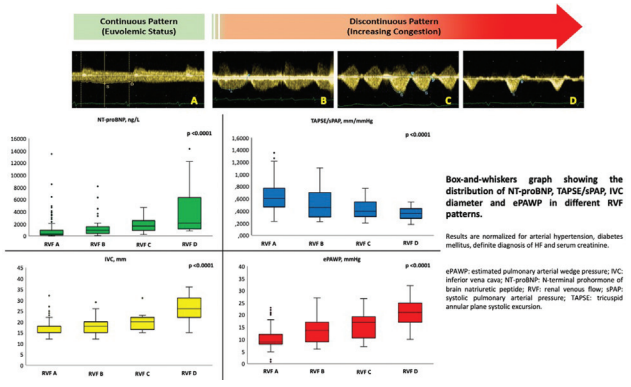

Design and method: The study enrolled 304 patients. 63 patients were at risk of developing HF, while 241 had overt HF. Among the latter, 61 patients had preserved left ventricular ejection fraction (LVEF >=50%), and 180 had reduced LVEF (<50%). All subjects underwent a baseline echocardiographic examination, lung ultrasound, Doppler-derived RVF evaluation, and laboratory evaluation of blood and urine samples.

Results: The most prevalent cardiovascular risk factor was arterial hypertension (AH), which was present in 60% of patients at risk of developing HF and in 72% of those with overt HF.

RVF was continuous in 230 patients (76%), and discontinuous in 74 (24%; dRVF). Among the latter, 39 showed pulsatile dRVF, 18 showed biphasic dRVF (i.e., two separate phases of venous flow), and 17 showed monophasic dRVF (i.e., only during diastole). dRVF was more prevalent in patients with overt HF. Monophasic dRVF was associated with more severe haemodynamic impairment and impaired renal function, as evaluated by estimated glomerular filtration rate and urinary albumin-to-creatinine ratio. After adjusting for clinical confounders, worsening RVF patterns were associated with increased natriuretic peptide levels, worse right ventricular-pulmonary arterial uncoupling, increased inferior vena cava diameter, and increased estimated pulmonary capillary wedge pressure (Figure). These results were confirmed in the subgroup of patients with overt HF, even after adjusting for LVEF.

Conclusions: The evaluation of RVF patterns improves the characterisation of patients with HF. The pathophysiological significance of impaired RVF is independent of common cardiovascular risk factors and LVEF. Implementing RVF analysis in clinical practice could allow for timely identification of patients at greater risk for developing or worsening HF.

ROLE OF CIRCULATING ENDOTHELIAL PROGENITOR CELLS AND CORRELATION WITH VASCULAR STIFFNESS AND ORGAN DAMAGE

Vanessa Desantis[1,2], *Marialuisa Sveva Marozzi*[1,3], *Lucia Giliberti*[1], *Francesco Corvasce*[1,3], *Antonella Scaringella*[2], *Maria Assunta Potenza*[2], *Carmela Nacci*[2], *Monica Montagnani*[2], *Angelo Vacca*[1], *Pietro Nazzaro*[3], *Sebastiano Cicco*[1,3]. [1]Unit of Internal Medicine Guido Baccelli, DiMePRe-J, University of Bari Aldo Moro, AUOC Policlinico di Bari, Bari, ITALY, [2]Unit of Pharmacology, DiMePRe-J, University of Bari Aldo Moro, Bari, ITALY, [3]Unit of Hypertension A.M. Pirrelli, DiMePRe-J, University of Bari Aldo Moro, AUOC Policlinico di Bari, Bari, ITALY

Objective: Atherosclerosis is a chronic cardiovascular disease. High plasma concentration of LDL is the main risk factor but the role of inflammation in all the stages become recently evident. Atherosclerosis and lipid metabolism change according to gender differences. Several possible markers of endothelial dysfunction and vascular stiffness have been identified, including clinical-instrumental and biochemical markers of inflammation and/or fibrosis (i.e., TNF-alpha, prostaglandin, L-Arginine/Asymmetric dimethylarginine - ADMA). A common mechanism identified in the pathogenesis of numerous CVD is endothelial dysfunction that correlates with circulating endothelial progenitor cells (EPCs). These cells are recruited from the bone marrow in response to vascular damage or tissue ischemia. In the peripheral blood, EPCs contribute to reendothelialization and neovascularization, acting as positive regulators of hemostasis and vascular integrity. A reduction in their number or function has been correlated to progression of CVD and MACE. Our project aims to assess the role of EPCs and L-ARG/ADMA in arterial stiffness and atherosclerosis.

