Transradial vs. transfemoral access in patients with ACS: bleeding complications and outcome

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Background: The use of transradial access for PCI is growing and the newly published guidelines on treatment of NSTEMI-ACS take account of this, provided the necessary experience exists. We studied ways of access in treatment of ACS patients under real world conditions in a big city.

Methods: Our Registry collects data on hospital treatment of patients with ACS since 1999. Since 1.4.11 data on different ways of PCI access are collected. We included all 10,146 patients treated with PCI from 20 hospitals (1.4.11–31.12.14). We studied bleeding complications (GUSTO) and the influence of access on hospital mortality.

Results: 4165 patients were treated with transradial (41,1%), 5981 with transfemoral (58,9%) PCI access.

Transfemoral vs. transradial access influences hospital mortality (OR=1.53; 95% CI: 1.18–1.98) and also influences chances of moderate to severe bleeding (OR=1.69; 95% CI: 1.17–2.45) even after adjustment for differences in patient characteristics and in antiplatelet and antithrombotic therapy.

Conclusion:

- Transradial access is being used in 41.1% of cases in our registry for treatment of ACS patients.
- Mild, moderate and severe bleeding occurred significantly less often after transradial access.
- Chances of moderate to severe bleeding are increased with transfemoral access even after adjustment.
- Hospital mortality is higher for patients with transfemoral access even after adjustment.

Differences between patients with transr

In %	Transradial access	Transfemoral access	p
Age ≥75 J.	25.4	29.3	<0.001

Women	26.0	31.2	<0.001
STEMI	50.9	50.6	0.764
Diabetes mellitus	27.1	30.3	0.001
Renal failure	12.4	17.0	<0.001
CHF	9.4	16.1	<0.001
Previous MI	15.5	20.0	<0.001
Previous PCI	19.3	23.4	<0.001
Cardiogenic shock on admission	2.9	10.4	<0.001
IABP	0.7	3.5	<0.001
Bleeding (Gusto)			
mild	1.4	3.3	
moderate	0.8	1.5	<0.001
severe	0.3	0.8	
Hospital mortality	2.8	7.8	<0.001

Patients treated with transfemoral access are older, more often women, suffer from more comorbidities and are acute more severely ill. They bleed and die more often in the hospital.