

Method Two hundred and sixty patients with MVP were included. MAD was evaluated and measured by two observers and longitudinal strain was analyzed by speckle-tracking.

Results In total, 36.2% of MVP patients had MAD and were younger ($P=0.033$) with higher rate of atypical chest pains ($P=0.041$) and bileaflet prolapses ($P=0.004$). Para-sternal long-axis view was the incidence of choice to detect MAD with a moderate inter-observer concordance (Kappa of 0.55), good correlation ($r=0.69$, $P<0.01$) and inter-class correlation coefficient (0.82; 0.67–0.90). Twenty patients had a history of severe VA. Among them, no difference was noted in terms of presence or severity of MAD. However, strain analysis showed reduced global longitudinal strain (18.6 ± 3.1 vs. $21.3 \pm 3.3\%$, $P=0.001$) and higher mechanical dispersion values (46 ± 13 vs. 37.4 ± 12.9 ms, $P=0.002$) in comparison to the rest of the MVP population.

Conclusion No significant association was found between severe VA and the presence or severity of MAD in MVP patients. Increased mechanical dispersion and reduced global longitudinal strain may be helpful for arrhythmic risk stratification. Comparison of severe ventricular arrhythmias (Fig. 1).

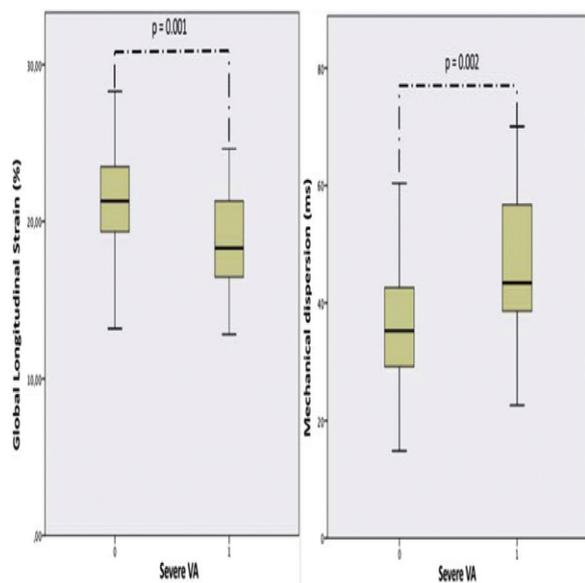


Fig. 1

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

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June 13th, Thursday 2019 - 10h00–11h00

Poster n°16

Factors associated with the ratio of acceleration time to ejection time in patients with aortic stenosis: An echocardiographic and computed tomography study

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Introduction Acceleration time to ejection time ratio (AT/ET) prolongation is associated with increased mortality in patients with aortic stenosis (AS). We aimed at evaluating the determinants associated with increased AT/ET.

Method The relationships between AT/ET ratio, clinical and Doppler echocardiographic variables of interest in the setting of AS were studied in 1107 patients with AS and preserved left ventricular (LV) ejection fraction (EF), with Computed Tomography–Aortic Valve Calcium (CT-AVC) score studied in a subgroup of 342 patients.

Results In univariate analysis, AT/ET ratio did correlate with aortic peak velocity (V_{max} , $r=0.57$, $P<0.0001$), mean pressure gradient (MPG, $r=0.60$, $P<0.0001$), aortic valve area (AVA, $r=-0.50$, $P<0.0001$) and CT-AVC score ($r=0.24$, $P<0.0001$). An AT/ET ratio had a good accuracy to predict a $V_{max} \geq 4$ m/s, a $MPG \geq 40$ mmHg, or an $AVA \leq 1.0$ cm², with an optimal cut-off value of 0.34. Multivariate linear regression analysis showed that presence of AS-related symptoms, decreased LV stroke volume index, LVEF, absence of diabetes mellitus, systolic blood pressure (SBP), increased LV mass index, relative wall thickness, and V_{max} were independently associated with increased AT/ET ratio (all $P<0.05$). In the subgroup of patients who underwent CT-AVC, CT-AVC score was independently associated with increased AT/ET ratio ($P<0.05$).

Conclusion AT/ET ratio is related to echocardiographic and CT-AVC indices of AS severity. However, multiple intricate factors beyond hemodynamic and anatomic severity of AS influence AT/ET ratio including LV geometry, function and SBP. These findings should be considered when assessing AT/ET in patients with AS and preserved LVEF.

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

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Friday, June 14, 2019 - 10h00–11h00

Poster n°37

Screening of valvular heart disease using pocket-sized transthoracic echocardiography device

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Introduction Valvular heart disease (VHD) is an increased common problem in clinical practice. Early diagnosis of significant VHD is a real challenge, allowing to propose an appropriate follow-up and the best therapeutic strategy. Standard transthoracic echocardiography (sTTE) is the gold standard for the detection of VHD. Pocket-sized transthoracic echocardiography (pTTE) is an incomplete sTTE and its usefulness for screening and evaluation of VHD is uncertain. The aim of this study was to evaluate the performance of pTTE compared to sTTE and auscultation for an early screening of VHD.

Method sTTE, pTTE (Vscan; GE Healthcare) and auscultation were performed by three different physicians in 284 unselected consecutive patients. All VHD detected by each of these three techniques were noted. sTTE was the gold standard. Each physician was blinded to the result of the other exams.