CONCLUSIONS The patients aged over 60 with defects >2cm were more likely to have severe PAH than those with defects < 2cm. Pulmonary artery pressure measured by right heart catheterization has no correlation with the age and ASD defect size corrected by BSA.

GW28-e1166

Clinical characteristics of coronary artery disease in patients with atrial septal defect

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OBJECTIVES Ostium secundum atrial septal defect (ASD) is a common cardiac anomaly that may be first encountered in the adult because patients with ASD are usually asymptomatic when they are young. Guidelines for coronary angiography suggest that all patients aged older than 50 years receive coronary angiography before cardiac or vascular surgery. However, the prevalence of coronary artery disease (CAD) in patients with ostium secundum ASD is still unclear. The aims of this study were to investigate the prevalence of and the risk factors for CAD in patients aged elder than 50 years with ostium secundum ASD.

METHODS A retrospective study was performed on patients aged > 50 years old with ostium secundum ASD. All the patients underwent selective coronary angiography (SCA) after comprehensive clinical evaluation, and the presence of CAD and the degree of stenosis were observed. Significant CAD was defined as the presence of more than 50% stenotic lesions during SCA. The risk factors for CAD including gender, age, body mass index, blood lipid, ASD size, pulmonary pressure and combined diseases were investigated.

RESULTS A total of 525 patients (157 men, 29.9%) aged from 50 to 74 (58 ± 6) years with body mass index of 23.5 ± 3.4 kg/m2 were included in this study. 131 (25.0%) patients with systemic hypertension, 32(6.1%) with diabetes, and 156 (29.7%) with atrial flutter/ fibrillation were detected. The size of ASD was 22.3 ± 8.9 mm and the pulmonary systolic/diastolic pressures were 44 ± 16 / 16 ± 7 mmHg. Among the patients, significant CAD was detected in 68 patients (13.0%); 46 patients had one vessel disease, 18 had two vessel disease and 4 had three vessel disease. Patients with CAD exhibited male preponderance (19.1% versus 10.3%, P<0.01) and the prevalence of CAD increased with age. No significant differences were observed in body mass index, ASD size, pulmonary pressure, levels of cholesterol, triglyceride and low density lipoprotein, and the percentage of atrial flutter/ fibrillation between the patients with CAD and those without CAD. The prevalence of CAD was 7.7% in patients with ASD without systemic hypertension and diabetes, 22.6% with systemic hypertension, 31.2% with diabetes and 50.0% with both, respectively. Systemic hypertension and diabetes were the independent risk factors for CAD in patients with ASD. The overall prevalence of CAD was 13.0% in men and 3.5 in women aged from 50 to 54 years old, and the prevalence of CAD in patients without systemic hypertension and diabetes at the same age was 5.6% in men and 2.6% in women, respectively.

CONCLUSIONS Whether routine SCA be performed to detect CAD in patients with ASD referred for cardiac surgery or device closure depends on not only age but also gender and risk factors. Routine SCA is recommended in man combined with hypertension and diabetes even the age is younger than 50 years. However, it seems reasonable to delay the cut-off age to perform SCA to 55 years for woman without hypertension and diabetes.

RHEUMATIC AND VALVULAR HEART DISEASE

GW28-e0235

Assessment of left ventricular function in patients with chronic aortic regurgitation by three dimensional strain imaging: Comparison with cardiac magnetic resonance imaging

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OBJECTIVES The aims of this study were to evaluate the change of geometry and function in patients with chronic aortic regurgitation(AR) using three-dimensional speckle tracing imaging(3D-STI) and to discuss its relationship with conventional LV parameters of systolic and diastolic function.

METHODS The aims of this study were to evaluate the change of geometry and function in patients with chronic aortic regurgitation(AR) using three-dimensional speckle tracing imaging(3D-STI) and to discuss its relationship with conventional LV parameters of systolic and diastolic function.

RESULTS With the degree of regurgitation increasing, the measures of EDVI, ESVI, LVMI, LVRI, EDSI, ESSI gradually increase, but the measures of Ld/Td, Ls/Ts gradually decrease. Comparing with control group, the measures of GLS were lower, but RoA, Twist were larger in moderate group. And GLS, GRS,Torsion, RoA, Twist were lower in severe group. Correlation analysis showed that Ld/Td, Ls/Ts, LVRI, GLS, GRS, RoA, Twist has a positive correlation and ESSI, EDSI, LVMI has a negative correlation with LVEF. And GLS has a negative correlation with E/E'. Multiple linear regression analysis identified GLS, GRS, RoA as predictors of LV ejection fraction in all patients with AR and LAd, EDSI, LVMI, LVRI as predictors of E/E'. Comparing with CMR, the measures of EDV, ESV, SV, LVEF, LVM by 3D-STI were not significant difference.

CONCLUSIONS Patients with moderate AR exits subclinical LV longitudinal axis dysfunction in the early stage and an increased apical rotation and an preserved radial, circumferential strain maybe the factors to remain normal ejection fraction of left ventricular. And the volumetric parameters and three dimensional strain parameters can be related to left ventricular diastolic and systolic function.

GW28-e0339

Novel simple biomarker for predicting clinical outcomes in infective endocarditis patients with normal left ventricular ejection fraction

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OBJECTIVES Monocyte to high density lipoprotein cholesterol ratio (MHR) was a newly emerged inflammatory marker. However, its prognostic value in patients with infective endocarditis (IE) and normal left ventricular ejection fraction (LVEF) was unclear.

METHODS We enrolled consecutive patients with IE and normal LVEF. The association of MHR with in-hospital and long-term mortality was evaluated. A receiver operator characteristic (ROC) curve analysis was performed to evaluate the predictive value of MHR for clinical outcomes. Multivariate logistic regression was used to determine the independent risk of MHR for adverse outcomes.

RESULTS Of 698 patients included, 44 (6.3%) developed in-hospital mortality. The occurrence of in-hospital death (3.9, 4.3 and 10.8%, p=0.003) and major adverse clinical events (MACEs) (15.6, 20.9 and 30.6%, p<0.001) were increased from the lowest to the highest MHR tertiles. ROC analysis demonstrated that MHR had good predictive value for in-hospital mortality (AUC=0.670, 95%CI=0.58-0.76, P<0.001), and was similar to C-reactive protein (AUC: 0.670 vs. 0.702, P=0.444). Furthermore, MHR>21.3 had a sensitivity of 74.4% and specificity of 57.6% for predicting in-hospital mortality. Multiple analysis showed that MHR>21.3 was an independent predictor of in-hospital (OR=3.21, 95%CI=1.38-7.47, P=0.007) and one-year death (HR=2.24, 95%CI=1.21-4.17, P=0.011). Kaplan-Meier survival curves showed that patients with MHR>21.3 had an increased one-year mortality relative to those without (P<0.001).

CONCLUSIONS Elevated MHR was independently associated with in-hospital and long-term mortality in patients with IE and normal LVEF.

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3D Echocardiographic evaluation of the association between pulmonary hypertension and right ventricle function in patients with severe rheumatic mitral stenosis

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