

Klnematics of the Shoulder after Stroke: Activities of Daily Living in patients with hemiparesis.

Published: 01-04-2011

Last updated: 03-05-2024

To quantify changes in range of motion (RoM) and muscle strain of the shoulder in hemiparetic stroke survivors compared to healthy controls in order to identify potential contracted or paretic muscles.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Central nervous system infections and inflammations
Study type	Observational non invasive

Summary

ID

NL-OMON34594

Source

ToetsingOnline

Brief title

KISS

Condition

- Central nervous system infections and inflammations

Synonym

Cerebrovascular accident, stroke

Research involving

Human

Sponsors and support

Primary sponsor: Leids Universitair Medisch Centrum

Source(s) of monetary or material Support: Ministerie van OC&W, Sophiafonds (donatiefonds)

Intervention

Keyword: ADL, Kinematics, Shoulder, Stroke

Outcome measures

Primary outcome

Shoulder Range of Motion (RoM) and related shoulder muscle strains.

Secondary outcome

Clinical phenotype:

Current shoulder pain (using 0-100 mm Visual Analog Scale (VAS);

Spasticity: Modified Ashworth Scale (0-5)

Degree of paralysis: Brunnstrom stage (0-6).

Status of motor recovery and arm function of the hemiparetic arm. Fugl-Meyer

upper extremity.

Study description

Background summary

Upper extremity paresis and/or spasticity is a common disability after stroke. The recovery rate of arm-hand function is poor. Despite intensive therapy, 30-66% of the patients do not have full arm function 6 months after stroke. The exact mechanism underlying the limited arm function is not clear. The arm range of motion (RoM) is thought to be limited because of muscle paresis, shortening of connective or muscle tissue, altered proprioception and pain. Data on range of motion of the shoulder related to the performance of activities of daily living, in combination with identification of potential muscle contraction (low muscle strain) or paresis (high muscle strain), can give more insight in these causes. This knowledge may contribute to tailored therapy and prognosis.

Study objective

To quantify changes in range of motion (RoM) and muscle strain of the shoulder in hemiparetic stroke survivors compared to healthy controls in order to

identify potential contracted or paretic muscles.

Study design

cross-sectional, observational

Study burden and risks

Patients and Controls are introduced in the Laboratory for Kinematics and NeuroMechanics.

After the short introduction the patients will undergo a limited medical examination to check inclusion and exclusion criteria and determine the clinical phenotype.

All volunteers participate in the motion registration of the thorax, shoulder and arm.

Six standardized arm motions and six Activities of Daily Living (ADL) are recorded three times by means of an electromagnetic tracking system, which takes about 3 quarters of an hour.

There are no risks related to the experiment.

Contacts

Public

Leids Universitair Medisch Centrum

PObox 9600
2300 RC Leiden
NL

Scientific

Leids Universitair Medisch Centrum

PObox 9600
2300 RC Leiden
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

6-24 months after first ever stroke

no shoulder complaints prior to stroke

no or limited shoulder pain after stroke (Visual Analog Scale score [1-10] < 1)

Paresis and or spasticity of the affected shoulder (modified Asworth Scale [0-5] > 0)

Limited mobility: forward arm elevation < 60 degrees

Exclusion criteria

repeated insults

electronic implant devices

shoulder surgery

neglect

Study design

Design

Study type: Observational non invasive

Intervention model: Other

Allocation: Non-randomized controlled trial

Masking: Open (masking not used)

Primary purpose: Other

Recruitment

NL

Recruitment status: Recruitment stopped

Start date (anticipated): 29-09-2011

Enrollment: 30

Type:

Actual

Ethics review

Approved WMO

Date:

01-04-2011

Application type:

First submission

Review commission:

METC Leids Universitair Medisch Centrum (Leiden)

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

ID

CCMO

NL35077.058.10