after an average 10 mos of follow-up, 3 deaths, 2 TIAs and 2 CVAs.
Conclusion: 1). Serial TTE noted stable cardiovascular structure and function after LAA device placement. 2) On TTE f/u, periprocedural PEs were the only serious complications noted. 3) A larger study with longer-term f/u is needed to determine PLAATO's efficacy to reduce cardioembolic stroke.

Echocardiographic Assessment

	Baseline n=64	1 wk n=16	1 month n=36	6 mo n=26	12 mo n=9
LVEF	51.2 ± 9.4%	51.9 ± 6.3%	51.9 ± 9.6	50.4 ± 10.9	54.2 ± 2.8
LA size	4.6 ± 0.6	4.6 ± 0.5	4.8 ± 0.6	4.6 ± 0.5	4.7 ± 0.4
Mitral Regurgitation	1.7 ± 0.7	2.0 ± 0.7	2.1 ± 0.7	2.1 ± 0.6	1.7 ± 0.5
Pericardial Effusion	5%	12%	0	0	0
ASD	30%	14%	14%	0	0

1131-147 Thoracic Aorta Atherosclerosis Burden Index Predicts Coronary Artery Disease in Patients Undergoing Transesophageal Echocardiography

Alexandra A. Frogoudaki, John Barbetseas, Constadina Aggeli, Demosthenes Panagiotakos, Christos Pitsavos, Pavlos Toutouzas, Christodoulos Stefanadis, Hippokration Hospital, Athens University, Athens, Greece

Background: The relationship between thoracic aorta atherosclerosis (TAA) and coronary artery disease (CAD) has been shown by previous studies.The aim of this study was to show the quantitative relationship between TAA and CAD in patients undergoing TEE.
Methods:We prospectively studied 246 patients (149 men,age 57.9±11.83 years, 97 women,age 56.9±12.33 years, p=0.54), who underwent TEE and coronary angiogram. Age, sex, standard risk factors for CAD were assessed. TEE was performed in a three-month period around the coronary angiogram. TEE studies have been analysed and ascending aorta, aortic arch and descending aorta were graded independently as following: Normal Intima: Grade I(points 0), Intima thickening without plaques: Grade II (point 1), One plaque<3mm: Grade IIIA(points 2), More than one plaque3mm: Grade IV(points 4), Large mobile or protruding plaque(s): Grade V (points 5). TAA grade was defined as the grade of the thoracic aortic segment with the most severe atherosclerosis. TAA burden index (TAABI) was defined as the sum of the points that have been awarded to each segment.
Results: Eighty-four pts (54 men) had CAD. When TAA was examined independently for each segment of the aorta, it was an independent factor for predicting CAD: for ascending aorta the possibility of prediction was increased 90% (OD:1.90, CI 95%: 1.26-2.85), for aortic arch was tri-folded (OD: 3.03, CI 95%: 2.08-4.40) and for descending aorta it was increased 70% (OD: 1.70, CI 95%: 1.27-2.26).ROC curve analysis showed that TAABI had the better specificity and sensitivity in predicting CAD. A TAABI cut-off point value more than 6 is associated with 20-fold increase of possibility of CAD existence. The specificity of TAABI value >6 in the prediction of CAD is 88%, the sensitivity is 81%, the positive predictive value is 77% and the negative predictive value is 90%.
Conclusion: Thoracic aorta atherosclerosis burden index is an easy to obtain by TEE parameter. A TAABI value more than 6 is an accurate index for CAD prediction implying that severe TAA is strongly related to CAD while it is rather safe to assume that patients with no TAA or mild TAA do not have angiographically significant CAD.

1131-148 Is Atherosclerotic Vascular Disease Associated With Left Ventricular Diastolic Function in Subjects With Normal Systolic Function? A Population-Based Transesophageal Echocardiographic Study

Yoram Agmon, Irene Meissner, A. J. Tajik, James B. Seward, Tanya M. Petterson, Teresa J.H. Christianson, David O. Wiebers, Bijoy K. Khandheria, Mayo Clinic and Mayo Foundation, Rochester, MN

Background: The role of atherosclerosis in the pathogenesis of left ventricular (LV) diastolic dysfunction in subjects with preserved LV systolic function is unclear.
Methods: Transesophageal echocardiography was performed in 388 subjects, a sample of the Olmsted County (MN) population. The relationship between clinical coronary artery disease (CAD), aortic atherosclerotic plaques, and LV diastolic function (mitral E/A ratio, deceleration time [DT], mitral E/annular e' velocity ratio, and left atrial volume [LAV; measured by transthoracic echocardiography]) were examined in 303 subjects with sinus rhythm and normal LV systolic function (age 66±10 yrs; 48% men).
Results: The table displays the absolute difference (DT) or % change (E/A, E/e', LAV) (& 95% confidence intervals) of LV diastolic parameters in relation to clinical and plaque variables (*p<0.05; †p<0.01; ‡p<0.001; §p values for 3 degrees of plaque thickness, compared with no plaques). Greater plaque thickness was associated with greater diastolic impairment, but these associations were not significant after adjusting for age, gender, and heart rate (p values >0.05). CAD was only associated with increased LAV (p=0.03), adjusting for age, gender, and heart rate.
Conclusions: Clinical and anatomical atherosclerosis are not independently associated with LV diastolic function at rest in subjects with normal LV systolic function, thereby questioning the role of atherosclerosis in the pathogenesis of isolated LV diastolic dysfunction.

