

Arthroscopic knee washout, with or without debridement, for the treatment of osteoarthritis

Interventional procedures guidance
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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, and specifically any special arrangements relating to the introduction of new interventional procedures. 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.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

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. Providers should ensure that governance structures are in place to review, authorise and monitor the introduction of new devices and procedures.

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 arthroscopic knee washout with debridement for the treatment of osteoarthritis is adequate to support the use of this procedure provided that normal arrangements are in place for consent, audit and clinical governance.
- 1.2 Current evidence suggests that arthroscopic knee washout alone should not be used as a treatment for osteoarthritis because it cannot demonstrate clinically useful benefit in the short or long term.

2 The procedure

2.1 Indications

- 2.1.1 Arthroscopic knee washout, with or without debridement, is used to treat osteoarthritis of the knee. Osteoarthritis of the knee is the result of progressive degeneration of the cartilage of the joint surface.
- 2.1.2 Treatment options depend on the severity of the osteoarthritis. The condition is usually chronic, and patients may have several treatment strategies applied at different stages. Conservative treatments include medication to relieve pain and inflammation, and physiotherapy. If there is a knee-joint effusion, fluid around the

knee may be aspirated with a needle (arthrocentesis). Corticosteroids or hyaluronic acid are sometimes injected into the knee joint. If these treatments are ineffective, a knee replacement operation may be necessary.

2.2 Outline of the procedure

- 2.2.1 Arthroscopic washout (lavage) of the knee is usually performed under general anaesthesia. A fiberoptic telescope (arthroscope) attached to a video camera is inserted through a small incision and saline is introduced via an arthroscopic cannula to wash out the joint. Washout expels any loose debris through the cannula. Debridement involves using instruments to remove damaged cartilage or bone, and this is often performed at the same time as washout.
- 2.2.2 It is difficult to predict before arthroscopic washout which patients will have lesions suitable for debridement and there is very little evidence to guide selection.

2.3 Efficacy

- 2.3.1 One randomised controlled trial (RCT) of 180 patients compared arthroscopic lavage alone, arthroscopic debridement and a sham procedure (simulated arthroscopy) with each other. The trial showed no significant differences in terms of pain relief or knee function at 2 years. A second RCT comparing debridement with washout alone reported that 80% (32/40) of patients in the debridement group were pain-free at 1 year, compared with 14% (5/36) of patients in the washout group ($p=0.05$). A third RCT of 90 patients reported that pain relief at 1 year was significantly better in patients treated with 3-litre washout than in those treated with 0.25-litre washout ($p=0.02$). However, there was no significant difference between the groups in terms of joint stiffness or function. An RCT of 32 patients found no significant difference between arthroscopic and closed-needle washout in terms of clinical or functional outcomes at 12 months. Another RCT of 38 patients comparing hyaluronic acid injections with arthroscopic washout reported no significant differences in pain or function at 1 year.

- 2.3.2 In the following three case series, patients were treated with washout with the intention of carrying out debridement. In one case series of 121 patients, 10% (12/121) required repeat arthroscopy and 12% (15/121) required knee replacement after a follow-up of 4–6 years. In another case series, 18% (18/100) of knees required further surgery after 5 years' follow-up (4 osteotomies, 3 unicondylar arthroplasties and 11 total knee replacements). A third case series reported that 23% (47/204) of knees required further surgery, which included 25 joint arthroplasties, after a mean follow-up of 7.4 years. For more details, refer to the 'Sources of evidence' section.
- 2.3.3 The Specialist Advisers stated that there is uncertainty about the efficacy of this procedure. They noted that patient selection is important: for example, patients with early osteoarthritic changes and those with large effusions are among those most likely to benefit. They listed the key efficacy outcomes as relief of pain and reduction of mechanical symptoms.

2.4 Safety

- 2.4.1 Few complications were reported in the studies. In one case series of 204 patients, haemarthrosis requiring aspiration occurred after 2% (4/204) of procedures and there was one case of deep venous thrombosis. For more details, refer to the 'Sources of evidence' section.
- 2.4.2 The Specialist Advisers did not express any major concerns about safety. They stated that theoretical adverse events include a small risk of infection and of venous thromboembolism.

2.5 Other comments

- 2.5.1 The use of this procedure in the treatment of rheumatoid arthritis was not considered.
- 2.5.2 It was noted that the microfracture technique may be used as an adjunct to this procedure but evidence relating to this was not considered.

3 Further information

- 3.1 NICE has also published [interventional procedures guidance on mini-incision surgery for total knee replacement](#) and has a [guideline on osteoarthritis in over 16s](#).

Sources of evidence

The evidence considered by the interventional procedures advisory committee is described in the [overview for this guidance](#).

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Endorsing organisation

This guidance has been endorsed by [Healthcare Improvement Scotland](#).