Title
High vs. Standard Protein Diets in Obese Patients with Heart Failure: Effects on Chronic Disease Risks

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Abstract

Background: There is controversy over dietary protein’s effect on longterm chronic disease risks in overweight and obese patients with heart failure. The aim of this study was to compare the effects of two calorie-restricted diets differing in protein content on chronic disease risks (e.g., weight, adiposity, glycemic control, lipid profiles, and blood pressure).

Methods: A total of 97 overweight and obese (mean body mass index [BMI], 37.0 ± 6.2 kg/m²) patients with heart failure, aged 58.8 ± 9.7 years, 70% males, consumed two diets, each for 12 weeks, in a randomized controlled design. The diets were: (1) a high protein diet (30% protein, 40% carbohydrates, and 30% fat) and (2) a standard protein diet (15% protein, 55% carbohydrates, and 30% fat). Their effects on weight (BMI) visceral fat (i.e. waist circumference), glycemic control (i.e. glycosylated hemoglobin [HgbA1C]), lipid profiles (total cholesterol [TC], low-density lipoprotein [LDL], high-density lipoprotein [HDL], triglycerides [TG]), and blood pressure at the beginning and end of each dietary intervention were analyzed.

Results: Both diets were equally effective in promoting weight loss and visceral fat loss and in improving TC, but the high protein diet decreased to a greater extent HgbA1C levels (P < 0.001) when compared with the standard protein diet. The high protein diet improved significantly TG levels (P < 0.001) and both systolic and diastolic blood pressures when compared with the standard protein diet (P < 0.001 and P < 0.001, respectively, see figure). No differences were noted in LDL and HDL levels.

Conclusion: Energy restricted diets facilitate weight loss and visceral fat loss and lower TC in overweight and obese patients with heart failure. However, the high protein diet promoted better improvements in TG levels, glycemic control, and blood pressure than the standard protein diet, and may be superior in reducing chronic disease risks and potentially slowing the progression of disease in this population.