Clinical Nutrition 38 (2019) 1478

Contents lists available at ScienceDirect

Clinical Nutrition

journal homepage: http://www.elsevier.com/locate/clnu

Letter to the Editor

Reply to letter regarding: "Validation of the sarcopenia index to assess muscle mass in the critically ill: A novel application of kidney function markers"

Thank you for your interest in our article entitled, "Validation of the sarcopenia index to assess muscle mass in the critically ill: a novel application of kidney function markers." We agree with the reader's comments that non-renal determinants of both creatinine and/or cystatin C could influence the sarcopenia index. While the non-renal factors that are mentioned to contribute to cystatin C have been well characterized in stable ambulatory care patients [1], it remains somewhat less clear how these are influenced by critical illness. In a prospective observational study of critically ill patients with daily creatinines and cystatin C's, 15–30% of patients experienced a rise in cystatin C with no corresponding increase in serum creatinine in the first seven days [2]. A parallel rise in serum creatinine could also be noted due to hypercatabolic states in critical illness which could result in a relative stability of the sarcopenia index. The degree to which these biomarker changes reflect underlying kidney function versus alternative non-renal explanations that emerge during critical illness remains unclear. Still, we found a strong association between lower sarcopenia index and poorer clinical outcomes. Further, the sarcopenia index was correlated with muscle mass, which argues against the association being fully explained by alternative causes for cystatin C elevation such as obesity or inflammation.

References

[1] Stevens LA, Schmid CH, Greene T, Li L, Beck GJ, Joffe MM, et al. Factors other than glomerular filtration rate affect serum cystatin C levels. Kidney Int 2009;75:652–60. https://doi.org/10.1038/ki.2008.638.

[2] Nejat M, Pickering JW, Walker RJ, Endre ZH. Rapid detection of acute kidney injury by plasma cystatin C in the intensive care unit. Nephrol Dial Transplant 2010;25:3283–9. https://doi.org/10.1093/ndt/gfq176.

Erin F. Barreto*

Department of Pharmacy, Mayo Clinic, 200 1st St SW, Rochester, MN, 55905, USA

Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery, Mayo Clinic, 200 1st St SW, Rochester, MN, 55905, USA

* Corresponding author. Mayo Clinic, 200 First St SW, Rochester, MN, 55905, USA.
E-mail address: Barreto.erin@mayo.edu.

27 February 2019

DOI of original article: https://doi.org/10.1016/j.clnu.2019.02.043.

https://doi.org/10.1016/j.clnu.2019.02.044