Similar heart failure hospitalization and survival benefits are associated with Sacubitril/Valsartan therapy in CRT non responders and in HFrEF patients with no CRT indication

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Background: Sacubitril/Valsartan (S/V) induced reverse remodelling and improved heart failure (HF) hospitalisation and survival in HF with reduced ejection fraction (HFrEF) in recent trials. Data on the clinical effectiveness of S/V in the specific HF patient cohort of CRT non-responders (CRT-NRs) are limited.

Aim of the study: Herein, we compared the impact of S/V on hospitalisation and mortality in CRT-NRs and in HFrEF patients with no CRT indication. In addition, we evaluated the outcome in patients with versus without a more marked response to S/V therapy.

Methods: Database search was performed to identify patients based on the following criteria. Group I: Patients implanted with a CRT pacemaker or ICD who demonstrated a less than 10% increase in left ventricular ejection fraction (LV EF) 6 months after device implantation on optimal medical therapy (CRT-NRs). In addition, these CRT-NRs were initiated on S/V as a replacement of ACEi/ARB therapy at least 6 months after device implantation. Group II: HFrEF patients with no CRT indication initiated on S/V. Patients were on S/V treatment at least for 6 months in both groups. Hospitalization and mortality rates were compared in both groups during follow-up. A subgroup analysis was also performed based on the improvement in LV EF on S/V. Patients with a more than 10% improvement were defined as S/V Super-responders, while those with a less than 10% increase as S/V Moderate responders.

Results: 70 patients were enrolled in Group I, and 135 in Group II. During a follow-up of 21.9±1.6 no significant differences were detected in the rates of hospitalization (31% vs 28%; p:0.742) and mortality (18.5% vs 17.2%; p = 0.456) in Group I and II, respectively. In group I, 13 (18.5%) and in Group II, 24 (17.7%) patients were identified as SV Super-responders. Rates of hospitalization were similar in S/V Super-responders and in SV Moderate responders in Group I (23.1% vs 31.6%, p = 0.464) as well as in Group II (25% vs 30.7%, p = 0.602). Mortality rates were similar, alike in in S/V Super-responders and in SV Moderate responders in both groups (Group I:15.4% vs 24.6%, p = 0.320, Group II: 20.8% vs 25.3%, p = 0.789).

Conclusion: Similar hospitalization and mortality rates were demonstrated on S/V in CRT-NR and in HFrEF patients with no CRT indication during a 21-month follow-up. A more than 10% increase of LV EF on S/V treatment did not predict improved hospitalization and survival as compared to a more moderate response in either group.