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CLINICAL SCIENCE

Abstract 1818: Beneficial Effects of Weight Loss Associated with a High Protein Diet on Cardiovascular Risk Profile, Functional Status and Quality of Life in Obese Heart Failure Patients: A Feasibility Study

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Abstract

OBJECTIVE: Clinical management of chronic heart failure (HF) related to adequate nutritional intake currently lacks a strong scientific basis. This study was conducted to evaluate the impact of 3 diet interventions on body weight and its potential to reduce cardiovascular risks and improve functional status.

METHOD: Fourteen obese HF patients (BMI > 27 kg/m²) were randomized to 1 of 3 diets: high protein (HP); low fat (LF) or average diet/control group (CG). Body anthropometrics (weight, BMI, waist circumference), indices of cardiovascular risks including (% body fat, blood pressure, cholesterol, triglycerides), and measures of functional status (6-minute walk, max VO₂) were obtained at baseline and after a 12-week nutritional support program. Statistics included two-way RMANOVA.

RESULTS: There were no significant differences in age (59±10 years), gender (78% male), NYHA (43% class II; 57% class III), HF etiology (57% non-ischemic), or ejection fraction (0.26±0.07) between the groups. The HP diet resulted in moderate reductions in body weight (Figure↓) and improvements in several health parameters (Table↓).

CONCLUSION: The data show that in a small group of obese HF patients, a 12-week HP diet resulted in moderate weight loss that was associated with reduced cardiovascular risks and better functional status. However, the long-term effects of a HP diet remain uncertain.

Figure Comparison of Weight Changes in the HP, LF and CG from Baseline to 12 Weeks

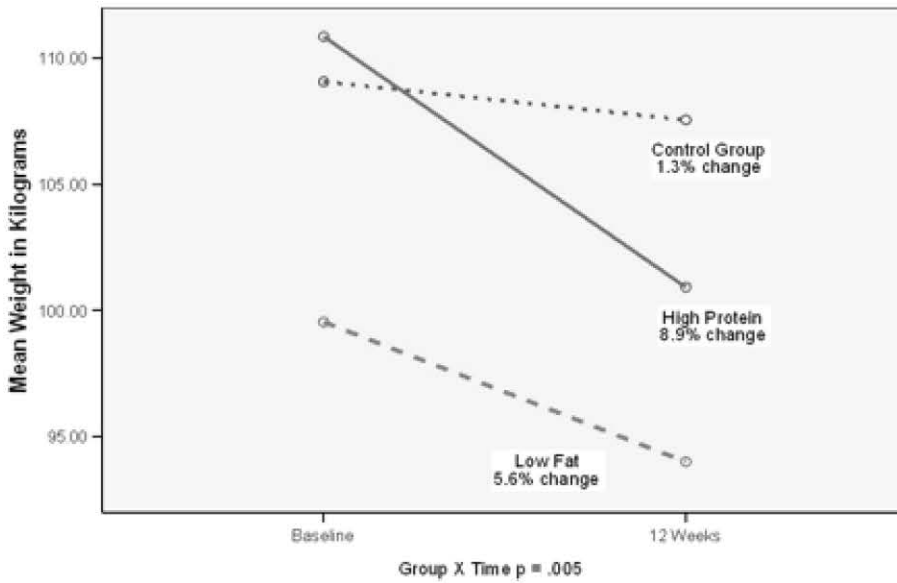


Figure Comparison of Weight Changes in the HP, LF and CG from Baseline to 12 Weeks

	High Protein (n=5)	Standard Protein (n=5)	Control Group (n=4)	3 Months	Overall Diet Group x Time
Body mass index, kg/m ²	-3.32 (.58)	-1.92 (1.12)	-.058 (1.41)	<-.001	.005
Waist Circumference, cm	-5.86 (1.36)	-2.00 (1.27)	-0.25 (1.55)	<-.001	.002
Body fat, %	-1.12 (1.30)	-2.55 (1.80)	-1.18 (0.19)	.110	.773
Systolic blood pressure, mmHg	-14.00 (5.78)	-8.40 (5.78)	-2.00 (8.42)	.130	.639
Diastolic blood pressure, mmHg	-5.00 (3.56)	-6.00 (3.56)	-3.50 (3.96)	.018	.701
Cholesterol, mg/dL	-35.00 (6.96)	-19.80 (8.29)	16.50 (10.05)	.056	.016
Triglycerides, mg/dL	-66.00 (25.52)	-18.00 (25.52)	2.00 (28.50)	.034	.076
Six-minute walk, feet	287.28 (80.00)	-12.28 (89.00)	-138.38 (77.14)	.350	.010
VO2 max	3.11 (.97)	-0.30 (.97)	-0.27 (1.09)	.009	.003

Mean changes in outcomes from baseline to 12 weeks, by diet group and time