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Topic 4. Ischemic heart disease, stress-echo, pericardium, emergency

Thursday, June 13, 2019—15h45 — 16h30

Poster n°17

Coronary reserve in Dobutamine stress echocardiography: Feasibility study and determination of a pathological threshold for myocardial ischemia in the LAD territory

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Introduction The evaluation of the coronary flow velocity reserve (CFVR) in the left anterior descending coronary artery (LAD) during a Dobutamine stress echocardiography (DSE) is few realized in current practice. A threshold < 2 would be in favor of myocardial ischemia according to some studies. The main purposes of this study are to analyze the feasibility of the CFVR and to search for a pathological threshold in order to make it a complementary tool in the non-invasive detection for myocardial ischemia in the LAD territory.

Method One hundred and ninety-six consecutive patients referred for detection of myocardial ischemia with contrast-enhanced DSE were evaluated in the GHPSJ from July 2017 to July 2018. CFVR was calculated as a ratio of the distal LAD diastolic peak velocity at rest and peak of stress. The result of the echocardiography was rendered only on the analysis of wall motion abnormalities as a standard reference.

Results The feasibility of CFVR is 94.9%. The pathological threshold of CFVR is ≤ 2.1 (sensitivity of 84.2%, specificity of 70%). The CFVR is altered at 1.87 ± 0.52 in the positive DSE in the LAD territory vs. 2.67 ± 0.91 in the normal ones ($P < 0.001$). No significant difference was found between the diabetic and non-diabetic populations ($P = 0.194$).

Conclusion The coronary reserve is a non-invasive feasible technique in current practice, sensitive, allowing to add a quantitative criterion to the detection of a myocardial ischemia during a DSE even in non-echogenic patients who needed contrast agent. (Figure 1, Cut off value of CFVR).

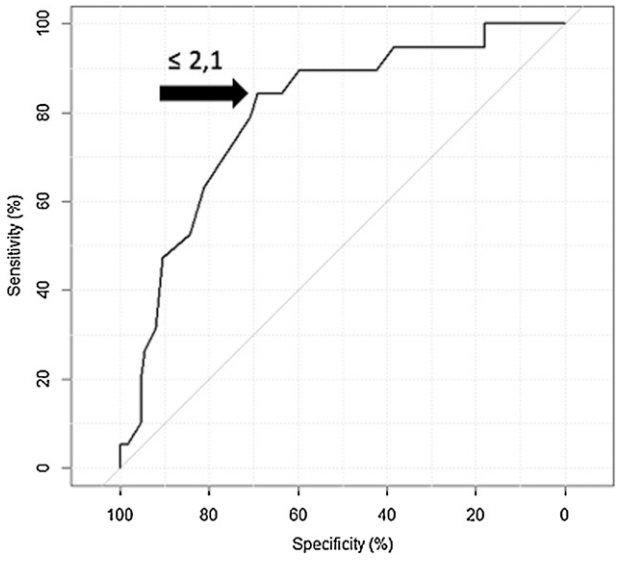

Figure 1 Cut off value of CFVR.

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

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Poster n°18

Evaluation of right ventricular contractile reserve with exercise stress echocardiography

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Introduction Right ventricular (RV) contractile reserve reflects the ability of RV to adapt to elevated afterload. RV functional response to exercise is challenging but could represent an important prognostic factor, especially in pulmonary arterial hypertension