NUMBER OF MORPHOLOGICAL TYPES OF VENTRICULAR PREMATURE BEATS WITH FRAGMENTED QRS WAVES MAY PREDICT POOR PROGNOSIS IN HYPERTROPHIC CARDIOMYOPATHY SUBJECTS WITHOUT OBSTRUCTIVE CORONARY ARTERIES

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: ECG and Stress: Tried and True, but Still Novel
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Background: We evaluated the significance of the number of morphological types of ventricular premature beats (VPB) with fragmented QRS waves (FQRSW) on 12-lead Holter ECG in hypertrophic cardiomyopathy (HCM) subjects without obstructive coronary arteries on 320 slice CT.

Methods: This was a retrospective analysis of 48 consecutive HCM subjects (36 males; age 61 ± 13 yrs) who underwent 320 slice CT (Aquilion one) and 12-lead Holter ECG (RAC-2103) within 12 months and who had no significant coronary stenosis (≥ 50%) on CT. Subjects were followed for a median of 51 months.

Results: A major adverse cardiac events (MACE) occurred in 6 subjects (6 males; mean age, 53 ± 20 years). According to a receiver operating characteristic (ROC) curve, the best cutoff value for numbers of morphological types of all VPB and VPB with FQRSW were 12 and 2 with area under the curve (AUC) 0.730 and 0.742, respectively, to distinguish subjects with and without MACE. Sensitivity and specificity were 66.7 and 92.9%, and 100 and 45.2% in number of morphological types of all VPBs and VPBs with FQRSW, respectively. By Kaplan Meier analysis, there was a significant difference in the occurrence of MACE between ≥ 12 and < 12 morphological types of all VPBs (P < 0.001) and between ≥ 2 and < 2 morphological types of VPBs with FQRSW (P = 0.039) during the follow up period.

Conclusion: The number of morphological types of all VPB and VPB with FQRSW on 12 lead Holter ECG may predict poor prognosis in HCM subjects without obstructive coronary arteries on CT.