Correlation of Weight and LDL Level Changes with Age in Males versus Females
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Abstract

Background: Aging causes changes in overall weight and lipid control. The gender effect on such changes with age, however, is unknown.

Objective: To compare the changes in weight and lipids among young (< 60 years of age) males (YM) and older (≥ 60 years of age) males (OM), and contrast this with young females (YF) and older females (OF).

Methods: Encounters from university-based primary cardiology clinic with a broad referral base were analyzed; 400 encounters were reviewed by age and gender for weight and LDL levels, and analyzed using a Student’s t test between groups. Mean age in each category is reported in years.

Results: Weight in young patients (mean age 50; n = 157) was 236 ± 70 lbs, and in Older patients (mean age 69; n = 243) was 198 ± 53 lbs (38 lbs difference; P < 0.05). Weight in young males decreased from 241 ± 70 lbs to 204 ± 44 lbs with age (37 lbs difference, P < 0.05), while weight in females decreased from 206 ± 65 lbs to (12 lbs difference, P = NS). LDL in young patients was 97 ± 41 mg/dL and in older patients was 81 ± 33 mg/dL (16 mg/dL difference, P < 0.05). LDL in young males decreased from 92 ± 33 mg/dL to 81 ± 34 mg/dL with age (11 mg/dL difference, P < 0.05), while LDL in young females decreased from 104 ± 49 mg/dL to 81 ± 32 mg/dL with age (23 mg/dL difference, P < 0.05).

Discussion

Obesity and cholesterol levels are major risk factors for coronary disease, affecting both men and women, especially with aging. In our cohort, we have demonstrated that despite a modest nonsignificant weight decrease in female patients with age, which was about one third the weight decrease seen in males, LDL significantly dropped in female patients with age by twice the decrease seen in males. Therefore, the correlation of weight and LDL decrease seen in male patients with age was not noted in female patients. The overall medical management of lipids and other cardiovascular risk factors in our cohort was guideline-based and without significant difference among the groups. The reason for this variation is unclear, but may be in part related to the hormonal changes in aging female patients. These observations are important as they identify significant age-related changes in weight and LDL levels by gender, which may provide some explanation for gender differences in cardiovascular risk with aging.

References