

ARTHROSCOPY FOR OSTEOARTHRITIS OF THE KNEE

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Overview

Osteoarthritis is a disease of the articular cartilage. The exact cause of osteoarthritis is unknown however if a joint is burdened by improper alignment, excessive weight, excessive activity, overuse, or injury articular cartilage wears away. When cartilage loss occurs there may ultimately come to be bone on bone contact. Changes in structures around the joint (muscles and tendons), fluid accumulation and bony overgrowth (e.g., osteophytes or bone spurs) can develop. Articular cartilage has limited potential for regeneration or repair. There is no cure for osteoarthritis.

Osteoarthritis can affect any synovial joint. When it involves the knee joint it can cause severe chronic pain, loss of mobility, and disability. Treatment is focused on education, physical and occupational therapy, weight transfer modalities, joint protection and pharmacologic therapy. Patients with severe symptomatic osteoarthritis and limitation in activities of daily living should be referred to an orthopedic surgeon for evaluation. Knee joint replacement (knee arthroplasty) provides marked pain relief and functional improvement in the majority of patients with osteoarthritis of the knee. Prosthetic implants have a limited life expectancy depending upon an individual's age, weight, activity level and medical condition. Revision arthroplasty is difficult and outcomes of revision arthroplasty are not comparable to outcomes for primary arthroplasty.

Arthroscopy is a minimally invasive procedure that allows direct visualization of the interior of a joint. Knee arthroscopy allows orthopedic surgeons to assess - and in some cases, treat - a range of conditions affecting the knee joint. Reconstruction of the anterior cruciate ligament (ACL) and repair of a torn meniscus are among the most commonly performed arthroscopic surgeries. Injuries to both the ACL and the menisci are common, particularly in young athletes. (Torn menisci are also seen in older patients as the result of degeneration.) Arthroscopic lavage and arthroscopic debridement have been proposed as options for patients with osteoarthritis of the knee to reduce pain and improve function, postponing knee joint replacement.

- Arthroscopic lavage or "washout" consists of flushing the knee joint with up to 10 liters of fluid. Any intraarticular debris is washed out through arthroscopic cannulas. In contrast to arthroscopic debridement, no instruments are used to mechanically debride or remove intraarticular tissue.
- Arthroscopic debridement may include low volume lavage. Debridement is a general term which is used to cover many arthroscopic procedures including partial synovectomy, decompression and resection of plicae/adipose tissue, partial meniscectomy, chondroplasty, removal of loose bodies, and/or osteophyte removal.

Hundreds of thousands of arthroscopic procedures for osteoarthritis of the knee are performed annually however until recently quality scientific evidence regarding arthroscopic lavage and arthroscopic debridement for osteoarthritis of the knee was lacking. The evidence must demonstrate that the procedure reduces pain or improves function as compared with treatment provided to a control group.

With respect to arthroscopic lavage for osteoarthritis of the knee, there are several small studies (Dawes et al., Rivaud et al., Jackson et al., Livesley et al., Gibson et al., Kalunian et al.), none of which showed a positive effect of arthroscopic lavage compared to a control group. In 2002, Moseley et al. published the first randomized placebo controlled study of arthroscopic lavage and arthroscopic debridement which provides strong evidence with regard to the efficacy of these procedures. At no point over a 24 month follow-up did patients in either intervention group report less pain or better function than the placebo group. Moseley et al. concluded that arthroscopic lavage is equivalent to placebo for osteoarthritis of the knee. None of these studies establish a positive effect on clinical outcomes of arthroscopic lavage of the osteoarthritic knee.

With respect to arthroscopic debridement for osteoarthritis of the knee, there are many studies however the majority are case series studies. Case series studies are less useful in determining the influence of a treatment on patient outcomes because of a lack of a control group, particularly in the case of knee pain where outcomes can be influenced by patient selection, placebo effects and/or natural history. Two small randomized studies (Gibson et al., Chang et al.) compared arthroscopic debridement to lavage and found no significant reduction in pain. Hubbard et al. compared arthroscopic debridement to lavage and reported improvement in patients with Outerbridge Grade III or IV osteoarthritis who underwent debridement. In 2002, Moseley et al. conducted the first randomized placebo controlled trial of arthroscopic lavage and arthroscopic debridement. At no point over 24 months follow-up did patients in either intervention group report less pain or better function than the placebo group. In fact, at times, patients in the debridement group reported function scores that were significantly worse than those in the placebo group.

In September 2008 the second major study to call into question the benefit of arthroscopic debridement was published by Kirkley et al. Kirkley et al. conducted a randomized controlled trial of patients with moderate to severe (Grade 2, 3 or 4 radiographic evidence defined by the modified Kellgren-Lawrence classification) knee OA. Patients were randomly assigned to arthroscopic debridement with optimal physical and medical therapy or to physical and medical therapy only. The primary outcome was the total Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC); range = 0 to 2400 with higher scores indicating more severe symptoms. Patients with moderate to severe OA typically have a score of approx. 1000. At 2 years post-procedure, the mean WOMAC score for the surgery group was 874 ± 624 as compared to the control group with 897 ± 583 . Kirkley et al. concluded that arthroscopic debridement provides no additional benefit for osteoarthritis of the knee as compared with optimized physical and medical therapy.

