Brazil. Frailty and mortality were the independent and dependent variables, respectively. The former was assessed using the frailty phenotype, considering unintentional weight loss, exhaustion, muscle weakness, slow gait and low physical activity level, and participants were categorized as non-frail, pre-frail or frail. Intra-hospital mortality was collected in the healthcare electronic medical chart system (TrackCare). The older patients were categorized into two groups: those that were discharged and those that died. Data analysis was descriptive and using the chi-squared, Mann-Whitney U and simple and multiple logistic regression tests. Demographic (age and sex) and clinical data (number of medications and body mass index- BMI) were collected to adjust the analyses.
Results: 7.1% of the older adults hospitalized during the study period were non-frail, 34.1% pre-frail and 58.8% frail, and 7.1% died during their hospital stay. The group that died exhibited more frailty criteria (U=510.500; p=0.006) and more frequent muscle weakness (X^2(1)=7.412; p=0.006) and slow gait (X^2(1)=5.636; p=0.030). These individuals showed no differences in age, sex, education level, BMI and medications when compared to their discharged counterparts (p>0.05). In simple regression analyses, one more frailty criterion increased the likelihood of intra-hospital death by 110% (OR=2.100 [95% CI 1.201 – 3.673]). Adjusted multiple analyses did not change the simple regression results.
Conclusion: Older adults with more frailty criteria exhibited a greater likelihood of intra-hospital death. The findings reveal the risk of intra-hospital death in hospitalized frail older patients and therefore, the need for multiprofessional monitoring of these individuals from the moment they are admitted.
Implications: Understanding frailty in a hospital setting may contribute to the development of healthcare, screening, health indicator and prevention strategies aimed at improving care and prognosis for these individuals.
Keywords: Hospitalization, Frailty, Mortality

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: The authors would like to thank the support of the University of Brasília - Faculty of Ceilândia, Gama Hospital and FAPDF and the permission of all participants.
Ethics committee approval: Research Ethics Committee of the Faculty of Ceilândia of the University of Brasília (UnB) – CEP/FCE (Opinion 5.081.969)

https://doi.org/10.1016/j.bjpt.2024.100786

190

PREDICTORS OF HOSPITALIZATION AND DEATH IN OLDER ADULTS WITH COGNITIVE IMPAIRMENT

Regina de Souza Barros[1], Jeremias Bruno Silva de Oliveira[1], Luciana de Lima Sousa[1], Gabriel Tourino Mafra Teixeira[1], Maria Paula Bastos Dias[1], Patrícia Azevedo Garcia[1]
[1] *University of Brasilia (UnB), Postgraduate Program in Rehabilitation Sciences, Brasilia, Distrito Federal, Brazil*

Background: Cognitive impairment, characterized as a deficit in one or more brain functions, has been associated with greater post-hospitalization functional limitations. Hospitalization is a known risk factor for functional decline in older adults and has been linked to post-discharge disability, rehabilitation difficulties, higher mortality and irreversible, physical, functional and psychosocial consequences. However, few studies have investigated factors related to the hospitalization process in older adults with cognitive impairment.
Objectives: Identify the sociodemographic factors, clinical conditions, and sarcopenia criteria predictive of hospitalization and death in older adults with cognitive impairment.
Methods: A longitudinal observational study was conducted involving 170 older adults with cognitive impairment assessed at a specialized public hospital. The predictive variables were sociodemographic characteristics (age, sex, and education), clinical conditions (engagement in physical exercise and history of hospitalization in the last 6 months) and sarcopenia criteria (muscle strength, muscle mass and physical performance). Muscle strength was evaluated by hand grip dynamometry, muscle mass by measuring calf circumference and physical performance via the Timed Up and Go (TUG) test. The variables predicted were hospitalization and death up to one year after assessment. Analyses were performed using descriptive statistics, the independent Student's t, Mann-Whitney U and chi-squared tests and simple logistic regression.
Results: of the 170 participants, most were sedentary women, with an average age of 77.57 years and low education level, with confirmed sarcopenia in 15.9% and previous history of hospitalization in 13%. During the one-year follow-up, 15.9% (n=27) of the older adults were hospitalized and 7.6% (n=13) died. The Mann-Whitney U test showed that education level had an effect on hospitalization (U=1423.5, p=0.027) and death (U=647.0, p=0.025) in the one-year follow-up. The chi-squared test indicated that a history of hospitalization in the last 6 months was associated with hospitalization [X^2(1)=4.729; p=0.030] and death [X^2(1)=3.919; p=0.048] in the one-year follow-up period. Simple logistic regression demonstrated an association between history of hospitalization in the last 6 months and readmission during one year of follow-up (OR=2.963; 95%CI 1.076–8.165, p=0.036). Associations between education level and the occurrence of hospitalization and death at follow-up and between history of hospitalization and death at follow-up were not significant in simple logistic regression.
Conclusion: This study found that a history of hospitalization in the last 6 months was associated with hospitalization over a one-year period in older adults with cognitive impairment.
Implications: These findings reinforce the importance of recognizing a history of hospital stays as a risk factor for further hospitalization in older adults with cognitive impairment, in order to implement early interventions aimed at preventing readmission and death.
Keywords: Aged, Hospitalization, Mortality

