

Predictors of 360-day survival in centenarians

Healthy aging assumes the combination of longevity and quality of life. Quality of life in old age is associated with mental and physical well-being allowing for independent living and social function. Appropriate scales can be used to assess mental function and independence in activities of daily living. In this study we applied such scales to examine the health of a group of centenarians in Poland. Blood tests helped complete the assessment of body functions. These included, among other indicators of inflammation, the number of leukocytes in the blood, the concentration of C-reactive protein and interleukin 6. Aging is associated with changes in immunity, referred to as inflammaging, characterized by generalized chronic inflammation, not necessarily associated with infection. We previously reported (Szewieczek J et al. AGE 2015; 37: 4) that centenarians with systolic blood pressure greater than the pressure believed to be normal (i.e., systolic blood pressure below 140 mm Hg) were better able to function and had greater probability of survival beyond 180 days. Therefore, we also examined the concentration of endothelin-1 peptide produced by vascular endothelial cells, which constricts the vessel and increases blood pressure. ET-1 is considered an important factor in the development of vascular dysfunction and cardiovascular disease. We analyzed the factors that predict probability of survival beyond 360 days and found that the best prognostic indicators are the functional scales mentioned above. Greater self-reliance in basic daily activities increases the likelihood of 360-day survival. Additionally, it was also an important indicator of the blood serum concentration of albumin. Survival may be predicted by the level of leukocytes, C-reactive protein and interleukin-6 (more intense inflammation was associated with a poor prognosis). Lower concentrations of endothelin-1 were found to be beneficial, but surprisingly we that we found no relationship between endothelin-1 and blood pressure. Thus, we observed that measures of functional status, indicators of inflammation and endothelin-1 predict the probability of surviving the next 360 days in centenarians.

Publication

[Functional measures, inflammatory markers and endothelin-1 as predictors of 360-day survival in centenarians.](#)

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