Nociceptive flexion reflex (NFR) thresholds in chronic tension-type headache and chronic whiplash syndrome

Published: 18-05-2006
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The objective of this study is to prove patients with CTTH and chronic neck pain after a whiplash injury have a lower nociceptive flexion reflex threshold compared to painfree controls.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Headaches
Study type	Observational non invasive

Summary

ID

NL-OMON29972

Source
ToetsingOnline

Brief title
NFR thresholds

Condition

- Headaches

Synonym
chronic tension-type headache, chronic whiplash syndrome

Research involving
Human

Sponsors and support

Primary sponsor: neurologie en klinische neurofysiologie

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

Intervention

Keyword: chronic, headache, NFR, whiplash

Outcome measures

Primary outcome

Primary outcome is the minimum current intensity eliciting a spinal reflex

(reflex threshold).

Secondary outcome

Secondary outcomes are the RIII amplitude, psychological symptoms (SCL-90),

quality of life (SF-36) and the total tenderness score (TTS).

Study description

Background summary

The pathophysiology of chronic tension-type headache (CTTH) and of chronic neck pain after a whiplash trauma is largely unknown. It has been shown that these patients often show increased pericranial muscle tenderness and muscle hardness. In two randomized controlled trials we could not prove botulinum toxin (with a spasmolytic effect) to be effective in patients with CTTH and chronic whiplash syndrome.
Treatment of these tender muscles did not seem to help the patient. Possible explanation herefore is the so-called spinal cord hypersensivity.
Patients with CTTH and chronic neck pain after a whiplash trauma show often exaggerated pain responses following low intensity nociceptive stimulation. This can explain the persistence of pain after minimal or even in absence of tissue injury.
The nociceptive flexion reflex (NFR) is a spinal reflex of one limb after (painful) electrical stimulation of the suralis nerve. It is a reliable and objective tool to measure pain and the degree of spinal cord hypersensivity. Patients with chronic pain syndromes seem to have lower reflex thresholds compared to pain free controls as a result of spinal cord hypersensivity.

Study objective

The objective of this study is to prove patients with CTTH and chronic neck pain after a whiplash injury have a lower nociceptive flexion reflex threshold compared to painfree controls.

Study design

After informed consent is obtained, we record baseline demographics (age, sex, length, weight, bloodpressure). During a baseline period of 4 weeks, patients use a diary to record the presence of headache and/or neck pain, number of headache hours per day, number of days on which medication is taken and number of tablets taken per day. Before and after the NFR measurements patients record their headache and\or neck pain intensity on a visual rating schaal (VRS), in which 0 means no pain and 10 the worst pain imaginable.

Study burden and risks

The NFR measurements are non-invasive measurements, according to standard EMG (electromyograghy) protocols.

Contacts

Public
Selecteer

Leyweg 275
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Nederland
Scientific
Selecteer

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

Patients are eligible: (1) if they meet the criteria for chronic tension-type headache (according to the International Headache Society criteria = IHS); (2) if they had a whiplash type neck distortion defined as a soft tissue injury of the neck following a vehicle collision, with symptoms lasting longer than 6 months (according to the Quebec task Force, Whiplash Associated Disorders grade 1 and 2)

Exclusion criteria

Age < 18 or > 65 years; pregnancy; neuromuscular disorders; severe psychiatric comorbidity; analgesics abuse

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	01-06-2006
Enrollment:	90
Type:	Actual

Ethics review

Approved WMO Date:	18-05-2006
Application type:	First submission
Review commission:	METC Leiden-Den Haag-Delft (Leiden)
	metc-ldd@lumc.nl

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	NL11797.098.06