PP-009

The Morphologic and Functional Features of LAD Myocardial Bridging at 64-Detector MDCT Coronary Angiography: Correlation with Coronary Artery Disease

Ömer Çelik[1], Alper Aydın[2], Ahmet Arif Yalçın[1], Mehmet Ertürk[1], Hale Ünal Aksu[1], Ibrahim Faruk Aktürk[1], Hamdi Püşüroğlu[1], Ali Birand[1]
[1]Istanbul Mehmet Akif Ersoy Thoracic – Cardiovascular Surgery Training and Research Hospital Cardiology Department, Istanbul, [2]University of Bahçeşehir Departman of Cardiology, Istanbul

Objectıve: The aim of this study was to retrospectively evaluate the morphologic and functional features of myocardial bridging (MB) with multi-detector computed tomography (MDCT) coronary angiography.
Methods: The study population consisted of 191 consecutive patients who underwent coronary artery angiography with MDCT. Besides coronary lesions, morphologic features of the MB (depth, length and the distance of the tunneled artery from the left coronary ostium) were analysed.
Results: MDCT detected and satisfactorily depicted MB on left anterior descending artery in 41 patients (21.5%). Statistically significant correlation was observed between the percentage of systolic compression and the depth of the tunneled segment ($r=0.538$, $p<0.01$). Morphologic features of MB were not significantly related to the presence of CAD in proximal segments.
Conclusıons: MDCT coronary angiography depicts the morphological and functional features of the MB in detail. With the rapid improvements in MDCT technology, MDCT coronary angiography steps forward and/or will be more prominent as the reference imaging modality in evaluation of the presence of coronary MB.

PP-010

Association of Red Blood Cell Distribution Width with Coronary Artery Calcification

Özgül Malçok Gürel[1], Ayse Bilgic[2], Bora Demirçelik[1], Mahmut Güneş[1], Ömer Çağlar Yılmaz[3], Fadime Bozduman[1], Kemal Kahyalar[1], Yusuf Selcoki[1], Aslı Atar[1], Beyhan Eryonucu[1]
[1]Turgut Ozal University, School of Medicine, Department of Cardiology, Ankara, [2]Turgut Ozal University, School of Medicine, Department of Nephrology, Ankara, [3]Ankara Occupation Hospital, Cardiology, Ankara

Background: Red blood cell distribution width (RDW) was found to be associated with cardiovascular morbidity and mortality. The severity of coronary artery calcification (CAC) detected by computerized tomography (CT) correlates with coronary plaque burden which makes CAC an important marker of atherosclerosis. We aimed in this study to investigate whether serum RDW levels are associated with CAC in patients with low-intermediate risk for CHD but without known coronary heart disease (CHD).
Methods: A total of 531 patients who underwent coronary CT angiography were enrolled in this study. Patients were divided into three groups according to coronary artery calcification score (CACS) and groups were compared in terms of classical risk factors and RDW: Group I, CACS=0; Group II, CACS= 0-100; Group III, CACS>100.
Results: Mean age of patients was 55.2±8.4 yr. When groups compared with one-way ANOVA, age ($p<0.001$), neutrophil count ($p=0.03$), platelet count ($p=0.02$), and RDW ($p=0.02$) were statistically different. According to post-hoc analysis significant difference was detected between Group II and III (12.9±0.9 vs 13.3±1.7, $p=0.02$) but not in between Group I and II ($p>0.05$) or Group I and III ($p>0.05$) in terms of RDW. There was significant positive correlation between RDW and CACS ($r=0.131$, $p=0.002$). In a receiver operating characteristic (ROC) curve analysis, the RDW value of 13.05% was identified as an effective cut-point in predicting the severity of CACS (>100) with a sensitivity of 38.7% and a specificity of 66.0%.
Conclusion: RDW is associated with CAC, suggesting that it might be an available marker for the prediction of severity of CAC.

