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EVALUATION OF VENTILATION DURING EXERCISE TESTS IN PEOPLE WITH POST-COVID-19 SYNDROME

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Background: In addition to deconditioning, persistent low-grade inflammation following acute SARS-CoV-2 infection may contribute to systemic problems, which supports the need for further assessment of cardiopulmonary conditioning. In fact, the impairment of the respiratory system in the acute phase of COVID-19 has the potential to significantly impact functional capacity in patients with post-COVID-19 syndrome (PCS), with dynamic hyperinflation (DH) and reduced ventilatory reserve (RV).
Objective: To investigate the dynamic ventilatory responses and their influence on the functional capacity to exercise in these patients.
Methods: Between March and October 2022, a cross-sectional study was carried out with 16 patients with PCS aged ≥18 years attended at the Piquet Carneiro Polyclinica, at the State University of Rio de Janeiro. Patients with a history of COVID-19 pneumonia with persistence of respiratory symptoms after 3 months of the acute phase were included. Patients without a previous diagnosis of COVID-19 confirmed by RT-PCR (reverse-transcription polymerase chain reaction) and those who failed to perform the protocol tests were excluded. Patients underwent impulse oscillometry (IOS), spirometry, 6-minute walk test (6MWT) with Spiropalm®-6MWT, and cardiopulmonary exercise test (CPET). A ≥100 ml decrease in inspiratory capacity (IC) during exercise was defined as HD. Ventilatory reserve (VR) indicates how close minute ventilation (VE) approaches maximum voluntary ventilation (MVV) during a given activity and was calculated as the difference between MVV and VEpeak ([MVV-VEpeak]/MVV); VR <30% was considered to be ventilatory limitation on exertion.
Results: Median age and time since diagnosis of COVID-19 were 57 (50−59) years and 98 (93−106) days, respectively. Regarding spirometry, 12.5% and 50% of the participants had an abnormal spirometry and an altered IOS, respectively, and the difference in resistance between 4 Hz and 20 Hz (R4-R20) was detected in 31.2% of the participants. cases. Regarding cardiopulmonary performance during exercise, the median distance in the 6MWT was 83 (78−97) % of predicted, with HD and VR <30% observed in 62.5% and 12.5% of participants, respectively. In CPET, the median peak oxygen consumption (VO2peak) was 19 (14−37) ml/kg/min. There was a significant correlation of the distance covered in the 6MWT with both R4-R20 (rs = -0.499, P = 0.039) and VO2peak (rs = 0.628, P = 0.009).
Conclusion: Our findings suggest that HD and, to a lesser extent, low VR are contributors to poor exercise performance that is associated with peripheral airway disease.
Implications: Based on these results, we obtained precise ventilatory and metabolic measurements, which we can consider as an important factor for more assertive exercise prescription during the rehabilitation of these patients. Moreover, these results are promising if we consider that they were obtained with simple, cheap, and portable ventilatory and metabolic measurement systems, easily applicable in real-world environments.
Keywords: Post-COVID-19 Syndrome, Functional capacity, Cardiopulmonary stress test

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EFFECTIVENESS OF TELE-INTERVENTIONS FOR BEHAVIOR CHANGE AND SELF-MANAGEMENT IN STROKE SECONDARY PREVENTION: OVERVIEW OF SYSTEMATIC REVIEWS

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Background: Recurrent stroke contributes to the high burden of stroke. Secondary prevention guidelines recommend addressing modifiable risk factors. Despite the increased use of tele-interventions with individuals after stroke, the use of these interventions for behavior changes and self-management in secondary prevention has a low level of evidence in these guidelines.
Objective: To critically appraise and consolidate evidence from systematic reviews (SR) on the effectiveness of theoretically informed person-centered tele-interventions for behavior change and self-management in stroke secondary prevention.
Methods: An overview of SR that followed the Cochrane Guidelines was performed, involving the identification, screening, and synthesis of SR (with and without meta-analyses) and of eligible primary studies from the SR. When it was possible, meta-analyses were performed with data from primary studies for the outcomes of interest: primary (reduction in mortality, recurrent stroke and other cardiovascular events), secondary (adherence to health behaviors), and tertiary (control of cardiovascular risk factors).
Results: 12 SR and 14 primary studies were included. Seven SR were rated as having a high risk of bias, mainly because they did not define the eligibility criteria. Six SR performed meta-analyses with the outcomes of interest. Only one SR performed meta-analysis with primary outcomes (mortality, recurrent stroke and other cardiovascular events), and no significant difference between groups was found. Secondary outcomes: significant improvement was found for medication adherence, but it was not found for management of depressive symptoms. Tertiary outcomes: meta-analyses were performed for systolic and diastolic blood pressure (SBP and DBP), cholesterol and blood glucose and significant improvements were found for SBP and low-density lipoprotein (LDL). The methodological quality of the primary studies showed that blinding of participants and personnel, and of outcome assessment were the domains with the highest risk of bias. Meta-analyses of tele-interventions compared with usual care were performed for recurrent stroke, medication and healthy eating adherence, physical activity participation, and control of cardiovascular risk measures (SBP, DBP, total cholesterol and triglyceride). A significant difference between group, favoring tele-intervention, was identified for improve in medication adherence (mean difference, MD: 0.41; confidence interval of 95%, 95%CI: 0.16, 0.65; I^2: 69%) and healthy eating adherence (standardized MD, SMD: 0.41; 95%CI: 0.19, 0.63; I^2: 17%), and for the decrease in SBP (MD: -9.18; 95%CI: -12.96, -5.39; I^2: 0%).
Conclusions: Theoretically informed person-centered tele-interventions for stroke secondary prevention resulted in significant improvement in medication and healthy eating adherence, and a

decrease in SBP. Future studies using these interventions should consider other risk factors related to stroke secondary prevention.
Implications: This overview contributes to increasing the strength of recommendation of the use of theoretically informed person-centered tele-interventions in stroke secondary prevention. Furthermore, it guides future research indicating the need to investigate the effect of strategies involving these interventions on other outcomes that did not show significant improvement.
Keywords: Stroke, Telehealth, Secondary Prevention

