

Repetitive nerve stimulation in proximal muscles: technical implementation

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Which position of the person and which positions of the electrodes on the shoulder create the best recorded and best reproducible muscle amplitude?

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Neuromuscular disorders
Study type	Observational invasive

Summary

ID

NL-OMON31139

Source

ToetsingOnline

Brief title

RNS in proximal muscles

Condition

- Neuromuscular disorders

Synonym

myasthenia; myasthenia gravis

Research involving

Human

Sponsors and support

Primary sponsor: Leids Universitair Medisch Centrum

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

Intervention

Keyword: myasthenia, RNS, trapezoid muscle

Outcome measures

Primary outcome

CMAP-amplitude of the trapezoid muscle: amplitude itself and the difference between repeated measurement.

Secondary outcome

not applicable

Study description

Background summary

Repetitive nerve stimulation (RNS) is an important diagnostic test for disease of the neuromuscular junction like myasthenia gravis (MG). In MG proximal muscles are more vulnerable to disease than distal ones, so RNS of a proximal muscle is more sensitive to diagnose MG. RNS in a proximal muscle is technically more difficult and only moderately reproducible. Because raising evidence is mounting that RNS can and will be used as marker for disease severity, a reproducible test has become more important.

Study objective

Which position of the person and which positions of the electrodes on the shoulder create the best recorded and best reproducible muscle amplitude?

Study design

Persons are tested on two different days by the same protocol. Three combinations of two electrodes (20x30mm) are attached to the shoulder. The nerve is stimulated in the neck. The reactions of the muscle, measured between the electrodes, are recorded simultaneously. The combination of electrodes with the best reproducible result is determined by statistical analysis.

Study burden and risks

thirty minutes, twice

The RNS can be uncomfortable and sometimes even be painful.

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

at least 18 years old

able to give informed consent

Exclusion criteria

neuromuscular disorders of nerve and muscles

diseases predisposing to nerv or muscle disease, for example diabetes mellitus

Study design

Design

Study type: Observational invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Diagnostic

Recruitment

NL

Recruitment status: Recruiting

Start date (anticipated): 14-01-2011

Enrollment: 20

Type: Actual

Ethics review

Approved WMO

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

CCMO

ID

NL19299.058.07