# Efficacy of Adductor Channel Block for anterior cruciate ligament surgery: A prospective double blinded randomized controlled trial

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The goal of this study is to objectify the postoperative pain level, the use of opiates and postoperative nausea and vomiting after adding the adductor channel block to the standard pain regiment after anterior cruciate ligament surgery.

**Ethical review** Approved WMO **Status** Recruiting

Health condition type Tendon, ligament and cartilage disorders

Study type Interventional

## **Summary**

#### ID

NL-OMON51570

#### **Source**

**ToetsingOnline** 

**Brief title**DUAL trial

#### **Condition**

Tendon, ligament and cartilage disorders

#### Synonym

anterior cruciate ligament rupture

#### Research involving

Human

### **Sponsors and support**

**Primary sponsor:** Sint Antonius Ziekenhuis

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Source(s) of monetary or material Support: Bijdrage R&D anesthesiologie

#### Intervention

**Keyword:** Adductor channel block, Anterior cruciate ligament surgery, locoregional anesthesia

#### **Outcome measures**

#### **Primary outcome**

The primary endpoint is postoperative pain (numerical rating score) within the first 24 hours

#### **Secondary outcome**

Secondary endpoints are pain score 48 hours postoperative, motor block result, use of postoperative pain medication including opiates and the use of rescue medication, postoperative pain location, postoperative nausea and vomiting, use of anti-emetics, overall patient satisfaction, contact within 48 hours after surgery with general practicioner or emergency department and adverse events.

# **Study description**

#### **Background summary**

Addition of locoregional anesthesia to the standard, multimodal pain management reduces postoperative pain after knee surgery. Locoregional blockade of the femoral nerve provides adequate pain relief after knee surgery but can induce weakness of the quadriceps muscle as an adverse event. Blocking the saphenous nerve, the vastus medialis nerve and the medial femoral cutaneous nerve ocasionally with the anterior skin branch of the obturator nerve, known as the \*adductor channel\* is a simple and effective technique to reduce postoperative pain after knee surgery.

#### Study objective

The goal of this study is to objectify the postoperative pain level, the use of opiates and postoperative nausea and vomiting after adding the adductor channel

block to the standard pain regiment after anterior cruciate ligament surgery.

#### Study design

Prospective, double blinded randomized intervention study.

#### Intervention

Identification of the adductor channel using ultrasonic landmarks such as the femoral artery and the sartorius muscle. When a patient is randomized in the intervention group; 10 ml of Levobupivacaine 0.25% will be added in the adductor channel. When randomized in the control group: 10 ml of sodium chloride 0.9% (placebo) will be added in the adductor channel.

#### Study burden and risks

Locoregional anesthesia is an existing and well recognized method to relieve perioperative and postoperative pain. Addition of locoregional anesthesia to the standard, multimodal pain regimen will reduce postoperative pain and use of pain medication after knee surgery. Patients will be randomized between the control group (placebo injection with sodium chloride 0.9% solution) or the adductor channel block with levobupivacaine 0.25%. After induction, study patients will either receive a placebo injection of the adductor channel block or with levobupivacaine. The ultrasonic landmarks (femoral artery and sartorius muscle) are easily recognizable using ultrasound. The risks of the adductor channel block are limited and are being minimalized by the use of ultrasound. Known adverse events are infection, bleeding, intravascular administration and temporary motor block.

## **Contacts**

#### **Public**

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## **Trial sites**

#### **Listed location countries**

**Netherlands** 

# **Eligibility criteria**

#### Age

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

#### Inclusion criteria

- ASA classification 1-3
- Age >= 18 years
- Anterior cruciate ligament surgery
- General anesthesia
- Informed consent

#### **Exclusion criteria**

- Contraindication to local anesthetics
- Neuromuscular disease

# Study design

## **Design**

Study type: Interventional

Intervention model: Parallel

Allocation: Randomized controlled trial

Masking: Double blinded (masking used)

Control: Placebo

Primary purpose: Treatment

#### Recruitment

NL

Recruitment status: Recruiting
Start date (anticipated): 25-08-2022

Enrollment: 34

Type: Actual

# **Ethics review**

Approved WMO

Date: 02-06-2022

Application type: First submission

Review commission: MEC-U: Medical Research Ethics Committees United

(Nieuwegein)

# **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 NL80947.100.22

Other volgt

# **Study results**

Date completed: 01-10-2023

Actual enrolment: 34