Topic 02 – Heart failure and cardiomyopathy

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Temporal trends in prescription rates of recommended treatments in chronic heart failure outpatients: a comparison of three French surveys IMPACT RECO I, II & III

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Background: Recent registries have shown that recommended drugs for the treatment of congestive heart failure (CHF) remain under-prescribed in daily practice.

Aims: To compare prescription rates of CHF drugs in three French surveys Impact Reco I, II and III.

Methods: We included outpatients followed by private cardiologists: 1947 in Impact Reco I (2005), 1974 in Impact Reco II (2005/2006) and 1574 in Impact Reco III (2007), with NYHA class II-IV heart failure and a left ventricular ejection fraction < 40%, and we compared treatment modalities. Recommended treatments and target doses were defined according to ESC guidelines.

Results: There was an improvement in both the rate of prescription, and in the proportion of patients reaching target dose or 50% of target dose of ACE I, ARBs and beta blockers (see table).

Conclusion: We observed an improvement with time in the management of CHF outpatients with an increase in prescription rates of recommended CHF drugs, as well as in the dosage used for ACE-I, ARB and beta-blockers,

Prescription			IMPACT I 2005	IMPACT II 2005/2006	IMPACT III 2007
	Global population		1917	1974	1574
ACE I	**Number patients with prescription**	N (%)	1361 (71.0)	1349 (68.3)	1099 (70.2)
	Target dose	%	48.7	57.3*	52.3•
	50% Target dose	%	80.4	84.5*	88.4†•
ARBs	**Number patients with prescription**	N (%)	395 (20.6)	592 (30.0)*	516 (33.3)†•
	Target dose	%	9.1	7.4	20.7†•
	50% Target dose	%	52.9	49.7	68.6†•
Beta-blockers	**Number patients with prescription**	N (%)	1245 (65.2)	1382 (70.0)*	1229 (78.3)†•
	Target dose	%	18.4	23.4*	25.7†
	50% Target dose	%	47.3	53.5*	59.9†•

* : p<0.05 Impact II vs I
• : p<0.05 Impact III vs II
† : p<0.05 Impact III vs I

although there is still room for improvement particularly for beta blockers. These encouraging findings suggest a better awareness and implementation of ESC guidelines by French private cardiologists.

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Factors that precipitate hospitalizations for heart failure with preserved ejection fraction – characteristics and impact on post-discharge outcome

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Background: Hospitalizations for heart failure (HF) are associated with high mortality and influence post-discharge survival in patients with both reduced and preserved (≥50%) ejection fraction (EF). Several factors may precipitate HF hospitalizations. Heart failure with preserved ejection fraction (HFPEF) is associated with considerable mortality. The characteristics and prognostic impact of precipitating factors have not been studied in patients with HFPEF.

Aims: To study the characteristics and impact on long-term outcome of HF precipitating factors in patients surviving a first hospitalization for HFPEF.

Methods: We conducted a prospective observational study (11 healthcare establishments, Somme, France) and included consecutive patients discharged alive after a first hospitalization for HFPEF. Precipitating factors were collected on admission (acute coronary syndromes [ACS], uncontrolled hypertension, arrhythmia, worsening of renal function [WRF], non-adherence to therapy, and pneumonia). Mortality analyses used Cox models. Patients were followed for 5 years.

Results: The cohort comprised 358 patients (76±10 years, 53% women). Mean EF was 63±8%. One ore more precipitating factors were identified in 274 patients (76%). The most common were arrhythmia (37%), pneumonia (16%), ACS (12%), and WRF (12%). Uncontrolled hypertension and non-adherence to therapy were identified in 9% and 10% of cases, respectively. Arrhythmia (HR1.35[1.02-1.80];p=0.03) and pneumonia (HR1.44[1.01-2.07];p=0.05) were independently related to increased 5-year mortality. Compared to patients without precipitating factors (n=84), those with one factor (n=190; HR 1.67[1.15-2.43];p=0.007) as well as those with ≥2 factors (n=84; HR 1.59[1.03-2.45];p=0.04) displayed excess 5-year mortality.

Conclusion: Factors that precipitate hospitalizations are frequent among patients with HFPEF and predict increased long-term mortality. A more attentive management of these factors may translate into survival benefits.

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Pulmonary Hypertension and Prognosis of Heart Failure

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Background: Pulmonary hypertension (PH) is common in patients with heart failure (HF) but, its relationship to symptoms and prognosis in a broad representative population of patients with HF has rarely been investigated.

Methods: We interrogated a large database of consecutive referral to a HF clinic serving a population of 600,000 people. Systolic HF (S-HF) was defined as a LVEF≤45% and Preserved systolic LV HF (PS-HF) was defined as LVEF >45% with an NT-proBNP value >400pg/mL. Right Ventricle Systolic Pressure (RVSP) was assessed by the measurement of the tricuspid regurgitation (TR) peak systolic velocity.

Results: Of 2135 patients referred, 1026 had S-HF, 354 had PS-HF and 533 had an accurate TR velocity measurement. Median (IQR) calculated RVSP for HF patients was 25 (18-35mmHg). Amongst these patients, 270 had S-HF

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