

feasible and relevant for comprehensive hemodynamic assessment of acute HF.

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Can an exercise evaluation of heart function before deciding cardiac resynchronization therapy help in defining the risk of non-response to the therapy?

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Background.— Mechanical dyssynchrony along with its role in cardiac resynchronization therapy (CRT) has been studied for over 10 years now. Still, there are no recommendations for the use of imaging techniques to best select the patients who are the most likely to positively answer to CRT. We sought, then, to test up-to-date echocardiographic tools at rest and during a standardized exercise.

Patients and results.— Thirty out of 197 patients were prospectively recruited. All were chronic heart failure patients in sinus rhythm, optimally pharmacologically treated but still in NYHA III and able to perform some degree of exercise. They were followed at 6-month. Patients were responders according to a decrease in left ventricular end-systolic volume > 15%. Responders and non-responders were significantly different at baseline according to QRS-width (162 ± 18 vs. 144 ± 22 ms, $P=0.01$), left atrial volume (33 ± 10 vs. 53 ± 12 mL/m², $P<0.001$), mitral inflow duration/RR at rest and exercise (0.32 ± 0.05 vs. 0.37 ± 0.08 , $P=0.03$), left pre-ejection time delay (129 ± 36 vs. 104 ± 34 , $P=0.03$) right atrial area, right ventricular annulus s' and TAPSE at rest and during exercise (TAPSE exercise 21.2 ± 2.9 vs. 16 ± 6.5 , $P=0.004$). Using a stepwise multivariate logistic regression, the exercise mitral inflow duration and the degree of deformation in the LV lateral wall during exercise were the two best independent predictors of response.

Conclusion.— Prediction of response to CRT has to be based on a multivariable analysis including RV function, LA size, but also dyssynchrony and regional LV function.

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Prognostic significance of left atrial spontaneous contrast in patients with non valvular atrial fibrillation and a CHADS2 score = 0

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Background.— Transesophageal echocardiography (TEE) can detect left atrial (LA) thrombus and LA spontaneous echocardiographic contrast (SEC), which have been associated with a higher risk of thromboembolism in patients with atrial fibrillation (AF). We hypothesized that TEE-detected LASEC could predict cardiovascular events in AF in addition to clinical risk stratification in CHADS2 score = 0 patients.

Methods.— Among 763 consecutive patients hospitalized for non valvular AF (NVAf), prior to cardioversion, TEE was systematically performed within 24 h after admission; 205 patients had a CHADS2

score = 0. All patients were followed-up (mean 6.3 ± 4.3 years) and cardiovascular (CV) events (stroke, death, or heart failure) defining a composite endpoint were recorded.

Results.— Mean age was 54.5 ± 13.5 years. NVAf was paroxysmal in 101 patients (49.3%), persistent in 82 (40.0%) and permanent in 22 (10.7%). LA thrombus was found in one patient (0.5%), LASEC in 60 (29.3%), classified as mild in 43 (21.0%), moderate in 14 (6.8%) and severe in three (1.5%). One hundred seventy six (87.1%) were prescribed warfarin and 25 (12.4%) aspirin at hospital discharge. At follow-up, death occurred in 27 patients (13.2%), stroke in five (2.4%), heart failure in four (2.0%). AF recurrence was observed in 60 patients (29.3%) and haemorrhage requiring hospitalization in five (2.4%). The Kaplan-Meier (figure) curves showed that the presence of LASEC (Yes/No) was associated with a higher risk of CV events.

Conclusions.— TEE-detected LASEC is associated with a higher risk of CV events (stroke, death, or heart failure) at long-term follow-up in NVAf at very low risk of thromboembolism.

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Session n° 6 – Valve diseases and endocarditis

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Is echocardiographic follow-up of importance in patients presenting with carcinoid tumor and carcinoid syndrome?

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Background.— Carcinoid heart disease may occur in patients presenting with carcinoid tumor and carcinoid syndrome. Studies evaluating the echocardiographic follow-up of this specific population remain rare. The aim of this prospective study was to assess the natural history of cardiac involvement in patients presenting with carcinoid tumor and carcinoid syndrome.

Methods.— We studied 100 consecutive patients (48 men, 52 women) presenting with carcinoid tumor and carcinoid syndrome. All patients underwent annual transthoracic echocardiographic studies and biological carcinoid markers.

Results.— Mean age of our population was 60 ± 12 years (range 36 to 83). At baseline, prevalence of carcinoid heart disease was 31%, whereas at the end of follow-up (mean FU: 42 months), this prevalence was 52% ($P=0.003$). Correlations were strong between urinary 5-HIAA and severity score ($r=0.90$, $P<0.0001$). A carcinoid heart disease was systematically found in all patients presenting with at least three years of carcinoid syndrome and increased level of urinary 5-HIAA. In patients without carcinoid heart disease, no occurrence of carcinoid heart disease was found after three years of conventional therapeutic strategy.

Conclusion.— Prevalence of carcinoid heart disease increases during follow-up. Carcinoid heart disease may progress over time, leading to perform annual echocardiographic follow-up.

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LAA closure monitoring by transesophageal echocardiography using ice probe

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