NICE guidance

Supercapsular percutaneously assisted total hip arthroplasty for osteoarthritis

Interventional procedures guidance
Published: 25 May 2022
www.nice.org.uk/guidance/ipg726

Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

1 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.
- 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, short-term outcomes and long-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 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.

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. A trial cup is

placed into the acetabulum attached to an external alignment jig. A second skin portal is made distally and posteriorly once the correct acetabular position is set. A cannula is inserted to protect the adjacent sciatic nerve when using the power reamer. Once reamed, the acetabular components are inserted and a trial reduction done. The definitive components are inserted if the reduction is deemed satisfactory. The hip joint capsule is closed with a suture. Then the gluteal fascia and skin are closed with sutures.

2.6 This procedure uses a specific set of implants and specialised instruments. 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 8 sources, which was discussed by the committee. The evidence included 1 systematic review and network meta-analysis, 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.

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

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
- templating and planning should be used to ensure that leg length offset and intramedullary sizing are appropriate
- mainly cementless implants are used, but other CE marked implants can be used
- the safety profile differs depending on the type of implant
- cementless implants might be associated with higher rates of intraoperative fractures.

3.6 The committee noted that this procedure appears to have short-term benefits, including early mobilisation.

ISBN: 978-1-4731-4597-9

Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.

Accreditation