NICE guidance

Midcarpal hemiarthroplasty for wrist arthritis

Interventional procedures guidance
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www.nice.org.uk/guidance/ipg663

1 Recommendations

1.1 Evidence on the safety and efficacy of midcarpal hemiarthroplasty for wrist arthritis is inadequate in quantity and quality. Therefore, this procedure should only be used in the context of research. Find out what only in research means on the NICE interventional procedures guidance page.

1.2 Further research could be in the form of case series. It should report patient selection, type and severity of arthritis, patient-reported outcome measures and the need for revision in the longer term (at least 5 years).

2 The condition, current treatments and procedure

The condition

2.1 Wrist arthritis can be caused by rheumatoid arthritis, osteoarthritis, trauma or sepsis. It can cause pain, stiffness and swelling.

Current treatments

2.2 Treatments include analgesics, non-steroidal anti-inflammatory drugs, disease-modifying antirheumatic drugs and corticosteroid injections. If these do not work well enough, surgical treatments can be used. These include proximal row carpectomy, limited or partial carpal fusion, total wrist arthrodesis or total wrist arthroplasty.

The procedure

2.3 The procedure is done using general or regional anaesthesia, with a tourniquet applied to the upper arm. A radiographic template is created preoperatively to determine the implant size. An incision is made over the wrist, in line with the third metacarpal. The joint is exposed, and the first row of carpal bones and the radial articular cartilage are removed. A trial implant is put into position, the carpus is reduced onto the bearing surface and the implant size, range of motion and stability are assessed. The final implant is then put in place and fully seated on the contoured subchondral plate.

2.4 Strengthening exercises are started 4 to 6 weeks after surgery and full activity can start several weeks after that. The aim is to relieve pain while keeping the midcarpal articulation and the anatomic centre of wrist rotation.

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 2 sources, which was discussed by the committee. The evidence included 2 case series. It is presented in table 2 of the interventional procedures overview. Other relevant literature is in the appendix of the overview.

3.2 The specialist advisers and the committee considered the key efficacy outcomes to be: relief of pain, restoration of wrist function, and patient-reported outcome measures, including quality of life.

3.3 The specialist advisers and the committee considered the key safety outcomes to be: pain, infection, loss of function and loosening of the prosthesis.

3.4 Patient commentary was sought but none was received.

Committee comments

3.5 The committee noted that the evidence it reviewed came from 2 small case series. It was informed that only 1 surgeon at 1 centre is doing the procedure in the UK.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.

Accreditation