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1041 HAND GRIP STRENGTH AMONG POST-ACUTE COVID-19 OLDER ADULTS

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Introduction: Muscle strength is one crucial determinant of functional activity among older adults. While COVID-19 infection is often described as an acute respiratory disease with potential multiorgan involvement, its severe inflammatory nature may lead to changes to structure and function of skeletal muscles. This present study aimed to evaluate grip strength among post COVID-19 elderly with exploration of factors influencing the change in grip strength.

Method: Patients with history of COVID-19 infection aged ≥65 years were recruited in the COVID-19 follow up clinic. Grip strength was assessed using Jamar dynamometer following standard protocol while baseline clinical information was collected from hospital electronic medical record. Data collected were analysed to evaluate grip strength in relation to participants' demographics, comorbidity, length of hospital stay and steroids medication use. Total steroids equivalent doses were calculated and dichotomy of 400 mg was selected based on its median.

Results: Ninety-three participants (mean [SD] age: 73 [6], 52.7% males) were recruited at an average (SD) of 55 (37) days after hospital discharge, with 79.6% participants hospitalized with COVID-19 of clinical category 4. Majority (74.2%) of the participants recorded measurements lower than diagnostic cut-off for low grip strength recommended by Asian Working Group for Sarcopenia (AWGS) 2019. Results showed that increasing age was associated with a decrease in grip strength ($r = -0.30$, $p = 0.003$). Besides, increase in hospital stay ($r = -0.22$, $p = 0.035$) and Charlson Comorbidity Index (CCI) score ($r = -0.42$, $p = 0.000$) were associated with decreasing grip strength measurements. No significant discrepancy in grip strength was observed between subgroups of patients receiving total steroids equivalent doses of <400 mg and ≥ 400 mg ($p = 0.881$).

Conclusion: Low grip strength readings were recorded among post COVID-19 elderly particularly patients of older age, with longer hospital stay and higher CCI. This suggests the need for close monitoring and provision of rehabilitation intervention to older adults affected by COVID-19 infection.