

moderate agreement ($\kappa = 0.448$, $p < 0.001$). The concordance between EWGSOP (2019) and Wang et al. (2018) was also moderate ($\kappa = 0.471$, $p < 0.001$). Between EWGSOP (2019) and the study by Schlüssel et al. (2008) substantial agreement was observed ($\kappa = 0.785$, $p < 0.001$).

Conclusion: EWGSOP (2019) and Schlüssel et al. (2008) showed good agreement for diagnosing reduced handgrip strength in elderly patients undergoing hemodialysis.

Implications: the reduction in handgrip strength has a negative impact on elderly patients with chronic kidney disease. It's a tool not influenced by volume changes and is necessary to diagnose sarcopenia in this population.

Keywords: Renal dialysis, Renal insufficiency, Muscle strength

Conflict of interest: The authors declare no conflict of interest.

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CARDIORESPIRATORY RESPONSE IN POST-COVID VOLUNTEERS ACCORDING TO THE VENTILATORY SUPPORT RECEIVED IN THE ACUTE PHASE: CROSS-SECTIONAL STUDY

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Background: The assessment of functional capacity in volunteers with post-covid syndrome has become an important issue to estimate functional consequences, disability and physiological responses to exercise. Our hypothesis is that patients show different cardiorespiratory responses to the 1-minute sit and stand test (1STS) according to the ventilatory support received in the acute phase of the disease.

Objectives: To compare the initial cardiorespiratory responses by 1STS of patients from the "Post-covid life" study according to the ventilatory support received in the acute phase of the disease.

Methods: Cross-sectional observational study with post-covid volunteers with different severities of both sexes, adults, recruited between June 2020 to October 2022 to a Physiology Laboratory of UnB. For comparison the volunteers were divided into 3 groups according to the respiratory support received in the acute phase, being: no respiratory support (SSR), oxygen therapy (O2) and mechanical ventilation (MV). They were evaluated by 1STS according to the pre-established protocol, including recording heart rate, perception of effort before and after the test and number of repetitions performed. Statistical analyses were performed using the Statistical Package For The Social Sciences (SPSS), version 20. The Kolmogorov Smirnov test was used to evaluate the normality of the variables. The ANOVA test for unreplicated measures and the Kruskal Wallis test were used for intergroup comparisons, considering $p < 0.05$ statistically significant. Registration number: NCT04595097.

Results: We included 75 participants, 56% female, mean age 53.3 ± 11.6 years, BMI 31.2 ± 6.1 kg/m², hospitalization 20.1 ± 17.8 days, 74% sedentary and 18% previously active. The number of repetitions was 21.3 ± 9.4 , 19.5 ± 5.9 and 21.6 ± 7.4 for SSR, O2 and MV groups respectively. The volunteers had a mean HR pre of 79.5 ± 11.0 , 83.3 ± 12.6 and post of 85.6 ± 14.6 , 92.2 ± 16.0 , 101.3 ± 16.4 and 105.2 ± 18.7 beats for the SSR, O2 and MV groups. The pre-BORG of the SSR, O2, and MV groups were 9.1 ± 2.8 , 9.7 ± 2.8 , and 8.3 ± 8.0 , and post 12.1 ± 3.3 , 14.2 ± 2.6 , and 13.0 ± 2.7 . Although the number of repetitions showed no difference between groups ($p > 0.05$), HR and BORG were higher in the MV group compared to the others ($p < 0.005$).

Conclusion: Although the number of repetitions obtained by 1STS did not vary according to the ventilatory support received in the acute phase of COVID 19, the cardiorespiratory adjustments were greater in the volunteers submitted to MV compared to those who used O2 and SSR, suggesting greater deconditioning.

Implications: The results suggest that 1STS with HR monitoring and BORG is a functional test capable of assessing cardiorespiratory adjustments in post-covid patients.

Keywords: Physical exercise, COVID-19, Rehabilitation

Conflict of interest: The authors declare no conflict of interest.

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Ethics committee approval: The present study was approved by the ethics in research council of the institution Universidade de Brasilia Faculdade de Ceilândia and is registered under number CAAE: 35706720.4.0000.8093.

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PROFILE OF HOSPITALIZED ELDERLY PEOPLE: CARDIAC AUTONOMIC CONTROL, FUNCTIONAL CAPACITY, PERIPHERAL MUSCLE STRENGTH, INDEPENDENCE, AND MORTALITY

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Background: Population aging is accompanied by multimorbidities and several systemic changes, such as cardiovascular, functional and strength, which can result in recurrent hospitalizations. In it, functional alterations of pre-existing strength and independence are potentiated, increasing dependence, loss of function and prolonged hospitalization. Identify the profile of the elderly in terms of these variables allows directing effective interventions in search of major complications.

Objectives: To evaluate cardiac autonomic control, functional capacity, peripheral muscle strength and independence for activities of daily living (ADL), and the relationship between these variables and the risk of mortality in hospitalized elderly.

