Abstract: P1652

Effects of sacubitril/valsartan on real-world patients with heart failure due to non-ischemic cardiomyopathy

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BACKGROUND: Sacubitril/valsartan significantly reduced heart failure hospitalizations and mortality in the PARADIGM-HF-trial. However, little is known about the dosing, tolerability, efficacy and safety of sacubitril/valsartan in a non-clinical trial real-world population with non-ischemic cardiomyopathy.

METHODS: Between March 2017 and December 2018, we retrospectively collected baseline and follow-up data of all consecutive patients with heart failure with reduced ejection fraction (HFrEF) due to non-ischemic etiology (non-ischemic cardiomyopathy) receiving therapy with sacubitril/valsartan. Doses of sacubitril/valsartan were optimized to individual tolerance. In addition to clinical and echocardiographic assessment, plasma N-terminal pro-B-type natriuretic peptide (NT-pro-BNP), serum creatinine and estimated glomerular filtration rate (eGFR) levels were measured and compared between baseline and 3-18 months after treatment.

RESULTS: A total of 129 patients (70% males) were identified. At baseline, median age was 65 years, median left ventricular ejection fraction (LVEF) was 30%, and all patients had symptoms of NYHA functional class =II. A total of 45% of patients received dose adjustment. They received a much lower dose of sacubitril/valsartan in comparison with those in the PARADIGM-HF (113 ± 60 vs. 375 ± 75 mg). Within 6 months of being transitioned into sacubitril/valsartan therapy, only 1.6% achieved maximal dose (400 mg/day), 18.6% achieved 200 mg/day, 59.7% achieved 100 mg/day, and 20.2% achieved 50mg/day. The main reason for not achieving maximal dose was because a decrease in blood pressure (49%). However, symptomatic hypotension leading to medication discontinuation only occurred in 5 patients (4%). Over a median(IQR) follow-up of 354 (135-453) days after initiation of sacubitril/valsartan, LVEF improved (31.0 ± 9 vs 42.6 ± 11%; P = .002) and NT-pro-BNP levels decreased (15375 ± 4041 vs 10443 ± 3267 pg/ml; P < .001). However, a modest but significant decrease in eGFR (61.9 ± 35 vs 51.8 ± 33 ml/min/1.73m2; P < .001) was also observed.

CONCLUSION: Real-world patients with HFrEF due to non-ischemic cardiomyopathy exhibit significant cardiac function improvement following the initiation of sacubitril/valsartan. However, the optimal target dose of sacubitril/valsartan for Asian population, who are tend to be associated with lower body mass index, lower blood pressure and less tolerable doses of ACE-inhibitors/ARBs, should be observed in larger scale real-world clinical studies.