Arthroscopic versus open hemitrapeziectomy without tendon interposition in osteoarthritis

Published: 31-03-2014
Last updated: 15-05-2024

Compare three different surgical interventions for osteoarthritis of the thumb, arthroscopic hemitrapezectomy vs open hemitrapezectomy vs open hemitrapezectomy with interposition of tendon. All three interventions are widely used for osteoarthritis...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Bone and joint therapeutic procedures
Study type	Interventional

Summary

ID

NL-OMON40183

Source
ToetsingOnline

Brief title
Arthroscopic versus open hemitrapeziectomy in osteoarthritis

Condition

- Bone and joint therapeutic procedures

Synonym
osteoarthritis CMC joint

Research involving
Human

Sponsors and support

Primary sponsor: Erasmus MC, Universitair Medisch Centrum Rotterdam
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Arthroscopic, CMC, Ostearthritis, Treatment

Outcome measures

Primary outcome

1. Arthroscopic intervention gives earlier postoperative functional recovery

2. Less chance of damaging the superficial branch of the radial nerve

3. Less postoperative pain

4. Tendon interposition is not beneficial in regard of pain reduction

Secondary outcome

na

Study description

Background summary

Osteoarthritis of the CMC joint of the thumb has several different treatment modalities, so far no difference between the treatment modalities has been proven. The current study compares three different treatment strategies to compare long term outcome

Study objective

Compare three different surgical interventions for osteoarthritis of the thumb, arthroscopic hemitrapezectomy vs open hemitrapezectomy vs open hemitrapezectomy with interposition of tendon. All three interventions are widely used for osteoarthritis of the CMC joint.

Study design

Three different interventions will be performed on the patient after randomization

Intervention

Arthroscopic technique

The procedure is performed under regional or general anaesthesia. Tourniquet control is applied, with the elbow flexed 90 degrees and the thumb in longitudinal traction. Traction applied to the thumb is 3-5 kg. The CMC joint is identified with palpation and a needle insertion. Small incisions are made on the radial and ulnar side (1U and 1R [ref]) of the EPB. With small scissors and blunt clamp the joint capsule is perforated and the 1.9 mm or 2.3 mm 30 degrees arthroscope is introduced. After identification, the joint is debrided and a synovectomy is performed using the 2.3 shaver. The hemitrapezectomy is performed with the burr (2.6 or 3.0 mm), debriding the sclerosed surface of the distal trapezium for about two to three mm. The instruments and arthroscope are changed from portals to achieve adequate resection. Debris is rinsed out and the instruments are removed.

Open technique

The procedure is performed under regional or general anaesthesia. Tourniquet control is applied, with the arm on an arm rest. According to the surgeon a volar Wagner incison or a dorsal incison is made. Branches of the superficial radial nerve are identified and retracted. The CMC joint is opened, hereby creating a capsule flap with can be closed at the end of the procedure. The distal part of the trapezium is removed using oscillating saw, osteotome and rongeur in a piecemeal technique. Special attention is given to osteofytes, around the CMC I joint (if present, between first and second metacarpal). Care is given not to damage the FCR tendon. Afterwards debris is rinsed out and the capsule is closed with resorbable braided sutures. Skin is closed with nonabsorbable nylon suture.

Open technique with tendon interposition

The techinique is the same as described above, however after removal of the distal part of the trapezium a palmaris longus tendon or part of the flexor carpi radialis tendon is harvested through small incisions in the volar forearm, knotted with resorabable suture material and inserted in the space between the base of the metacarpal and the trapezium, before closing the dorsal capsular flap.

Rehabilitation

Directly postoperative the thumb is immobilised in a fore arm splint, with only the interphalangeal joint free to move. The splint is changed at the first outpatient visit two weeks later and a thumb spica cast is applied for an additional four weeks. After removal of the cast a handtherapy regime is started and full motion is allowed, full power and sport a resumed until 12

weeks postoperative.

Study burden and risks

na

Contacts

Public
Erasmus MC, Universitair Medisch Centrum Rotterdam

Dr. Molewaterplein 50 50
Rotterdam 3015 GE
NL
Scientific
Erasmus MC, Universitair Medisch Centrum Rotterdam

Dr. Molewaterplein 50 50
Rotterdam 3015 GE
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

osteoarthritis of the carpometacarpal joint of the thumb

Exclusion criteria

Osteoarthritis grade 4 (osteoarthrits of the STT joint)
Hyperlaxity
Systemic of degenerative osteoarthritis
Severe subluxation of the CMC joint of the thumb

Study design

Design

Study type: Interventional

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	14-08-2014
Enrollment:	90
Type:	Actual

Ethics review

Approved WMO

Date:	31-03-2014
Application type:	First submission
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

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: 23896
Source: NTR
Title:

In other registers

Register	ID
CCMO	NL44294.078.13
OMON	NL-OMON23896