

POSTER PRESENTATION

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# Presence Of Left Ventricular Non Compaction In Hypertrophic Cardiomyopathy Is Associated With Arrhythmia

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## Background

Cardiac magnetic resonance (CMR) imaging allows accurate assessment of ventricular compaction. We aimed to determine whether left ventricular non-compaction (LVNC) is related to increased incidence of arrhythmia in adults with Hypertrophic cardiomyopathy (HCM).

## Methods

58 consecutive HCM patients referred for CMR between 2008-2014 were recruited. Only patients with intermediate ventricular thickness of 15-29 mm were included. Patients with apical HCM, severe LV outflow tract obstruction (resting gradient >50 mmHg) and significant loading conditions, such as aortic stenosis or hypertension, were excluded. LVNC was diagnosed as per Petersen's criteria.

## Results

66% of the patients were male, mean age  $52 \pm 18$  years, mean wall thickness was  $19 \pm 4$  mm. Amongst the 9 patients with LVNC, 5 had VT/VF, 2 had SVT and 2 had syncope. Patients with LVNC had a significantly higher prevalence of ventricular arrhythmia than those without LVNC (56% vs 18%,  $p = 0.03$ ), with a relative risk of 3.0 (95% CI 1.3 - 6.9). LV septal thickness ( $18.4 \pm 5.6$  mm vs  $18.7 \pm 3.5$  mm,  $p = 0.9$ ) and ejection fraction ( $70 \pm 7.7$  vs  $70 \pm 10.5\%$ ,  $p = 0.9$ ) did not significantly differ between those with LVNC and those without. Presence of LV scar assessed by late gadolinium enhancement was similar between the groups (89% vs 73%,  $p = 0.7$ ).

## Conclusions

Presence of LVNC may be associated with ventricular tachyarrhythmia in HCM patients and may provide a new phenotypic marker for adverse prognosis, especially in the intermediate risk group. Further studies in larger populations are required to assess its possible prognostic value.

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