Mental Practice: using motor imagery for neurologic rehabilitation of gaitdisorders. Study 4: Imagery ability in stroke patients. A hemifield study on lateralization of arm representations.

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The main objective of this study is answering the question whether stroke patients, in solving the Parsons hemifield task, use both brain hemispheres intermixed, or that one of both is predominantly involved.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON32400

Source ToetsingOnline

Brief title Parsons hemifield task: How do we recognize our own hands?

Condition

Other condition

Synonym

Attaque, Cerebral Vascular Accident

Health condition

CVA

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Research involving

Human

Sponsors and support

Primary sponsor: Rijksuniversiteit Groningen Source(s) of monetary or material Support: NWO (ZonMW)

Intervention

Keyword: lateralization, motor imagery, stroke

Outcome measures

Primary outcome

Computer task: reaction time and percentage correct answers

MRI

Secondary outcome

None

Study description

Background summary

Every year a considerable amount of elderly people are confronted with the consequences of stroke which, for instance, can result in gait dysfunction. The general rehabilitation method for this group of people is bottum-up. By repeated movement execution an improve is gait is expected. The neural networks which aid in movement execution could however also be directed top-down, by means of motor imagery.

The last couple of years is had become clear that motor imagery and motor execution are closely connected. Motor imagery results in i.e. activity in partially the same brain areas as in actual motor execution. Also, other studies have shown that repeated motor imagery (mental practice) even leads to an improvement in motor execution.

The main question we want to answer with this study is if a Parsons hemifield task for recognizing hands can contribute to unraveling the basic mechanisms of motor imagery, specific what the exact role is of both brain hemispheres in solving this task.

Study objective

The main objective of this study is answering the question whether stroke patients, in solving the Parsons hemifield task, use both brain hemispheres intermixed, or that one of both is predominantly involved.

Study design

The project 'Mental practice: improving gait in stroke patient in the late stage' is a promotion traject for four years. This fourth study is an attempt to gain more insight in the motor imagery ability of stroke patients. This study is a continuation of the second study towards investigating motor imagery ability in stroke patients (metc.2004.134). In this study, a clear connection was found between hemispheric location of the brain lesion and the ability to imagine hand movements. The current study will further aim at the question whether in solving the Parsons hemifield task, both hemispheres contribute equally, or that one of both has a primary role.

Study burden and risks

There are no apparent risks for the participants with this study. The extra burden for patients is composed of imagining movements and manually pressing a button. These activities are in no possible way damaging for the patients. They are short in time and are performed sitting.

The MRI investigation will take up maximally 30 minutes of the patients time.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age Adults (18-64 years) Elderly (65 years and older)

Inclusion criteria

First unilateral CVA CVA > 4 weeks Motor functioning affected upper extremity moderate to severely impaired (Fugl-Meyer score < 62)

Exclusion criteria

Multiple CVA's co-morbidity which interferes with the goals of this experiment severe cognitive dysfunctioning Speech- and language disorders which interferes with the goals of this experiment

Study design

Design

Study type:	Observational non invasive
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Other

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Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	22-07-2019
Enrollment:	16
Туре:	Actual

Ethics review

Approved WMO	
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register CCMO ID NL21714.042.08