Rehabilitation and Recovery

ESOC-0909

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Effect of neuromuscular magnetic stimulation on the hemiplegic upper extremity in subacute stroke patients

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Objects: To investigate effects of neuromuscular magnetic stimulation (NMMS) on the wrist and hand muscle comparing with neuromuscular electric stimulation (NMES) in subacute stroke patients.
Subject and Method: Patients with subacute hemiplegic stroke were recruited to the study, excluded if they have a cognitive dysfunction (MMSE <20). Participants were randomized into 2 groups, that is a NMMS group(N = 10) and a NMES group(N = 10). Both group received 15-minute session at least twice a day for 5 days a week for 3 weeks. NMMS(10 Hz, duration 10 s, 10 min treatment time and 3000 total pulse) and NMES(a symmetrical, biphasic waveform ; 30 us pulse width; 40 Hz) was applied to the affected upper extremity in alternating extensor/flexor muscle contraction. Outcome measurements were done at baseline, after 1 week, and at the end of the treatment period (after 3 weeks). The primary outcome measure was for hand function: Box and blocks test, Jebson-Taylor hand function test and 9-hole peg board test. Secondary outcome measure was for motor performance: Wrist and hand muscle strength(manual muscle test), grip power, and spasticity.
Results: There were statistically significant improvements in measures of wrist flexor and hand flexor/extensor strength over the treatment period, but not significantly different between the groups.
Conclusions: Both stimulations of wrist and hand muscle improves muscle strength, but there were no significant change between the stimulations.

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Information provision after stroke: A qualitative synthesis of the views and experiences of stroke survivors and their carers

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Background: The provision of information is frequently reported as being an unmet need of stroke survivors and their carers. Optimal strategies to address this lack of adequate information provision have not yet been identified and it is currently unclear why information interventions do not consistently show benefit with these people. In this review, we evaluated qualitative studies of patients' and carers' perspectives of information provision after stroke, to understand how these may inform the development of future strategies of information delivery.
Method: An electronic search of relevant databases was conducted, and all results were screened by title and abstract by two independent reviewers. Qualitative studies which gathered the perspectives of stroke survivors and/or their carers about the provision of information after stroke were included. The studies were summarized, and findings synthesized using tabulation and thematic analysis.
Results: Eight studies were included in the synthesis, and the following themes were derived: The adequacy of the information including the timing of information; access to information, including information consistency; and the delivery of information including specific views on information topics, delivery method and format.
Conclusions: The timing and format of information was important to the participants of the included studies, and the information requirements and preferences for how it should be delivered varied greatly between participants. The findings suggest that while information is an important component of post-stroke care for both the survivor and their carer, a personalized approach to information provision might be required.

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Driving a car does not make you happy 2–5 years after stroke

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Background: Most adults in Norway hold a driver license. After brain injury this can be withdrawn. National regulations including satisfactory mental speed and attention, satisfactory problem solving and intact field of view are required. Getting back the driver license is a huge goal for many stroke survivors.
In a Norwegian follow up study of former stroke patients discharged from specialized rehabilitation, psychiatric problems according to The General Health Questionnaire (GHQ-30) and Hospital Anxiety and Depression Scale (HADS) were found in almost 50 % averagely 3 ½ years after their stroke. Fifty four percent reported driving a car at follow up, and 43 % had lost their driver license due to the brain injury. There was no information regarding the last three percent.
Method: Univariate and multiple regression analyses were performed in 100 included persons (35 % women, average age 59 years).
Results: Dependency in toileting during rehabilitation predicted emotional distress (HADS > 10) at follow up. Well-being (GHQ-30 <6) at follow up was predicted by age > 65 years, independent walking ability, perceiving proxies as supportive and holding a job (occupation). Well-being was strongly associated with emotional distress at follow up. There was no association between the outcome measures and holding a driver license.
Conclusion: Even if loosing the license to drive a car for many patients seems to feel like a huge loss, in this study no association were found between having a driver license and mental health or psychological well-being in the long run after cerebral stroke.

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Be aware of differences when comparing results of rehabilitation in different countries

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The objective of the study was to describe the diversity between Latvian and Swedish populations for persons who undergoes in-patient rehabilitation after stroke.
Methods: The data of 1117 patients from Latvia and 3723 patients from Sweden who received post-acute inpatient rehabilitation after stroke was used for this retrospective cohort study. Basic medical (type of stroke diagnosis, side of lesion in brain) and sociodemographic information (age and gender of patients), as well as information on organization of reha-

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