

Current issues of geriatric patients

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Aging of the population is a global issue and a big challenge to various kinds of stakeholders such as health care professionals. Frailty in older adults is a serious problem in aged countries such as in Japan. In general, frailty can be defined as a vulnerable state that places older adults to high risk for adverse health outcomes, such as falls, hospitalization, and mortality and aging is a major cause of frailty. Age is also a major risk factor for chronic kidney disease (CKD), and CKD is a growing health problem in many countries. The prevalence of CKD in Japan is estimated to be 13% in Japanese adult population. CKD is known to be associated with impaired health status, physical function, sarcopenia and frailty. Due to the improved management of non-communicable diseases, we need to take care of older patients with multiple problems, such as frailty and sarcopenia. The aim of current prospective cohort study was to examine whether CKD can predict new long-term care insurance (LTCL) requirement certification in community-dwelling Japanese older adults. We analyzed the cohort data from a prospective study. We followed up 8,063 elderly in two cities for 2 years, and analyzed the association between CKD and LTCL requirement. The outcome was new certification for LTCL service requirement during 2 years. We measured serum creatinine (estimated glomerular filtration rate; eGFR), serum albumin, frailty checklist, and BMI. During the 2-year follow-up, 536 older adults (6.6%) were newly certified for LTCL service requirement. By dividing the cohort according to the quartiles of eGFR, we found that older adults with eGFR <60.0 ml/min/1.73m² had a significantly elevated risk for LTCL service requirement in multivariate analyses with eGFR 71.4–83.6ml/min/1.73m² as the reference (adjusted hazard ratio: 1.44 [95%CI 1.12–1.86]). We also found that CKD was associated with frailty in our cohort. In conclusion, CKD is independently associated with new LTCL service requirement certification and is an important marker for frailty in older adults.