

**Table 2. Resting and maximal exercise testing findings for the both group.**

Variables	CAD group n=122	Control group n=112	P value*
Resting heart rate, bpm	81(56-101)	85(50-102)	0.118
Resting QT, ms	339 ± 34	332 ± 36	0.101
Resting QTc, ms			
Bazett	390 (311-587)	393 (295-488)	0.865
Framingham	378 ± 25 a1	374 ± 27 b1	0.373
Fridericia	376(302- 491) a2	374 (279-458) b2	0.409
Hodges	394 (311-517) a3	389 (297-490) b3	0.995
Resting systolic BP, mmHg	121 ± 15	118± 17	0.158
Resting diastolic BP, mmHg	81± 6	78 ± 8	0.244
Resting to peak HR time, min	6.9±2.6	7.1 ±2.5	0.376
Peak HR, bpm	149 ±19	150 ± 20	0.861
Max. exercise QT, ms	268 (169- 438)	240 (168-348)	<0.001
Max. exercise QTc, ms			
Bazett	405 (290-556)	391 (291-537)	0.015
Framingham	360 ± 34 a1	340 ± 29 b1	<0.001
Fridericia	350 (235-515) a2	331 (242- 461) b2	0.001
Hodges	411 (331-514) a3	409 (325-497) b3	0.601
Peak systolic BP, mmHg	190 ± 27	195 ± 26	0.123
Peak diastolic BP, mmHg	95±12	98 ± 11	0.156

bpm- beat per minute, BP- blood pressure, HR- heart rate, min-minute, ms- millisecond, \* Chi square, Mann Whitney U test and unpaired Student's t-tests, paired t test and Wilcoxon rank test.a1,a2,a3 between resting and maximal exercise in the CAD group(p < 0.001), b1,b2,b3 between resting and maximal exercise in the control group (p < 0.001).

**OP-156****Relationship between Scar Size and Characteristics by ce-CMR and Tpeak-Tend Interval in Post-MI Patients with Relatively Preserved LV Functions and Nonsustained Ventricular Tachycardia**

Kivanc Yalin<sup>1</sup>, Ebru Golcu<sup>1</sup>, Hakan Buyukbayrak<sup>1</sup>, Ekrem Bilal Karaayvaz<sup>1</sup>, Cansu Selcan Akdeniz<sup>1</sup>, Ravza Yilmaz<sup>2</sup>, Memduh Dursun<sup>2</sup>, Ahmet Kaya Bilge<sup>1</sup>, Kamil Adale<sup>1</sup>

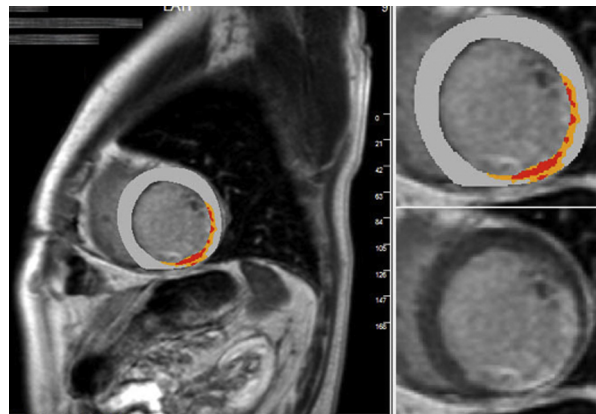
<sup>1</sup>Istanbul University, Istanbul Faculty of Medicine, Department of Cardiology, Istanbul, <sup>2</sup>Istanbul University, Istanbul Faculty of Medicine, Department of Radiology, Istanbul

**Introduction:** The Tpeak-Tend (Tpe) interval is an electrocardiographic index of transmural repolarization dispersion and has been reported to predict life-threatening arrhythmias in the long QT syndrome, Brugada Syndrome, hypertrophic cardiomyopathy and systolic dysfunction. Infarct tissue size and heterogeneity characterized by cardiac magnetic resonance (CMR) has been shown to be associated with arrhythmogenic substrates and sudden cardiac death. Although Tpe interval is not considered to reflect structural heart disease, Tpe interval was found to be correlated with extent of non-transmural scar in post-MI patients. However the relationship between perinfarction zone and scar core percent has never been studied. In this study, we aimed to study the relation between Tpe interval and scar size and characteristics assessed with CMR in post-MI patients.

