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Anthropometric indices of sarcopenia in patients with Chronic Kidney Disease

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The Chronic Kidney Disease (CKD) is a kidney dysfunction for which the estimated Glomerular Filtration Rate (eGFR) results <90 ml/min. The primary causes are glomerulonephritis, nephrosclerosis, diabetic nephropathy, nephropathy due to obesity and unilateral kidney (1). CKD is associated with frailty, cardiovascular disease, hypokinesia, sarcopenia and disability (2). In this study participated 74 subjects with CKD (mean age ≥ 65 years), 45 males and 29 females. All subjects underwent to anthropometric measurements: height, weight, BMI, circumferences (waist, dominant wrist, right/left arm, right/left thigh, right/left leg), body folds (biceps right/left, triceps right/left), calculation of the arm areas (adipose area, lean area, total area and muscle circumference). We divided the subjects into 5 samples according to the classification of Walker (2) based on the eGFR (ml/min): stage I+II (n=1), stage III (n=14) stage IV (n=50) stage V (n=9). In particular we have taken into account the anthropometric data of the stage III and V: BMI (stage III 28.85 ± 6.2 vs stage V 26.47 ± 3.69); total arm area (stage III 72.33 ± 16.52 vs stage V 65.36 ± 18.1); muscle arm circumference (stage III 26.06 ± 3.05 vs stage V 24.46 ± 3.52); adipose arm area (stage III 16.80 ± 7.94 vs stage V 16.58 ± 6.39); lean arm area (stage III 55.37 ± 13.68 vs stage V 48.90 ± 15.09). These preliminary results show that there is a worsening trend in anthropometric data according to the disease progression, from III to V stage, though the statistical analysis did not reach the significance.

References

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Keywords

Chronic kidney disease; eGFR; anthropometry.