

## Naš komadić neba: kakvi su bolesnici koje hospitaliziramo zbog zatajivanja srca u Kliničkom bolničkom centru Rijeka

### Our piece of heaven: what are hospitalized heart failure patients like in University Hospital Centre Rijeka

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**Cilj:** Prikazati bolesnike sa zatajivanjem srca (ZS) hospitalno liječene u Kliničkom bolničkom centru Rijeka tijekom godine dana, utvrditi njihove karakteristike i hospitalni ishod prema ejekcijskoj frakciji (EF) lijeve klijetke, posebno s ejekcijskom frakcijom srednjeg raspona (HFmrEF) te usporediti naše rezultate s dostupnima iz literature<sup>1</sup>.

**Bolesnici i metode:** Provedeno je retrospektivno, opservacijsko istraživanje na ukupno 375 bolesnika. Uključeni su svi bolesnici hospitalizirani zbog ZS-a, koji su kao uzorak našeg centra uneseni u Registar bolesnika sa ZS-om Europskog kardiološkog društva, a isključeni oni u kardiogenom šoku te s akutnim koronarnim sindromom. Bolesnici su klasificirani u tri skupine prema ehokardiografski procijenjenoj vrijednosti EF-a (EF <40%, EF 40-49%, EF ≥50%).

**Rezultati:** U usporedbi s bolesnicima sa ZS s očuvanom EF (HFpEF), oni sa ZS sa sniženom EF (HFmrEF) bili su značajno mlađi (73 vs. 78 godine, p<0,01), većinom muškarci (64 vs 34%, p<0,01), češće s blokom lijeve grane (32 vs. 7%, p<0,01) i višom prevalencijom ishemijske etiologije (52 vs. 22% p <0,01). Bolesnici s HFpEF imali su češće arterijsku hipertenziju kao uzrok ZS-a (3 vs 14%, p <0,01). Fibrilacija atrija bila je prisutnija u bolesnika s HFpEF (41 vs. 65%, p <0,01). Bolesnici s HFmrEF nalikovali su na one s HFpEF glede dobi, spola, indeksa tjelesne mase i prisutnosti fibrilacije atrija. Prosječna duljina hospitalizacije (8 dana) i bolnička smrtnost (6%) nisu se značajno razlikovale među skupinama.

**Zaključak:** Unatoč mogućim razlikama bolesnika s HFmrEF i preostale dvije skupine, naša HFmrEF populacija dominantno je nalikovala HFpEF skupini. Za razliku od HFmrEF fenotipa i njenog liječenja, preostale dvije vrste ZS-a nisu globalno dovoljno razjašnjene. Stoga su daljnja istraživanja u ovih bolesnika od posebnog značaja za razvoj kliničke prakse zasnovane na dokazima.

**Aim:** Present heart failure (HF) patients hospitalized during the period of one year in University Hospital Centre Rijeka, describe their characteristics and hospital outcome according to left ventricular ejection fraction (EF) with emphasis placed on heart failure with mid-range ejection fraction (HFmrEF) and compare our results with literature data<sup>1</sup>.

**Patients and Methods:** Retrospective, observational study was conducted with a total of 375 subjects. All patients hospitalized for heart failure were included, same sample we introduced to European Society of Cardiology HF Register, except those presented with cardiogenic shock or acute coronary syndrome. Patients were classified in three groups according to their left ventricular ejection fraction (EF ≤40%, EF 40-49%, EF ≥50%) measured using echocardiography.

**Results:** In comparison with HFpEF (heart failure with preserved ejection fraction) subjects, patients with HFmrEF (heart failure with reduced ejection fraction) were younger (73 vs. 78 years, p<0.01), more commonly male (64% vs 34%, p<0.01) with left bundle branch block (32% vs. 7%, p<0.01) and higher prevalence of ischemic HF etiology (52% vs. 22%, p<0.01). HFpEF patients had hypertension (3% vs 14%) more often as a confirmed cause of HF. As expected, atrial fibrillation was significantly more common in HFpEF group (41% vs. 65%, p<0.01). The HFmrEF category resembled the HFpEF population regarding age, gender, body mass index and atrial fibrillation frequency. The average length of hospitalization (8 days) and the in-hospital mortality (6%) did not differ significantly between groups.

**Conclusion:** Despite possible differences between HFmrEF and the other two investigated HF categories, our HFmrEF population predominantly resembled HFpEF group. Unlike HFmrEF group characteristics and its management, the other two heart failure categories are globally not sufficiently defined. Hence their future research is of special importance for development of evidence-based medical practice.

#### LITERATURE

1. Chioncel O, Lainscak M, Seferovic PM, Anker SD, Crespo-Leiro MG, Harjola VP, et al. Epidemiology and one-year outcomes in patients with chronic heart failure and preserved, mid-range and reduced ejection fraction: an analysis of the ESC Heart Failure Long-Term Registry. *Eur J Heart Fail.* 2017 Dec;19(12):1574-1585. <https://doi.org/10.1002/ehf.813>