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Prevalence of sarcopenia in community-dwelling older adults in Ireland: comparison of EWGSOP1 and EWGSOP2 definitions

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Abstract

Sarcopenia is a muscle disease rooted in adverse muscle changes that accrue across a lifetime. It is an independent risk factor for numerous adverse health outcomes. In 2010, the European Working Group on Sarcopenia in Older People (EWGSOP) published a definition for the identification of people with sarcopenia (EWGSOP1). In 2018, this definition was updated based on the newest evidence (EWGSOP2), with the focus now on low muscle strength rather than low muscle quantity as the key characteristic of sarcopenia. In addition, EWGSOP2 provides clear cut-off points for measurements of variables that identify sarcopenia. The aim of this study was to determine the prevalence of sarcopenia among community-dwelling older adults in Ireland for the first time and to assess agreement between the EWGSOP1 and EWGSOP2 definitions. In a cross-sectional analysis, 490 community-dwelling adults (age 78.4 ± 8.0 y, body mass index 27.6 ± 5.1 kg/m²) were assessed. Skeletal muscle mass was estimated using bioelectrical impedance analysis, muscle strength was measured via handgrip dynamometry and physical performance via the Short Physical Performance Battery. Sarcopenia was defined according to both the 2010 criteria (EWGSOP1) and the updated 2018 criteria (EWGSOP2). Using the EWGSOP1 criteria, the prevalence of sarcopenia was 7.1% (2.6% sarcopenia, 4.5% severe sarcopenia) and 3.6% were classified as pre-sarcopenic (low muscle mass without a decrement in strength or physical performance). Using the EWGSOP2 criteria, the prevalence of sarcopenia was 5.5% (1.6% sarcopenia, 3.9% severe sarcopenia) and 23.4% were classified as having low strength but without a decrement in muscle mass. Five of the participants who were classified as sarcopenic (2 sarcopenic, 3 severe sarcopenia) by EWGSOP1 were classified as “normal” using the EWGSOP2 criteria. In conclusion, the prevalence of sarcopenia in community-dwelling older adults in Ireland is in line with the prevalence reported in other European countries using the EWGSOP1 criteria (3.3–11.4%). To our knowledge this is the first study to compare the prevalence based on the EWGSOP1 and the EWGSOP2 criteria. We report a slightly lower prevalence using the EWGSOP2 definition compared to the EWGSOP1 definition. Importantly however, in contrast to EWGSOP1, the EWGSOP2 definition identified a substantial proportion of older adults with poor strength in the absence of overt sarcopenia (23.4%). These older adults represent a group who would benefit from further clinical investigation and intervention.

Conflict of Interest

There is no conflict of interest