Predicting post-capillary origin of Pulmonary Hypertension (PH): external validation of the PH Council (PHC) of International Society for Heart and Lung Transplantation (ISHLT) score

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Background: Determination of the origin (pre or post-capillary) of PH is crucial to guide therapy. Right heart catheterization (RHC) is the gold standard to identify PH origin. However this invasive is invasive and may cause complications. The PHC of ISHLT proposes a clinical and echocardiographic score to estimate the origin of PH in order to select patients who truly requires RHC. The aim of the study was to evaluate the validity of this score in a real life population of patients with PH.

Methods: We studied retrospectively clinical, echocardiographic and hemodynamic characteristics of consecutive patients referred to our center to undergo a RHC between January 2005 and August 2013 and evaluated the performance of the PHC prediction score.

Results: 116 patients with pre capillary PH and 71 with post capillary PH were included. Post capillary PH patients were older(73.2 vs 62.8, p<0.001), more hypertensive(71.8% vs 44.8%, p=0.001), had more often diabetes (29.6% vs 12.0%, p=0.003) and atrial fibrillation (AF; 64.8% vs 3.4%, p<0.001) than pre capillary PH patients. Univariable analysis showed that echocardiographic left heart abnormalities (OR:5.05 95% CI[2.59-9.85], p<0.001), left heart valvular disease (OR:19.13[5.49-66.68], p<0.001), comorbidities (hypertension, obesity, coronary artery disease, diabetes) (OR:3.15[1.56-6.38], p=0.001) were associated with the presence of post capillary PH. In multivariable analysis, AF is independently associated with post capillary PH (OR: 40.99[9.64-174.25], p < 0.001). ROC curves analysis showed that the PHC score provided an area under the curve (AUC) of 0.78(Se 78% and Sp 66% for a score ≥3) to predict post capillary PH in our population. Adjunction of AF as a new criterion improved the score performance (AUC 0.85, Se 68%, Sp 91%, p=0.004 for a score ≥4).

Conclusion: The score proposed by the PHC of ISHLT to determine non-invasively the origin of PH is fairly accurate but could be enhanced by the adjunction of AF as a new criterion.

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Contribution of right ventricular echocardiographic parameters in evaluation of the prognosis of dilated cardiomyopathy

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Introduction: The evaluation of the prognosis of patients with dilated cardiomyopathy (DCM) is an essential step in their care but the study ultrason sound of the right ventricle (RV) is not a part of the practice of the cardiologist.

Purpose: Determine which of the RV echocardiographic parameters those predicting the occurrence of secondary cardiac events (death, hospitalization for decompensated heart failure and ventricular arrhythmias poorly tolerated) in patients with DCM.

Materials and methods: Prospective study in 61 patients with DCM. All patients received a conventional echocardiographic examination with emphasis on studying the RV parameters: fractional shortening surface (FRSRV), the systolic excursion of the tricuspid annulus in T (TAPS) and systolic pulmonary artery pressure (SPAP), completed by a tissue pulsed Doppler study at the tricuspid annulus (Sa, Ea and Aa). We studied the correlation between echocardiographic parameters of RV and the occurrence of secondary cardiac events.

Results: The average age of patients was 62±9 years with a sex-ratio of 2/1. Forty-eight percent of patients were in NYHA class III. The average fractional ejection of left ventricle was 29±7.2%. DCM was ischemic in 59% of cases. During follow-up (11±5 months), 5 patients died, 22 were hospitalized for decompensated heart failure and 2 patients had a ventricular tachycardia. We have shown that the parameters predictors of mortality are: TAPS < 12mm and FRSRV < 33%. Parameters predictive of hospitalization for decompensated heart failure: SPAP > 42mmHg, RV FRS < 39%, TAPS < 15mm and wave velocities Sa, Ea and Aa or DT ecocardiographic annulus < respectively 10,1cm/s to 6,09cm/s and 12,75cm/s. Those predictive of cardiac events overall: SPAP >42mmHg, a TAPS < 11,5, a FRSRV < 38%, Sa and Aa waves to the DT tricuspid lower respectively at 10,2cm/s and 14cm/s. In multivariate analysis, only the FRSRV < 38% was a factor directly related to the occurrence of cardiac events overall.

0069

Prognosis of heart failure in the Moroccan woman

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There are differences between heart failure (HF) of women and that of men in terms of epidemiology, pathophysiology, treatment and quality of care. The aim is to analyze the epidemiological profile of women followed by HEART FAILURE THERAPY UNIT (HFTU) at the cardiology center Ibn Rochd in Casablanca. See how they are optimized therapeutically and demonstrate that the female is an independent prognostic factor.

We report a retrospective study composed of 1500 patients followed in HFTU between January 2007-to May 2013. On 1500 patients were 525 women and 975 men. The average age of women was 58±4 years versus 62±4 years in men. 38% of women were diabetic and 36% hypertensive.10% of women had at least one coronary lesion confirmed versus 28% for men. Therapeutically only 45% of women were optimized (full dose of beta-blocker-IEC-spirinolactone) versus 78% in men. After 1 year of follow-up there were 4.

The results of our study are similar to those of the few studies and prognosis seems to be better among women, although the mechanism is not well understood.

0082

Multimodality imaging in cardiac amyloidosis: respective contributions of echocardiography, MRI and scintigraphy

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Context: Amyloidosis(AA) prognosis is determined by cardiac involvement. The main types of A are immunoglobulin light chain(AL) and transthyretin-related(TTR), which can be mutated(TTRm) or senile(TTRw). Specific treatments can’t be administered unless A has been typed histologically. Literature suggests echocardiography,69 Tc DPD scintigraphy and cardiac MRI could help typing A. We described these imaging modalities to assess these potential tools for an uninvasive typing.

Material and methods: We analysed these imaging modalities in patients examined at Cardiomyopathies Competence Center(CCC) of La Timone Hospital in Marseille, with an histologically proven diagnosis of cardiac A(CA).

Results: We included 75 patients examined between September 2006 and March 2014 at CCC, with a strongly suspected diagnosis of CA. CA could be histologically confirmed and typed in 45 patients(10 TTRm, 4 TTRw, 6 TTR undetermined; 19 AL,6 of other type). In 11 patients, CA was confirmed but...