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: Not applicable.
Ethics committee approval: Research Ethics Committee of the Faculty of Ceilândia of the University of Brasília (UnB) – CEP/FCE (Opinion 5.530.84)

https://doi.org/10.1016/j.bjpt.2024.100787

191

IMMEDIATE EFFECTS OF FUNCTIONAL ELECTRICAL STIMULATION ON THE GASTROCNEMIUS MUSCLE ON PLANTAR PRESSURES IN CHILDREN WITH CEREBRAL PALSY

Jéssica do Val Rodrigues[1], Bruna Carolina Araújo de Souza[1], Beatriz Bicalho Saraiva[1], Beatriz El'Corab de Resende[1], Maria Eduarda de Araújo Almeida Muniz[1], Paula Silva de Carvalho Chagas[1]
[1] *Departamento de Fisioterapia, Universidade Federal de Juiz de Fora (UFJF), Juiz de Fora, Minas Gerais, Brasil*

Background: Cerebral Palsy (CP) presents motor impairments as one of its main symptoms, such as the equinus gait pattern. There is a portable electrical stimulator available in the market called the Walkaide® which aims to stimulate the anterior tibial muscle. However, due to shortening and contractures, the triceps surae muscle suffers a decrease in its ability to move, resulting in hyperactivation of the anterior tibial muscle. Stimulating the triceps surae muscle can provide the necessary force for improving gait biomechanics, generating an increase in propulsion during the terminal support phase, range of motion, speed, and stride length. Unfortunately, the Walkaide® is not accessible in low- and middle-income countries like Brazil due to its cost.
Objective: To evaluate the immediate effects of a prototype portable electrical stimulator designed to activate the gastrocnemius muscle in children with Cerebral Palsy.
Methods: Three children with right-side unilateral CP (two females aged 9 and 13 years old, and one male aged 9 years old) participated in this prototype study. Plantar pressures were evaluated in a semi-static posture and during walking on the MPS Platform with and without the use of electrical stimulation on the gastrocnemius muscle. The pressures in different areas of the foot and the arch index were analyzed before and during the use of the electrical stimulator in the two conditions mentioned above.
Results: The use of electrical stimulator led to an improvement in the plantar distribution in both affected and non-affected lower limbs in static and dynamic conditions, as observed in the three children with CP evaluated. In the static condition with the stimulator, there was greater weight bearing posteriorly to the right, an increase in the contact surface, and an improvement in the arch index compared to the condition without the stimulator. In the dynamic condition, there was an increase in the contact surface of the right foot with the device, and the weight distribution was more symmetrical when compared to not using the device.
Conclusion: The use of electrical stimulator on the gastrocnemius muscle has a great potential for improving the distribution of plantar pressures, which can enable children with unilateral CP to distribute their weight to the heel. Therefore, it is believed that with time, children may show an improvement in their gait pattern.
Implications: The use of the electrical stimulator may lead to improvements in plantar pressures, allowing children with unilateral CP to discharge weight posteriorly. This could potentially replace the use of standardized orthoses, resulting in aesthetic and practical benefits. Additionally, it promotes the development of a national equipment with lower costs of production.
Keywords: Cerebral palsy, Gait, Electrical stimulator

