Beneficial Effects on Blood Pressure and Lipid Profile of Programmed Exercise Training in Subjects With White Coat Hypertension

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摘要

Abstract

BACKGROUND: Patients with white coat hypertension comprise a substantial portion of the hypertensive population. Previous reports have shown that moderate-intensity regular exercise training in patients with mild hypertension usually reduces blood pressure (BP), but there is a lack of data regarding individuals with white coat hypertension. This study was performed to evaluate whether programmed exercise was effective in reducing BP in patients with white coat hypertension and whether it also had beneficial effects on other biochemical parameters.

METHODS: A total of 42 patients (23 men and 19 women) with white coat hypertension (mean 24-h ambulatory BP 119.2 +/- 6.6/78.3 +/- 5.8 mm Hg) were divided randomly into two groups: control (n = 20) (no exercise), and moderate-intensity exercise (n = 22). The training group exercised three times per week at the prescribed exercise intensity using a treadmill exercise program. Blood pressure, heart rate, and biochemical parameters were monitored every 4 weeks for 12 weeks.

RESULTS: Significant reductions in clinic and ambulatory BPs were seen in the exercise group after only 4 weeks regular exercise training and these persisted over the 12-week study. The mean maximal reductions in clinic BP were 11 mm Hg for systolic and 5 mm Hg for diastolic pressure. Significant reductions were found in plasma total cholesterol (-6.1%), low-density lipoprotein cholesterol (LDL-C) (-14.1%), and triglyceride (-11.4%). Elevation of high-density lipoprotein cholesterol (HDL-C) (+11.2%) was also noted. CONCLUSIONS: These data, which are clinically significant, suggest that 12 weeks of exercise training can result in successful reduction of BP and favorable changes in the lipid profile that would be beneficial to patients with white coat hypertension.