Abstract. Angiotensin receptor-neprilysin inhibitor (sacubitril/valsartan) is well known to be superior over angiotensin-converting enzyme inhibitor (ACEI) or angiotensin receptor blockers (ARBs) in terms of reducing cardiovascular mortality in heart failure with reduced ejection fraction (HFrEF). However the impact of sacubitril/valsartan therapy on exercise capacity versus ACEI/ARBs for such patients is less tested.

Methods. This non randomized observational study enrolled 100 patients with HFrEF. All participants underwent two sets of cardiopulmonary exercise tests (CPET) at baseline and after 6 months of non interrupted sacubitril/valsartan therapy in addition to optimal anti failure medications. Bridging from ACEI/ARBs to ARNI was done at baseline according to guidelines.

**Results**. After 6 months, patients received sacubitril/valsartan had significant improvement in LVEF from 26 ± 5 to 29.6 ± 8%, peak oxygen consumption (VO2) improved from 14.6 ± 4 to 17.3 ± 5.2 mL/kg/min, oxygen pulse increased from 11.6 ± 4 to 13.6 ± 5 mL/kg/min and ∆VO2/∆Work increased from 9.1 ± 2.5 to 10.2 ± 1.6 mL/min/watt (p = 0.0001 for all). Conclusion: Sacubitril/valsartan therapy improved exercise tolerance, peak oxygen consumption and LVEF up to 6 months of follow-up.

Keywords: heart failure; sacubitril/valsartan; cardiopulmonary exercise test.