

Results of a 6-month intensive outpatient management programme for patients with chronic heart failure – a pilot study

 Denis Došen^{1*},
 Dubravko Došen¹,
 Dejan Došen²,
 Dora Fabijanović²,
 Maja Čikeš²,
 Davor Miličić²

¹Private Cardiovascular Clinic "Dr. Došen", Karlovac, Croatia

²University of Zagreb School of Medicine, University Hospital Centre Zagreb, Zagreb, Croatia

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***ADDRESS FOR CORRESPONDENCE:** Denis Došen, Poliklinika dr. Došen, Trg Petra Zrinskog 7, HR-47000 Karlovac, Croatia. / Phone: +385-98-548-540 / E-mail: denisdosen@gmail.com

ORCID: Denis Došen, <http://orcid.org/0000-0003-3490-5505> • Dubravko Došen, <http://orcid.org/0000-0002-0263-2920>
Dejan Došen, <http://orcid.org/0000-0002-2641-4768> • Dora Fabijanović, <http://orcid.org/0000-0003-2633-3439>
Maja Čikeš, <http://orcid.org/0000-0002-4772-5549> • Davor Miličić, <http://orcid.org/0000-0001-9101-1570>

Introduction: Heart failure (HF) has been singled out as a staggering clinical and public health problem, associated with significant mortality, morbidity, and healthcare expenditures. Heart failure patients often experience a loss of productivity and quality of life.¹ This pilot study evaluated the effectiveness of a multidisciplinary, outpatient HF clinic during 6 months period. Our goal was to determine whether an intensive intervention at a HF clinic improves patient's functional status (New York Heart Association (NYHA) class), echocardiographic parameters, and levels of NT-proBNP. Patients with optimal drug therapy at the start and at the end of the study were also evaluated.

Patients and Methods: Our follow-up consisted of 8 scheduled patient contacts - initial visit at day 1, telephone contact at day 3, and visits to the clinic at weeks 1, 3, 5, 7 and at months 3 and 6. Verbal and written comprehensive education, optimization of treatment, easy access to the clinic, and advice for symptom monitoring and self-care were provided. Echocardiography study, six-minute walk test (6MWT) and levels of NT-proBNP were performed on an initial and the last visit. For group comparison Pearson chi-square, Fischer's Exact test, Wilcoxon Signed Ranks Test and Paired Samples T-Test were used.

Results: A total of 35 HF pts (mean age 76±6 years, 40% male) with various comorbidities (atrial fibrillation (57%), diabetes mellitus (32%), arterial hypertension (74%), chronic obstructive pulmonary disease (6%) diagnosed per the current guidelines were prospectively assessed in the period of 6 months. In follow-up period significant reduction of body mass index, average heart rate and systolic blood pressure was observed (**Table 1**). Echocardiography study showed improvements in systolic pulmonary pressure and left ventricular ejection fraction (**Table 2**).

Conclusion: A HF outpatient clinic involving an intensive intervention by a clinician, substan-

TABLE 1. Patients characteristics.

Segment	Visit 1	Visit 6 months	P-value
BMI (mean ± SD)	31.42 ± 5.45	30.70 ± 4.87	0.02
SBP (mean ± SD)	127 ± 22	119 ± 9	0.02
HR (mean ± SD)	76 ± 21	69 ± 11	0.03
6MWT (median, IQR)	200 (82-280)	270 (170-325)	< 0.01
NT-proBNP (median, IQR)	1873 (929-3301)	1676 (434-4032)	0.183
NYHA (%)			
II	20 (59)	32 (97)	< 0.01
III	14 (41)	1 (3)	
OMT			
Beta-blockers (%)	32 (94)	31 (92)	0.52
ACEI / ARBs (%)	21 (62)	23 (72)	0.30
MRA (%)	8 (24)	23 (72)	< 0.01
ARNI (%)	3 (9)	5 (16)	0.46
Diuretics (%)	33 (99)	32 (97)	1.0

BMI = body mass index, SBP = systolic blood pressure, HR = heart rate, 6MWT = 6 Minute Walk Test, NYHA = New York Heart Association, OMT = optimal medical therapy, ACEI = Angiotensin-converting-enzyme inhibitor, ARBs = Angiotensin receptor blockers, MRA = Mineralocorticoid receptor antagonist, ARNI = Angiotensin Receptor-Neprilysin Inhibitors

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tially improves patient's functional status (NYHA class, 6MWT) as well as echocardiographic parameters. We also showed that mineralocorticoid receptor antagonists are still underutilized in the treatment of heart failure in our region and that further improvements in their prescribing are needed.

TABLE 2. Echocardiographic parameters.

Segment	Visit 1	Visit 6 months	P-value
EDV (mean ± SD)	139 ± 62	131 ± 54	0.16
LVEF (mean ± SD)	43 ± 14	48 ± 13	< 0.01
E/E' (mean ± SD)	12.3 ± 4.2	11.7 ± 4.2	0.34
LAVI (mean ± SD)	60.2 ± 19.7	61.1 ± 16.1	0.74
TAPSE (mean ± SD)	18 ± 4	20 ± 4	0.01
sPAP (mean ± SD)	52 ± 15	27 ± 15	0.01

EDV = End-diastolic volume, LVEF = Left ventricular ejection fraction, LAVI = Left atrial volume index, TAPSE = Tricuspid annular plane systolic excursion, sPAP = Systolic pulmonary artery pressure

LITERATURE

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