Shaping Tomorrow's Nephrology: Insight-Driven Kidney Care
KSN 2026 SEOUL, KOREA
The 46th Annual Meeting of the Korean Society of Nephrology
THE KOREAN SOCIETY OF NEPHROLOGY
Jun 11 (Thu) – 14 (Sun), 2026
COEX, Seoul, Korea

Abstract Type : Poster exhibition
Abstract Submission No.: A-0188
Abstract Topic : Non-dialysis CKD

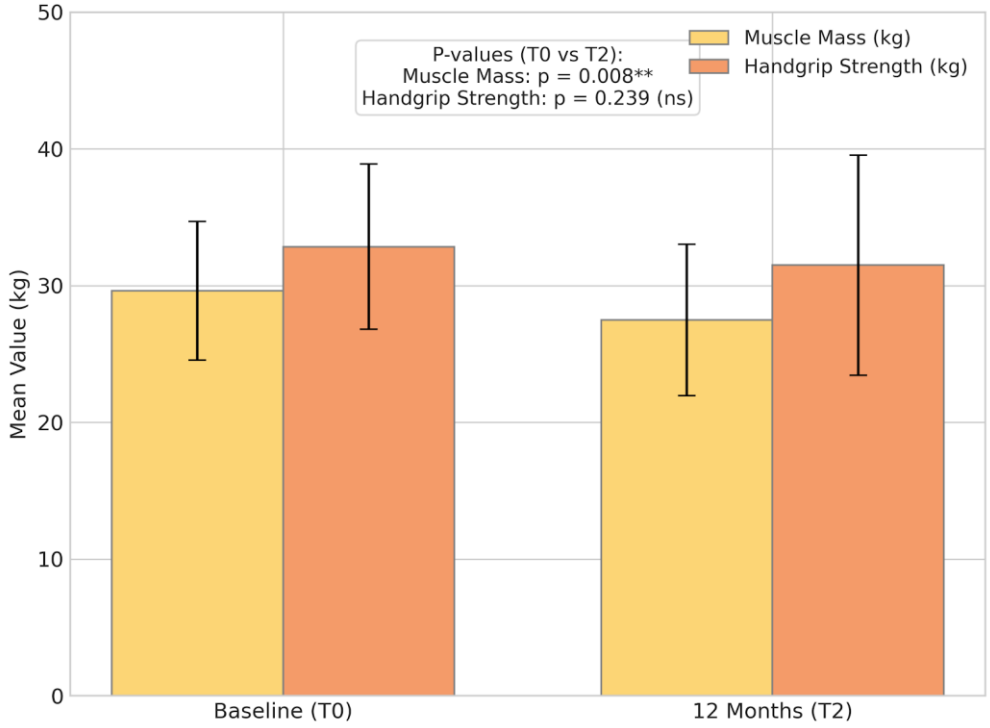
Long-Term Effects of Finerenone on Inflammation and Muscle Function in Patients with Chronic Kidney Disease: A 12-Month Prospective Study

Heeryong Lee, JIN HO LEE
Department of Internal Medicine-Nephrology, LEESIN HEMODIALYSIS AND INTERVENTION CLINIC, Korea, Republic of

Objectives : Mineralocorticoid receptor (MR) overactivation promotes chronic inflammation, renal dysfunction, and muscle loss. Finerenone, a non-steroidal selective MR antagonist, has the potential to mitigate these adverse effects. This study aimed to evaluate the long-term impact of a 12-month finerenone treatment on systemic inflammation, renal function, and muscle parameters (mass and strength) in patients with chronic kidney disease (CKD).
Methods : In this prospective observational study, 16 patients with CKD who completed a 12-month finerenone treatment were analyzed. Skeletal muscle mass and handgrip strength were assessed using bioimpedance analysis (BIA) and a hand dynamometer at baseline and after 12 months. Biochemical markers, including serum creatinine (Cr), albumin, and C-reactive protein (CRP), were also evaluated. Paired t-tests were utilized for statistical analysis, with CRP values adjusted for changes in the minimum detection limits of the laboratory equipment.
Results : Over the 12-month follow-up, renal function remained remarkably stable, with serum Cr showing no significant change (1.53 ± 0.34 mg/dL vs. 1.53 ± 0.32 mg/dL, p=0.966). Adjusted CRP levels also remained well-controlled without significant elevation (0.10 ± 0.01 mg/L vs. 0.11 ± 0.03 mg/L, p=0.339), indicating the successful management of systemic inflammation. Due to the long-term progression of the disease, skeletal muscle mass significantly decreased from 29.62 ± 5.08 kg to 27.48 ± 5.54 kg (p=0.008). However, handgrip strength, representing actual muscle function, was successfully preserved without a statistically significant decline (32.84 ± 6.04 kg vs. 31.49 ± 8.05 kg, p=0.239).
Conclusions : A 12-month treatment with finerenone successfully preserved renal function and stabilized chronic inflammation in CKD patients. Although a structural decline in muscle mass was observed over time, a significant loss of muscle strength was effectively prevented. These findings suggest that the anti-inflammatory properties of finerenone may contribute to preserving muscle quality and neuromuscular function. Further large-scale studies with control groups are warranted to confirm these protective effects.

Code_Generated_Image (3).png

Figure 1. Changes in Muscle Mass and Handgrip Strength over 12 Months



Code_Generated_Image (3).png

Figure 2. Maintained Renal Function and Stable Inflammation (Adjusted CRP)