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The influence of implant length on the outcomes of total hip arthroplasty

Submission date
30/06/2017

Recruitment status
No longer recruiting

Registration date
14/07/2017

Overall study status
Completed

Last Edited
05/09/2023

Condition category
Musculoskeletal Diseases

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[_] Record updated in last year

Plain English summary of protocol

Background and study aims
Osteoarthritis is a condition that causes joints to become painful and stiff. Hip osteoarthritis can be treated with hip replacement surgery, where the damaged hip joint is replaced with an artificial implant. The surgeon has various choices as to which implant they use. The implant that surgeons routinely use comes in two different lengths: the original (150mm) length or the 'short' (125mm) length. It is not known whether patient outcomes differ based on the length of the implant used. The aim of this study is to find out whether the length of the hip replacement stem has any influence on pain and physical function after total hip replacement.

Who can participate?
Patients aged 45-80 undergoing total hip replacement for osteoarthritis

What does the study involve?
Participants are randomly allocated to receive either an 'original' (150mm) or 'short' (125mm) stem as part of routine total hip replacement at the study centre. Hip function, quality of life, pain, joint awareness, satisfaction and implant position are measured at the start of the study and after 1 and 2 years.

What are the possible benefits and risks of participating?
It is thought that the length of stem does not affect patient recovery or outcomes after surgery in any way. Participants do not directly benefit from taking part in this study, but the knowledge gained may benefit other people by helping to find the best way to treat people who need total hip replacement in the future. Both stem lengths are available for routine use in the study centres, and as such there are no additional risks in taking part in this study beyond those of having routine total hip replacement surgery.

Where is the study run from?
1. Royal Infirmary of Edinburgh (UK)
2. Golden Jubilee National Hospital (UK)

When is the study starting and how long is it expected to run for?
January 2016 to December 2019

Who is funding the study?
Stryker (USA)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
2 (01-04-16)

Study information

Scientific Title
Can Arthroplasty Stem INfluence Outcome? (CASINO): a randomised controlled equivalence trial of 125mm vs 150mm Exeter stems in total hip arthroplasty

Acronym
CASINO

Study objectives
That the use of the 125mm ExeterTM stem in routine total hip arthroplasty achieves equivalent short-term (up to 2 years post-op) patient-reported and radiographic outcomes as the 150mm Exeter stem.

Ethics approval required
Old ethics approval format

Ethics approval(s)
South East Scotland Research Ethics Committee 02, 12/05/2017, ref:16/SS/0176

Primary study design
Interventional

Study design
Multi-centre prospective randomised controlled trial

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Hip osteoarthritis

Interventions
Patients will be randomised on a 1:1 ratio to receive either an ‘original’ (150mm) or ‘short’ (125mm) ExeterTM stem as part of routine total hip arthroplasty at the study centre. Randomisation will be by computer-generated number, stratified by centre using random block sizes.

A standard operative technique will be employed by all trial surgeons; using the posterior approach, ExeterTM femoral component and ContemporaryTM acetabular component (Stryker). All implants will be cemented. The routine post-operative patient care protocol of the study centre will be employed.

Intervention Type
Device

Phase
Not Applicable

Drug/device/biological/vaccine name(s)
150mm ExeterTM hip stem, 125mm ExeterTM hip stem

Primary outcome(s)
Patient reported function, measured using the Oxford Hip Score at baseline, 1 year and 2 years

Key secondary outcome(s)
1. Quality of life, measured using the EQ5D-5L questionnaire at baseline, 1 year and 2 years
2. Pain, measured using the visual analogue scale at baseline, 1 year and 2 years
3. Joint awareness, measured using the Forgotten Joint Score-12 at baseline, 1 year and 2 years
4. Satisfaction, measured using a satisfaction Likert response scale at 1 and 2 years
5. Radiographic implant position, measured using AP pelvis radiographs at 1 year

Completion date
31/12/2020

Eligibility

Key inclusion criteria
1. Planned total hip replacement for osteoarthritis
2. Planned primary hip arthroplasty with standard implants
3. Patients aged 45-80
4. Patient willing and able to comply to the study protocol

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
40 Years

Upper age limit
80 Years

Sex
All

Key exclusion criteria
1. Dysplasia of the hip/acetabulum
2. Requirement for acetabular bone grafting
3. Planned bilateral procedures within the trial period
4. Activity-limiting pain in either knee or contralateral hip
5. Procedures done for pain relief (such as for patients with no walking capacity)
6. Already recruited to the trial

Date of first enrolment
01/06/2017

Date of final enrolment
01/06/2018

Locations

Countries of recruitment
United Kingdom

Scotland

Study participating centre

Royal Infirmary of Edinburgh
Edinburgh
United Kingdom
EH16 4SA

Study participating centre
Golden Jubilee National Hospital
Glasgow
United Kingdom
G81 4DY

Sponsor information

Organisation
ACCORD; The University of Edinburgh & NHS Lothian

ROR
https://ror.org/01x6s1m65

Funder(s)

Funder type
Industry

Funder Name
Stryker

Alternative Name(s)
Stryker Corporation, Orthopedic Frame Company

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan

The current data sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		16/04/2023	05/09/2023	Yes	No
HRA research summary			28/06/2023	No	No