

Inflammation and Salt-Inducible Kinases - A Potential Novel Therapeutic Strategy in Patients with Heart Failure

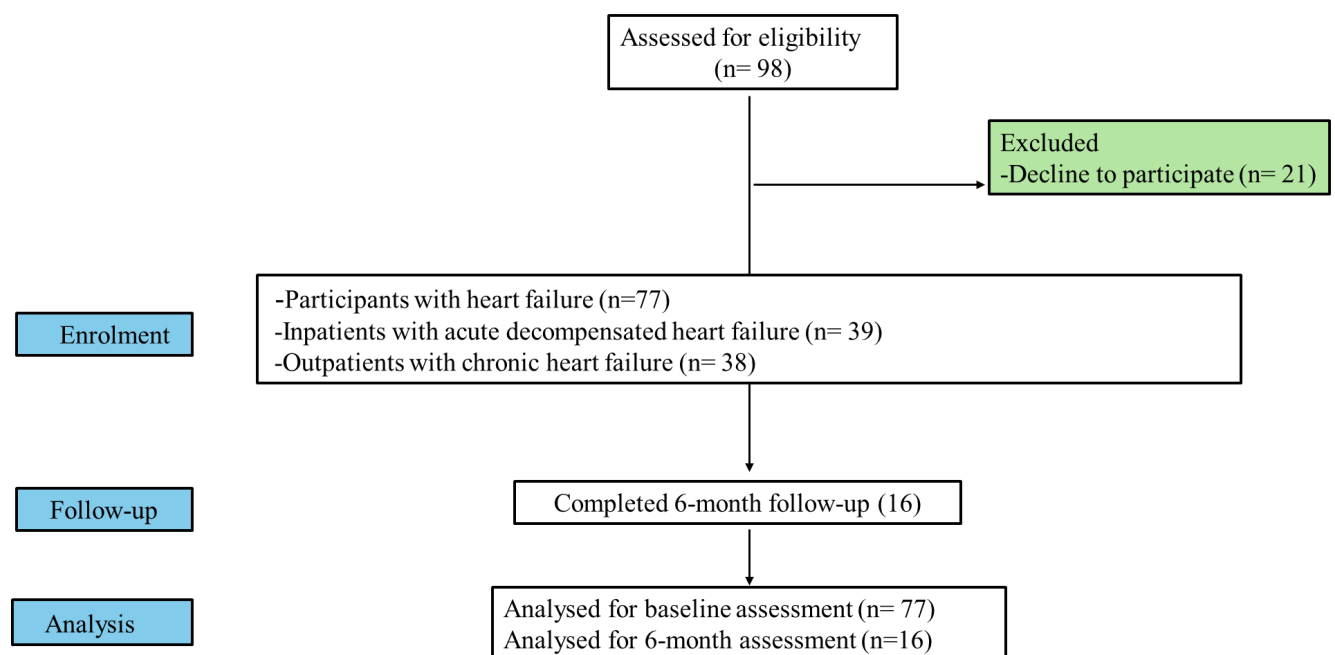
A Basic Results Summary

Section 1: Participant Flow

We successfully recruited 77 heart failure (HF) patients, comprising 39 inpatients and 38 outpatients.

Both inpatient and outpatient groups underwent blood testing to measure inflammatory markers, and echocardiography to assess cardiac function and structure, and completed the Kansas City Cardiomyopathy Questionnaire (KCCQ) to evaluate HF-related quality of life. Inpatients were also called back for a follow-up visit.