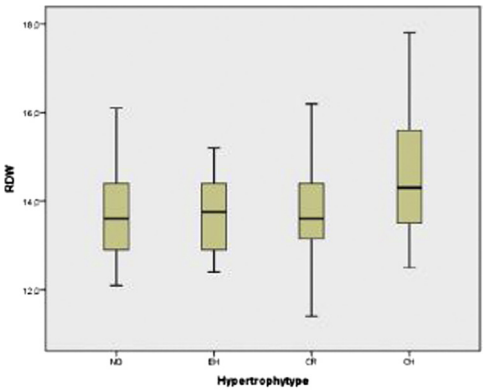
Hypertension

PP-011

Red Cell Distribution Width and Abnormal Left Ventricle Geometric Patterns in Patients with Untreated Essential Hypertension

Barış Kılıçaslan, Hüseyin Dursun, Cenk Ekmekçi, Mehmet Aydın
Tepecik Research and Training Hospital, İzmir

Aim: Abnormal left ventricle (LV) geometric patterns are associated with a greater risk of hypertensive vascular complications. Red cell distribution width (RDW) reflects adverse cardiovascular outcomes and higher inflammatory status. Although association between RDW and hypertension has been investigated, relation between abnormal LV geometric patterns and RDW was not studied previously. The aim of this study was to investigate the relationship between RDW and abnormal LV geometric patterns in untreated essential hypertension.
Methods: Measurements were obtained from 139 patients with untreated essential hypertension (Mean age= 51.3±16.3 years). Four different geometric patterns (NG; normal geometry, CR; concentric remodelling, EH; eccentric hypertrophy, CH; concentric hypertrophy) were determined according to the LV mass index (LVMI) and relative wall thickness (RWT). RDW, lipid parameters and other biochemical markers were measured in all patients.
Results: The highest RDW values were determined in CH group compared with NG, CR and EH groups ($p<0.05$, for all). RDW values were similar among the NG, CR and EH groups ($p<0.05$, for all). RDW was associated with age, LVMI and LV geometry in bivariate analysis ($p<0.05$, for all). Age (beta= 0.309, $p=0.001$), LV geometry type (beta= 0.228, $p=0.01$) and RWT (beta= -0,278; $p=0.25$) were independent predictors of high RDW in multiple linear regression analysis. The highest RDW values were observed in the CH group.
Dıscussıon: The highest RDW values were observed in the CH group compared with other geometric patterns independently of age and anemia. RDW could be a predictor of end organ damage in untreated hypertensive patients.



RDW- Red cell distribution width, NG- normal geometry, EH- Eccentrix hypertrophy, CR- concentric remodelling, CH- concentric hypertrophy

Comparison of baseline, echocardiography and laboratory characteristics

Variables	NG group (n=36)	CR group (n=35)	EH group (n=30)	CH group (n=38)	f	P value
AGE (year)	45,2± 17.6	54,7± 16.8	52.8± 16.4	52.0± 13.8	2.313	0.079
SBP (mmhg)	135,8± 10.5	138,8± 14.9	140,3± 9,9	145,9± 15,5	3.824	0.011
DBP (mmhg)	84,1± 7.2	89,8± 10.7	89,1± 9.6	90.6± 11.6	3.197	0.026
RDW (%)	13,7± 1.0	13,7± 1.1	13,7± 0.8	14,7± 1.5 c	5,225	0,002
LVDD (mm)	42,6± 3.3	49,8± 2.4	46,3± 3.5	44,6± 3.3	24.924	<0.001
LVSD (mm)	25,4± 4.4	30,4± 2.8	28,5± 3.7	26,1± 4.6	9.05	<0.001
LV MASS (g)	139,6± 29.1	159,9± 36.6	206.4± 29.1	218,2± 44.5	36.611	<0.001
LVMI (g/m2)	79,6± 12.3	87,0± 15.6	126,2± 20.1	113,7± 12.1	67,824	<0.001
RWT (mm)	0,50± 0.04	0,43± 0.02	0,53± 0.07	0,41± 0.03	42,028	<0.001