

Early cardiac reverse remodeling in a large cohort of patients with HFrEF treated with Sacubitril/Valsartan

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Background: Despite the widespread use of Sacubitril/valsartan (Sac/Val) in patients with reduced ejection fraction (HFrEF), definite data on cardiac remodeling under treatment are still lacking.

Methods and aim of the study: We conducted a retrospective analysis on a large cohort of 201 consecutive HFrEF ambulatory patients who started Sac/Val in our HF unit between Sept. 2016 and Dec. 2018 on top of optimal medical treatment. Patients with both basal and follow up (at least 3 months) echocardiographic assessment (TTE) were included.

Results: A follow up TTE was performed in 100 patients (male 76%; mean age 67.4±11.1 years; medium follow-up 309±182 days). Baseline characteristics are shown in Tab.1. 34% of the patients reached the maximal dose (97/103 b.i.d.) while 18 interrupted the treatment. We observed an overall significant improvement in ejection fraction (EF), end-diastolic and end-systolic ventricular volumes (EDV/ESV), while just a trend in pulmonary pressures (PAPs) and mitral regurgitation (MR) reduction was noted (p=0.06 and 0.09 respectively). Non ischemic etiology and high dose of Sac/Val were predictors of better remodeling (Fig.1).

N=100	Clinical characteristics
Systolic blood pressure (mmHg)	116±11
Diastolic blood pressure (mmHg)	70±9
Hemoglobin (g/dl)	13±1.99
MDRD (ml/min/1,73m2)	63±21.4
Potassium (mmol/L)	4.26±0.50
NYHA class II (n; %)	59 (59%)
NYHA class III (n; %)	41 (41%)
Ischemic etiology (n; %)	58 (58%)
ICD (n; %)	41 (41%)
CRT (n; %)	32 (32%)
Beta-blockers (n; %)	94 (94%)
ACEi or ARBs (n; %)	92 (92%)
MRA (n; %)	77 (77%)

Conclusion: Sac/Val led to an early favorable ventricular remodeling assessed by echocardiography. The benefit was greater in patients on higher Sac/Val dose and non ischemic etiology.