Figure 1. Strobe Flow Chart



Section 2: Baseline Characteristics

Table 1 Baseline Characteristics

Variable	Total cohort	Inpatient	Outpatients	P -value
Number of participants	N=77	N=39	N=38	
Age (years)	69.78 ± 10.96	69.10 ± 13.27	70.47 ± 8.07	0.587
Male	55 (71.4%)	26 (66.70%)	29 (76.30%)	0.349
First Presentation of HF	30 (39%)	26 (66.7%)	4 (10.5%)	<0.001
Weight (kg)	86.91 ± 20.48	89.48 ± 25.19	84.00 ± 15.69	0.349
BMI (kg/m²)	29.63 ± 7.15	30.46 ± 9.15	28.95 ± 4.99	0.387
KCCQ				
Overall summary score	41.15 ± 23.37	29.97 ± 19.02	52.62 ± 21.98	<0.001
Clinical summary score	29.57 ± 17.26	22.61 ± 16.08	36.72 ± 15.59	<0.001
Total symptom score	3.56 ± 1.42	2.83 ± 1.15	4.31 ± 1.29	<0.001
Blood				
NT-proBNP (ng/L)	1732.50 (411.75, 4259.00)	3301 (1711.00, 7096.00)	661 (217.00, 1754.00)	<0.001
Co-morbidities				
IHD	38 (49.4%)	12 (30.8%)	26 (68.4%)	<0.001
Hypertension	37 (48.1%)	22 (56.4%)	15 (39.5%)	0.137
Diabetes	24 (31.2%)	17 (43.6%)	7 (18.4%)	0.017
Stroke	7 (9.1%)	5 (12.8%)	2 (5.3%)	0.249
Atrial fibrillation	36 (46.8%)	22 (56.4%)	14 (36.8%)	0.085
Hypercholesterolaemia	7 (9.2%)	4 (10.3%)	3 (8.1%)	0.746
CKD	17 (22.4%)	10 (26.3%)	7 (18.4%)	0.409
Medications				
Ace inhibitor	33 (42.9%)	16 (41%)	17 (44.7%)	0.742
Angiotensin receptor blocker	32 (41.6%)	15 (38.5%)	17 (44.7%)	0.576
Calcium channel blocker	9 (11.8%)	6 (15.4%)	3 (8.1%)	0.326
Beta-blocker	58 (76.3%)	27 (69.2%)	31 (83.8%)	0.136
Antiplatelets	33 (42.9%)	11 (28.2%)	22 (57.9%)	0.008
Statin	50 (64.9%)	27 (69.2%)	23 (60.5%)	0.424
SGLT2 Inhibitor	27 (35.1%)	14 (35.9%)	13 (34.2%)	0.877
Anticoagulants	33 (42.9%)	21 (53.8%)	12 (31.6%)	0.048
MRA	32 (42.1%)	17 (44.7%)	15 (39.5%)	0.642
Loop diuretics	47 (61%)	32 (82.1%)	15 (39.5%)	<0.001
Echocardiogram				
Ejection fraction %	33.84 ± 10.02	32.30 ± 11.21	34.98 ± 9.13	0.410
Average E/e' Ratio	13.30 ± 5.38	15.20 ± 6.23	12.18 ± 4.59	0.055
Left atrial area (cm)²	25.97 ± 9.07	29.32 ± 10.77	22.88 ± 5.83	0.012

Data are mean ± SD; Median ± (quartile 1, quartile 3), or n (%).

Abbreviation: BMI, Body Mass Index.

Section 3 Outcome Measures

Table 2 Inflammatory Markers at Baseline

Variable	Inpatient	Outpatients	P-value
CRP mg/ml	3.42 (2.31, 5.82)	1.45 (0.63, 3.16)	0.002
TNF-alpha pg/ml	2.82 (2.29, 4.74)	2.54 (1.65, 4.43)	0.069
IL-1 β pg/ml	0.34 (0.25, 0.46)	0.45 (0.26, 0.61)	0.194
IL-6 pg/ml	0.82 (0.71,1.18)	0.65 (0.43,1.21)	<0.001
IL-10 pg/ml	0.26 (0.11, 0.31)	0.14 (0.06, 0.25)	0.008
NLR	2.90 (1.88, 3.30)	3.06 (2.34, 4.03)	0.312

Table 3 Inflammation and NT-proBNP in Baseline and 6-Month Visit

Variable	Baseline Visit	6-Month Visit	P value
CRP mg/ml	5.22 (3.34, 7.24)	3.66 (1.15, 6.98)	0.323
TNF-alpha pg/ml	4.74 (2.36, 5.14)	4.43 (2.86, 6.89)	0.365
IL-1 beta pg/ml	0.29 (0.16, 0.39)	0.41 (0.27, 0.46)	0.018
IL-6 pg/ml	1.18 (0.81,4.04)	1.71 (0.83, 5.93)	0.637
IL-10 pg/ml	0.30 (0.23, 0.33)	0.27 (0.23, 0.51)	0.955
NT-proBNP (ng/L)	4134.13 \pm 2979.39	3084.13 \pm 3088.14	0.344

Table 4 KCCQ Scores at Baseline and 6-Month Visit

Variable	Baseline Visit	6-Month Visit	P value
Clinical summary score	23.81 \pm 16.22	25.98 \pm 13.50	0.684
Overall summary score	27.99 \pm 20.30	39.22 \pm 18.18	0.110

Section 4 Adverse Events

There were no adverse events associated with this study.