	E/A ratio	DT (ms)	E/e' ratio	LAV (ml/m2)
Age, per 10 yrs	-17 (-19,-14)‡	23 (18,27)‡	17 (12,21)‡	6 (3,10)†
Male gender	0 (-7,7)	14 (4,23)†	-15 (-21,-8)‡	3 (-4,10)
Clinical CAD	-6 (-18,7)	24 (6,42)*	9 (-6,26)	20 (6,37)†
Plaques <4 mm thick	-16 (-22,-10)‡§	17 (6,28)‡§	19 (9,30)‡§	3 (-4,11)†§
Plaques 4-5 mm	-21 (-29,-12)	23 (8,37)	27 (13,43)	20 (8,33)
Plaques >=6 mm	-29 (-39,-19)	45 (24,66)	46 (24,73)	19 (3,37)

1131-149 Reduced Coronary Flow Reserve in the Coronary Sinus Is a Predictor of Hemodynamically Significant Stenoses of the Left Coronary Artery Territory

Alexander V. Vrublevsky, Alla A. Boshchenko, Rostislav S. Karpov, Cardiology Research Institute, Tomsk, Russian Federation

The aim of our study was the detection of hemodynamically significant stenoses of the left coronary artery (LCA) territory using transesophageal Doppler assessment of coronary flow reserve (CFR) in the coronary sinus (CS).
Methods: We studied 65 CAD pts (men, mean age 51±8 years): 38 – with isolated left anterior descending artery (LAD) or left circumflex artery (Cx) stenosis >50%; 27 – with both LAD and Cx stenoses >50%. The control group consisted of 31 healthy volunteers (men, mean age 34±5 years). Transesophageal Doppler assessment of coronary blood flow in the CS was performed at baseline and after intravenous dipyridamole (0,56 mg/kg for 4 minutes) using ultrasound diagnostic systems HDI 5000 SonoCT and Ultramark 9 HDI CV (Philips-ATL). CFR in the CS was calculated in two ways: 1) as ratio of hyperemic to baseline peak antegrade flow velocity (CFR by Vp); 2) as ratio of hyperemic to baseline volume blood flow velocity (CFR by VBF). The level of the CBF<2 in both ways of calculation was diagnosed as reduced.
Results: CAD pts compared to healthy volunteers had significantly lower CFR in the CS both by Vp (1,51±0,44 and 2,57±0,79; p<0,001) and VBF (2,21±1,18 and 5,43±2,83, p<0,001). Sensitivity and specificity of CFR<2 in the CS as a predictor of hemodynamically significant stenoses of the LCA were for Vp 89% and 76%, and for VBF – 49% and 97%, respectively. CFR <2 in the CS by V_p was registered in 96% of CAD pts with two-vessel lesion and in 84% of CAD pts with single-vessel lesion, while CFR <2 in the CS by VBF was revealed in 85% of CAD pts with two-vessel lesion and only in 26% of CAD pts with single-vessel lesion. Sensitivity and specificity of CFR <2 in the CS by VBF in the diagnostics of hemodynamically significant two-vessel lesion of the LCA were 85% and 84%.
Conclusion: Thus, the reduced CFR in the CS is a sensitive and specific predictor of LCA stenoses. A decrease of CFR <2 in the CS both by V_p and VBF is a predictor of hemodynamically significant two-vessel lesion of the LCA, while a decrease of CFR <2 in the CS only by V_p is a predictor of single-vessel lesion of the LCA.

1131-150 Right Ventricular Dysfunction on Preoperative Transesophageal Echocardiography Predicted Poor Outcomes of Cardiac Surgery

Svetlana Barbarash, Craig Saunders, Ravi Karanam, Thomas Prendergast, Daniel Goldstein, Fred Sardari, Paul Burns, Simon Cheung, Marc Cohen, Chunguang Chen, Newark Beth Israel Medical Center, Newark, NJ

Background:
Left ventricular (LV) dysfunction increases the risk for cardiac surgery. Few data were available for evaluation of relationship between right ventricular (RV) dysfunction and outcome of cardiac surgery. This study was to examine the effect of RV dysfunction on outcomes of cardiac surgery.
Method:
From a database of cardiac surgical outcomes in patients with non-emergency coronary bypass surgery (CABG) or valve surgery with or without CABG between 4/1999 and 11/2001, 767 consecutive patients who had pre-operative transesophageal echocardiography (TEE) were included in the study. RV dysfunction on TEE was graded on a scale of 0 to 3 (0 - normal, 1 - mild, 2 - moderate, 3 - severe) without knowledge of surgical outcomes.
Results:
There were 496 patients with CABG only, 271 patients with valve surgery with or without CABG (Table). The overall 30-day mortality of cardiac surgery was 4.3% (8.1% for the combined valve and CABG, 2.2% for CABG only). RV function correlated significantly with surgical mortality (Rank r=0.97, p<0.001). Multi-variant analysis revealed that RV function, LV ejection fraction, pulmonary artery pressure, type of cardiac surgery are independent parameters that predicted surgical mortality.
Conclusions:
RV dysfunction was associated with a significant increase in cardiac surgical mortality, particularly in patients with valve surgery with or without CABG. Thus, RV function should be considered as an important parameter in selecting patients for cardiac surgery.