

### **Echocardiographic Evaluation of Patients with Acute Heart Failure during Pregnancy with or without Identifiable Precipitating Factors.**

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Background: Peripartum cardiomyopathy (PPCM) is defined as the onset of cardiac failure without identifiable cause 1 month pre, to 5 months post-partum. Because it is difficult to distinguish between classical PPCM and acute heart failure (AHF) due to a precipitating factor(PF), most such patients are usually discharged with a diagnosis of PPCM, an ominous prognostic factor regarding future pregnancies.

Methods: We studied women diagnosed with PPCM according to Leviev Heart Center registry between 1998-2009 in order to differentiate between patients with and without PF. Mean follow up time was 39±38 months(1-140) .

Results: PPCM was diagnosed in 41 women. Seventeen had identifiable PF for AHF (5 hypertensive crisis or eclampsia, 6 acute blood dyscrasia with massive fluid reposition, 2 sepsis, 4 other causes). Presentation with acute pulmonary edema was more common in women with PF (58% vs 25%, p=0.05).

#### Baseline Echocardiographic Characteristics of Patients with AHF with and without PF

	AHF WITH PF	AHF WITHOUT PF	p
LVEDD(mm)	51±6	57±7	0.01
LVESD(mm)	39±6	46±7	0.003
LVEDD/BSA(mm/m <sup>2</sup> )	29±3	32±4	0.01
LVEF(%)	35±9	27±10	0.006
SF(%)	23±8	19±6	0.1

LVEF, LV ejection fraction; LVEDD, LV end-diastolic dimension; LVESD, LV end-systolic dimension; BSA, Body Surface Area.

During the follow up period 83% of women with PF vs. 30% without PF improved their LVEF to  $\geq 50\%$  ( p<0.01).

Conclusions: Women who develop AHF with identifiable PF have smaller baseline LV dimensions and better LVEF than patients without PF. Unlike patients with heart failure without PF (PPCM), most of the patients with AHF+PF recover LV function allowing positive consideration of future pregnancies.