HEALTH EVIDENCE REVIEW COMMISSION (HERC)

COVERAGE GUIDANCE: KNEE ARTHROSCOPY FOR OSTEOARTHRITIS

Initial HERC approval 06/14/2012
Reaffirmed 11/13/2014

This coverage guidance was created under HERC's 2012 coverage guidance process and does not include strength of recommendation, a GRADE-informed framework or coverage guidance development framework.

As a part of the normal evidence review process, the Evidence-based Guidelines Subcommittee reviewed new evidence in September, 2014 (see Appendix A) and found one new systematic review from trusted sources. They determined that this guidance is supported by the updated literature scan. However, the guidance's recommendation language has been altered to be consistent with that of more recent guidances.

HERC Coverage Guidance

In the absence of other appropriate indications, arthroscopic lavage and debridement of knee osteoarthritis (or osteoarthrosis) is not recommended for coverage.

RATIONALE FOR GUIDANCE DEVELOPMENT

The HERC selects topics for guideline development or technology assessment based on the following principles:

- Represents a significant burden of disease
- Represents important uncertainty with regard to efficacy or harms
- Represents important variation or controversy in clinical care
- Represents high costs, significant economic impact
- Topic is of high public interest

Coverage guidance development follows to translate the evidence review to a policy decision. Coverage guidance may be based on an evidence-based guideline developed by the Evidence-based Guideline Subcommittee or a health technology assessment developed by the Heath Technology Assessment Subcommittee. In addition, coverage guidance may utilize an existing evidence report produced by one of HERC's trusted sources, generally within the last three years.

EVIDENCE SOURCES

Washington State Health Care Authority Health Technology Assessment Program. (2008). HTA evidence report: Arthroscopic surgery of the knee for osteoarthritis. Retrieved from http://www.hta.hca.wa.gov/documents/ka_final.pdf

National Institute for Health and Clinical Excellence. (2007). Arthroscopic knee washout, with or without debridement, for the treatment of osteoarthritis: Guidance. London: NICE. Retrieved from http://guidance.nice.org.uk/IPG230/Guidance/pdf/English The summary of evidence in this document is derived directly from this evidence source, and portions are extracted verbatim.

SUMMARY OF EVIDENCE

Clinical background

Lumbar Disease

Osteoarthritis (OA) is a common orthopedic condition characterized by articular degeneration within a joint that is estimated to affect approximately 27 million people in the United States. The diagnosis of osteoarthritis of the knee is commonly based on a combination of symptoms and physical findings such as knee pain or stiffness and radiographic findings. Patients with knee osteoarthritis and symptoms that are refractory to medical management may receive arthroscopic interventions for diagnosis or treatment. Interventions such as debridement and lavage of the knee are carried out with the goal of delaying knee replacement arthroplasty. Although orthopedic guidelines list joint lavage and arthroscopic debridement as treatment options, their roles in managing OA of the knee remain controversial. In 1998, it was estimated that 650,000 knee arthroscopies were performed yearly (Moseley 2002). Arthroscopies are considered by many to be minimally invasive procedures, but clinically significant adverse events have been reported.

Evidence review

The Washington HTA report utilized the 2007 systematic review conducted by AHRQ (Samson 2007) as the primary evidence base. That report stated that the evidence is insufficient to conclude that arthroscopy and lavage or debridement results in pain reduction or improved function for patients with osteoarthritis of the knee. Neither arthroscopic lavage nor debridement has been found to be superior to sham arthroscopy in well-designed and conducted randomized controlled trials (RCTs). A search of the literature identified no new studies since the AHRQ Publication that met inclusion criteria. Only one study (Moseley 2002), was included in the review, which evaluated the Knee-Specific-Pain Score (KSPS) at two years along with other measures of pain and function and determined that they did not include a clinically meaningful difference between either the debridement group and placebo or the lavage group and placebo group.

The WA HTA reported limited information on adverse effects from RCTs that evaluated arthroscopy with lavage and debridement for knee OA, primarily because the trials focused on efficacy and did not formally measure safety events. Observational data, however, provided useful indicators about safety concerns, including the following:

- Mortality has been reported to be from 0.1% to 0.5% ;
- A 0.3% rate of stroke or myocardial infarction has been reported;

- A hemarthrosis rate of nearly 25% was reported in one case series;
- Reports of infection have ranged from 0.5% to 2%;
- DVT has been reported to be from 0.6% to 17.9% in patients undergoing arthroscopy for any reason (not specifically for OA of the knee).

