

Arthroscopy of the knee joint for arthrosis: No benefit detectable

May 13 2014

The benefit of therapeutic arthroscopy with lavage and possible debridement for the treatment of arthrosis of the knee joint (gonarthrosis) is not proven. There was no hint, indication or proof of benefit of therapeutic arthroscopy in comparison with non-active comparator interventions, e.g. sham surgery, for any patient-relevant outcome. From the active comparator therapies, only the injection of glucocorticoids into the knee joint produced worse results than arthroscopy for the outcome "global assessment of the symptoms of gonarthrosis".

This was the result of the final report published by the German Institute for Quality and Efficiency in Health Care (IQWiG) on 12 May 2014. A new study, in which strengthening exercises under the supervision of a physical therapist were used as comparator therapy, did not change this assessment.

Arthroscopy aims to relieve symptoms

Gonarthrosis, also called "osteoarthritis of the knee", is a chronic progressive disease, which often occurs in both knees at the same time. Increasing failure of the joint is associated with changes in the structure of the joint, pain, and loss of flexibility. It makes daily tasks like climbing stairs difficult and can reduce quality of life. Around 17 per cent of men and 27 per cent of women in Germany develop osteoarthritis at some point in their lives. This disease most commonly

affects the hip and [knee joints](#). The risk factors of gonarthrosis include age, sex, genetic factors and obesity.

Therapeutic arthroscopy of the knee joint is an endoscopic procedure where the knee joint is flushed with saline solution. Sometimes meniscal or cartilage abnormalities are removed or smoothed (debridement). The aim of this procedure is to relieve symptoms like pain and improve flexibility.

Wide variety of treatments

IQWiG compared this treatment with several other interventions, including no treatment, sham treatment and active treatments without arthroscopy, such as glucocorticoid injections into the knee joint. The effect of these treatments on the daily activities and the quality of life of the people affected was of particular interest. Changes in the severity of symptoms and possible side effects of the treatments were also compared, for example infections after surgery.

Studies were subject to uncertainty

Eleven randomized controlled trials with a total of more than 1000 patients were identified for this research question, but a considerable number of them were subject to uncertainty. For example, in many cases the interventions were not blinded: The patients knew then whether or not they had arthroscopy. Sham arthroscopies can be done, however, in which patients receive a small skin incision on the knee, but no further surgery. This kind of "placebo surgery", albeit controversial, is particularly informative for the assessment.

No advantage over sham interventions

No benefit of therapeutic arthroscopy in comparison with sham surgery and no treatment could be derived from most study results, and no clear conclusion could be drawn on potential harm from adverse treatment effects. It was already known that invasive treatment methods often have a particularly strong placebo effect. However, the extent of improvement perceived by the patients after placebo arthroscopy in these studies was surprising.

The comparison with active interventions was also sobering. Arthroscopy had a slight advantage only in comparison with glucocorticoid injection into the knee joint: The symptoms were somewhat milder. The study did not provide any information about whether the quality of life of the people affected also improved in comparison with the injection.

Also no benefit in comparison with strengthening exercises

Data from patients who had gonarthrosis with damage of the medial meniscus were used for the comparison of arthroscopic interventions with strengthening exercises under the supervision of a physical therapist. There was no significant effect in the two outcomes "pain" and "global assessment of the symptoms" at any time point of the study. Hence the overall result is the same as in the preliminary report: The benefit of arthroscopy of the knee joint for the treatment of gonarthrosis is not proven.

Process of report production

IQWiG published the preliminary results in the form of the preliminary report in September 2013 and interested parties were invited to submit comments. At the end of the commenting procedure, the preliminary report was revised and sent as a final report to the commissioning agency

in May 2014. The written comments submitted were published in a separate document at the same time as the final report. The report was produced in collaboration with external experts.

The executive summary provides an overview of the background, procedure and further results of the report.

Provided by Institute for Quality and Efficiency in Health Care

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