Conclusion: We reported systolic RV long axis function being independent of age, reversibly affected. Myocardial strain was higher among males, although the strain technique showed a wide spread in standard deviation. The lack of correlation between strain measurements and traditional m-mode and pulsed TDI techniques and the differences in pulsed and colour TDI technique should be considered in the use of these methods.

Background: Systemic sclerosis (SSC) may be associated with right ventricular overload, secondary to pulmonary hypertension (PH). The reported rates of PH in SSC patients is 10-60% and represents a leading cause of mortality. The aim of this study was to evaluate right ventricular function in SSC patients and to establish whether that population presents limitation in exercise capacity.

Methods: We prospectively studied 20 consecutive patients (17F, 3M, age 56±11.5yrs) with SSC (mean disease duration 10.5±2.4yrs) and the group of 15 age-matched healthy subjects (13F, 2M, age 55±5yrs). In addition to conventional evaluations, transesophageal echocardiographic (TEE) for assessment of RV overload, 6-minute walking test (6MWT) and NT-proBNP were performed.

Results: Patients with SSC presented signs of RV overload at TEE examination. Incapacitated pressure gradient through the TAPJ could be measured in 14/SSC patients (70%) and in 3/controls (20%). The mean value of TIPG in SSC group was higher than in controls (49±20 vs 10±12 mmHg, p<0.05). TIPG > 30 mmHg was found in 5/25% SSc patients (TIPG 42, 36, 33, 32, 32 mmHg, respectively), while in none of the controls. Also RV/LV ratio was increased in SSc patients (0.55±0.06 vs 0.48±0.03, p=0.001). Although the mean 6-MWT distance tended to be shorter in SSC patients than in controls, the difference did not reach statistical significance (512±60 vs 563±50 m, NS). The mean oxygen saturation of capillary blood after the 6-MWT was lower in SSc patients (92.5±3.3 vs 95.5±1.5, p=0.005). Interestingly, plasma NT-proBNP level correlated positively with TIPG (r=0.58, p=0.03) and negatively with 6-MWT distance (r=-0.46, p=0.05).

Conclusions: Pulmonary hypertension and limitation of exercise capacity is common in SSc patients. Noninvasive investigation of PH among SSC patients may provide an opportunity to intervene prior to development of irreversible pulmonary vascular disease.

240 The pulmonary arterial stiffness in acute pulmonary thromboembolism

N. Kalay, I. Ozdogru, A. Gul, I. Gull, Y. Cetinkaya, A. Dogan, Y. Ilymaz, A. Ozgurhan. Erciyes University, Cardiology Department, Kayseri, Turkey

Introduction: Pulmonary arterial stiffness (PAS) is a new echocardiographic index that can be used to noninvasively evaluate the pulmonary arterial vasculature. It was reported that PAS was associated with pulmonary arterial pressure (PAP) and pulmonary vascular resistance, however, no data is available how the PAS in acute pulmonary thromboembolism (APE) changes and its relation with cardiac function. We investigated the relationship between PAS and right ventricular function in patients with APE.

Methods: The study population included 22 patients (mean age 45±16 years, 9 male 13 female) with APE. Diagnosis of APE was made with clinical features, biochemical parameters, blood gases analysis, spiral computed tomography (CT) and echocardiography. Conventional and tissue Doppler echocardiography (TDI) were performed in 24 hours after the diagnosis. The annular systolic and diastolic diameters, right ventricular ejection fraction (RVEF), peak pulmonary velocity (PV), and pulmonary acceleration time (PAT) was measured by conventional echocardiography. PAS was obtained with disease of PV to PAP (PV=15kms/sec×PAP). Right ventricular annular S, E, A velocities were measured by TDI.

Results: PAS ranged between 8.5 to 26 kHz/sec (mean PAS: 15.9±5.7 kHz/sec). There was a significant correlation between PAS and RVEF (r=0.477, p=0.017 respectively). PAS was significantly correlated with basal diastolic E and A velocities at RV (r=-0.678, p=0.003 respectively) and PV (r=-0.820, p=0.004 respectively). The average PAS in group B was higher than group A however, mean E/A ratio of APE in group B was lower than group A (Table p<0.05).

Conclusions: PAS was associated with elevated PAS, systolic and diastolic dys-function of RV in APE, especially when PAS is higher than 10. The PAS may be used as an echocardiographic parameter to evaluate the cardiac functions and pulmonary arterial vasculature in APE.

