



Figure 1

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

<https://doi.org/10.1016/j.acvdsp.2019.04.035>

Poster n°33

Is left ventricular longitudinal strain a good prognostic factor in Friedreich ataxia?

C. Heuze^{1,*}, L. Legrand¹, A. Diallo², M.L. Monin³, C. Ewencyk⁴, R. Isnard¹, E. Vicaut², A. Durr³, F. Pousset¹

¹ AP-HP, Department of Cardiology, ICAN (Institute for Cardiometabolism and Nutrition), Pitié-Salpêtrière University Hospital, Paris, France

² Groupe ACTION (Allies in Cardiovascular Trials Initiatives and Organized Networks), URC Lariboisière, Paris, France

³ AP-HP, Department of Genetics, ICM (Brain and Spine Institute), Pitié-Salpêtrière University Hospital, UMR S 1127, Inserm U 1127, CNRS UMR 7225, Paris, France

⁴ AP-HP, Department of Genetics, Pitié-Salpêtrière University Hospital, Paris, France

* Corresponding author.

E-mail address: cecile.heuze30@gmail.com (C. Heuze)

Introduction Friedreich ataxia (FRDA) is a rare genetic ataxia. The causal mutation is an expanded trinucleotide repeat (GAA) in the frataxin gene. Hypertrophic cardiomyopathy in FRDA is the major cause of early death. Patients with progressive decline of the left ventricular ejection fraction (LVEF) have the worst prognosis. The aim of the study was to evaluate the prognostic value of 2D global longitudinal strain (GLS) compared to LVEF in FRDA patients.

Method From 2003 to 2017 consecutive patients with genetically confirmed FRDA were included. GLS was retrospectively performed. News was obtained for all patients until April 2018.

Results The study included 156 patients of 35 ± 12 years (mean $\pm$ SD) with an age at disease onset of 17 ± 11 y and GAA repeat on the shorter allele of 590 ± 241 pb. The following echocardiographic parameters were studied: LVEF $64 \pm 9\%$, GLS $-19.8 \pm 5\%$ ($n=141$), septal wall thickness (SWT) 11.4 ± 2.5 mm, posterior wall thickness (PWT) 10.4 ± 1.8 mm, LV end diastolic diameter (LVEDD) 44.4 ± 6 mm. Correlation between GLS and LVEF was 0.31 ($P=0.0002$).

After a mean follow-up of 7.7 ± 4.0 y, 17 (11%) patients died and the outcome (cardiac arrhythmia, heart failure, stroke or death) concerned 28 (18%) patients. In univariate analysis (Cox model), factors associated with mortality were: GLS (HR:1.2;95%CI 1.10–1.32, $P=0.0001$), LVEF (HR:0.88;95%CI 0.85–0.92, $P<0.0001$), GAA (HR:1.28;95%CI 1.11–1.47, $P=0.0008$), age at onset (HR:0.84;95%CI 0.76–0.94, $P=0.002$), LVMI (HR:1.02;95%CI 1.01–1.04, $P=0.0078$), SWT (HR:1.18;95%CI 1.01–1.36, $P=0.03$) and LVEDD (HR:1.09;95%CI 1.00–1.19, $P=0.04$). In multivariate analysis LVEF was the only independent predictor of long-term mortality (HR:0.93;95%CI 0.88;0.99, $P=0.02$). GLS was also an independent predictor of the composite outcome in multivariate analysis.

Conclusion GLS is a predictor of morbimortality but is not superior to LVEF in FRDA patients.

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

<https://doi.org/10.1016/j.acvdsp.2019.04.036>

Poster n°34

Reliability of the latest echographic recommendations for estimating left ventricular filling pressures: A comparative study with left cardiac catheterization

W. Dali^{1,2,*}, H. Ben Slima^{1,2}, Y. Kilani^{1,2}, A. Ben Khalfallah^{1,2}

¹ Service de Cardiologie de l'hôpital régional de Menzel Bourguiba, rue de Palestine, 7050 Menzel Bourguiba Bizerte, Tunisie

² Faculté de médecine de Tunis université Tunis el Manar, Tunis, Tunisie

* Corresponding author.

E-mail address: wassim.dali1718@gmail.com (W. Dali)

Introduction The current recommendations regarding the estimation of left ventricular filling pressures are based on expert consensus. We tried to evaluate the reliability of the actual algorithm in comparison with the left cardiac catheterization and with the algorithms published in 2009.

Method We enrolled 100 adult patients scheduled for coronary angiography between December 2017 and May 2018. An estimation of filling pressures by transthoracic echocardiography and cardiac catheterization on the same day was performed.

Results The mean age of our patients was 62.79 ± 10.35 with a male predominance (sex ratio at 3.34). The majority had coronary artery disease (66%). The mean ejection fraction was 53 ± 13 . The 2016 algorithm was superior to those published in 2009 compared to the invasive estimate. In fact, its sensitivity and specificity were 70.14% and 86.66% with an accuracy of 75.25% versus 62.21%, 86.66% and 69.79% respectively for the 2009 algorithms. Analysis, in case of preserved systolic function, showed a great decrease in the results of the 2009 algorithms while the 2016 algorithm remained valid. Regarding echographic parameters, the E/e' ratio had the highest coefficient value ($r=0.47$) whereas no correlation was found for the tricuspid regurgitation jet velocity.

Conclusion In addition to its simplicity, the actual decision tree for estimating left ventricular filling pressures seems reliable and more efficient than the previous ones.

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

<https://doi.org/10.1016/j.acvdsp.2019.04.037>

Poster n°35

Association between AF progression phenotypes with LAA strain, cardiac NT-proANP and VCAM1 levels in atrial fibrillation

A. Nechitaylo*, R. Spampinato, P. Buettner, G. Hindricks, J. Kornej

Heart Center Leipzig at University of Leipzig, Department of Electrophysiology, Leipzig, Germany

* Corresponding author.

E-mail address: deralexander@mail.de (A. Nechitaylo)

Introduction Atrial natriuretic peptide (ANP) is specifically secreted from the atria in response to tension stress and together with vascular cell adhesion protein-1 (VCAM-1) is associated with AF progression and recurrences. Recently we demonstrated an association between NT-proANP and VCAM1 levels with AF progression phenotypes based on persistent AF and low voltage areas (LVA):