



Letter

Comment on “Early enteral nutrition is associated with reduced in-hospital mortality from sepsis in patients with sarcopenia”


Dear Editor,

In recent article, Koga et al. reported that early enteral nutrition (EEN) was independently associated with reduced in-hospital mortality in sarcopenic patients, but not in non-sarcopenic patients [1]. This study is very important as it is the first in literature investigating different effects of EEN in sarcopenic and non-sarcopenic patients with sepsis. However, we would like to mention some of our concerns regarding the methods used in this report.

Sarcopenia was first defined by Rosenberg in 1989 as age related loss of muscle mass in the elderly. The European Working Group on Sarcopenia in Older People (EWGSOP) was founded in 2009 to form a common consensus on the definition of sarcopenia which is documentation of either low muscle strength or low physical performance in addition to documentation of low muscle mass. Documentation of low muscle mass solely by itself is not enough to define sarcopenia. Another point we would like to mention about the methods used in this valuable study is muscle mass measurement technique. Computed tomography (CT) analysis of muscle mass, magnetic resonance imaging, dual-energy X-ray absorptiometry and bioelectrical impedance analysis have all been validated and recommended by EWGSOP [2] but CT analysis of muscle mass must contain whole body scan of the muscle tissue. It would not be accurate to define sarcopenia based on measurement of the skeletal muscle mass area at the level of the third lumbar spine. And lastly, retrospective analysis of CT scans has potential to make measurements by several scanners which can be the cause of variations in body composition attenuation between individual scanners [3].

We believe that if these particular points about the definition of sarcopenia are taken into consideration, we would come up with more accurate results in further studies.

Conflict of interest

No conflict of interest.

Fund

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Author contributions

Dr. Melis Ketenci and Dr. Umut Safer drafted the letter, Dr. Mustafa Kaplan and Dr. Vildan Binay Safer made critical review of the article.

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Reply to the letter to the editor


We thank Ketenci et al. for their interest in our study and thoughtful comments [1].

They indicated that low muscle mass alone is not enough to define sarcopenia. We agree that muscle strength or physical performance should be assessed for the diagnosis of sarcopenia, as mentioned in our manuscript. However, it is often difficult to assess muscle strength or physical performance in septic patients on admission. For the assessment of physical performance, although some physical actions such as gait or stair climb are required [2], many of septic patients cannot act as usual because of their illness on admission. The assessment of muscle

strength also seems to be difficult in acute phase of sepsis. Although reliability of some methods (e.g. Medical Research Council scale, hand grip dynamometry) was demonstrated in subacute phase of critically illness [3], their reliability on ICU admission is unclear because severer condition could make them difficult to perform. On the contrary, the assessment of muscle strength or physical performance in subacute phase could be affected by ICU acquired weakness, and may not reflect premorbid state. Nonvolitional assessment for muscle strength may be needed in acute phase of critical illness.

Ketenci et al. also indicated some problems about the assessment of muscle mass by abdominal CT. We agree that different CT scanner or scanning protocol may cause some difference in calculated skeletal muscle area. Therefore, a pre-defined protocol for CT scanning is expected in future prospective study. Additionally, whole body CT scan is more desirable method than a single cross-sectional scan, as they suggested. However, higher cost or radiation exposure of whole body CT scan could limit its practical use. Because skeletal muscle area calculated in the single cross-sectional image was validated to be highly correlated with whole body skeletal muscle mass [4], it is popularly used to estimate muscle mass.

Conflict of interest

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