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THE RELATIONSHIP BETWEEN URINARY INCONTINENCE AND DYNAPENIA IN ELDERLY WOMEN: A CROSS-CROSS STUDY

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Background: Urinary Incontinence (UI) is characterized by the International Continence Society (ICS) as any involuntary loss of urine, and several factors may be linked to this phenomenon, such as age, menopause, and some chronic diseases. However, the relationship between dynapenia and UI has been highlighted in the literature. Dynapenia, defined by the loss of muscle strength, is an event inherent to aging, and this muscle weakness, when in specific regions, such as the pelvic floor, can lead to greater UI events.
Objectives: To verify the association between dynapenia and the presence of UI in elderly women living in the city of Porto Alegre, RS.
Methods: Descriptive and cross-sectional study. The population consisted of women over 60 years of age living in a neighborhood in the city of Porto Alegre, RS. A descriptive questionnaire was used to characterize the subjects and the UI assessed through the International Consultation on Continence Questionnaire – Short Form (ICQ-SF). Muscle strength was assessed using the Sit and Stand Test (SST) and Hand Grip Dynamometry using a Jamar brand dynamometer.
Results: 298 elderly women were assessed, and in 78 (33%) the presence of UI was identified. The mean age of women without UI was 75.03 + 7.1 years versus 75.03 + 6.87 years with UI (p= 0.287). There were no significant differences in any of the sample characterization variables, demonstrating that the samples were homogeneous. As for TSL, there was no statistical significance (p=0.086). In Dynamometry, there was a significant difference in favor of the group without UI (p=0.020). The Chi-square test was used to compare the presence of UI with dynapenia, where dynapenic elderly women with UI were 36%, and dynapenic women without UI were 21% (X^2=0.0132).
Conclusion: The study indicated that dynapenic elderly women had a higher prevalence of UI, however, other studies seeking to analyze the prospective behavior of these variables should be developed, with larger samples and in different places, in order to reduce the influence of habits and environment.
Implications: UI has a high prevalence in the elderly and its relationship with dynapenia must be considered, and this outcome must be considered in the geriatric evaluation and rehabilitation.
Keywords: Urinary Incontinence, Muscle strength, Elderly

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URINARY INCONTINENCE IN PATIENTS INFECTED BY SARS-COV 2 AFTER HOSPITAL DISCHARGE: A CROSS-SECTIONAL STUDY

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Background: The SARS-CoV-2 epidemic, which killed more than 15 million people worldwide, in addition to high mortality, brought a series of post-COVID consequences. According to the current literature, the main persistent symptoms after infection are fatigue, dyspnea and muscle pain. Another important possible damage, still little discussed in the literature, refers to the association of SARS-CoV 2 infection with the prevalence of Urinary Incontinence (UI). This condition is more prevalent among women, ranging from 25 to 45% in the global population, affecting the health and quality of life of this population.
Objectives: To identify the prevalence of UI in patients infected with SARS-CoV 2 after hospital discharge and describe the sociodemographic and clinical profile of these subjects.
Methods: Descriptive and cross-sectional study. The population consisted of individuals after hospital discharge due to SARS-CoV-2 infection. Data collection was carried out via telephone call by a previously trained researcher, after hospital discharge, using a structured instrument asking sociodemographic data, previous conditions, hospitalization conditions, UI assessment and use of the Functional Status Scale (PCFS), from September 2021 to October 2022. The sample size was calculated by using the study by Dhar et al. (2020) as a reference. Adopting a significance level of 85%, acceptable error of 5% and a prevalence rate of 7%, indicating a sample size of 54 subjects. To verify the association of variables with the presence of urogenital disorders, the Chi-Square, Fisher's Exact, Student's t, Mann-Whitney and Multivariate Analysis tests were applied.
Results: The sample consisted of 32 women (56.4 ±11.3 years) and 27 men (49.5 ±10.7 years), the women being 7 years older (p=0.022). The prevalence of UI in the sample was 15.25%, with only women affected. The presence of UI pre versus post hospitalization for SARCoV-2 did not change (15.25% and 15.25%, respectively). During hospitalization, 28.8% of the sample required care in the Intensive Care Unit (ICU), with an average of 26.4 ± 40 days of hospitalization. As for the disability condition evaluated with the PCFS scale, grades 3 and 4 (moderate and severe) were identified in 44.1% of the individuals. In the multivariate analysis, in the model with different variables (age, hypertension, kidney disease, insomnia and emotional disorders), only the emotional aspects showed a significant association between the outcomes (p=0.034).
Conclusion: The prevalence of UI among the assessed sample did not change after hospital discharge due to hospitalization due to COVID-19. Women had a higher prevalence of UI, with emotional aspects being the variable associated with outcomes.
Implications: The consequences of COVID-19, especially in post-discharge patients, need to be better investigated. Some limitations,