

Transradial versus transfemoral intervention for acute myocardial infarction: Bleeding complications and short term outcome – Data of the Berlin Myocardial Infarction Registry

Authors: J.- U. Röhnisch, B. Maier, S. Behrens, R. Schoeller, H. Schühlen, H. Theres

Background

Transradial intervention is been used more commonly in the last years and is being recommended for treatment of patients with myocardial infarction (MI) by the scientific medical societies, if the necessary experience required for the performance exists (Consensus document on the radial approach in percutaneous intervention Hamon EuroInterventions jan 2013; ESC-2012 AMI-STEMI guidelines). We analysed the situation in Berlin under day-to-day circumstances.

Methods

The Berlin Myocardial Infarction Registry (BMIR) prospectively collects data on hospital treatment of patients with ACS since 1999. Since 1.4.2011 the interventional approach (transradial or transfemoral) is also collected. In our study we included all 4287 patients treated with primary PCI from 16 hospitals between 1.4.11-31.12.12. Bleeding complications were collected according to the GUSTO criteria (mild, moderate, severe). Factors of influence on the choice of intervention and on hospital mortality were also analysed.

Results

1785 patients were treated transradial (41.6%), 2502 transfemoral (58.4%).

Table 1: Differences between patients treated with transradial versus transfemoral intervention

	Transradial intervention	Transfemoral intervention	p
Age in yrs.	63.9	65.3	<0.001
Women	24.9	28.8	0.005
STEMI	53.2	50.7	0.098
Diabetes mellitus	24.9	30.3	<0.001
Renal failure	10.4	15.3	<0.001
CHF	8.0	15.6	<0.001
Previous MI	14.4	21.7	<0.001
Previous PCI	16.8	25.3	<0.001
Cardiogenic shock on admission	2.3	10.4	<0.001
IABP	1.2	5.3	<0.001
Bleeding (Gusto)			
mild	2.0	3.2	<0.001
moderate	0.8	1.7	
severe	0.4	0.7	
Hospital mortality	2.9	7.6	<0.001

Patients treated with a transfemoral compared to a transradial approach were older, more often women, had more comorbidities, were acute more severely sick, suffered more from bleedings and died more often in the hospital.

Even after adjustment for factors significantly influencing hospital mortality the transfemoral approach showed an OR=1.59 (95% KI: 1.06-2.39) compared to transradial intervention. Transfemoral intervention also caused more bleeding complications even after adjustment (OR=1.89 (95% KI: 1.09-3.28)).

Conclusions

1. Transradial intervention is used in 41.6% of patients in the BMIR hospitals.
2. Mild, moderate, and severe bleeding occurred significantly less often with the transradial approach.
3. Frequency for moderate to severe bleeding is higher for transfemoral versus transradial intervention after adjustment.
4. **Our registry data show that** hospital mortality is higher for MI patients after transfemoral intervention even after adjustment. **A RCT is warranted.**

ESC jens-uwe.roehnisch@t-online.de Passwort: kardio