

POSTER PRESENTATION

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# Impact of gender on the prevalence and extent of microvascular obstruction after st-elevation myocardial infarction

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## Background

Baseline characteristics of women suffering from ST-elevation myocardial infarction (STEMI) diverge compared to men. Therefore the presence and extent of microvascular obstruction (MO), which has been shown to be a prognostic marker for adverse clinical outcome after STEMI, might differ between genders. Up to date gender differences of MO after STEMI have not been evaluated.

## Methods

STEMI patients reperfused by primary angioplasty (n=423) within 12 hours after symptom onset underwent contrast-enhanced-MRI at a median of 3 (interquartile range [IQR] 2;4) days after the index event. MO was measured 15 minutes after gadolinium injection with late enhancement sequences and evaluated qualitatively and quantitatively (as percentage of left ventricular mass [%LV]).

## Results

A total of 105 women and 318 men were analysed (24.6 vs. 76.4%,  $p < 0.001$ ). In comparison to men, women were significantly older (71.5 [IQR 63.4;77.0] vs. 63.7 [IQR 54.0;71.0] years,  $p < 0.001$ ), displayed longer symptom-onset-to-reperfusion times (241 [IQR 156;389] vs. 196 [IQR 132;337] minutes,  $p = 0.04$ ), a higher prevalence of diabetes mellitus (35.9 vs. 23.3%,  $p = 0.02$ ) and arterial hypertension (76.7 vs. 65.6%,  $p = 0.04$ ). Complete epicardial reperfusion defined as post-PCI TIMI-flow III (95.2 vs. 95.2%,  $p = 1.0$ ) did not differ significantly between genders.

The prevalence and extent of MO, infarct size and left ventricular ejection fraction were similar in women and

men (MO presence: 65.4 vs. 71.9%,  $p = 0.22$  / MO extent: 0.59 [IQR 0;1.24] vs. 0.71 [IQR 0;2.0] %LV,  $p = 0.47$ ; infarct size: 13.9 [IQR 5.8;25.6] vs. 18.4 [IQR 8.7;29.0] % LV,  $p = 0.14$ ; ejection fraction: 52.2 [IQR 42.6;60.0] vs. 49.4 [40.7;57.9] %,  $p = 0.16$ ).

## Conclusion

Despite longer ischemic time and a more disadvantageous cardiovascular risk profile in women the prevalence and extent of MO do not differ between genders.

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