

CR (Figures 1-2). Increase in LVEF 5% had a significant impact on survival both on patients that underwent aortic valve intervention (log rank $p=0.03$) and those who underwent medical management (log rank $p=0.01$), as opposed to presence of SVFR (log rank $p=0.234$ and $p=0.708$ respectively).

Conclusions During LDDSE in LFLGAS normalised FR, not SVFR, is a better determinant of TSAS, whereas assessment of LVEF change instead of SVFR determines CR.

Valve Disease/Pericardial Disease/ Cardiomyopathy

125

EVALUATION OF TITIN CARDIOMYOPATHY IN PATIENTS WITH DILATED CARDIOMYOPATHY REVEALS A BLUNTED HYPERTROPHIC RESPONSE, AN EARLY ARRHYTHMIC RISK AND A SIGNIFICANT INTERACTION WITH ALCOHOL

¹Upasana Tayal*, ²Rachel Buchan, ¹Nicola Whiffin, ³Simon Newsome, ¹Roddy Walsh, ²Paul Barton, ¹James Ware, ¹Stuart Cook, ²Sanjay Prasad. ¹Imperial College; ²Royal Brompton Hospital; ³London School of Hygiene and Tropical Medicine

10.1136/heartjnl-2017-311726.124

Background Titin truncating variants (TTNtv), found in ~10%–20% of dilated cardiomyopathy (DCM), are notable for variable penetrance and expressivity. We evaluated whether TTNtv DCM patients had distinct phenotypic features, which may influence disease outcomes.

Methods Prospectively recruited DCM patients underwent comprehensive clinical evaluation, cardiac MRI and TTN sequencing.

Results Overall, 572 subjects, 388 men (67.8%), mean age 53.5 ± 14.4 years, were recruited. TTNtv were found in 56 patients (9.8%) and were associated with lower indexed LV mass (LVMi) and thinner LV walls, in the absence of differences in LV volumes after adjusting for clinical covariates (LVMi 83.1 vs. 94.0 g/m², $p=0.008$; max. LV wall thickness 9.1 vs.

10.1 mm, $p=0.003$; indexed LV end diastolic volume 122.7 vs. 131.3 mls/m², $p=0.07$).

196/572 patients (34%) had atrial fibrillation or ventricular arrhythmia at recruitment. Adjusting for age, gender, baseline ventricular function, and left atrial volume, TTNtv independently associated with early arrhythmic burden (adjusted OR 2.90, CI 1.48 to 5.77, $p=0.002$). On sensitivity analysis, this association remained significant after exclusion of 12 patients with rare LMNA variants (adjusted OR 2.88, CI 1.45 to 5.81, $p=0.003$).

TTNtv alone did not predict LVEF but in the presence of a history of alcohol excess, LVEF was reduced by 17.5% ($p<0.0001$), independently of other predictors of LVEF (age, gender, NYHA class, mid-wall fibrosis, and a family history of NIDCM).

Conclusions These data demonstrate that DCM due to TTNtv is associated with a blunted hypertrophic response, highlighting possible disease mechanisms. We also demonstrate that TTNtv are independently predictive of early arrhythmia and show a significant gene-environmental interaction between TTNtv and alcohol, which may inform risk stratification.

126

DOES HYPERTROPHIC CARDIOMYOPATHY GENOTYPE AFFECT TISSUE DOPPLER IMAGING PARAMETERS OVER 3-YEAR FOLLOW-UP PERIOD?

¹Wern Yew Ding*, ²Mohammed Meah, ²Robert Cooper, ²David Oxborough, ²John Somauroo. ¹Countess of Chester Hospital; ²

10.1136/heartjnl-2017-311726.125

Introduction Recent studies suggest that tissue Doppler imaging (TDI) have prognostic value in hypertrophic cardiomyopathy (HCM). We aimed to identify if there was a difference in rate of deterioration of TDI values of diastolic function and longitudinal systolic function according to genotype status. **Methods** Aprospective, single-centre observational study over 33 months was undertaken. Twenty-six HCM patients were assigned a group according to genotype status (G+ve (n=14) vs G-ve (n=12)). Differences in baseline and follow-up TDI

Abstract 126 Table 1 Changes in TDI parameters according to HCM genotype

Value		Baseline, mean (SD)	Follow up, mean (SD)	Change	p value for Change (G+ve vs G-ve)
Medial E	G+ve	6.33 (0.50)	7.85 (0.75)	+1.52	0.002
	G-ve	6.57 (0.48)	5.06 (0.46)	-1.51	
Lateral E	G+ve	9.68 (0.84)	9.86 (0.84)	+0.18	0.034
	G-ve	9.13 (0.73)	6.94 (0.73)	-2.19	
Average E	G+ve	8.00 (0.61)	8.86 (0.75)	+0.86	0.003
	G-ve	7.85 (0.53)	6.00 (0.50)	-1.85	
Medial S	G+ve	7.57 (0.48)	8.11 (0.69)	+0.54	0.200
	G-ve	7.19 (0.50)	6.68 (0.34)	-0.51	
Lateral S	G+ve	9.89 (1.01)	8.65 (0.61)	-1.24	0.387
	G-ve	9.15 (0.62)	7.76 (0.43)	-1.39	
Medial E/E	G+ve	12.59 (1.66)	9.73 (1.07)	-2.86	0.004
	G-ve	14.98 (2.09)	18.00 (2.58)	+3.02	
Lateral E/E	G+ve	8.33 (1.04)	7.23 (0.79)	-1.10	0.0003
	G-ve	9.98 (1.31)	14.05 (2.25)	+4.07	
Average E/E	G+ve	10.46 (1.31)	8.48 (0.87)	-1.98	0.0002
	G-ve	12.48 (1.66)	16.02 (2.30)	+3.54	