COMMENTS

EFFECTS OF HORMONE REPLACEMENT THERAPY ON SARCOPENIA: IS IT REAL?

To the Editor:

We read the article by Follis and colleagues examining the relationship between sarcopenic obesity and falls in a multiethnic cohort of postmenopausal women.[1] We found this article interesting; however, we want to address some points.

Although the anabolic effects of androgens are well known, the results of studies examining the effect of estrogen on skeletal muscle are conflicting. Previous studies have shown that hormone replacement therapy (HRT) increased muscle mass and strength in postmenopausal women.[2,3] In a study evaluating the estrogenic regulation of skeletal muscle proteome in postmenopausal monozygotic twin sisters, systemic E2 and intramuscular dihydrotestosterone levels were found to be higher in the HRT group. In addition, muscle strength was found to be higher in the HRT group; however, no difference was found between hand grip strength and specific muscle strength.[4] Therefore, we could consider that HRT is strongly associated with sarcopenia. In this study, the rate of HRT use was 52.9% in the nonfallers group and 53.6% in the fallers group. If HRT groups were excluded, the relationship between fall and sarcopenia and sarcopenic obesity groups could be different.

Sarcopenic obesity was first defined by Richard N. Baumgartner as the copresence of sarcopenia and obesity, when measured by dual X-ray absorptiometry (DXA). The diagnosis of sarcopenic obesity and cutoff values are still unclear. The authors have used the cutoff values in the study by Newman et al for diagnosing sarcopenic obesity.[5] Body mass index (BMI) is the most important factor for obesity diagnosis, but BMIs of patients were not specified by the authors.

The updated recommendations of the European Working Group on Sarcopenia in Older People identify poor physical performance (gait speed, the Short Physical Performance Battery, and the Timed Up and Go test) as indicative of severe sarcopenia.[6] In the present study, we know only patients' recreational physical activity (PA). In the PREvention with MEDiterranean DIet-Plus (PREDIMED) study, they examined the associations of leisure-time PA with the prevalence of sarcopenia, body composition, and muscle strength among older adults having overweight/obesity. Total PA and moderate-vigorous PA were inversely associated with BMI, waist circumference, and fat mass, and positively associated with bone mass and lower-limb muscle strength.[7] If the physical performance of the patients in this present study had been evaluated in terms of leisure PA, and if this had been used for the diagnosis of sarcopenic obesity, a different relationship between sarcopenic obesity and falls could have been shown.

In addition to this cohort study in which the relationship between sarcopenic obesity and falls is evaluated, studies with a clear definition of sarcopenic obesity and cutoff values are needed.

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See the Reply by Follis et al.

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