agreement (6.3±5.8 vs. 6.0±4.8, kappa = 0.74 (p<0.001). Calcified lesions were identified to a similar extent (28 vs. 26 cases) with fair degree of agreement (kappa=0.40). Both Bifurcation lesions and total occlusions were identified to a similar degree by MSCTA and ICA, (kappa=0.38 for bifurcation lesions and =0.64 for total occlusion). For lesions identified with both techniques the degree of agreement was higher than total score (6.5±4.8 for ICA vs. 6.9±6.3 for MSCTA, p<0.05), kappa = 0.76).
Conclusion: We found a good degree of agreement between 64 MSCTA and ICA in syntax score calculation. Larger studies with new scanners of MSCT are needed to confirm our results.

CRT-303

NonInvasive Assessment of Plaque Characteristics with Dual Source Multislice Computed Tomography Coronary Angiography in Symptomatic Controlled Diabetic Patients

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Objective: Cardiovascular events are high in patients with type II diabetes, whereas their risk stratification is more difficult. The higher risk may be related to differences in coronary plaque burden and composition. The purpose of this study was to evaluate whether differences in the extent and composition of coronary plaques in patients with and without diabetes can be observed using multi slice computed tomography (MSCT).
Research design and methods: MSCT was performed in 100 patients (56 [56%] with type II diabetes) we also use HA1c as a predictor to differentiate between controlled and uncontrolled diabetic patients. The number of diseased coronary segments was determined per patient; each diseased segment was classified as showing obstructive (50% luminal narrowing) disease or not. In addition, plaque type (non calcified, mixed, and calcified) was determined. Plaque characteristics were compared in patients with and without diabetes and also between controlled and uncontrolled diabetic patients. Regression analysis was performed to assess the correlation between plaque characteristics and diabetes.
Results: Patients with diabetes showed significantly more diseased coronary segments than non diabetic patients (4.870 ± 2.488 vs. 2.130 ± 1.558, P < 0.001*) with more non obstructive (3.833±2.847 vs. 0.567 ±1.558, P < 0.001*) plaques. Relatively more non calcified (0.833±0.841 vs. 0.348±0.640) and calcified (3.278±2.528 vs. 0.565±0.935) and less mixed (0.741±0.894 vs. 1.217±1.191) plaques were observed in patients with diabetes (P < 0.02). Also patients with uncontrolled diabetes showed significantly more non calcified plaques than patients with controlled diabetes (1.50 ± 0.67 vs 0.375 ± 0.609, P< 0.001*). Diabetes correlated with the number of diseased segments and non obstructive, non-calcified, and calcified plaques.
Conclusions: Differences in coronary plaque characteristics on MSCT were observed between patients with and without diabetes and patients with controlled and uncontrolled diabetes. Diabetes was associated with higher coronary plaque burden. More non calcified and calcified plaques and less mixed plaques were observed in diabetic patients and also more non calcified plaques were observed in uncontrolled diabetic patients. Thus, MSCT may be used to identify differences in coronary plaque burden, which may be useful for risk stratification.

Imaging

CRT-304

Validity of Tissue Doppler Markers in the Assessment of Pulmonary Hypertension

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Background: The accuracy of tissue Doppler parameters of right ventricular function including Isovolumic relaxation time (IVRT) and Isovolumic contraction time (IVCT) have not been validated sufficiently in pulmonary hypertensive patients (pts).
Purpose: To assess the ability of tissue Doppler imaging (TDI) - as a noninvasive method- to predict pulmonary artery pressure and to determine the possibility of assessment of severity of pulmonary hypertension.
Patients and Methods: The study population comprised three parallel groups of consecutive patients. The study groups were: Group I (31 control subjects) in which conventional Doppler and TDI-derived echocardiographic variables were measured from lateral tricuspid annulus and compared with Group II (30 pts with pulmonary hypertension and normal left side structure and function) and group III (30 pts with pulmonary hypertension and dilated cardiomyopathy).
Results: In group I the median age of the pts was 40.4 years, 68% of them were males, in group II the median age of the pts was 35.5 years, 76.7% of them were females while in group III the median age of the pts was 33.5 years, 80% of them were males. The estimation of PASP was derived from tricuspid regurgitation velocity according to the Bernoulli equation. The measurement of IVRT was calculated using pulsed tissue Doppler. In group II and in group I (p, 0.0001), the average IVRT was 81.00±6.3 ms [95% confidence interval (CI):65–96] and 32.3±7.05 ms (95% CI: 20–50), respectively. We found a strong correlation between IVRT and systolic pulmonary pressure in group II (r=0.57, p, 0.0001) and a cut-off of 57.5 ms showed a sensitivity and specificity of 100% and 97%, respectively, for the prediction of elevated PASP. In group II and in the group I (p, 0.0001), the average IVCT was 34.2±4.8 ms [95% confidence interval (CI):25–45] and 61.5±9.7 ms (95% CI: 45–75), respectively. We found a strong inverse correlation between IVCT and systolic pulmonary pressure in the PH group (r =-0.38, p, 0.0001) and a cut-off of 35.5ms showed a sensitivity and specificity of 60% and 63%, respectively, for the prediction of elevated PASP.
Conclusions: The measurement of IVRT and IVCT by TDI is a simple and reproducible method that correlates well with PASP. It is, therefore, parameters to consider in the echocardiographic assessment of pts with PH, and may be particularly important when the tricuspid Doppler signal is poor.

CRT-305

ST Elevation Morphology and Site of Early Repolarization Pattern in Patients with False Tendons

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Background: Although early repolarization pattern (ERP) have been considered for long time to be a normal electrocardiographic finding, it was proved in recent studies to cause sudden cardiac death. Exact mechanism underling this electrocardiographic phenomenon is not well established. False tendons are (FT) fibromuscular bands that transverse the left ventricular cavity and often contain conduction tissue which proved in some case reports to cause ventricular tachycardia.
Objectives: To investigate the electrocardiographic characteristics of patients with false tendons.
Methods: We studied 60 non cardiac patients with FTs and 60 non cardiac patients with ERP. Patients were classified according to presence of ERP and FTs to: ERP+FT (group 1, n=52) and ERP or FT (group 2, n=68). ERP was defined as J point elevation manifested either as QRS slurring (transition from the QRS segment to the ST segment) or notching (positive deflection on terminal S wave), upper concavity ST segment elevation for more than 0.1mV and prominent T waves in at least 2 contiguous leads. False tendons were defined (by 2D TTE) as bands stretching across the left ventricle (LV) from the ventricular septum to the papillary muscle or LV free wall but not connecting, like the chordae tendinae, to the mitral leaflet. PRd, QRSd, QT, QTc, JT and JTc were calculated, site morphology of ST elevation was identified and amplitude of ERP and number of leads with ST elevation were calculated. Site and number of FTs were identified and length & thickness & volume of FT were measured. FTs were classified according to their points of attachment as type 1 (longitudinal), type 2 (diagonal), type 3 (transverse) and type 4 (weblike).
Results: ERP was present in 29 patients (48.3%) of patients with FTs and FTs were present in 23 patients (38.3%) of patients with false tendons. Horizontal ST segment elevation was found in (61.4%) patients of those with ER and FT which is much more common than patients with ER alone (27.8%) and this was statistically significant (P= 0.007). We found that 80% of patients with ER pattern in the inferior leads have oblique FTs (P = 0.043) and 72% of patients with ER pattern in the inferolateral leads have transverse FTs (P = 0.05).
Conclusion: Our results suggest that FTs may play a role in genesis and determination of site and morphology of ERP.