Pregnancy in women with a cardiomyopathy: outcomes and predictors from a retrospective cohort

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Background and objective Pregnanacies in women with cardiomyopathies are considered at high risk for complications. However we lack data to characterise their natural history and to predict the outcome. Our aim was to evaluate the prevalence and predictors of acute cardiac and obstetrical events in pregnant women with a cardiomyopathy, excluding peripartum cardiomyopathy.

Methods and results The monocentric retrospective survey includes 43 pregnancies in 36 women with dilated cardiomyopathy (DCM, n=10), hypertrophic cardiomyopathy (HCM, n=28), arrhythmogenic right ventricular cardiomyopathy (ARVC, n=3), tachycardia-induced-cardiomyopathy (TCM, n=1) and non-compacted left ventricle (NCLV, n=1). There were 1 fetal death (with maternal cardiac death), 10 (23%) preterm deliveries and 11 (26%) low neonatal birth weights. There were major maternal cardiovascular events in 14 pregnancies including 6 acute heart failures (5 DCM, HCM), and 3 cardiac deaths, which occurred in cases that did not follow our usual multidisciplinary protocol (1 pregnancy denial with DCM, 1 undiagnosed HCM, 1 DCM recognized near term). CARPREG score was predictive of maternal cardiac events that occurred in 67%, 33% and 25% of pregnancies with CARPREG scores of 2, 1 and 0 respectively. However major complications (heart failure, asymptomatic degradation of LVEF, and symptomatic aggravation of pulmonary artery hypertension) occurred in 3 women with no known risk factors. LV ejection fraction alone, gradient in HCM, ZAHARA or WHO scores were less discriminant than CARPREG for maternal outcome.

Conclusion Pregnancy in women with a cardiomyopathy is a high risk period for both major cardiac and fetal events. The worst complications occurred in cases that did not benefit from a multidisciplinary team management. The highest rate of events was observed in DCM patients but significant risk was also associated with HCM. Prediction of risk with CAPREG scoring is appropriate but need to be improved.

The author hereby declares no conflict of interest