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Peripartum Cardiomypathy- Evaluation with Trans-Thoracic Echocardiography (TTE) and Cardiac MRI (CMR)

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Purpose:
Peripartum cardiomypathy (PPCM) is defined as new onset heart failure (HF), between the last month of pregnancy and 5 months post partum, absence of HF cause or recognizable heart disease and demonstration of left ventricular (LV) dysfunction.
The purpose of the study is to report trans-thoracic echocardiography (TTE) and cardiac MRI (CMR) findings in patients with clinically suspected PPCM.

Patients and methods:
The study cohort included 5 patients , mean age 35.8±4 years (range: 30-42). All presented with new onset peripartum HF.
All patients underwent TTE and CMR. Two patients performed a follow-up CMR. TTE: according to the American Society of Echocardiography standard. CMR: 1.5T scanner; steady state free precession and late gadolinium enhancement (LGE) sequences.

Results: TTE was performed within 1-2 day from presentation; CMR was performed in 3 patients within 1-2 day and in 2 patients within 4 months. TTE demonstrated an average left ventricular ejection (LVEF) fraction of 22±14% (range15-45%). Accordingly, average LVEF at CMR was 25±21 (range15-63%). Linear or punctuate midwall septal LGE was demonstrated in 4/5 of the patients. A repeat CMR scan in two patients (at nine and eleven months after the initial scan) demonstrated mild LVEF improvement (15% to 27%) but with no change in LGE pattern.

Conclusions:
PPCM is a diagnosis of exclusion in peripartum patients. We demonstrated septal LGE in 4/5 patients of our cohort. This suggests that CMR may contribute new data, in the non invasive evaluation of PPCM, and in the understanding of the pathologic basis of PPCM.