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**Sarcopenia in CKD**

**Young Rim Song**

*Hallym University Sacred Heart Hospital, Korea*

Chronic kidney disease (CKD) is associated with metabolically unfavorable changes in body composition and several terminologies have been proposed to define these inflammation-associated wasting and nutritional derangements. Sarcopenia which is defined as low physical performance and loss of muscle mass and strength is frequently confounded by terms such as malnutrition, protein energy wasting (PEW) and cachexia. Sarcopenia was first introduced to describe the age-related degenerative loss of skeletal muscle mass. However, chronic disease such as CKD, heart failure and rheumatic disease, malnutrition and physical inactivity can induce alterations in protein metabolism leading to sarcopenia. There are many similarities between the aging process and uremia-associated systemic complications, suggesting that uremia resembles a state of accelerated aging. In CKD, the etiology of sarcopenia is multifactorial with reduced protein intake, inflammation, metabolic acidosis, hormonal dysregulation, oxidative stress, insulin resistance, vitamin D deficiency and sedentary lifestyle leading to increased protein degradation and decreased protein synthesis. Many studies demonstrated that sarcopenia is very prevalent in CKD, mainly in patients undergoing hemodialysis and it might contribute to the excess mortality and poor quality of life. However, there are still debate about its diagnostic criteria, pathogenesis, surveillance, clinical significance and therapeutic interventions. Indisputably, sarcopenia is an important part of nutritional disturbance in CKD and should be assessed in clinical practice using an available method. Dual-energy X-ray absorptiometry (DXA) or whole body computed tomography (CT) is considered as the "gold standard", but the choice of surrogate method will depend on its availability, ease of application in clinical practice, and local experience. Interventions to reverse sarcopenia have focused mostly on energy and nutritional supplementation with resistance exercise. Recently, pharmacologic interventions aiming at reversing protein degradation and inflammation have shown positive results in experimental settings. This presentation aims to talk about the definition of sarcopenia, its pathogenesis and prevalence, impact on clinical outcomes and interventions to reverse sarcopenia in patients with CKD and undergoing dialysis.