Conclusion: BB, ACEI/ARB, spironolactone/erlenerone are less often prescribed in elderly patients contrasting with digoxin and anticoagulants prescription. These differences persist after adjustment on LVEF.

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Importance of haemodilution in haemoglobin concentrations in outpatients with chronic heart failure. Results of IMPACT-RECO Program III

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Background: The prevalence of anaemia in chronic heart failure (CHF) ranges widely from 4% to 70% due to a lack of an established definition of anaemia in CHF. Furthermore haemodilution impacts haemoglobin concentrations and could be an important cause of anaemia in CHF.

Aims: The IMPACT-RECO program III analysed the impact of NYHA class of CHF and of comorbidities on therapeutic management of French outpatients with stable CHF and left ventricular systolic dysfunction.

Methods: This survey was carried out from March 2007 to December 2007 among randomly selected French private cardiologists. 1574 patients with CHF and left ventricular ejection fraction (LVEF) < 40% were included.

Results: Mean age was 71 ± 13 years, 75% of the patients were men, 24% were in NYHA class III/IV, 54% had coronary artery diseases, 30% had atrial fibrillation and the mean LVEF was 34 ± 7%. Haemoglobin concentration was recorded in 953 patients. Anemia was defined as a haemoglobin concentration < 12 g/L in women and < 13 g/L in men. The impact of NYHA class and congestive status in haemoglobin concentrations are summarized in the table.

Conclusions: Congestive status impacts haemoglobin concentrations more than the severity of CHF estimated by NYHA class. Haemodilution is an important aetiology of anaemia in CHF, thus haemoglobin concentration should be evaluated if possible in patients without congestive signs.

<table>
<thead>
<tr>
<th>Haemoglobin (g/L)</th>
<th>NYHA I</th>
<th>NYHA II</th>
<th>NYHA II</th>
<th>NYHA III</th>
<th>NYHA IV</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>with</td>
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<td>without</td>
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<tr>
<td></td>
<td>congestive</td>
<td>signs</td>
<td>congestive</td>
<td>signs</td>
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<tr>
<td>n</td>
<td>107</td>
<td>448</td>
<td>62</td>
<td>295</td>
<td>37</td>
</tr>
<tr>
<td>Men</td>
<td>13.3 ± 1.6</td>
<td>13.4 ± 1.7</td>
<td>12.1 ± 1.9</td>
<td>12.7 ± 1.8</td>
<td>13.4 ± 1.6</td>
</tr>
<tr>
<td>Women</td>
<td>12.7 ± 1.2</td>
<td>12.6 ± 1.3</td>
<td>11.8 ± 2.5</td>
<td>12.1 ± 1.6</td>
<td>12.2 ± 2.1</td>
</tr>
<tr>
<td>Anaemia N (%)</td>
<td>33 (30.8)</td>
<td>150 (33.5)</td>
<td>42 (67.7)**</td>
<td>149 (50.5)*</td>
<td>15 (40.5)</td>
</tr>
</tbody>
</table>

* p < 0.05: NYHA III vs NYHA I/II
** p < 0.05 : NYHA II with congestive signs vs NYHA I/II without congestive signs III/IV.

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Left ventricular systolic function and Response to Cardiac Resynchronization Therapy is influenced by Right ventricular function as assessed by Echocardiography

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Background: Right ventricular (RV) function has been proven to be a major determinant of clinical outcome in Chronic Heart Failure (CHF). The right and left (L) ventricles inter dependence has been weakly evaluated but might impact on response to treatments and prognosis.

Aim: We sought to assess the impact of RV function on LV function by studying longitudinal and radial strains in CHF-patients selected for cardiac resynchronization therapy (CRT).

Methods: Thirty-eight consecutive CHF-patients (New York Heart Association class III/IV, left ventricular ejection fraction [LVEF] less than 35%, QRS greater than 120 ms) were studied before and after 6-month of CRT. RV function was assessed by tricuspid annulus plane systolic velocity (Vs) with a cut-off of 11.5 cm/s. Global LV longitudinal strain (GLS) was measured (from the apical 4-chamber, apical 3-chamber and apical 2-chamber views) before and after CRT. Mean radial strain was measured from the parasternal mid-ventricular view. Reverse remodeling was defined by echocardiography at 6-month by a decrease in LV end-systolic volume ≥ 15%.

Results: Eighteen patients had RV-dysfunction (mean Vs=7.6 ± 2cm/s) and 20 had normal RV-function (13.6±2.7cm/s). LVEF and volumes were non different between groups. Patients with RV-dysfunction had significantly worse global longitudinal strain before CRT (A-4Ch=-5.3±1.5% vs. -7.4±2.2%, p=0.01; A-2Ch=-5.7±1.2% vs. -9±2%, p<0.01; A-3Ch=-5.2±0.9% vs. -8.4±2.2%, p=0.01). After CRT, differences in global longitudinal strain were still significant. Considering mean radial strain, there were no differences between groups. The likelihood of response to CRT was significantly worse in patients having a RV dysfunction (75% vs. 44%, p<0.05).

Conclusion: RV dysfunction diagnosed in patients planed for CRT is associated with a significantly worse LV global longitudinal function and a significantly weak likelihood of response to CRT at 6-month.

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Primary prevention for heart failure among old hypertensive patients: Contribution and perspectives derived from recent trials

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Background: In 2009, in France, heart failure (HF) affects around 1 000 000 Pts and is the first cause of hospitalization among patients (Pts) above 80 years of age. Despite constant progresses, results of HF secondary management are still moderate. Mortality rates decrease slowly, remaining around 30 to 40% at 1year and reaching 70% at 5 years. Primary prevention of HF could therefore be an effective strategy. In particular, hypertension (HT) is strongly associated with HF. Meta-analyses (MA) demonstrated a correlation, even not linear, between blood pressure (BP) decrease and HF risk, suggesting different impacts of anti-HT strategies. In the ALLHAT trial, the lowest rates of hospitalization and fatal HF were found for Pts receiving diuretic or ACE inhibitor.

Methods: INDANA MA data, assessed among 1 670 Pts above 80, have been compared to the recent, randomized, double-blind, multicentric HYVET trial results. HYVET evaluated the benefits of treating 3845 Pts ≥ 80 years with a sustained systolic BP<160 mmHg using indapamide +/− perindopril strategy (I-PS) or placebo.

Results: INDANA results showed a significant 39% reduction of HF associated with a 6% relative excess of death from all causes in active group. In HYVET, active treatment was associated with a 21% reduction of all causes death (p=0.02) and a significant 64% reduction of HF (p < 0.001), with an incidence decreasing from 1.48% to 0.53% per year. According to published figures, one HF would be prevented by treating 52 Pts during 2 years.

Conclusion: these results provide evidence that I-PS in HT Pts above 80 is beneficial and effective for preventing HF and mortality. These results, if applied to French population, could contribute to a significant reduction of HF incidence among old HT patients.