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Heart failure with preserved ejection fraction: changes in clinical parameters between acute presentation and subsequent follow-up

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Purpose: In the prospective KaRen registry of heart failure with preserved ejection fraction (HFPEF), changes in clinical and biological parameters and medications were assessed between acute presentation and out-patient follow-up in stable state.



Methods: The KaRen study included patients presenting with acute heart failure (HF) according to inclusion criteria: Framingham criteria for HF, left ventricular ejection fraction $\geq 45\%$ and brain natriuretic peptide (BNP) > 100 pg/mL or NT-proBNP > 300 pg/mL. Once stabilized, 4-8 weeks after the index presentation, patients returned as out-patients for repeat assessment. Changes in clinical and biological parameters and medications between inclusion and follow-up were assessed with Students t-test and Chi-square tests

Results: 577 patients were recruited and 458 returned for the 4-8 weeks visit. 56% were women. The median [25-75pctl] age was 79 [72-84] years. Medical history included 78% hypertension, 58% atrial arrhythmia, 26% type II diabetes and 27% serum creatinin > 100 micromol/l. The table provides inclusion and follow-up data

Conclusions: Patients presenting with HFPEF are elderly and a majority are women, with a high rate of hypertension and atrial arrhythmias. Blood pressure is incompletely controlled. At follow-up, blood pressure and NT-proBNP were reduced, but patients remain symptomatic. Still, efforts are needed to improve symptoms in HFPEF.

Table (abstract 85) – Inclusion and follow-up data

Variable Mean (IQR)	NYHA I / II / III / IV	SBP	Creatinine	NT-proBNP	ACEI /ARB	B-blocker	ANTICOAG
Inclusion	0.8 / 9.4 / 40 / 49.8%	148 [130-170]	93 [74-128]	2433 [1272-4790]	60%	65%	41%
Follow-up	13 / 62.5 / 22.2 / 2.3	140 [120-150]	95 [75-129]	1409 [514-2641]	68%	67.5%	51.3%
p		<0.0001	0.003	<0.0001			

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Acute heart failure: Characteristics and predictors of six months mortality

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Aim: Heart failure is known to be a major cause of morbidity and mortality in developed countries. The number of Tunisians suffering from acute heart failure (AHF) is increasing, but only little is known about the prognosis and possible risk factors for a fatal outcome in our population. The aim of our study is to describe patients with AHF with regard to clinical presentation and mortality at 6 months.

Method and results: We conducted a retrospective study including 234 patients from a Tunisian center hospitalized with AHF.

Our study population's average age was 65 ± 13.8 , 56% were male. Hypertension was noted in 60.3% of the cases, diabetes in 51.7% and 69.7% of the patients had new-onset heart failure. Ischemic etiology was noted in 48.7% of cases followed by hypertensive, dilated cardiomyopathy and valvular cardiopathy observed respectively in 21.4%, 14.5%, and 11.1% of cases. Left ventricular ejection fraction (LVEF) was reported in 97% of our population. 46.6% of these had preserved systolic function ($LVEF \geq 45\%$) and 17.2% had a $LVEF < 30\%$. At discharge, 41.5% of patients had beta-blockers and 86.8% either ACE-inhibitors or angiotensin receptor blockers in use.

At six months 25 patients (11.2%) died. We identified several clinical and biochemical prognostic risk factors in univariate analysis. Independent predictors of 6 months mortality were QRS width ≥ 130 ms (adjusted HR, 6.15; 95% CI, 1.25-30.15; $p=0.025$), hyperglycemia at admission (adjusted HR, 1.32; 95% CI, 1.12-1.56; $p=0.001$), high serum level of glycated hemoglobin (adjusted HR, 0.49; 95% CI, 0.39-0.67; $p<0.0001$), worsening of renal function during hospitalization (adjusted HR, 13.87; 95% CI, 3.54-54.24; $p<0.0001$) and the non-use beta-blockers at discharge (adjusted HR, 0.06; 95% CI, 0.007-0.58; $p=0.015$).

Conclusion: We present the characteristics and prognosis of our population of AHF patients. Six months mortality is relatively high, and independent clinical risk factors include wide QRS, hyperglycemia at admission, poorly controlled diabetes, worsening of renal function during hospitalization and the non-use beta-blockers at discharge.

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Kinetics of copeptin during dobutamine echocardiography in patients with previous Tako Tsubo cardiomyopathy

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Purpose: To demonstrate the abnormal kinetics of copeptin during stress in patients with Tako-Tsubo cardiomyopathy (TTC).

Methods: We analyzed prospectively copeptin kinetics before and after dobutamine echocardiography in 12 TTC compared to 10 controls, matched for age and gender. The level of the other main stress hormones (adrenaline, noradrenaline, dopamine, insulin, cortisol) were also collected.

Results: All dobutamine echocardiographies were normal. Before and after echocardiography, there were no differences in hormones values between TTC and controls. Surprisingly, after echocardiography in TTC, copeptin decreased, as did cortisol, noradrenaline, and insulin. In the control group, no variation was found.

Conclusions: Surprisingly, in TTC after dobutamine echocardiography, most hormones, including copeptin, decreased.

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Heart failure and diabetes: a fatal association. (Series of 1351 patients)

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Introduction: The prevalence of heart failure and diabetes are both increasing: 25 to 30% of patients with heart failure suffer from diabetes. Diabetics have more diastolic dysfunction because accumulation collagen in intramyocardial.

The objectives of our study are to compare echocardiographics and Doppler profiles of diabetics and non diabetics.

Material and methods: We included 1351 patients, diabetics and non diabetics, admitted in united of heart failure in Ibn Rochd Center of Cardiology from May 2006 to October 2010. All patients were evaluated by echocardiography and Doppler.