NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Interventional procedures consultation document

Supercapsular percutaneously assisted total hip arthroplasty for osteoarthritis

Hip osteoarthritis is a condition in the hip joint that can cause pain, stiffness and difficulty walking. Sometimes the joint needs replacing surgically (total hip arthroplasty). In this procedure, smaller cuts are used to access the hip than in standard surgery. Also, tendons and muscles are moved apart rather than cut, and the hip does not need to be dislocated. Two small cuts are made in the skin on the outside of the hip, and surgical instruments are put through the cuts (percutaneous) to access the joint. The top of the thigh bone is removed, a dome-like structure is fitted into the socket of the joint, and a metal ball and stick are fitted into the bone (supercapsular). The procedure is done under a general or regional anaesthesia, and takes about 2 hours. The aim is to reduce symptoms and improve hip function, and reduce trauma during the operation compared with that during standard hip replacement surgery.

NICE is looking at supercapsular percutaneously assisted total hip arthroplasty for osteoarthritis.

NICE's interventional procedures advisory committee met to consider the evidence and the opinions of professional experts, who are consultants with knowledge of the procedure.

This document contains the draft guidance for consultation. Your views are welcome, particularly:

- comments on the draft recommendations
- information about factual inaccuracies
- additional relevant evidence, with references if possible.

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others.

This is not NICE's final guidance on this procedure. The draft guidance may change after this consultation.

After consultation ends, the committee will:

- meet again to consider the consultation comments, review the evidence and make appropriate changes to the draft guidance
- prepare a second draft, which will go through a resolution process before the final guidance is agreed.

Please note that we reserve the right to summarise and edit comments received during consultation or not to publish them at all if, in the reasonable opinion of NICE, there are a lot of comments or if publishing the comments would be unlawful or otherwise inappropriate.

Closing date for comments: 13 January 2022

Target date for publication of guidance: May 2022

1 Draft recommendations

1.1 Evidence on the safety and efficacy of supercapsular percutaneously assisted total hip arthroplasty for osteoarthritis is limited in quality and quantity. Therefore, this procedure should only be used with special arrangements for clinical governance, consent, and audit or research. Find out what special arrangements mean on the NICE interventional procedures guidance page.

1.2 Clinicians wanting to do supercapsular percutaneously assisted total hip arthroplasty for osteoarthritis should:

- Inform the clinical governance leads in their healthcare organisation.
- Give patients (and their families and carers as appropriate) clear written information to support shared decision making, including NICE's information for the public.

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- Ensure that patients (and their families and carers as appropriate) understand the procedure's safety and efficacy, and any uncertainties about these.
- Enter details about all patients having supercapsular percutaneously assisted total hip arthroplasty for osteoarthritis onto the National Joint Registry and review local clinical outcomes.
- Discuss the outcomes of the procedure during their annual appraisal to reflect, learn and improve.

1.3 Healthcare organisations should:

- Ensure systems are in place that support clinicians to collect and report data on outcomes and safety for every patient having this procedure.
- Regularly review data on outcomes and safety for this procedure.

1.4 Further research should include suitably powered randomised controlled trials comparing this procedure with standard approaches to total hip arthroplasty. It should report details of patient selection and short-term outcomes.

2 The condition, current treatments and procedure

The condition

2.1 Osteoarthritis, also known as degenerative joint disease, is a disorder of synovial joints. It occurs when damage triggers repair processes leading to structural changes in a joint. There are 2 main types of osteoarthritis: primary (more generalised osteoarthritis with unknown aetiology) and secondary (osteoarthritis with a known cause, such as injury or inflammation in the joint). When it affects

the hip, symptoms include joint stiffness, pain and reduced function, such as difficulty walking.

Current treatments

2.2 Care and management of osteoarthritis is described in NICE's clinical guideline on osteoarthritis. Current management of hip osteoarthritis includes lifestyle changes (such as weight loss), physical or occupational therapy, medications and surgery (such as hip resurfacing, total hip arthroplasty and osteotomy).

The procedure

2.3 Supercapsular percutaneously assisted total hip arthroplasty is also described as the 'SuperPath' approach. It is a minimally invasive approach to total hip arthroplasty. The aim, as with standard posterior or direct lateral approaches, is to reconstruct the hip to reduce symptoms and improve hip function, but with smaller cuts and less tissue damage.

2.4 The procedure is done under general or regional anaesthesia. The patient is usually put in the standard lateral decubitus position, with the hip in 45 degrees of flexion and 10 to 15 degrees of internal rotation. A cut is made superior to the greater trochanter. The gluteal fascia is cut, the gluteus maximus muscle is split, the gluteus medius and minimus muscles are retracted anteriorly, and the piriformis tendon is retracted posteriorly. Once the joint capsule is exposed, it is cut from the base of the greater trochanter to 1 cm proximal to the acetabular rim.

2.5 The femoral canal is then reamed and broached without dislocation. The femoral neck is osteotomised and the femoral head removed. The implant trial cup is placed into the acetabulum to allow access of instruments for its preparation. A second cut is made and, using an external guide, a distal and posterior portal is

then formed for acetabular reaming. Once the acetabulum is reamed, the definitive acetabular component and polyethylene liner are inserted and secured. Trial femoral components are reduced and tested for stability and tissue tension. Once the trial components are removed, the definitive femoral stem is inserted and the femoral head implanted. The hip joint capsule is preserved and closed with a suture. Then the gluteal fascia and skin are closed with sutures.

2.6 The procedure usually takes about 2 hours. Specific cementless implants and various specialised instruments are used. Postoperative rehabilitation is recommended for muscle strengthening and mobility.

3 Committee considerations

The evidence

3.1 NICE did a rapid review of the published literature on the efficacy and safety of this procedure. This comprised a comprehensive literature search and detailed review of the evidence from 7 sources, which was discussed by the committee. The evidence included 3 randomised controlled trials, 2 non-randomised comparative studies and 1 case series. The committee also considered safety data from 3 implant summary reports for the Profemur L Modular Stem, Profemur L Classic Stem and Procotyl L Cup, provided by the National Joint Registry. It is presented in the summary of key evidence section in the interventional procedures overview. Other relevant literature is in the appendix of the overview.

3.2 The professional experts and the committee considered the key efficacy outcomes to be: functional outcomes, quality of life and other patient-reported outcomes using validated measures.

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3.3 The professional experts and the committee considered the key safety outcomes to be: pain, bleeding, infection, fracture and dislocation.

3.4 Patient commentary was sought but none was received.

Committee comments

3.5 The committee was informed that, for this procedure:

- suitable training and mentoring is needed for the first few cases
- templating and imaging intensifier should be used during the learning curve of the surgeon
- different implants can be used and the safety profiles of different implants may be different.

3.6 The committee noted that this procedure appears to have short-term benefits, including early mobilisation and a relatively short hospital stay.

Tom Clutton-Brock
Chair, interventional procedures advisory committee
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