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: We would like to thank all the research participants and collaborators.
Funding: FAPEMIG and CAPES
Ethics committee approval: Universidade Federal de Juiz de Fora. CAAE: 59362122.0.0000.5147.

https://doi.org/10.1016/j.bjpt.2024.100788

192

ASSESSMENT OF THE LONG-TERM PHYSICAL CAPACITY OF COVID-19 SURVIVORS

Jéssica Gabriela Messias Oliveira[1], Rayanne Costa de Sales[2], Renan Pereira Campos[2], Beatriz Luiza Pinheiro Alves Azevedo[1], Thiago Thomaz Mafort[1], Agnaldo José Lopes[1,2]
[1] *Departamento de Pneumologia, Policlínica Piquet Carneiro, Universidade do Estado do Rio de Janeiro (UERJ), Rio de Janeiro, Rio de Janeiro, Brasil*
[2] *Programa de Pós-Graduação em Ciências da Reabilitação, Centro Universitário Augusto Motta (UNISUAM), Rio de Janeiro, Rio de Janeiro, Brasil*

Background: Post-COVID-19 syndrome (PCS) is characterized by a set of clinical findings that appear during or after infection with SARS-Cov-2 and persist after 12 weeks. The long-term consequences of COVID-19 are not fully known, but there is already evidence that the infection can deteriorate lung function, reduce functional capacity, impair quality of life and cause important emotional repercussions. Thus, there needs to be a tool to assess the course of sequelae and how limiting they may be to estimate the long-term burden of this disease. One of the tools used is the *Post-COVID-19 Functional Status Scale* (PCFS), which considers pain, emotional aspects and functional limitations of the individual.
Objectives: To build a predictive model of physical function through PCFS in patients with PCS.
Methods: Between October and March 2021, a cross-sectional study was carried out with 201 survivors of COVID-19 aged 18 years or older at Policlínica Piquet Carneiro, UERJ. The study included patients with persistent symptoms or development of sequelae beyond 12 weeks from the onset of acute COVID-19 symptoms. The meanings of each score on the PCFS scale are as follows: grade 0: no functional limitations; grade 1: negligible functional limitations; grade 2: slight functional limitations; grade 3: moderate functional limitations; and grade 4: severe functional limitations. They were also assessed for general fatigue using the Chronic Fatigue Therapy Functional Rating Scale (FACIT-F), handgrip strength (HGS), and spirometry. The inferential analysis was composed by Pearson's correlation coefficient for the association between the PCFS and the other variables. Multivariate linear regression was applied to investigate which variables were predictive of PCFS. Significance $P<0.05$ was used. The analysis was processed using JASP version 0.14.1.
Results: The number of participants classified as 0, 1, 2, 3 and 4 on the PCFS scale was 25 (12%), 40 (20%), 39 (19%), 49 (24%) and 48 (24%), respectively. The PCFS scale was significantly correlated with the following variables: FACIT-F score ($r=0.542$, $P<0.001$), HGS ($r=-0.339$, $P<0.001$), previous hospitalization ($r=0.226$, $P=0.001$), BMI ($r=0.163$, $P=0.021$) and gender ($r=-0.153$, $P=0.030$). The regression model with the highest regression coefficient ($R=0.622$) included the following variables: age, sex, BMI, FACIT-F, previous hospitalization and HGS.
Conclusion: Using the PCFS scale, we investigated the factors that contribute to a worse physical condition of patients with PCS, without previous locomotor deficiency. The results indicate that the worse the general fatigue in these patients, the worse their physical functions.
Implications: Based on these results, we propose a predictive model for the PCFS scale in patients with PCS that takes into account age, sex, BMI, FACIT-F, previous hospitalization and HGS. Due to the importance of assessing physical functioning in this patient population, the PCFS scale can be a useful tool for clinical evaluation and planning of rehabilitation strategies.
Keywords: Post-COVID-19 syndrome, Physical ability, Quality of life

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: Not applicable.
Ethics committee approval: UERJ Ethics and Research Committee under number CAAE-30135320.0.0000.5259.

https://doi.org/10.1016/j.bjpt.2024.100789