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53rd EDTNA/ERCA International Conference

Addressing Inequities in Kidney Care for a Healthier Future

Alfândega Congress Centre
Porto, Portugal
October 11–14, 2025

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Functional capacity of hemodialysis patients – 13 years of evolution

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Background

Chronic kidney disease and hemodialysis are factors that affect functional capacity, and physical inactivity, sarcopenia and a sedentary lifestyle are important risk factors for mortality (1,2).

Physical exercise can offer multiple benefits to patients with chronic kidney disease, such as improving aerobic and functional capacity and having a positive impact on quality of life (3,4).

Objectives

To describe the changes in functional capacity over 13 years in the same group of people with chronic kidney disease on hemodialysis.

Methods

Functional capacity was assessed at two different times, spaced 13 years apart, using the 6-meter Timed Up and Go, the 30-second sit to stand test and the handgrip strength test. The data is presented using measures of central tendency and dispersion (compared using the non-parametric Wilcoxon test).

Results

Seven people (4 women and 3 men) with an average age of 55.49±11.98 years in 2012 (average age of 68.49 years in 2025) took part in the two assessments.

The subjects showed statistically significant changes in the results of the tests [2012 data vs. 2025 data] Up and Go (9.66±4.06 vs. 12.03±5.07 seconds), sit to stand (17.33±7.66 vs. 12.15±4.33 repetitions), average right and left hand grip strength (19.12±7.43 vs. 14.72±8.42 Kg/f).

From the analysis of the results, it can be seen that the patients saw a clear reduction in their functional capacity when comparing the two assessment moments.

Conclusion/Application to practice

There was a marked reduction in levels of functionality over the 13 years between the two assessments. The implementation of intervention programs could mitigate the negative effects of biological aging, sedentary lifestyle and the catabolic state resulting from chronic kidney disease and hemodialysis.

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Abstract Country

Portugal

Disclosure of Interest

No