesser⁹, U. Zeymer¹

¹Klinikum Ludwigshafen, Ludwigshafen, Germany; ²Stiftung Institut, Ludwigshafen, Germany; ³Westpfalz Hospital, Kaiserslautern, Germany; ⁴Klinikum Nuernberg - Sued-Nuernberg, Nuremberg, Germany; ⁵Bielefeld Hospital, Bielefeld, Germany; ⁶Klinikum Fulda Heart-Thorax-Center Cardiology, Fulda, Germany; ⁷Vivantes Humboldt Klinikum, Berlin, Germany; ⁸Clinic Neuperlach, Munich, Germany; ⁹Clinic Oldenburg, Oldenburg, Germany

On behalf of ALKK

Funding Acknowledgement: Type of funding source: None

Background: Cardiogenic shock (CS) in patients (pts) with acute ST elevation myocardial infarction (STEMI) is the strongest predictor of hospital mortality. Radial in contrast to femoral access in STEMI pts might be associated with a lower mortality. However, little is known on radial access in CS pts.

Methods: We retrospectively analysed all STEMI pts between 2009 and 2015 who suffered from CS and who were included into the ALKK PCI registry. Pts treated via a radial access were compared to those treated via a femoral access.

Results: Between 2009 and 2015 23796 STEMI pts were included in the

registry. 1763 (7.4%) of pts were in CS. The proportion of radial access was 6.6%: in 2009 4.0% and in 2015 19.6%, p for trend <0.0001 with a strong variation between the participating centres (0% to 37%).

Conclusions: Radial access was only used in 6.6% of STEMI pts presenting in CS. However, a significant increase in the use of radial access was observed over time (2009: 4%, 2015 19.6%, p<0.001), with a great variance in its use between the participating hospitals. Despite similar pt characteristics the difference in hospital mortality according to access site has to be interpreted with caution.

	Radial access (n=111)	Femoral access (n=1589)	p-value
Age (years, median, quartiles)	68.6 (57.8; 77.7)	67.6 (56.7; 77.0)	0.90
Women	22.5%	29.6%	0.11
Prior myocardial infarction	18.8%	26.8%	0.078
Prior stroke/TIA	5.3%	9.1%	0.21
Prior PCI	15.4%	18.8%	0.39
Prior coronary bypass surgery	2.7%	6.2%	0.13
Diabetes mellitus	30.3%	30.6%	0.96
Renal failure	38.1%	36.3%	0.71
Atrial fibrillation	13.2%	15.4%	0.63
Current smoker	51.7%	45.3%	0.25
Coronary 3 vessel disease	44.1%	46.3%	0.66
Number of treated vessels	1.7	1.6	0.081
TIMI III – flow after PCI	77.3%	76.3%	0.82
Drug-eluting stent	62.4%	41.8%	<0.001
Death in the cath lab	3.6%	8.1%	0.087
Hospital mortality	31.5%	42.1%	0.029
Median hospital stay (days)	6 (3, 11)	7 (1, 15)	0.75