

# Routine invasive strategy for women with NSTEMI? - Results of the Berliner Herzinfarktregister (BHIR)

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## Purpose

In patients with acute coronary syndromes (ACS) two treatment strategies are possible: a routine invasive strategy where all patients undergo coronary angiography (usually within 72 hrs) and, if indicated, coronary revascularisation is performed; or a conservative approach where medical therapy is used initially and revascularisation may be performed later if ischemia and symptoms persist. It is under discussion whether female patients with NSTEMI benefit from a routine (early) invasive therapy as women are usually underrepresented in the treatment trials. Therefore, we analysed our data concerning the effect of a routine invasive strategy on hospital mortality in female and male patients with NSTEMI and STEMI.

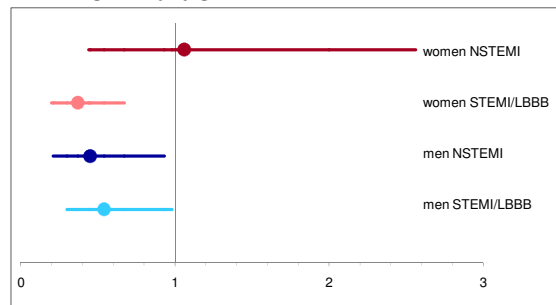
## Results

**Fig. 1: Baseline characteristics in female and male patients with NSTEMI vs. STEMI**

Baseline characteristics	women			men		
	NSTEMI	STEMI / LBBB	p	NSTEMI	STEMI / LBBB	p
Age ≥ 75 yrs.	45.9%	41.7%	0.078	23.2%	15.1%	<0.001
Diabetes mell.	39.0%	31.7%	0.002	30.2%	22.4%	<0.001
Renal failure	21.0%	15.0%	0.001	16.0%	10.4%	<0.001
CHF	21.3%	15.1%	0.001	15.2%	10.9%	<0.001
Atrial fibrillation	12.8%	8.2%	0.002	9.4%	5.4%	<0.001

p<0.05 for comparison of NSTEMI patients according to sex and STEMI patients according to sex

**Fig. 4: ORs for influence of PCI on in-hospital mortality after adjustment\* for female and male patients with NSTEMI and STEMI**



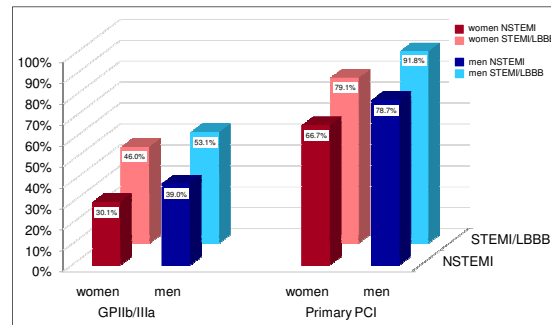
\* adjusted for age in years, cardiogenic shock on admission, renal failure, diabetes mellitus, CHF

## Methods

The BHIR is an ongoing myocardial infarction registry in the city of Berlin established in 1999 which collects data on the treatment and outcome of male and female patients with an acute myocardial infarction (Pre-hospital time <48 hrs) prospectively and standardized.

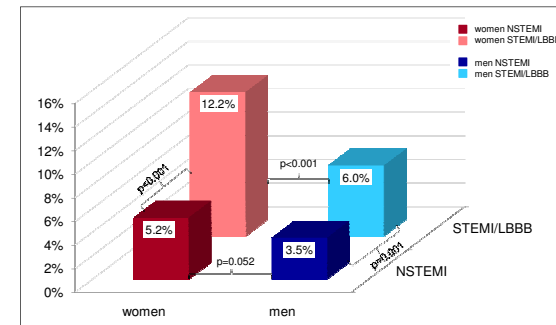
For this analysis data from 5249 patients admitted to hospitals with PCI-facilities between Jan. 2004 and Dec. 2007, stratified for STEMI/LBBB (m=1990/w=935) and NSTEMI (m=1510/w=814), was included and compared.

**Fig. 2: Therapy in female and male patients with NSTEMI vs. STEMI**



p<0.001 for comparison of NSTEMI/STEMI and of women/men. There was no difference in patients with NSTEMI vs. STEMI in initial medical therapy regarding the use of ASA, BB, ACEI or statin.

**Fig. 3: In-hospital mortality in female and male patients with NSTEMI vs. STEMI**



## Summary and conclusions

- Female patients with NSTEMI were the oldest patient group and showed significantly more concomitant diseases than female patients with STEMI and male patients with NSTEMI/STEMI.
- Regarding initial medical therapy a GPIIb/IIIa-Antagonist was used less often in female patients with NSTEMI than in the other groups.
- Female patients with NSTEMI received primary reperfusion therapy (mostly PCI) less often than female patients with STEMI and male patients with NSTEMI/STEMI.
- Female patients with NSTEMI had a significantly lower hospital mortality rate than female patients with STEMI. Hospital mortality in men with NSTEMI tended to be lower. However, the difference was insignificant.
- Female patients with NSTEMI did not, after adjustment, benefit from a routine/early invasive therapy compared with the other groups.
- This data is from a registry. It should be validated in randomized-controlled trials and data from other registries. Further research may be needed to determine an appropriate and optimal strategy for female patients with NSTEMI.

Hospitals participating in the third phase of the BHIR since 1.1.2007

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