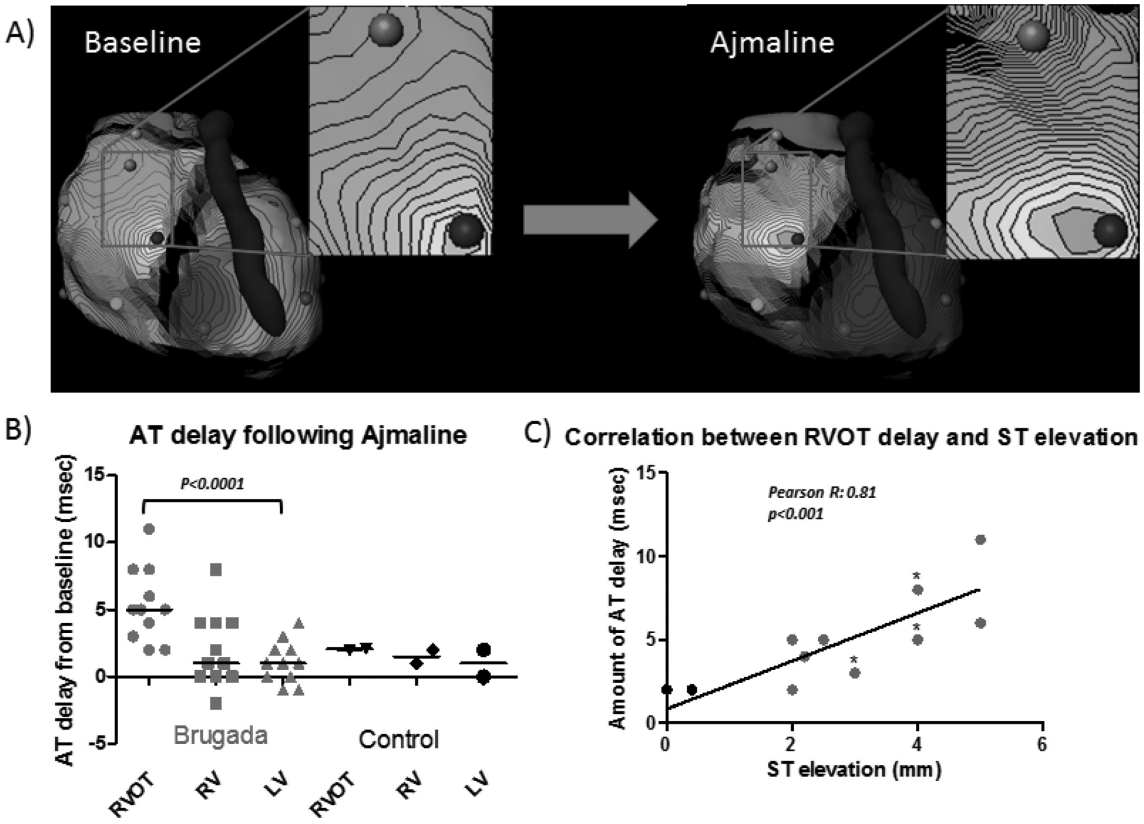

Abstract 146 Figure 1 a) Isochronal crowding seen RVOT following ajmailne, and measurement of activation times across region b) Activation time (AT) delay across the different regions. c) Correlation of RVOT conduction delay with ST elevation on ECG. Black denotes control and red denotes Brugada participants

Valve Disease/Pericardial Disease/ Cardiomyopathy

147 ELEVATED SERUM TROPONIN I IS ASSOCIATED WITH INCREASED RISK IN HCM

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The European Society of Cardiology recently recommended a new tool[1] to estimate 5 year risk of sudden cardiac death (SCD) in patients with hypertrophic cardiomyopathy (HCM). We investigated the relationship between serum cardiac troponin I (cTnI) levels and HCM-risk score in 100 consecutive patients referred to the West of Scotland Inherited Cardiac Conditions Clinic. The 20 most recent patients had a high sensitivity cTnI assay performed (limit of detection (LOD) 1.2 ng/L) and the remaining 80 had the traditional assay (LOD 10 ng/L). Demographic, clinical, genetic and imaging parameters were collected at first assessment. HCM-risk was calculated retrospectively.

Cardiac TnI was elevated in 27% of the population (n = 100, 60% male, mean age 56 ± 14, left ventricular outflow tract (LVOT) obstruction (i.e. resting gradient ≥30 mmHg) in 20%) and they had significantly higher overall HCM-risk score (3.7% v 2.2%, $p < 0.01$). Of the risk tool's component variables, an elevated cTnI was associated with increased left atrial diameter (50 ± 8 v 42 ± 8 mm, $p < 0.01$) and raised maximum LVOT gradient (33 ± 38 v 19 ± 24 mmHg, $p < 0.03$), but not with maximal wall thickness, family history of SCD, the presence of non-sustained ventricular tachycardia, history of syncope, or age at clinical evaluation. Of non-tool variables, an elevated cTnI was associated with history of atrial fibrillation (37% v 14%, $p < 0.01$) and heart failure (22% v 3%, $p < 0.01$). Finally, in a sub-group (n = 49) of patients who underwent cardiac magnetic resonance imaging, patients with an elevated cTnI were more likely to have late gadolinium enhancement (92% v 38%, $p < 0.01$).

In conclusion, serum cTnI is elevated in a significant proportion of patients with HCM and is associated with clinical markers of disease severity. Biomarkers may be useful as an adjunct to current risk models in identifying patients with adverse cardiac remodelling and underlying atrial fibrillation.

REFERENCE

1 O'Mahony C *et al*. A novel clinical risk prediction model for sudden cardiac death in hypertrophic cardiomyopathy (HCM risk-SCD). *Eur Heart J*. 2014;**35**(30):2010—20

148 THE COST EFFECTIVENESS OF SCREENING YOUNG ATHLETES WITH ECG IN THE UK

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Introduction High false positive rates and subsequent costs of additional investigations provide major obstacles to state-sponsored screening of young athletes for cardiac disease with