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Results of the survey ithaque: monitoring and therapies for systolic heart failure

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Electrical therapies by defibrillators (ICD) and resynchronization devices (CRT-D – CRT-P), have demonstrated their benefits on symptoms, morbidity and mortality in selected heart failure patients (HF). The ITHAQUE survey aims to describe the different supports of patients in HF patients with impaired left ventricular (LV) function (LV ejection fraction < 45%)

Methods: 927 patients treated for HF were seen in outpatient visit with a general cardiologist (75%) or in a tertiary center (25%). A survey of treatments and follow-ups was completed by the physician. 3 groups under optimal treatment, defined by the French Society of Cardiology (SFC) guidelines, have been analyzed:

Gr1 = Class 1B (patients with ischemic cardiomyopathy and coronary revascularization, NYHA II and III, LVEF <30%) – Class 2Aa (30%)
Gr2 = Class 2aB (dilated cardiomyopathy, NYHA II and III, LVEF <30%) and class 2CA (30%)
Gr3 = Class 1B (HF Patients, NYHA III and IV, LVEF <35% and QRS > 120 ms)

Results: Of the total patients, 79 received an ICD (8.5%), 22 a CRT-D (2.4%) and 76 a CRT-P (8.2%). On the other side, 279 patients eligible according to the recommendations of the SFC did not receive additional treatment with ICD or CRT (30%). Pharmacological treatment associated is mainly composed of IE (76.5%), Beta-blockers (76.6%), Diuretics (90%), anticoagulants (90%) and Anti-arrhythmics (20%). Rules lifestyle modifications (77.8%) and practice of physical activity (31.2%) are also prescribed, associated or not.

Conclusion: Although the specific conditions of therapeutic patient must be taken into account, the ITHAQUE survey did show that the electrical therapies recommended by the SFC for heart failure patients with systolic dysfunction are underused.

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A retrospective study of systematic research of chronic obstructive pulmonary disease in a systolic heart failure population

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Background: Chronic obstructive pulmonary disease (COPD) is an independent risk factor for cardiovascular disease (CVD) including heart failure (HF) and coronary arteries diseases, which are one of the leading causes of morbidity and mortality in COPD patients. Thus, COPD could deteriorate HF and explain the worst prognostic of the association of the two diseases. Actually, there is no information about the prevalence of COPD assessed by systematic pulmonary function test in HF patients.

Purpose: Describe the prevalence of COPD in a systolic HF population.

Methods: COPD was systematically researched by pulmonary function test in 274 patients (216 men) followed for systolic HF in the University’s Hospital of Rangueil, Toulouse, France between April 2002 and April 2009. Degrees of COPD were defined according to the GOLD classification.

Results: In the 274 systolic HF patients mean age was 61±11 years and mean ejection fraction (EF) was 32±15 % with 130 (47 %) patients with ischemic systolic HF. There was 112 (41 %) of COPD with 57 (20.8 %), 44 (16.1 %), 7 (2.6 %) and 4 (1.5 %) GOLD 1, 2, 3 and 4 respectively. There was no difference between no-COPD and COPD groups in sex (77.7 vs 75.9 %; p=0.1), and NYHA stage (mean 2.2±0.7 vs 2.3±0.8; p=0.3) but patients with COPD were older (66.1±11 vs 57.1±13.7 years; p<0.001) and had better EF (33.5±9.4 vs 30.2±12.9 %; p=0.016). There was 43.8 % ischemic heart failure in the COPD group versus 51.8 % in the no-COPD group (p=0.13) and no-COPD group had a tendency to have more fl-blocker treatment (74.1 % vs 62.5 %; p=0.051).

Conclusion: COPD has a high prevalence in systolic HF population but clinical diagnostic is difficult because of the lack of specificity of dyspnoea assessed by NYHA stage. HF patients with COPD are older and have a better EF suggesting that dyspnoea from pulmonary disease is interpreted as a symptom of HF.

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Heart failure with preserved ejection fraction.

Age of atrial fibrillation: two main characteristics of patients enrolled in the KaRen project.

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Background: We describe the baseline characteristics of subjects prospectively recruited in the KaRen morbidity-mortality French and Swedish registry. KaRen’s purpose is to study the impact of dysynchrony (electrical and/or mechanical) on the prognosis of heart failure patients with preserved ejection fraction.

Methods and results: The Karen study is an ongoing study with a minimum follow-up of 18-month for every patient. Here, we are reporting the initial characteristics of the 268 first patients included in the registry. These heart failure patients with preserved ejection fraction recruited in university hospitals are old. The mean age is 76.5 years old. 43% are between 80 and 89 years old. 59% were women. 10% of them have a bundle branch block. The prevalence of hypertension is 75%, coronary artery disease 31%, valvular heart disease 20%, atrial fibrillation 85%, pulmonary primary disease 24%, peripheral vascular disease 15%, renal insufficiency 26% (creatinine >120µmol/l). The percentage of death at 4-8 weeks follow-up after the inclusion is 4% (9% in Sweden and 2 in France despite the great similarity between the other characteristics of the population).

Conclusions: Patients in KaRen are “real world” patients with heart failure and preserved ejection fraction. Age and atrial fibrillation are the two most determinant characteristics of our population.

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Diabetes prevents compensatory hypertrophy after myocardial infarction and impairs cardiac function : possible implication of stretched inducible kinase growth signaling

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Aim: The present study investigated possible mechanisms underlying postischaemic remodeling in diabetic hearts. Diabetes (DM) accelerates postischaemic cardiac remodeling and increases mortality after myocardial infarction.

Methods: Acute myocardial infarction (AMI) was induced in rats with type 1 diabetes (DM) and non diabetic rats (NDM-AMI) while sham operated animals served as controls (SHAM). All groups were subjected to echocardiographic analysis 2 weeks after infarction.