

Case Number:	CM14-0179169		
Date Assigned:	11/03/2014	Date of Injury:	08/28/2002
Decision Date:	12/09/2014	UR Denial Date:	09/22/2014
Priority:	Standard	Application Received:	10/28/2014

HOW THE IMR FINAL DETERMINATION WAS MADE

MAXIMUS Federal Services sent the complete case file to an expert reviewer. He/she has no affiliation with the employer, employee, providers or the claims administrator. The expert reviewer is Board Certified in Neurology, has a subspecialty in Neuromuscular Medicine and is licensed to practice in New Jersey. He/she has been in active clinical practice for more than five years and is currently working at least 24 hours a week in active practice. The expert reviewer was selected based on his/her clinical experience, education, background, and expertise in the same or similar specialties that evaluate and/or treat the medical condition and disputed items/services. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

CLINICAL CASE SUMMARY

The expert reviewer developed the following clinical case summary based on a review of the case file, including all medical records:

The patient is a 64-year-old man who sustained a work-related injury on August 28, 2002. Subsequently, he developed low back and left knee pain. Prior treatment included physical therapy, medications, knee brace, cortisone injections to the knee (12 injections), knee arthroscopies in 2003 and 2004, hyaluronic acid injections in 2003, 2004, 2007, and 2009, and at least 3 lumbar epidural steroid injections. MRI of the left knee performed on February 5, 2007 documented prominent tricompartmental degenerative changes with marrow edema of both sides of the joint spaces, especially involving the lateral compartment where there is a 15 mm focal subchondral bony defect consistent with osteonecrosis. According to a progress report dated September 10, 2014, the patient stated his pain was located on his lower back, left knee, and left shoulder. Patient stated that his pain radiates to bilateral legs. He stated his pain was constant and sharp shooting. Patient rated his pain as an 8/10 without medications and 5/10 with medications. His physical examination revealed moderate tenderness to palpation left medial patella, positive crepitus with left knee flexion and extension, moderate decreased range of motion of the left knee due to pain, and antalgic gait on left. The patient's diagnosis included: left knee sprain/strain and probable post-traumatic arthritis of the left knee. The provider requested authorization for left knee intra-articular steroid injection.

IMR ISSUES, DECISIONS AND RATIONALES

The Final Determination was based on decisions for the disputed items/services set forth below:

Left knee intra-articular steroid injection under ultrasound guidance: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG), Knee Chapter, Knee Corticosteroid Injections

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG) Knee and Corticosteroid Injections

Decision rationale: According to MTUS guidelines, knee injection is not routinely indicated. According to ODG guidelines, Recommended for short-term use only. Intra-articular corticosteroid injection results in clinically and statistically significant reduction in osteoarthritic knee pain 1 week after injection. The beneficial effect could last for 3 to 4 weeks, but is unlikely to continue beyond that. Evidence supports short-term (up to two weeks) improvement in symptoms of osteoarthritis of the knee after intra-articular corticosteroid injection. The number of injections should be limited to three. The short-term benefit of intra-articular (IA) corticosteroids in treatment of knee osteoarthritis is well established, and few side effects have been reported. Longer-term benefits have not been confirmed. Comparisons of IA corticosteroids showed triamcinolone hexacetonide was superior to betamethasone for number of patients reporting pain reduction up to four weeks post injection. The response to hyaluronan/hylan products appears more durable, compared to corticosteroids. In a randomized controlled trial comparing a new reciprocating procedure device (RPD) to the traditional syringe for injection of intraarticular corticosteroid, the RPD significantly reduced patient pain and procedure time. Intra-articular injections of hyaluronate are associated with delayed onset of analgesia but a prolonged duration of action vs. injections of corticosteroids. Intra-articular corticosteroid injections help to relieve pain and reduce swelling in osteoarthritis of the knee and typically yield improvement within 24 hours that lasts 4 to 8 weeks. Repeated injections to the knee may not accelerate disease progression for osteoarthritis. A meta-analysis of clinical trials concluded that, from baseline to week 4, intra-articular corticosteroids appear to be relatively more effective for pain than intra-articular hyaluronic acid, but by week 4, the 2 approaches have equal efficacy, and beyond week 8, hyaluronic acid has greater efficacy. This study demonstrates the potential chondrotoxicity associated with intra-articular bupivacaine use in arthritic knee joints, particularly when given with a corticosteroid. Although these findings seem to be subtle and are probably subclinical after just 1 injection, they indicate the possible spectrum of iatrogenic injury that may be caused by repeated injections of local anesthetics commonly used to treat articular pain. Although there are several corticosteroid compounds available for use in the IA injection of the knee joint, there is scant comparative data for the compounds, although there appears to be a tendency for triamcinolone to be the most efficacious compound. There is no evidence to suggest that doses other than those recommended by the manufacturers for each compound should be administered. There is too little experimental or observational data to draw any conclusions as to an optimal frequency of IA corticosteroid injection, and current usage patterns are determined by practitioner opinion. Finally, IA injection of corticosteroid is a treatment adjunct and should not be used as monotherapy for patients with chronic, stable OA. This systematic review looking for predictors of response from intra-articular steroid injections in knee osteoarthritis suggested that absence of synovitis, presence of effusion, and withdrawal of fluid from the knee were all predictive of a better response. Increasing efficacy was also associated with increasing severity of radiographic degeneration and increasing severity of pain, stiffness, and loss of function.

Duration of symptoms was not associated with response. Imaging guidance for knee joint injections: In the knee, conventional anatomical guidance by an experienced clinician is generally adequate. Ultrasound guidance for knee joint injections is not generally necessary. For more information and references, see Ultrasound, diagnostic. Criteria for Intraarticular glucocorticosteroid injections: Documented symptomatic severe osteoarthritis of the knee according to American College of Rheumatology (ACR) criteria, which requires knee pain and at least 5 of the following: (1) Bony enlargement; (2) Bony tenderness; (3) Crepitus (noisy, grating sound) on active motion; (4) Erythrocyte sedimentation rate (ESR) less than 40 mm/hr; (5) Less than 30 minutes of morning stiffness; (6) No palpable warmth of synovium; (7) Over 50 years of age; (8) Rheumatoid factor less than 1:40 titer (agglutination method); (9) Synovial fluid signs (clear fluid of normal viscosity and WBC less than 2000/mm³). Not controlled adequately by recommended conservative treatments (exercise, NSAIDs or acetaminophen); Pain interferes with functional activities (e.g., ambulation, prolonged standing) and not attributed to other forms of joint disease; Intended for short-term control of symptoms to resume conservative medical management or delay TKA; Generally performed without fluoroscopic or ultrasound guidance; Absence of synovitis, presence of effusion preferred (not required); Aspiration of effusions preferred (not required); Only one injection should be scheduled to start, rather than a series of three; A second injection is not recommended if the first has resulted in complete resolution of symptoms, or if there has been no response; With several weeks of temporary, partial resolution of symptoms, and then worsening pain and function, a repeat steroid injection may be an option; The number of injections should be limited to three. In this case, the patient had 12 left knee steroid injections. ODG guidelines do not support the use of long term steroid injections. The patient was reported to have osteonecrosis which could be exacerbated by more steroids injections. Therefore, Left knee intra-articular steroid injection under ultrasound guidance is not medically necessary.