Methods: Observational, cross-sectional study carried out in a university hospital. Elderly > 60 years old, with preserved cognition and hemodynamically stable, were included. Lowered level of consciousness, acute respiratory failure, unstable vital signs, dyspnea on minimal exertion and sepsis were exclusion criteria. The Charlson Comorbidity Index was applied, and the following evaluations were performed: records of the R-R intervals for analysis of heart rate

variability (HRV), Barthel index, handgrip strength (HGS) and the 5-time sit-to-stand test (ST55) (patients eligible for execution). Statistical analysis: Using the SPSS software, the Shapiro-Wilk, Wilcoxon and Spearman correlation tests were applied. Values presented as mean, standard deviation and $p \leq 0.05$.

Results: 20 elderly with a mean age of 70.4 ± 7.17 years (12 men (60%) and 8 women (40%)) participated until the moment of the study. The HRV indices showed no significant change in the change between the supine and sitting position (SDNN $p=0.65$; RMSSD $p=0.57$; PNN50 $p=0.39$; LF $p=0.14$; HF $p=0$, 15 and LF/HF $p=0.19$). The average Charlson score was 5.65 ± 2.90 . Reduced HGS values were found in the dominant limb (24.22 ± 9.45 Kgf; 75.78% of predicted), ST55 (19.04 ± 6.10 s; 57.93% of predicted) and Barthel (63.25 ± 29.57). The RMSSD index showed a negative correlation with the ST55 ($r_s=-0.90$, $p=0.03$) and the Barthel index showed a positive correlation with the FPP ($r_s=0.62$, $p=0.01$).

Conclusion: Hospitalized elderly did not show changes in HRV indices after postural change, which may indicate an altered autonomic response in this population. In addition, they showed a reduction in peripheral muscle strength and functional performance, and a moderate risk of mortality at one year. Higher RMSSD index values correlated with lower execution times in the ST55, as well as higher FPP correlated with lower dependency. We suggest that new studies like this one be carried out, characterizing, and correlating these variables with frailty and sarcopenia.

Implications: Given these results, even though the sample is small and partial, it is imperative to evaluate these variables at the time of hospitalization of the elderly, to guide multidisciplinary teams in decision-making for intervention and prevention of greater functional and strength losses in this population.

Keywords: Elderly, Cardiac autonomic control, Functionality

Conflict of interest: The authors declare no conflict of interest.

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THE EFFECTIVENESS OF AN EXERCISE PROGRAM TO IMPROVE POSTURAL BALANCE IN INDEPENDENT ELDERLY PEOPLE: A RANDOMISED TRIAL

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Background: Aging is accompanied by systemic changes that compromise mobility, muscle strength and postural balance. Therefore, elderly individuals are more susceptible to episodes of falls. In Brazil, the number of hospitalizations and deaths from falls from standing heights has grown dramatically among the elderly population. Several studies have shown the importance of balance and muscle strength training to reduce the risk of falls among the elderly. However, little is discussed about the progression of the level of

difficulty in a systematic way in the execution of balance exercises during the execution of these programs.

Objectives: (i) to propose an exercise program with progressions of difficulty for balance exercises; (ii) to investigate the effectiveness of the program to improve postural balance and reduce the risk of falls in independent elderly people.

Methods: this is a randomized clinical trial, carried out with elderly 60 years of age or older, residents of the city of Rio de Janeiro. Twenty-two participants were randomized to one of two treatment groups: intervention and control. The intervention group underwent an exercise program for static and dynamic balance with systematic progression of difficulty (dual-task exercises, manual resistance, and modification of sensory inputs) and exercises for muscle strengthening of the lower limbs. The control group performed the same exercise program, except for difficulty progressions. There were 2 sessions per week, for 12 weeks, lasting one hour each. The participants' risk of falls, functional mobility and gait adaptability were assessed before and after the intervention using the following instruments: Berg Balance Scale, Four Stage Balance Test, Timed Up and Go Test and Modified Dynamic Gait Index. The analysis of the data distribution profile (still to be carried out) will be verified using the Shapiro-Wilk test and, depending on the result, appropriate descriptive and inferential statistical analysis will be used. The effect size will be estimated according to the analysis used.

Results: the present study is in the data analysis phase. A total of 19 participants completed the exercise program (Control N=10; Intervention N=9), including 12 women. All 19 participants completed the 24 sessions without serious complications or falls.

Conclusion: the proposed exercise program was feasible and safe to be applied to independent elderly people, aged between 60 and 82 years, requiring the supervision of two therapists. Data relating to the assessment instruments will be analyzed for further interpretation and discussion of the results.

Implications: Considering the high rate of falls in the elderly population, injuries from falls and treatment costs, the present study proposes to provide a low-cost exercise program with easy access to therapists and the elderly population, and to test its effectiveness, aiming at reducing the risk of falls and their consequences for the elderly and for the Health System.

Keywords: Accidental Falls, Postural Balance, Aged

Conflict of interest: The authors declare no conflict of interest.

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EVALUATION OF THE QUALITY OF EVIDENCE IN SYSTEMATIC REVIEWS ON PHYSICAL THERAPY PUBLISHED IN HIGH-IMPACT JOURNALS: A METAEPIDEMIOLOGICAL STUDY

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