A neurocognitive approach for recovering upper extremity movement following subacute stroke: A randomized controlled pilot study

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[Purpose] This study aims to describe a protocol based on neurocognitive therapeutic exercises and determine its feasibility and usefulness for upper extremity functionality when compared with a conventional protocol. [Subjects and Methods] Eight subacute stroke patients were randomly assigned to a conventional (control group) or neurocognitive (experimental group) treatment protocol. Both lasted 30 minutes, 3 times a week for 10 weeks and assessments were blinded. Outcome measures included: Motor Evaluation Scale for Upper Extremity in Stroke Patients, Motricity Index, Revised Nottingham Sensory Assessment and Kinesthetic and Visual Imagery Questionnaire. Descriptive measures and nonparametric statistical tests were used for analysis. [Results] The results indicate a more favorable clinical progression in the neurocognitive group regarding upper extremity functional capacity with achievement of the minimal detectable change. The functionality results are related with improvements on muscle strength and sensory discrimination (tactile and kinesthetic). [Conclusion] Despite not showing significant group differences between pre and post-treatment, the neurocognitive approach could be a safe and useful strategy for recovering upper extremity movement following stroke, especially regarding affected hands, with better and longer lasting results. Although this work shows this protocol?s feasibility with the panel of scales proposed, larger studies are required to demonstrate its effectiveness.

Physical therapy

Stroke

Upper extremity

achievement

clinical article

clinical protocol

clinical trial

control group

controlled clinical trial

controlled study

disease course

experimental model

feasibility study

functional status

human

imagery

kinesiotherapy

muscle strength

physiotherapy

pilot study

questionnaire

randomized controlled trial

single blind procedure

statistical model

stroke patient

upper limb