Early case series studies suggested that arthroscopic debridement may be beneficial for certain subgroups of patients with osteoarthritis of the knee such as patients with mechanical symptoms due to loose bodies and meniscal tears. Kirkley et al. performed two prespecified subgroup analyses. Patients with less severe disease (Kellgren-Lawrence Grade 2) and patients reporting mechanical symptoms of catching, locking or both were hypothesized to derive greater benefit from surgery. Kirkley et al. found no benefit to arthroscopic debridement in either subgroup. A post hoc analysis of patients with more severe disease (Grade 3 or 4) also found no benefit of surgery.

Based on the strength of the studies conducted by Moseley et al. and Kirkley et al., FCHP's Technology Assessment Committee has concluded that the scientific evidence has not shown that arthroscopy improves outcomes for patients with osteoarthritis of the knee. Randomized controlled studies demonstrating a clinically significant advantage for arthroscopy would be necessary to refute these results, which show equivalence between arthroscopy a control group.

Covered Services

FCHP does not cover arthroscopy for the treatment of osteoarthritis of the knee because this procedure has not been shown to improve patient outcomes, specifically reduction in knee pain or improvement of knee function when compared to a control group.

Codes

This policy is not intended to address arthroscopy for other medically necessary indications, such as in the presence of infection, for the removal of loose or foreign bodies, or for the repair of a symptomatic torn ACL and/or meniscus.

Claims for arthroscopy of the knee (CPT Codes 29870-29887 or 29999) submitted with osteoarthritis (ICD-9-CM 715.xx) listed as the primary diagnosis will be denied with the following disposition: *Reject Not Paid Separately*.

Code G0289 is an add-on code and should be added to the knee arthroscopy code for the major procedure being performed. When G0289 is submitted with a non-covered procedure, G0289 will be denied with the following disposition: *Reject Not Paid Separately*.

Codes	Number	Description
CPT	29870	Arthroscopy, knee, diagnostic, with or without synovial biopsy (separate procedure)
	29871	Arthroscopy, knee, surgical; for infection, lavage and drainage
	29873	Arthroscopy, knee, surgical; with lateral release
	29874	Arthroscopy, knee, surgical; for removal of loose body or foreign body (e.g., osteochondritis dissecans fragmentation, chondral fragmentation)
	29875	Arthroscopy, knee, surgical; synovectomy, limited (e.g., plica or shelf resection) (separate procedure)
	29876	Arthroscopy, knee, surgical; synovectomy, major, two or more compartments (e.g., medial or lateral)
	29877	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage (chondroplasty)
	29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
	29880	Arthroscopy, knee, surgical; with meniscectomy (medial

Codes	Number	Description
		and lateral), including any meniscal shaving)
	29881	Arthroscopy, knee, surgical; with meniscectomy (medial or lateral), including any meniscal shaving)
	29882	Arthroscopy, knee, surgical; with meniscus repair (medial or lateral)
	29883	Arthroscopy, knee, surgical; with meniscus repair (medial and lateral)
	29884	Arthroscopy, knee, surgical; with lysis of adhesions, with or without manipulation (separate procedure)
	29885	Arthroscopy, knee, surgical; drilling for osteochondritis dissecans with bone grafting, with or without internal fixation (including debridement of base of lesions)
	29886	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion
	29887	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion with internal fixation
	29999	Unlisted procedure, arthroscopy
HCPCS	G0289	Arthroscopy, knee, surgical, for removal of loose body, foreign body, debridement/shaving of articular cartilage (chondroplasty) at the time of other surgical knee arthroscopy in a different compartment of the same knee

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Products to Which This Policy Applies

- ⊕ FCHP Direct & Select Care
- ⊕ Fallon Preferred Care (PPO)
- ⊕ Major Medical
- ⊕ MassHealth
- ⊕ Companion Care
- ⊕ Commonwealth Care
- ⊕ Fallon Senior Plan™

Committee review dates:

Technology Assessment Subcommittee: 10/28/2008

Technology Assessment Committee: 01/13/2009

IMPORTANT NOTE

Not all services are covered for all products or employer groups. This medical policy expresses FCHP's determination of whether certain services or supplies are medically necessary, experimental or investigational or cosmetic. FCHP has reached these conclusions based upon the regulatory status of the technology and a review of clinical studies published in peer-reviewed medical literature. Even though this policy may indicate that a particular service or supply is considered covered, this conclusion is not based upon the terms of your particular benefit plan. Each benefit plan contains its own specific provisions for coverage and exclusions. Not all benefits that are determined to be medically necessary will be covered benefits under the terms of your benefit plan. Members and their providers need to consult the Evidence of Coverage to determine if there are any exclusions or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and the plan of benefits, the provisions of the benefits plan will govern. However, applicable state mandates will take precedence with respect to fully insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, Federal mandates will apply to all plans. With respect to Medicare and Medicaid members, this policy will apply unless Medicare and Medicaid policies extend coverage beyond this medical policy.