Perisurgical observation of nociceptive thresholds during total knee arthroplasty for association with persisting postsurgical pain: an explorative study

Gepubliceerd: 14-01-2015 Laatst bijgewerkt: 15-05-2024

Ethische beoordeling	Positief advies
Status	Anders
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON26714

Bron
NTR

Aandoening

Total knee arthroplasty, persisting pain, chronic pain

Ondersteuning

Primaire sponsor: Radboudumc
Overige ondersteuning: STW/NWO

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

- Persistent postsurgical pain (PPSP)
- eQST
o Electrical pain threshold (ePT) [mA]
o Electrical pain tolerance threshold (ePTT) [mA]

- Nociceptive Perception thresholds (NPT)
o Stimulus amplitude [mA]
o Responses to stimuli (perceived/not perceived)
o Stimulation time [s]

Toelichting onderzoek

Achtergrond van het onderzoek

Background of the study:
Total knee arthroplasty (TKA) often produce severe persistent postsurgical pain (PPSP), and in some cases, chronic pain. While the acute pain postpones the early recovery, the chronic pain seriously restricts an individual's quality of life, and also increases costs of global health care and absenteeism at work. Central sensitization plays a major role in the development of PPSP. Sensitization is characterized by generalized hyperalgesia and can be detected by means of a decrease in (electrical) pain threshold. Recently, a pilot study showed that presurgical electrical pain tolerance thresholds (ePTT) have predictive value for PPSP in abdominal surgery patients. Other pilot studies suggest that, in addition to ePTTs, electrical nociceptive perception thresholds (eNPTs), when tracked over a short period of time (e.g. 25 minutes) can be expected to be able to observe changes in peripheral and/or central mechanisms in more detail than regular EPTs. Results after TKA show similar persisting pain incidences as after abdominal surgery. Therefore, these patients are a suitable population to study the generalizability of the results found in previous studies.

Objective of the study:
The main objective of this study is to investigate the predictability of persisting postsurgical pain (PPSP) after TKA using electrical quantitative sensory testing (eQST) and nociceptive perception thresholds (NPT) in combination with a presurgical conditioning pain modulation (CPM) paradigm. The secondary objectives of this study are to investigate (1) the effect of TKA on stimulus specific changes in NPT, and (2) the correlation between eQST versus NPT and PPSP.

Study design:
Monocentre prospective observational study

Onderzoeksopzet

Preoperative: baseline measurement at -35 to -7 days

Postoperative: days 2, 42, 84, 168, and 365

Onderzoeksproduct en/of interventie

Not applicable

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Patients scheduled for total knee arthroplasty.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Patient’s refusal

- Preexisting neurological or psychiatric illnesses

- Chronic pain syndromes

- Alcohol or drug abuse

- Suspected possibility of delirium

- Difficulties in communication

- Rheumatoid arthritis

- Revision knee surgery or participation in another study

- Presurgicaloperative ASA score >3

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders

Controle: N.v.t. / onbekend

Deelname

Nederland

Status:	Anders
(Verwachte) startdatum:	01-02-2015
Aantal proefpersonen:	40
Type:	Onbekend

Ethische beoordeling

Positief advies

Datum:	14-01-2015
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 40450
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL4710
NTR-old	NTR4981
CCMO	NL47455.091.14
OMON	NL-OMON40450

Resultaten

Samenvatting resultaten
N/A