

International Journal of Gerontology

journal homepage: http://www.sgecm.org.tw/ijge/



Editorial Comment

Albumin Level and Physical Integrity

Serum albumin (SA), the most abundant circulating blood protein produced in the liver, has been known to participate several vital physiological functions. As a reliable biomarker predicting clinical endpoints in various conditions and in the general population, ^{2,3} the circulating albumin level also serves as an index representing physical integrity (including musculoskeletal) and long-term nutritional status in both acute or chronic settings.⁴ In this issue, Suzuki et al.⁵ reported that the serum albumin level during admission correlated with physical functions and walking distances in elderly patients with acute illness. Their findings may expand the applications of the use of albumin as a biomarker for various illnesses in clinical settings; however, they are not surprising. Apart from its systemic biological effects, albumin also serves as a key plasma carrier protein that may facilitate cardiac energy conversion and utilization, thereby enhancing the cardiopulmonary capacity. 6 Collectively, these data provide new biological insights into the pathophysiological role of albumin as a marker of acute illnesses in the elderly population.

References

1. Chien SC, Chen CY, Lin CF, et al. Critical appraisal of the role of serum albu-

- min in cardiovascular disease. Biomark Res. 2017;5:31.
- 2. Phillips A, Shaper AG, Whincup PH. Association between serum albumin and mortality from cardiovascular disease, cancer, and other causes. *Lancet*. 1989;2(8677):1434–1436.
- 3. Arques S, Ambrosi P. Human serum albumin in the clinical syndrome of heart failure. *J Card Fail*. 2011;17(6):451–458.
- Visser M, Kritchevsky SB, Newman AB, et al. Lower serum albumin concentration and change in muscle mass: the Health, Aging and Body Composition Study. Am J Clin Nutr. 2005;82(3):531–537.
- 5. Suzuki R, Niitsu M, Yamaguchi A, et al. Association of serum albumin levels at admission on physical function and walking capacity in patients with acute illness. *Int J Gerontol*. 2021;15(1):7–11.
- van der Vusse GJ, van Bilsen M, Glatz JF. Cardiac fatty acid uptake and transport in health and disease. Cardiovasc Res. 2000;45(2):279–293.

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