Letter to the Editor

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Distinguishing Sarcopenia From Parkinsonian Motor Dysfunction: Limitations of SARC-F Screening

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To the editor,

I read with interest the article entitled "Association between sarcopenia risk, disease severity, and functional mobility in Parkinson's disease: a cross-sectional study" (1). The study highlights a clinically significant relationship among sarcopenia risk, disease severity, and functional mobility in Parkinson's disease. However, the interpretation of these findings requires careful consideration from a neurological perspective. The strength, assistance with walking, rising from a chair, climbing stairs, and falls (SARC-F) questionnaire is not a direct measure of muscle mass or muscle quality; rather, it is a screening tool reflecting functional limitations such as gait disturbances, difficulty getting up from a chair, and balance problems (2). These domains substantially overlap with the core motor features of Parkinson's disease, including bradykinesia, rigidity, and postural instability (3). Therefore, high SARC-F scores in this patient group may primarily represent underlying Parkinsonian motor severity rather than true sarcopenia (4).

Current diagnostic approaches emphasize that sarcopenia should not be defined solely on the basis of functional limitations (2). According to contemporary consensus criteria, the diagnosis of sarcopenia requires the combined assessment of muscle strength, muscle quantity or quality, and physical performance (2). In this context, sarcopenia assessment should move beyond questionnaire-based screening to include objective measures such as handgrip strength, chair-stand performance, and muscle mass evaluation using dual-energy X-ray absorptiometry or bioelectrical impedance analysis (2,5). Emerging tools such as muscle ultrasonography may offer additional value in distinguishing true muscle loss from Parkinson-related motor dysfunction (5).

In Parkinson's disease, this multidimensional approach is particularly important to distinguish disease-related functional impairment from true muscle loss (4,6). Recent studies also support this observation. A study showed that the SARC-F questionnaire has limited diagnostic performance for detecting sarcopenia in Parkinson's disease, has low sensitivity, and its performance is similar to disease staging scales (4). Similarly, another study reported that Parkinson's patients showed greater functional decline and higher screening scores. Nevertheless, the sarcopenia prevalence defined according to objective criteria did not differ significantly from control groups (6). In addition, emerging evidence indicates that muscle assessment methods, including ultrasonography, may provide more reliable evaluation of muscle status in this population (5).

In this context, the strong correlations reported in the study (1) may not indicate a direct relationship with sarcopenia. Instead, they may reflect overlapping measurement structures related to Parkinsonian motor burden (4,6). This distinction is clinically crucial because sarcopenia is a potentially modifiable condition through nutritional and resistance-based interventions (7), whereas Parkinsonian motor disorders follow a neurodegenerative process and require different therapeutic strategies (6). From a neurological perspective, this differentiation is not only methodological but also clinically relevant. In Parkinson's disease, a significant portion of functional limitations stems from impaired motor control due to dopaminergic dysfunction in basal ganglia circuits (3), while in sarcopenia, it is primarily associated with structural

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and metabolic changes in peripheral muscle tissue (7). These two processes can produce similar functional-level results, which can cause diagnostic overlap, especially in assessments based solely on functional scales. Therefore, integrating direct measurements of muscle strength and muscle mass with neurological examination findings, disease stage, and motor phenotype may provide a more accurate clinical approach to sarcopenia assessment in Parkinson's disease (6,7).

Therefore, the key issue may not be whether sarcopenia risk correlates with mobility, but whether current assessment approaches can meaningfully differentiate sarcopenia from Parkinson-related motor dysfunction. In Parkinson's disease, sole reliance on functional screening tools may be insufficient, and a more comprehensive approach supported by objective muscle measurements may be required.

Footnotes

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