(PAH) patients. We aimed, using exercise stress echocardiography (ESE), to assess different RV contractile reserve evaluation methods in a cohort of PAH patients and controls.

Method We prospectively included 12 patients with PAH and 12 healthy volunteers. An ESE (using tilt-table ergometer) was performed in all patients to assess RV function at rest and under peak exercise. Changes in these parameters during exercise were calculated to quantify the RV contractile reserve. 3D RV function as well as peak systolic strain, pulmonary pressures, TAPSE, pulmonary VTI and pulmonary output (using the right ventricular outflow tract diameter) were assessed in all patients.

Results Our patient group was composed by PAH patients, 52 ± 11 years; mean age of our control group was 31 ± 6 years. PAH patients achieved an exercise with a mean workload of 70 ± 26.4 Watts. There was no complication after the exercise test in all patients. Change in TAPSE was not significantly different between patients and controls ($P = 0.17$), whereas change in pulmonary VTI, pulmonary output and RV peak systolic strain was highly discriminant (respectively $P = 0.03$, $P = 0.009$ and $P = 0.0009$). Regarding RV contractile reserve parameters, RV end-systolic pressure area ratio (peak/rest) was not statistically different between controls and patients ($P = 0.14$) whereas change in TAPSE/sPAP, RV peak strain/sPAP, 3D RV EF/sPAP were significantly different ($P = 0.005$, $P = 0.0008$, $P = 0004$).

Conclusion Changes in pulmonary output, RV peak systolic strain as well as changes in TAPSE/sPAP but mainly RV peak strain/sPAP, 3D RV EF/sPAP represent consistent and feasible tools to assess RV contractile reserve.

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Poster n°21

Carotid intima-media thickness as a predictor of significant coronary artery disease in patients with NSTE-ACS

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Introduction The carotid intima-media thickness have been used as surrogate end-points for evaluating the regression and/or progression of atherosclerotic cardiovascular disease, but their predictive value in acute coronary artery disease is inconclusive. The aim of this study was to evaluate the ability of the carotid intima-media thickness to predict significant coronary artery disease in patients with NSTE-ACS.

Method Patients admitted for NSTE-ACS and indication for coronary angiography were prospectively evaluated. Severe coronary artery disease was defined as the presence of stenosis > 70% of at least one major epicardial coronary artery or any of their major branches. A ROC curve was developed to define the carotid intima-media thickness cut-off that best predicts significant coronary artery disease.

Results A total of 296 patients were evaluated: mean age was 62 ± 12 years and 58% were male. Two hundred and eighteen (73.6%) patients had significant coronary disease. Carotid intima-media thickness measurement in these patients was significantly higher than in those without significant coronary artery disease (0.87 ± 0.14 mm vs. 0.75 ± 0.13 mm; $P < 10-3$). Carotid intima-media thickness > 0.82 mm showed a sensitivity of 58.7%, specificity of 76.6%. The area under the ROC curve was 0.73 (95% confidence interval of 0.67—0.79).

Conclusion Carotid intima-media thickness > 0.82 mm had a good specificity to predict significant coronary disease in patients with NSTE-ACS. Considering its low cost and ease of use, its measurement may be incorporated to help in the assessment and stratification of NSTE-ACS patients for certain categories.

Disclosure of interest The authors declare that they have no competing interest

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Poster n°22

Evaluation of changes of global longitudinal strain in patients with coronary artery disease after PCI

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Introduction Recovering blood flow to a coronary stenosis may improve left ventricular (LV) function in patients with coronary artery disease (CAD). However, the reported data about evaluation of LV function post-percutaneous coronary intervention (PCI) in CAD was limited.

Objectives Purpose of this study was to determine the change in parameters of global longitudinal strain (GLS) in patients with CAD underwent PCI, and to compare the LV function measured by ejection fraction (EF) and global longitudinal strain.

Method We enrolled Patients with CAD who underwent elective PCI. Echocardiographic measurements of LV function by EF as well as by 2D speckle tracking to assess global longitudinal strain were performed in all patients within 24 hours pre- and post-PCI procedure and 1 week later. The LV global longitudinal peak strain average (GLPS-Avg) was calculated from 18 segments measurement.

Results The study included (57.2 ± 6.8 years old). Means of GLPS-Avg pre-, 24 hours and one week post-PCI were $-9.58 \pm 3.74\%$ and $-10,43 \pm 4.36\%$ and 16.79 ± 4.98 respectively. Means of EF pre-, 24 hours and one week post-PCI were $42.3 \pm 10.1\%$ and $44.5 \pm 11.08\%$ and $47.85 \pm 11.79\%$, respectively. The improvement of LV function was more significant statistically when it was measured by GLPS-Avg ($P < 0.0001$) than that of EF ($P < 0.001$). The improvement of GLPS-Avg was correlated with target vessel revascularization involving left anterior descending artery.

Conclusion Recovery of left ventricular function post-revascularization of coronary artery disease could be detected earlier by either ejection fraction or global longitudinal strain measurements; however the latter is more accurate. Improvement of GLPS is correlated moderately with target vessel revascularisation involving left anterior descending artery.

Disclosure of interest The authors have not supplied their declaration of competing interest

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