

Bone remodelling in femoral neck fractures treated with a dynamic hip screw

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In this study we will monitor changes in bone mineral densities after intracapsular femoral neck fractures treated with a dynamic hip screw.

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

Summary

ID

NL-OMON50006

Source

ToetsingOnline

Brief title

BMD after DHS

Condition

- Fractures

Synonym

Hip fracture

Research involving

Human

Sponsors and support

Primary sponsor: Rijnstate Ziekenhuis

Source(s) of monetary or material Support: Er zal een aanvraag gedaan worden bij het Rijnstate Vriendenfonds

Intervention

Keyword: Bone mineral density, Dynamic hip screw, Femoral neck fracture

Outcome measures

Primary outcome

Changes in bone mineral density measured with Dual energy X-ray Absorptiometry in several regions of interest in the hip treated with a dynamic hip screw as a treatment for an intracapsular femoral neck fracture.

Secondary outcome

-Complications

Study description

Background summary

Intracapsular femoral neck fractures are common and are often treated with a dynamic hip screw in relatively young patients (<60 years). Complications as a cut-out or osteonecrosis of the femoral head after treatment with a dynamic hip screw still occur. The reason for these complications are possibly caused by bone remodeling around the dynamic hip screw and within the femoral head. Therefore, early detection of changes in bone density is needed. Literature regarding bone remodeling around the dynamic hip screw is scarce.

Study objective

In this study we will monitor changes in bone mineral densities after intracapsular femoral neck fractures treated with a dynamic hip screw.

Study design

In this exploratory prospective study, we will include 25 patients with an intracapsular femoral neck fracture treated with a dynamic hip screw.

Study burden and risks

Four extra Dual energy X-ray Absorptiometry*s will be performed. Visits to the

hospital are needed. A disadvantage is the extra, limited, radiation.

Contacts

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Scientific

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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 to participate if they are diagnosed with an intracapsular femoral neck fracture and are treated with a dynamic hip screw.

Exclusion criteria

Patients are excluded from this study if the affected hip has a history of osteonecrosis of the femoral head, Perthes, osteoarthritis (Kellgren and

Lawrence score III or IV) or a previous operation. Furthermore, patients that did not fully weight-bear the operated hip preoperatively will be excluded too.

Study design

Design

Study type: Observational invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Diagnostic

Recruitment

NL

Recruitment status: Recruiting

Start date (anticipated): 09-11-2020

Enrollment: 25

Type: Actual

Ethics review

Approved WMO

Date: 07-09-2020

Application type: First submission

Review commission: CMO regio Arnhem-Nijmegen (Nijmegen)

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	NL74196.091.20
Other	NTR-nummer: NL8649