**Methods:** This study was enrolled 28 post-MI patients with non-sustained ventricular tachycardia. Tpe interval was defined as the peak or nadir of T wave to the end of T wave and was measured in each precordial lead by a single blinded observer. All patients underwent both cine and contrast enhanced CMR imaging. Left ventricular ejection fraction (LVEF), scar core, peri-infarct zone and total scar masses were assessed and these values to LV mass ratios were obtained (Figure). The correlation analysis was performed to determine the relationship between Tpe interval and infarct parameters.

**Results:** All of the patients had evidence of scar on late enhanced images. Mean left ventricular ejection fraction was 44.3±4.2%. Mean scar core (>3SD SI of remote myocardium) was 3.34±0.86%, mean peri-infarct zone (2-3 SD SI of remote myocardium) 22.48±8.51% and mean total scar; 25.82±8.81% respectively. Correlation analysis showed no correlation between scar core percent (r=0.233, p=0.24), peri-infarct zone percent (r=0.144, p=0.57) and total scar percent (r=0.123, p=0.54) respectively.

**Conclusion:** There was no association between scar size, infarct heterogeneity and Tpe interval. Our data suggest that these two modalities may reflect different arrhythmogenic mechanisms.

**OP-157****Comparison of Electrocardiographic Criteria in Hypertrophic Cardiomyopathy Patients with and without Apical Aneurysm**

Enis Grbovic<sup>1</sup>, Ozcan Ozeke<sup>1</sup>, Cagatay Ertan<sup>2</sup>, Gokhan Keskin<sup>3</sup>, Bulent Deveci<sup>4</sup>, Serkan Cay<sup>1</sup>, Firat Ozcan<sup>1</sup>, Serkan Topaloglu<sup>1</sup>, Dursun Aras<sup>1</sup>, Ahmet Duran Demir<sup>2</sup>, Sinan Aydogdu<sup>1</sup>

<sup>1</sup>Turkiye Yuksek Ihtisas Hospital, Department of Cardiology, Ankara, <sup>2</sup>Acibadem University, Department of Cardiology, Eskisehir, <sup>3</sup>Acibadem University, Department of Cardiology, Ankara, <sup>4</sup>Akay Hospital, Department of Cardiology, Ankara

**Background:** Apical aneurysms in patients with hypertrophic cardiomyopathy (HCM) represent an underrecognized but clinically important subset of HCM patients, often requiring a high index of suspicion. It is commonly associated with adverse clinical course, including sudden cardiac death and embolic stroke; however it may be frequently missed by echocardiography because of poor image quality of left ventricular apex, particularly between the apical hypertrophic cardiomyopathy (ACM) and mid-ventricular obstructive hypertrophic cardiomyopathy (MVO-HCM). Previous descriptions of an association of apical aneurysm with ST segment elevation (STE) have been confined to case reports or small patient series.

**Objectives:** We aimed to compare electrocardiographic STE in HCM patients with and without apical aneurysm.

**Methods:** We developed this clinical review using an extensive MEDLINE review of the literature and data from our laboratories. By means of 12-lead electrocardiography, we measured the maximal voltage of negative T-wave in all leads, and categorized the repolarization abnormalities as ST-segment depression, STE or isoelectric ST segment (Figure 1).

**Results:** There were 29 ACM patients without apical aneurysm (Group 1; 52.6 ± 17.7 years, 69% male) and 28 MVO-HCM patients with apical aneurysm (Group 2; 59.6 ± 13.2 years, 57% male). The STE in V4-6 derivations were statistically more frequent in patients with apical aneurysm compared to those without aneurysm (93% vs 7%, p < 0.001). There was a positive correlation between the presence of the STE in V4-6 derivations and the presence of the apical aneurysm (Spearman's ρ = 0.895, P < 0.001).

**Conclusions:** Clinicians and specifically echocardiographers must pay special attention on the electrocardiography to correctly detect the frequently overlooked apical aneurysm in HCM patients, and should be careful for apical aneurysm in the presence of STE in V4-6 derivations.

