PhD student:
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Research project:
The Impact of Right Ventricular Dysfunction on clinical long-term outcomes in Genotyped Dilated/Non-Dilated Left Ventricular Cardiomyopathy

Abstract:
Background. Right ventricular (RV) dysfunction is frequently present in patients with dilated cardiomyopathy (DCM) at initial evaluation and is associated with poor outcomes including heart failure hospitalization and death. However, the prevalence of RV dysfunction and its impact on clinical outcomes including left ventricular reverse remodeling (LVRR) is unknown in genetic DCM.
Aim. We aim to describe the prevalence of RV dysfunction at initial evaluation and its impact on clinical outcomes in a genotyped cohort of patients with DCM and non-dilated left-ventricular cardiomyopathy (NDLVC).
Methods.
Patients were classified as genotype positive (G+) if carrying a pathogenic/likely pathogenic (P/LP) variant; otherwise, they were classified as genotype negative (G-). All patients have their RV function evaluated through either echocardiography or cardiac magnetic resonance (CMR) at baseline. Most of the patients have an echocardiographic RV assessment at baseline. 65% have CMR available. RV dysfunction will be considered as both continuous (FAC, TAPSE, S') and binary (yes/no) variable at echocardiography. Similarly, RV dysfunction will be considered as both continuous (RV ejection fraction) and binary variable at CMR.
Echocardiographic variables
DCM is defined as the presence of left ventricular ejection fraction (LVEF) <50%, with LV end-diastolic diameter (LVEDD) >58mm males/>52mm females in the absence of secondary causes of systolic impairment, such as significant coronary artery disease (>50% stenosis of any major coronary artery branch) or primary valvular disease. NDLVC is defined as the presence of LVEF<50% without LV dilation, in the absence of secondary causes of systolic impairment. RV dysfunction is defined as a fractional area change (FAC) <35% (TAPSE and S` were used in a subset of those patients who did not have FAC available).
LVRR is defined as an LVEF increase of ≥ 10% points as compared to baseline or ≥50% and LVEDD reduction ≥10% or to ≤33 mm/m2 for DCM. LVRR is defined as an LVEF increase of ≥ 10% points (and above 30%) or ≥50% for NDLVC.
Cardiac Magnetic Resonance variables
RV dysfunction is defined as an EF<52% for women and <53% for men. RV dysfunction is categorized into mild (41-51%), moderate (30-40%), and severe (<30%).
RV dilation is defined as an RV end-diastolic volume indexed (RVEDVi) >112 ml/m2 for women and >121 ml/m2 for men.
Clinical outcomes are described as follows:
-End-stage heart failure (ESHF): composite of ventricular assist device implantation, heart transplant, and CV-related mortality.
-HF hospitalizations.

-All-cause mortality.

Results.
Currently analysing data.