O R I G I N A L P A P E R

Correlation Short-Term Minimal Weight-Loss and Blood Pressure Control in Obese Patients with Hypertension

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Abstract

Background: International studies have shown a two-way relationship between obesity and hypertension, increased morbidity, increased risk of complications and poor compliance to treatment.
Aim: The aim of the present study was to assess whether short-term weight loss had had any effects on blood pressure control in obese patients with stage 1 hypertension who were not under treatment.
Methodology: Initially, the sample comprised of 265 obese patients newly diagnosed with stage 1 hypertension that were not under treatment. 157 of them had to be excluded, since they did not comply with the study inclusion criteria; consequently, the final sample comprised of 108 patients. All participants were given a low-sodium diet. The SPSS 15.0 was used for the statistical analysis and the significance level was set to $p< 0.05$.
Results: Our sample (n=108) consisted of 46 males and 62 females with an average age of 52±1.8 years and 50.3±1.5, respectively. Two weight measurements were taken, the second one took place after six months of diet and showed the following differences: the average BMI decreased from 33.7kg/m^2±0.9 to 31.9±0.8 (males), and from 31.2±0.7 to 29.9±0.7 in females ($p <0.001$); also, waist circumference (WC) decreased from 119.6 ±1.8 cm to 113.4 ±1.6 cm in males, and from 101.9± 1.3 cm to 97.2±1.2 cm in females ($p <0.001$). Systolic blood pressure (SBP) also decreased from 149 mmHg±2.4 to 134 mmHg±1.6 (males), and from 144 mmHg±1.8 to 138 mmHg±1.3 (females) ($p <0.001$), and diastolic blood pressure (dbp), was also lower from 80 mmHg±1.8 to 76 mmHg±1.6 in males, and from 74 mmHg±1.2 to 73 mmHg±1.1 in females ($p<0.001$).
Conclusions: Decreasing waist circumference in obese patients with stage 1 hypertension, combined with a diet targeted at reducing calories and sodium, could lead to short-term blood pressure control in accordance with international guidelines.

Key Words: weight loss, blood pressure, BMI, obesity, waist circumference, sodium intake, hypertension