241 Predictive value of echocardiography on inhospital mortality in haemodynamically stable patients with pulmonary embolism

S. Salingue 1, J. Glasnowe 1, A. Stojljevic 1, D. Djordjevic 1, R. Janjic 1, D. Mitic 1, V. Topce 1, M. Zivkovic 1, 1Clinical center Nis, Cardiology Department, Nis, Serbia and Montenegro; 2Clinical center, Clinic of vascular surgery, Nis, Serbia and Montenegro

Prognostic value of right ventricular dysfunction (RVD) in haemodynamically stable patients with acute pulmonary embolism (PE) is still unclear. The aim of this study was the assessment of echocardiographically proved RVD as a valid prognostic factor in patients with acute PE.

Method: We analyzed 80 haemodynamically stable patients with acute pulmonary embolism. We also investigated the influence of age, gender, obesity, malignancy, cardiogenic surgery, D-dimer, perfusion lung scan defects and sub-cutaneous anticoagulation therapy.

Results: RVD was diagnosed by right ventricular dilatation (without hypertrophy), right ventricle-left ventricle (RV/LV) diastolic diameter ratio > 0.9, paradox calveal systolic motion, and pulmonary hypertension (Doppler imaging). There were 12 lethal outcomes during hospitalization period. Univariate analysis showed that perfusion lung scan defects and sub-cutaneous LMWH were significantly associated with the risk of death (see table).

Table 1

<table>
<thead>
<tr>
<th>PAS (kHz/sec)</th>
<th>0-8</th>
<th>8-16</th>
<th>&gt;16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death rate</td>
<td>2/4</td>
<td>4/16</td>
<td>6/20</td>
</tr>
</tbody>
</table>

Conclusion: It still remains unclear whether echocardiographically proved RVD is a prevalent and reliable predictor of adverse outcomes in haemodynamically stable patients with acute PE. Pulmonary lung scintigraphy (even without ventilation lung scintigraphy) is a better predictor of adverse outcome in this group of patients, and serves as an indication for a more aggressive anticoagulation or thrombolytic therapy.

242 Evolution of right ventricular function after biventricular pacing

F. Labombarda, A. Pulsser, P. Por Gabrinius, P. Scarni, G. Grofki, E. Salouk. CHU Caen Cote de Nacre, cardiology department, Caen, France

Purpose: Effects of resynchronisation therapy on right ventricular (RV) function are not well established. We currently benefit reliable echographic tools to evaluate RV function. The aim of our study is to analyse the evolution of RV function echographic parameters after biventricular pacing.

Methods: We consecutively studied 22 patients with dilated cardiomyopathy (ischemic or non ischemic) before and 6 months after pacemaker implantation. RV function was evaluated with RV Tei index (Tei), RV Doppler (DPD) and annular Peak Velocity (APV) using Tissue Doppler Imaging (TDI). A MANCIVA with repeated measures was used for comparisons of Doppler variables at baseline and during DVP.

Results: There were no significant changes according to pacing mode for SP (p = 0.826) and DPD (p = 0.179). Tei index is significantly improved for patients with septal lead (p = 0.05) Echographic parameters evolve similarly in subgroups of ischemic or non ischemic cardiomyopathy. Tei index is significantly increased in subgroup of responders patients (p = 0.05).

Conclusion: In our study, biventricular pacing does not have negative hemodynamic impact on RV function. RV lead may be implanted on the interventricular septum. Tei index seems to be the most relevant index to follow the evolution of RV function after resynchronisation therapy.

243 Correlation between echocardiographic interventricular septal flattening and gated SPECPECT as a marker of right ventricular overload

M.R. Movahed 1, A. Hepner 1, A. Lizolte 2, N. Milne 2. 1University of California Irvine Medical Center, Medicine, Division of Cardiology, Orange, United States of America; 2Univ. of California, Irvine Med. Ctr, Radiology, Orange, United States of America

Background: Flattening of the interventricular septum detected during echocardiographic examination is a sign of significant right ventricular (RV) overload. There are no reports of this sign seen on cardiac gated SPECPECT studies. We studied our relation between patients with septal flattening on gated SPECPECT with echocardiography, and pulmonary arterial pressure.

Method: Retrospectively we compared eight cases with flattening of the interventricular septum on cardiac gated SPECPECT imaging of which echocardiographic correlation and clinical data were available for the presence of RV overload. The flat-