

**WALKING POSTER PRESENTATION**

**Open Access**

# Characterization of peripartum cardiomyopathy by cardiovascular magnetic resonance imaging

Arash Haghikia<sup>1\*</sup>, Philipp Röntgen<sup>1</sup>, Jens Vogel-Clausen<sup>2</sup>, Denise Hilfiker-Kleiner<sup>1</sup>, Johann Bauersachs<sup>1</sup>

From 18th Annual SCMR Scientific Sessions  
Nice, France. 4-7 February 2015

## Background

Peripartum Cardiomyopathy (PPCM) is a potentially life threatening disease and the major cause of acute heart failure in the peripartum period. While many aspects of its clinical profiles have been frequently reported, functional analysis, in particular of the right ventricle, and tissue characterization by cardiovascular magnetic resonance (CMR) imaging have been only sporadically described. The aim of the present study was to analyze pathological alterations found in CMR imaging of patients newly diagnosed with PPCM.

## Methods

This was a multicenter study enrolling 34 patients with confirmed PPCM who underwent CMR imaging at the time of diagnosis.

## Results

Cine imaging of PPCM patients showed moderate to severe reduction of systolic left ventricular (LV) function (mean LVEF: 29.7±12.8%). In 35% of the patients right ventricular (RV) systolic function was also reduced with a mean RVEF of 42.9±13.9%. Dilatation of the LV was observed in 91% (mean LV-EDV/BSA 128.5±32.1 ml/m<sup>2</sup>) and dilatation of the RV was present in 24% (mean RV-EDV/BSA 87.4±18.5 ml/m<sup>2</sup>) of the patients. Focal non-ischemic late gadolinium enhancement (LGE) was visible in 71% and regional wall motion abnormalities were evident in 88% of the patients. LGE and wall motion abnormalities were predominantly located in the antero-septal and basal to midventricular segments.

## Conclusions

Beside LV systolic dysfunction, RV dysfunction and dilatation are frequently observed in PPCM patients at the

time of diagnosis. The presence of LGE suggests focal damage of myocardial tissue. A distinct pattern of LV wall motion abnormalities is evident in most PPCM patients. The present study may help to establish a set of CMR criteria suitable for diagnosis in patients with suspected PPCM and contribute to our understanding of this disease.

## Funding

This study was supported by the German Research Foundation (DFG), the German Federal Ministry of Education and Research (BMBF) and the Cluster of Excellence “Regenerative Biology to Reconstructive Therapy” (Rebirth).

## Authors' details

<sup>1</sup>Cardiology and Angiology, Hannover Medical School, Hannover, Germany.  
<sup>2</sup>Radiology, Hannover Medical School, Hannover, Germany.

Published: 3 February 2015

doi:10.1186/1532-429X-17-S1-Q46

**Cite this article as:** Haghikia et al.: Characterization of peripartum cardiomyopathy by cardiovascular magnetic resonance imaging. *Journal of Cardiovascular Magnetic Resonance* 2015 17(Suppl 1):Q46.

**Submit your next manuscript to BioMed Central  
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at  
[www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)



<sup>1</sup>Cardiology and Angiology, Hannover Medical School, Hannover, Germany  
Full list of author information is available at the end of the article