Corporate Medical Policy

Steroid Injections to the Knee and/or Shoulder “Notification”

File Name: Steroid_injections_to_the_knee_and_shoulder
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Policy Effective TBD

Description of Procedure or Service

Locally administered glucocorticoids have been used therapeutically in rheumatologic disorders for over 50 years to reduce inflammation. Over the short-term, these agents can diminish pain, swelling, and tenderness. Locally administered glucocorticoids have established efficacy, and can have dramatic results in treating conditions with well-defined underlying inflammatory etiologies such as rheumatoid arthritis or crystal-induced arthritis (eg, gout, pseudogout). But in conditions where inflammation is either absent, or not the primary etiology, local glucocorticoids may still often be employed.

Knee Pain
Causes of knee pain potentially amenable to glucocorticoid injection include inflammatory noninfectious arthritides (eg, rheumatoid, psoriatic, gout, pseudogout), bursitis (prepatellar, superficial infrapatellar, pes anserine pain syndrome also known as anserine bursitis), Baker cysts, and osteoarthritis. Knee osteoarthritis is the most common of these conditions with a U.S. estimated prevalence of 12.1% for symptomatic radiographic knee osteoarthritis. In contrast, the prevalence of rheumatoid arthritis is approximately 1%. Knee bursitis is likely less common (under 1%), and may be associated with osteoarthritis.

Knee osteoarthritis is commonly thought of as a degenerative condition, but synovial inflammation may play an important etiologic role. For example, in a cross-sectional study of 600 patients with painful knee osteoarthritis, almost half (47%) had ultrasound findings consistent with inflammation. Clinical signs and symptoms that may be associated with inflammatory flares include pain, stiffness, and effusion. While inflammation may be present during the disease, recommended first-line treatments for knee osteoarthritis generally include participation in exercise programs and weight loss if patients are overweight ("strongly recommend" in the American College of Rheumatology guideline).

Shoulder Pain
The shoulder is the most mobile structure in the body, and mobility comes at the expense of stability. It is a complicated combination of joints, bone, muscle, and tendons as well as neural and vascular structures. Shoulder pain is common, although prevalence estimates vary—1 systematic review reported point estimates ranging from 6.9% to 36%. Pain can arise from local structures or be referred. Intrinsic causes can be broadly considered as periarticular or glenohumeral. Periarticular causes include rotator cuff tendonitis or impingement syndromes, calcific tendinitis, rotator cuff tears, biceps tendinitis, and acromial clavicular arthritis;
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glenohumeral etiologies include inflammatory arthritis, osteoarthritis, osteonecrosis, septic arthritis, labral tears, glenohumeral instability, and adhesive capsulitis.

Shoulder Impingement Syndromes
The rotator cuff can be impinged during motion by bony structures, ligaments, or joints. Stages of impingement were described by Neer in 1972: (1) edema and hemorrhage; (2) tendon fibrosis and thickening; and (3) cuff tears, biceps tendon rupture, and bony changes. Impingement is diagnosed based on history and exam but can include lidocaine injection, imaging, and sometimes arthrography. Local glucocorticoid injections are most often used in patients with stage 2 disease combined with occupational and physical therapy (PT). Although some patients with stage 1 disease may be considered for local glucocorticoids, rest and PT may provide improvement. Refractory stage 2 and stage 3 disease may be treated surgically.

Owing to the difficulty identifying the precise cause of pain, “shoulder impingement syndrome” is often used to describe rotator cuff pain such as rotator cuff tendinopathy or partial tears and subacromial bursitis. Therapeutic options include PT and exercise, anti-inflammatory agents, and glucocorticoid injections. Glucocorticoid injections are commonly used—a study in the Netherlands found 22% of patients presenting with shoulder pain received injections and 30% were referred to PT. In the United States, an analysis of the National Ambulatory Medical Care Survey found PT ordered in 24% for those presenting with shoulder pain.

Frozen Shoulder (Adhesive Capsulitis)
Frozen shoulder is a condition characterized by restricted motion and pain. The cause is unknown, but pathologically involves inflammation of the synovium with adherence to the joint capsule with contraction. The onset is typically gradual, and initial presentation is often pain referred to the neck, back, and upper arm. A diagnosis is based on history and physical findings; imaging may be used to exclude other pathologies. Pain and function limitations may be self-limited and improve without treatment over the course of up to 2 or 3 years. Three clinical stages are described: (1) painful phase with increasing pain with movement often at night (weeks to months), (2) freezing or stiffening phase with decreasing pain and restricted motion (4-12 months), and (3) resolution or thawing phase with improving range of motion (12-42 months), which may be incomplete. Conservative therapies, used particularly during the painful phase, can include nonsteroidal anti-inflammatory drugs, PT, exercise, and intra-articular glucocorticoid injections. Arthroscopic capsular release or manipulation under anesthesia can be considered in refractory cases.

