

RELATIONSHIP BETWEEN BODY MASS INDEX AND BLOOD PRESSURE IN ELDERLY HYPERTENSIVE PATIENTS

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BACKGROUND/AIMS: To investigate the relationship between change in body mass index (BMI) and blood pressure in elderly hypertensive patients.

METHODS: 148 elderly hypertensive patients (96 women, 52 men) between 60 and 85 years of age were included in the study. All of the participants were given antihypertensive treatment. We measured weight, height, systolic blood pressure (SBP) and diastolic blood pressure (DBP). Individuals were classified based on BMI as nonoverweight (BMI < 25); overweight (BMI ≥ 25 and < 30); and obese (BMI ≥ 30).

RESULTS: Among 148 hypertensive patients, 26 were nonoverweight, 63 were overweight, and 59 were obese. The mean SBP of nonoverweight patients was 132.69 mmHg and the mean DBP was 78.84 mmHg. The mean SBP and DBP of overweight patients was 137.90 mmHg and 84.03 mmHg, respectively. In the obese group, the mean SBP was 140.16 mmHg and the mean DBP was 86.08 mmHg. Although no relationship was found between BMI and SBP (p=0.208), the association between BMI and DBP was significantly positive (p=0.019). Compared with nonoverweight patients, overweight and obese patients (p=0.05, p=0.001, respectively) had significantly higher DBP. No significant difference was found in DBP of obese and overweight patients.

CONCLUSIONS: This study showed that a decrease in BMI has a beneficial effect on blood pressure. We suggest that clinicians look for obesity coexisting with hypertension, and treat such cases to avoid coronary event and other complications of hypertension. Prevention and control of hypertension has a significantly positive impact on the life expectancy, particularly in elderly patients.

Keywords: Body mass index, Blood pressure, Elderly patients