Repetitive nerve stimulation in proximal muscles: technical implementation

Published: 11-10-2007
Last updated: 09-05-2024

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 muslce is tecnically more difficult and only moderately reproducible. Because raisin gevidence 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 determinde 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	ID
CCMO	NL19299.058.07