

lagen binding activity to antigen ratio (VWF:CB/Ag) and the percentage of high molecular weight multimers of VWF (%HMWM) did not change after exercise in the non obstructive group but were lowered in patients with latent obstruction (both  $p=0.003$ ). Incomplete SAM at rest was the strongest independent predictor of %HMWM drop ( $r=-0.70$ ,  $p<0.0001$ ). %HMWM after exercise tightly correlated with exercise peak gradient ( $r=-0.78$ ,  $p<0.0001$ ) and the persistence of obstruction during recovery ( $r=-0.67$ ,  $p=0.005$ ).

**Conclusion:** Incomplete SAM and mitral S velocity at rest are the main predictors of latent obstruction in HCM. Latent obstruction elicits a rapid cleavage of the largest multimers of VWF which is related to the peak gradient but also to the persistence of obstruction during recovery.

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### Implementation of patients reaction is better than implementation of knowledge in Heart failure patients

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Heart failure remains a disease with poor prognosis despite the therapeutic advances of recent decades. Nearly a third of hospital admissions are due to errors in dietetics follow up or therapeutic monitoring. Therapeutic education of patients with heart failure is growing fast in France. For the "Haute autorité de santé" (HAS), evaluation of education programs is an essential element in the same way that the educational diagnosis and interactivity. We wanted to determine what the assessment could predict the onset of the test combined death and hospitalization for heart failure.

We included 398 patients with systolic heart failure who received a therapeutic education between 2003 and 2008. The program involved an educational diagnosis individual training sessions with the disease, sessions Implementation situation, self-physical and dietary. During this educational process, patients filled a questionnaire initial knowledge (Q1) and a questionnaire at the end of training (Q2) and one year of it (Q3). They also fulfilled a clinical case assessment and post training within one year.

The average age of patients was 65 ( $\pm 4$ ), LVEF of 34 ( $\pm 4$ ), the average BNP of 235 ( $\pm 346$ ). There is no correlation between the scores of knowledge questionnaires and questionnaires of clinical cases. In ROC curve there is no cut off for predicting the occurrence of a major event. In survival curve there is no difference between patients having a response greater than the median at questionnaire 1, 2 or 3. however patients with a clinical performance at post training clinical cases above the median had an event-free survival significantly better than those with a response below the median ( $p<0.0001$ ).

**Conclusion:** The evaluation of the reactions of patients with clinical cases is greater than the simple evaluation of the knowledge of patients in terms of predicting survival without hospitalization for heart failure.

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### Determinants of B-type natriuretic peptide levels and left atrial volume in stable patients in sinus rhythm: an echocardiographic-catheterization study

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**Background:** B-type natriuretic peptide (BNP) (Advia Centaur System) and left atrial volume index (LAVi) are regarded as powerful markers of global myocardial function. Several confounding factors are known to potentially influence this relation. The aim of the present study was to evaluate the determinants of BNP and LAVi in the same population of stable patients referred for catheterism.

**Methods:** 74 consecutive patients were included. Exclusion criteria were arrhythmias, acute coronary syndrome, exacerbation of heart failure and severe left-sided valve disease. All the data were obtained within the same morning for each patient. All following variables were tested: age, gender, body mass index, systolic arterial pressure, heart rate, LV ejection fraction (LVEF), LV mass index

(LVM), significant mitral regurgitation (MR), serum hemoglobin (Hb), creatinine clearance (CC), LV end-diastolic pressure (LVEDP), extent of coronary disease.

**Results:** Univariate determinants of BNP were age, LVEF, LVM, MR, LVEDP, extent of coronary disease, Hb and CC. By multiple regression analysis, the independent determinants of BNP were age, LVEDP and LVEF ( $p<0.005$  for all). Univariate determinants of LAVi were age, significant MR, LVM, LVEF and LVEDP. By multiple regression analysis, the independent predictors were LVM and LVEDP ( $p=0.001$  for all). BNP was not predicted by LAVi in the multivariate model.

**Conclusion:** Our study confirms that both BNP and LAVi can be used as markers of global myocardial dysfunction in stable patients in sinus rhythm. However, age must be taken into consideration before interpreting BNP results.

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### Care management of heart failure in elderly patients in France. Results from the DEVENIR study

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**Rationale:** The part of elderly patients (pts) in heart failure (HF) population is growing. They might pose specific problems due to the greater proportion of HF with preserved LVEF, more frequent comorbidities or contraindications to recommended HF treatment.

**Objectives:** to describe the care management of pts > 80-year treated for HF in France.

**Methods:** Cross sectional observational survey with retrospective collection of data at hospital discharge. Pts must have been diagnosed with CHF and have been hospitalised for CHF within the previous 18 months. Pts are classified according to the LVEF at hospital discharge.

**Results:** 412 French out-hospital cardiologists entered 1 452 pts meeting the inclusion criteria. FEVG at hospital discharge was known for 1408 pts. 355 (25%) were more than 80-year-old. Management care at hospital discharge according to age and LVEF is detailed below.

		LVEF < 40%	LVEF 40-50%	LVEF > 50%	Total
Age>80	ACEI/ARB	84%	81%	80%	82%*
	BB	71%	67%	40%†‡	62%*
	Loop diuretics	92%	85%	85%	88%
	Spironolactone/epplerenone	26%	20%	18%	22%*
	Digoxin	20%	15%	29%	21%*
	Calcium antagonists	10%	14%	37%†‡	18%
	Anticoagulants	49%	45%	51%	49%*
Age≤80	ACEI/ARB	93%	93%	85%†‡	92%
	BB	79%	78%	76%	79%
	Loop diuretics	90%	82%	79%†§	86%
	Spironolactone/epplerenone	35%	21%	25%†§	30%
	Digoxin	16%	15%	16%	15%
	Calcium antagonists	9%	19%	21%†§	13%
	Anticoagulants	42%	39%	39%	41%

† $p<0.05$  for comparisons between LVEF > 50% and LVEF<40%;

‡ $p<0.05$  for comparisons between LVEF>50% and LVEF between 40% and 50%;

§ $p<0.05$  for comparisons between LVEF<40% and LVEF between 40% and 50%;

\* $p<0.05$  for comparisons between > 80 and ≤ 80 years old adjusted for LVEF.