Circumpatellar electrocautery denervation in total knee arthroplasty without patellar resurfacing: a prospective randomized study with 1-year follow-up

Published: 11-03-2008
Last updated: 15-05-2024

To determine the effect of circumpatellar electrocautery denervation in total knee arthroplasty without patellar resurfacing.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Joint disorders
Study type	Interventional

Summary

ID

NL-OMON32154

Source
ToetsingOnline

Brief title
Patellar denervation in total knee arthroplasty.

Condition

- Joint disorders
- Bone and joint therapeutic procedures

Synonym
anterior knee pain, patellofemoral pain

Research involving
Human

Sponsors and support

Primary sponsor: Deventer Ziekenhuis
Source(s) of monetary or material Support: geen

Intervention

Keyword: arthroplasty, knee prosthesis, patella

Outcome measures

Primary outcome

12 months, 2 years and 4 years after total knee arthroplasty:

(1) Prevalence of anterior knee pain using the Clinical Anterior Knee Pain

Rating.

Secondary outcome

12 months, 2 years and 4 years after total knee arthroplasty:

(2) Pain on a Visual Analogue Scale (VAS)

Before surgery, and 12 months, 2 years and 4 years after total knee

arthroplasty:

(3) WOMAC 3.1 Osteoarthritis Index

(4) Knee Society Score

Study description

Background summary

Anterior knee pain occurs in up to 31% of patients after total knee arthroplasty without patellar resurfacing, and in approximately 16% of patients with patellar resufacing.
The cause of patellofemoral pain after total knee arthroplasty is unknown but may at least be partly related to postoperative malalignment and anatomic

variations resulting in high patellofemoral contact forces. Immunohistochemical studies on innervation of the anterior knee have found hyperinnervation in the peripatellar soft tissues. In theory, circumpatellar denervation could result in a lower prevalence of anterior knee pain.
To date, only one clinical study addressed the results of patellar denervation in total knee arthroplasty. Although the results showed better pain relief after patellar denervation, the number of patients randomized was small (40), and no blinding was used. Randomized controlled trials to clarify the role of patellar resurfacing during total knee arthroplasty used 200 patients or more to achieve power to detect a significant difference.

Study objective

To determine the effect of circumpatellar electrocautery denervation in total knee arthroplasty without patellar resurfacing.

Study design

Randomized prospective with intervention, blinded.

Intervention

Circumpatellar electrocautery denervation in total knee arthroplasty without patellar resurfacing.

Study burden and risks

None

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

Not applicable.

Exclusion criteria

Isolated patellofemoral osteoarthritis
Contralateral patellar resurfacing (primary or as revision)
Insufficient Dutch language skills
Total hip replacement or contralateral total knee replacement within the study period or less than one year before entering the study
Inflammatory arthritis
History of patellar fracture
Prior patellectomy
Patellofemoral instability
Prior unicondylar knee replacement
Previous high tibial or distal femoral osteotomy
Any prior operation involving the extensor mechanism
A severe medical disability that limits the ability to walk
Disabling disease involving other joints of the lower extremities

Study design

Design

Study type: Interventional

Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)

Primary purpose: Treatment

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	08-04-2008
Enrollment:	200
Type:	Actual

Ethics review

Approved WMO Date:	11-03-2008
Application type:	First submission
Review commission:	METC Isala Klinieken (Zwolle)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

ID: 24792
Source: NTR
Title:

In other registers

Register	ID
CCMO	NL21569.075.08
OMON	NL-OMON24792