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LETTER

Sarcopenia as a Stronger Predictor for All-Cause Mortality Than Osteoporosis in a Medical Center in Central Taiwan [Letter]

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Dear editor

The present study, predicated on retrospective cohort data from a medical center in Taiwan, examined the impact of sarcopenia and osteoporosis on all-cause mortality.[1] Multivariate Cox regression analysis revealed that sarcopenia (with or without osteoporosis) exhibited a significantly stronger predictive power for mortality risk than osteoporosis alone (HR: 7.34 vs 3.99).

The authors of the study conclude that sarcopenia is a stronger predictor of mortality than osteoporosis. While this finding is supported by the data presented in this paper, it is essential to exercise caution when generalizing these results. First, the mortality risk associated with osteoporosis is often reflected indirectly through its complications, such as hip fractures.[2,3] Given the relatively brief follow-up period in this study (median 0.7 years), the long-term lethal impact of osteoporosis-related fractures may not have been fully captured. Secondly, osteoporosis has been demonstrated to be closely associated with post-fracture functional impairment, secondary infections, and recurrent fractures.[4,5] Furthermore, its mortality risk may become more pronounced with longer follow-up. A critical limitation of this study is that it did not adequately assess the contribution of fracture events to mortality. Furthermore, the elevated treatment rate observed among osteoporosis patients (47.6%) in this study may have contributed to a reduction in mortality risk, thereby diminishing the comparative strength against sarcopenia.

In addition to the limitations previously delineated by the authors, this study contains several areas that merit further refinement. Firstly, the diagnosis of sarcopenia did not fully adopt the AWGS 2019 community-based cutoff points. Conversely, the present study employed the lowest 20% of grip strength and walking speed as thresholds. While this approach took into account the more severe condition of the patients, it lacks specific validation in hospital populations. This may have ramifications for the diagnostic accuracy and cross-study comparability of the results. Future studies should establish validated criteria suitable for hospitalized patients with comorbidities. Secondly, to address the limitations imposed by the sample size, the concepts of "isolated sarcopenia" and "sarcopenia with osteoporosis" were analyzed in unison. While this approach is operationally feasible, it has the potential to obscure differences in risk between the two groups and overestimate the independent effect of sarcopenia. It is recommended that the limitations of this combined analysis be thoroughly delineated in the results section and that additional sensitivity analyses be conducted to refine the findings further. Furthermore, while the study noted higher medication rates in the osteoporosis group, key drugs (eg, denosumab) were not used as covariates in multivariate models. This approach, however, does not sufficiently address the potential confounding effects of medication on mortality. Subsequent studies should elucidate the independent effects of disease and treatment through model adjustments or inverse probability weighting. The study acknowledges insufficient statistical power (68–71%) but inadequately emphasizes the instability of HR estimates, particularly with extensive confidence intervals (eg, HR: 7.34, 95% CI: 1.47–36.75). This finding suggests that the result is not very robust, which necessitates a cautious interpretation of the conclusions. Future studies should expand sample sizes to enhance estimation precision.

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Disclosure

The author declares no conflicts of interest in this communication.

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