An economic model was provided by The Medical Advisory Secretariat Ministry of Health and Long-term Care, Toronto. The authors were unable to conduct a full economic analysis because effectiveness was not demonstrated in the literature.

Overall summary

There is no evidence that neither arthroscopic lavage nor debridement improves pain or functional outcomes in patients with osteoarthritis of the knee.

Procedure

Arthroscopy of the Knee

Diagnoses

Osteoarthritis of the knee

APPLICABLE CODES

CODES	DESCRIPTION
ICD-9 Diagnosis Codes	
715.06	Osteoarthrosis, generalized, of lower leg
715.16	Osteoarthrosis, localized, primary of lower leg
715.26	Osteoarthrosis, localized, secondary, of lower leg
715.36	Osteoarthrosis, localized, not specified as primary or secondary, of lower leg
715.86	Osteoarthrosis, involving more than one site but not specified as generalized, of lower leg
715.96	Osteoarthrosis, unspecified as localized or generalized, of lower leg
716.66	Unspecified monoarthritis, lower leg
CD-9 Volume 3 (Procedure Codes)	
None	
CPT Codes	
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (eg, mosaicplasty) (includes harvesting of the autograft[s])
29867	osteochondral allograft (eg, mosaicplasty)
29868	meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
29871	Arthroscopy, knee, surgical; for infection, lavage and drainage
29873	with lateral release
29874	for removal of loose body or foreign body (eg, osteochondritis dissecans fragmentation, chondral fragmentation)
29875	synovectomy, limited (eg, plica or shelf resection) (separate procedure)
29876	synovectomy, major, 2 or more compartments (eg, medial or lateral)
29877	debridement/shaving of articular cartilage (chondroplasty)

CODES	DESCRIPTION
29879	abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
29880	with meniscectomy (medial AND lateral, including any meniscal shaving)
29881	with meniscectomy (medial OR lateral, including any meniscal shaving)
29882	with meniscus repair (medial OR lateral)
29883	with meniscus repair (medial AND lateral)
29884	with lysis of adhesions, with or without manipulation (separate procedure)
29885	drilling for osteochondritis dissecans with bone grafting, with or without internal fixation (including debridement of base of lesion)
29886	drilling for intact osteochondritis dissecans lesion
29887	drilling for intact osteochondritis dissecans lesion with internal fixation
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction
HCPCS Level II Codes	
None	

Note: Inclusion on this list does not guarantee coverage

APPENDIX A

Scanning results

One review was identified in the core sources that was published after the date of the WA HTA report. Summary results and/or conclusions are presented below.

Reichenbach S, Rutjes AWS, Nüesch E, Trelle S, Jüni P. Joint lavage for osteoarthritis of the knee. (2010). Cochrane Database of Systematic Reviews. Issue 5. Art. No.: CD007320. DOI: 10.1002/14651858.CD007320.pub2.

Main results

We included seven trials with 567 patients. Three trials examined arthroscopic joint lavage, two non-arthroscopic joint lavage and two tidal irrigation. The methodological quality and the quality of reporting was poor and we identified a moderate to large degree of heterogeneity among the trials (I2 = 65%). We found little evidence for a benefit of joint lavage in terms of pain relief at three months (SMD -0.11, 95% CI -0.42 to 0.21), corresponding to a difference in pain scores between joint lavage and control of 0.3 cm on a 10-cm visual analogue scale (VAS). Results for improvement in function at three months were similar (SMD -0.10, 95% CI -0.30 to 0.11), corresponding to a difference in function scores between joint lavage and control of 0.2 cm on a WOMAC disability sub-scale from 0 to 10. For pain, estimates of effect sizes varied to some degree depending on the type of lavage, but this variation was likely to be explained by differences in the credibility of control interventions: trials using sham interventions to closely mimic the process of joint lavage showed a null-effect. Reporting on adverse events and drop-out rates was unsatisfactory, and we were unable to draw conclusions for these secondary outcomes.

Authors' conclusions

Joint lavage does not result in a relevant benefit for patients with knee osteoarthritis in terms of pain relief or improvement of function.

Summary

The recently published evidence does not contradict the current coverage guidance recommendations.