






## Pharmacotherapy in heart failure patients with reduced ejection fraction – results from clinical practice

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**Introduction:** The aim of the study was to establish pharmacotherapy application in the treatment of HFrEF (heart failure with reduced ejection fraction) patients in regular clinical practice, according to the European Society of Cardiology guidelines for acute and chronic heart failure 2016<sup>1</sup>.

**Patients and Methods:** The study included 127 patients of both sexes (41% female, mean age 80; 59% male, mean age 68,  $p=0.001$ ), hospitalized in 2019 at the Department for Heart and Vascular Diseases, Osijek University Hospital, due to HFrEF NYHA IV. It follows their first, second, and third hospitalizations. All the patients' data, including HFrEF etiology; biochemical, hemodynamic, and echocardiographic parameters; and pharmacotherapy data, were collected from the hospital database.

**Results:** Crucial comorbidities for HFrEF, such as arterial hypertension, were present in 83% of patients. Diabetes mellitus type II was found in 39% patients, and coronary heart disease in 57.5% of patients. In the first hospitalization (median NT-proBNP value 4276 pg/ml), discharge therapy included 54% BB, 60% ACEI, 52% MRA (50% 50mg), 32% ARNI (25% 49/51mg twice daily), 49% statins. In the second hospitalization (median NT-proBNP 5636 pg/ml), discharge therapy included 26% BB, 22% ACEI, 25% MRA (25% 50mg), 29% ARNI (50% 49/51mg twice daily), 24% statins. In the third hospitalization (median NT-proBNP 8998 pg/ml), discharge therapy included 10% BB, 10% ACEI, 12% MRA (25% 50mg), 21% ARNI (25% 49/51mg twice daily), 14% statins. A negligible number of patients were treated with ATII blockers and SGLT2 inhibitors.

**Conclusion:** HFrEF patients were already treated in outpatient clinics because of comorbidities and established HFrEF during stabile phase of disease. After the first hospitalization, they had the best pharmacologic profile for HFrEF treatment (except ARNI group, higher dose in the second hospitalization). HFrEF worsening in each next hospitalization that followed, resulting in lower quality pharmacotherapy, probably as a result of patients' worse clinical, hemodynamic, and biochemical condition. Early medication of HFrEF treatment in stabile phase of the disease is crucial for HFrEF prognosis.

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### LITERATURE

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