

The Impact of Sacubitril / Valsartan Versus ACE/ARB Therapy on Functional Capacity in Heart Failure with Preserved Ejection Fraction

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Background: The availability of pharmacological therapies producing a symptomatic benefit on patients with heart failure with preserved ejection fraction remains limited. Given prior evidence suggesting the efficacy of Angiotensin Receptor Neprilysin Inhibitors (ARNIs) in reducing cardiovascular mortality and CHF-related hospitalizations, as well as noted correlation between subjective, patient-oriented measures and objective outcomes (for example, medication compliance derived from perceived symptomatic benefit), we sought to investigate the effect of ARNIs on exercise capacity in a patient-defined manner.

Methods: We performed a literature search using PubMed, Embase, and Cochrane Library from inception through May 2022 to assess the impact of Sacubitril/Valsartan versus ACE/ARB therapy on physical activity tolerance in patients with heart failure with preserved ejection fraction. The co-primary outcomes were mean percent change in NYHA Class Improvement ≥ 1 from baseline and mean change in KCCQ-CSS scores from baseline.

Results: 2 studies (both randomized control trials) involving 7394 patients were included in the meta-analysis. Compared to patients receiving ACE/ARB therapy, the ARNI group showed no statistically significant difference in either mean percent change in NYHA Class Improvement ≥ 1 from baseline (OR 1.10, CI 0.88, 1.37, $p=0.40$) or mean change in KCCQ-CSS scores from baseline (MD 0.25, CI -1.22, 1.72, $p=0.74$).

Conclusion: The use of ARNI compared to ACE/ARBs confers no statistically significant improvement in functional capacity in patients with heart failure with preserved ejection fraction. Further trials with large sample sizes are needed to confirm our findings.