The condition may be idiopathic or attributed to a cause such as diabetes, thyroid disease, and cardiovascular disease. Diabetics with frozen shoulder may have a poorer prognosis. It is more common in middle age and in women, with an estimated prevalence varying from 2% to as high as 10% of the general population.

Glucocorticoid Preparations
A number of locally injectable glucocorticoid preparations are commonly used. Soluble agents (phosphate salts such as betamethasone) have rapid onset and a low risk of tissue atrophy or skin depigmentation. Insoluble agents are longer acting (eg, dexamethasone, hydrocortisone, triamcinolone). For example, triamcinolone acetonide is frequently used locally and long-acting. Agents are typically mixed with a local anesthetic that can diminish injection discomfort. Although reportedly uncommon, adverse effects of local injections can occur, including postinjection flare, infection, bleeding, tendon rupture, skin atrophy, and depigmentation. For example, Hollander et al (1961) reported an infection rate of 1 per 7000 injections with intra-articular knee injections.

Regulatory Status
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A number of glucocorticoids can be used locally and for intra-articular injection. For example, U.S. Food and Drug Administration labeling for triamcinolone acetonide injectable suspension, USP (Kenalog®-10 Injection) includes “Intra-articular or Intralesional Use Only.”

***Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.

Policy

BCBSNC will provide coverage for intra-articular glucocorticoid when it is determined to be medically necessary because the medical criteria and guidelines noted below are met.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When steroid injections to knee and/or shoulder are covered

Intra-articular glucocorticoid for the treatment of adults who have frozen shoulder may be considered medically necessary.

When steroid injections to knee and/or shoulder are not covered

Intra-articular glucocorticoids for the treatment of individuals who have knee osteoarthritis are considered investigational.

Subacromial glucocorticoids for the treatment of adults who have shoulder impingement syndrome are considered investigational.

Policy Guidelines

Up to 3 injections for frozen shoulder may be considered medically necessary.

The evidence for intra-articular glucocorticoids in individuals who have knee osteoarthritis includes randomized controlled trials (RCTs), systematic reviews of RCTs, and observational studies and surveys assessing potential harms. Relevant outcomes are symptoms, functional outcomes, health status measures, and treatment-related morbidity. The evidence is consistent with short-term improvement in pain and function following intra-articular glucocorticoids. However, conclusions are limited by suboptimal trial quality. In addition, mean improvements reported are not large and of questionable clinical importance. Short-term adverse events appear to occur infrequently. The long-term effects are unclear, particularly whether there are important beneficial or possibly harmful, long-term effects with repeated injections. The evidence is insufficient to determine the effects of the technology on health outcomes.

The evidence for subacromial glucocorticoids in individuals who have shoulder impingement syndrome includes RCTs, systematic reviews with meta-analyses, and observational studies.
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examining potential adverse effects. Relevant outcomes are symptoms, functional outcomes, health status measures, and treatment-related morbidity. The body of evidence is heterogeneous with respect to comparators examined and follow-up reported. A systematic review and meta-analysis found no evidence for long-term benefit. A Cochrane review did not conclude that image-guided injection has greater benefit than non-image-guided injection. A recent adequately powered pragmatic trial using ultrasound-guided injections supports these conclusions. Evidence on potential long-term harms is limited and short-term adverse events appear infrequent. Over the long term, evidence is not consistent with an improvement in the net health outcome compared with conservative care, including physical therapy and exercise. The evidence is insufficient to determine the effects of the technology on health outcomes.

The evidence for intra-articular glucocorticoids in individuals who have frozen shoulder includes RCTs, a health technology assessment, and a systematic review. Relevant outcomes are symptoms, functional outcomes, health status measures, and treatment-related morbidity. The body of evidence is somewhat heterogeneous, but generally consistent with clinically meaningful short-term reduction in pain, with less clear evidence for functional improvement. Adverse effects have not been commonly reported, but the adequacy of ascertainment in published studies is unclear. Evidence does not suggest that ultrasound guidance offers greater efficacy, but it is unclear whether ultrasound guidance might diminish the risk of harms. The evidence is sufficient to determine qualitatively that the technology results in a meaningful improvement in the net health outcome.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: 20610, 20611, J0702, J1020, J1030, J1040, J1094, J1100, J1700, J1710, J1720, J2650, J3300, J3301, J3302, J3303

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources


Policy Implementation/Update Information

5/31/16 New policy adopted. Intra-articular glucocorticoids for the treatment of individuals who have knee osteoarthritis are considered investigational. Subacromial glucocorticoids for the treatment of adults who have shoulder impingement syndrome are considered investigational. Intra-articular glucocorticoid for the treatment of adults who have frozen shoulder may be considered medically necessary. Policy noticed 5/31/2016 for effective date to be determined. (sk)
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Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.