Design and method: Our study is a prospective experimental investigation, enrolling all patients with cardiovascular disease. Patients will undergo routine hematological and biochemical tests as well as instrumental examinations in accordance with good clinical practice. The enrolled patients will undergo a series of clinical and instrumental examinations (ABI,PWV). In in vitro experiments, EPCs will be isolated from PBMCs and functional assays will be performed. Also, Proteome Profiler Target Analytes study and ELISA assay (L-Arg/ADMA) will be performed.

Results: There was a direct correlation between SCORE2/2-OP and PWV (r=0.70; p<0.0001). Preliminary data indicated a correlation between L-Arg/ADMA to SCORE2/2OP (r=0.36, p=0.04), Total Cholesterol (r=0.75, p=0.033) and LDL (r=0.75, p=0.031), as well as EPCs and their migration correlates to a change in folate cycle (P<0.007

Conclusions: preliminary data suggests the importance of EPCs as specific readout of cell activation and tissue damage in response to cardiovascular risk factors.

DIAGNOSTIC APPROACH IN PRIMARY HEALTHCARE FOR CARDIAC AMYLOIDOSIS: CASE REPORT

Fabiana Chyczij, Jose Alexandre. USF Fenix - Aces Marao e Douro Norte, Vila Real, PORTUGAL

Objective: Cardiac amyloidosis occurs through the accumulation of amyloid in cardiac tissue, This is the most common form of restrictive cardiomyopathy in the Western world. In recent years, significant advances in the knowledge of cardiac amyloidosis have been consolidated, bringing a profound reformulation of its clinical meaning.

The purpose of this case report is to demonstrate the importance of primary health care in the suspicion and diagnosis of patients with cardiac amyloidosis.

Design and method: Interview with patient, bibliographical review and revision of medical records.

Results: We describe here, the case of a 70-year-old caucasian man with no known personal or family history. He was consulted by his family doctor for unmedicated essential arterial hypertension associated with progressive worsening of fatigue during light exertion over 4 months of evolution.

On physical examination, he was normotensive, tachycardic and had symmetrical bimalleolar edema.

The electrocardiogram demonstrated atrial fibrillation with a heart rate of 100 - 120 bpm without other changes. Transthoracic echocardiogram showed dilation of the left ventricle, markedly thickened walls and hyperechogenic appearance, diffuse hypokinesia with compromised ejection fraction (±21%); binaural dilation and dilated right ventricle (RV) with compromised longitudinal function; without significant valvular changes. He started oral hypocoagulation and beta-blockers and was referred to a Cardiology consultation.

Cardiac magnetic resonance demonstrated changes phenotypic characteristics and pattern of late gadolinium enhancement compatible with cardiac amyloidosis. Scintigraphy with technesium 99 diphosphonic-1,2-propane carboxylic acid (Tc99m-DPD) positive for ATTR amyloidosis.

The diagnosis of heart failure with reduced EF due to ATTR amyloid cardiomyopathy was assumed. Exfoliating therapy with diuretic was performed, prognosis-modifying therapy and Tafamidis were initiated with excellent clinical response.

Conclusions: Cardiac amyloidosis is a rare pathology, its diagnosis requires a high index of suspicion based on the clinic and the findings of complementary non-invasive tests, particularly transthoracic echocardiography and cardiac resonance.

The family doctor plays a fundamental role not only in early diagnosis, but also in the first therapeutic approach, whenever possible, also referring all situations that require more specialized healthcare at hospital level.

ECHOCARDIOGRAPHIC AND ELECTROCARDIOGRAPHIC PREDICTORS OF NEW ATRIAL FIBRILLATION IN END-STAGE RENAL DISEASE PATIENTS WITH PRESERVED LEFT VENTRICULAR SYSTOLIC FUNCTION

Hyemoon Chung. Kyung Hee University, Seoul, SOUTH KOREA

Objective: We investigated the echocardiographic and electrocardiographic predictors for future development of AF in patients with ESRD and preserved LV EF who had never diagnosed AF.