

Case Number:	CM14-0039504		
Date Assigned:	06/27/2014	Date of Injury:	02/23/2011
Decision Date:	09/15/2014	UR Denial Date:	03/27/2014
Priority:	Standard	Application Received:	04/03/2014

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 Orthopedic Surgery and is licensed to practice in California. 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:

This is a 51-year-old male who sustained a vocational injury on 2/23/11. The claimant underwent left shoulder arthroscopy on 3/7/14. This review is for a 21-day rental of a Q-Tech Prevention System postoperatively.

IMR ISSUES, DECISIONS AND RATIONALES

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

21-Day Rental of the Q-Tech Prevention System: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation ODG Guidelines, Shoulder, Post-Operative Pain Pump, Venous Thrombosis.

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG); Shoulder chapter: Venous thrombosis Recommend monitoring risk of perioperative thromboembolic complications in both the acute and subacute postoperative periods for possible treatment, and identifying subjects who are at a high risk of developing venous thrombosis and providing prophylactic measures such as consideration for anticoagulation therapy. In the shoulder, risk is lower than in the knee and depends on: (1) invasiveness of the surgery (uncomplicated shoulder arthroscopy would be low risk but arthroplasty would be higher risk); (2) the postoperative immobilization period; & (3) use of central venous catheters. Upper extremity deep vein thrombosis (UEDVT)

may go undetected since the problem is generally asymptomatic. The incidence of UEDVT is much less than that of the lower extremity DVT possibly because: (a) fewer, smaller valves are present in the veins of the upper extremity, (b) bedridden patients generally have less cessation of arm movements as compared to leg movements, (c) less hydrostatic pressure in the arms, & (d) increased fibrinolytic activity that has been seen in the endothelium of the upper arm as compared to the lower arm. It is recommended to treat patients of asymptomatic mild UEDVT with anticoagulation alone and patients of severe or extensive UEDVT with motorized mechanical devices in conjunction with pharmacological thrombolysis, without delay beyond 10-14 days. Upper extremity DVT is much less studied compared to lower extremity DVT and the diagnostic and therapeutic modalities still have substantial areas that need to be studied. (Saseedharan, 2012) Although it is generally believed that venous thromboembolism (VTE) after shoulder surgery is very rare, there are increasing reports of deep venous thrombosis (DVT) and pulmonary embolism (PE) associated with shoulder surgery. (Ojike, 2011) Deep vein thrombosis (DVT) has an incidence of 1 case per 1000 and it is very rare after arthroscopy of the shoulder. The administration of DVT prophylaxis is not generally recommended in shoulder arthroscopy procedures. (Garofalo, 2010) On the other hand, the prevalence of DVT after reconstructive shoulder arthroplasty was 13%, compared to 27% after knee arthroplasty. (Willis, 2009) While the absolute rate of upper extremity deep vein thrombosis is low, the incidence is increasing due to more widespread use of peripherally inserted central venous catheters, according to a recent systematic review. A diagnostic algorithm using a clinical prediction score, D-dimer testing, and ultrasound can predict upper extremity deep vein thrombosis. The scoring system gives one point each for presence of venous material (such as a catheter), localized pain, and unilateral pitting edema, and subtracts one point if there is a plausible alternative diagnosis. For patients who score one point or less, the initial test of the algorithm is a serum D-dimer which if negative can rule out

Decision rationale: California MTUS and ACOEM Guidelines do not provide criteria pertinent to this request. The Official Disability Guidelines recommend monitoring the risk of perioperative thrombotic complications in both the acute, subacute, and post-operative period for possible treatment by identifying subjects who are at high risk of developing venous thrombosis and providing prophylactic measures such as consideration for anti-coagulation therapy. In the shoulder, the risk for developing venous thrombosis is significantly lower than it is in the lower extremity. Based on the medical records provided for review, there is no documentation suggesting that the claimant is at increased risk for developing deep vein thrombosis. Subsequently, the medical necessity for the Q-Tech Prevention System cannot be considered medically necessary based on documentation presented for review and Official Disability Guidelines.

21 Day Rental of Q-Tech Cold Therapy Recovery System with Wrap: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation ODG, Shoulder, Post-Operative Pain Pump, Venous Thrombosis.

MAXIMUS guideline: Decision based on MTUS ACOEM Page(s): 212. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG): Shoulder and Knee & Leg chapter:

Continuous-flow cryotherapy Recommended as an option after surgery, but not for nonsurgical treatment. Postoperative use generally may be up to 7 days, including home use. In the postoperative setting, continuous-flow cryotherapy units have been proven to decrease pain, inflammation, swelling, and narcotic usage; however, the effect on more frequently treated acute injuries (e.g., muscle strains and contusions) has not been fully evaluated. Continuous-flow cryotherapy units provide regulated temperatures through use of power to circulate ice water in the cooling packs. Complications related to cryotherapy (i.e., frostbite) are extremely rare but can be devastating. (Hubbard, 2004) (Osbaahr, 2002) (Singh, 2001) Game Ready accelerated recovery system Recommended as an option after surgery, but not for nonsurgical treatment. See Continuous-flow cryotherapy. The Game Ready system combines Continuous-flow cryotherapy with the use of vasocompression. While there are studies on Continuous-flow cryotherapy, there are no published high quality studies on the Game Ready device or any other combined system. However, in a recent yet-to-be-published RCT, patients treated with compressive cryotherapy after ACL reconstruction had better pain relief and less dependence on narcotic use than patients treated with cryotherapy alone. (Waterman, 2011).

Decision rationale: California ACOEM Guidelines support the use of cold applications for pain control. The Official Disability Guidelines recommend the use of continuous flow cold therapy in the postoperative period for up to seven days. However, the Official Disability Guidelines do not support its use longer than seven days which includes home use in the post-operative setting. Therefore, the request for 21 days rental of the Q-Tech Cold Therapy Recovery System with Wrap cannot be supported as medically necessary.

Purchase of Post-Operative Pain Pump: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation ODG, Shoulder, Post-Operative Pain Pump, Venous Thrombosis.

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG); Shoulder chapter: Postoperative pain pump Not recommended. Three recent moderate quality RCTs did not support the use of pain pumps. Before these studies, evidence supporting the use of ambulatory pain pumps existed primarily in the form of small case series and poorly designed, randomized, controlled studies with small populations. Much of the available evidence has involved assessing efficacy following orthopedic surgery, specifically, shoulder and knee procedures. A surgeon will insert a temporary, easily removable catheter into the shoulder joint that is connected to an automatic pump filled with anesthetic solution. This "pain pump" was intended to help considerably with postoperative discomfort, and is removed by the patient or their family 2 or 3 days after surgery. There is insufficient evidence to conclude that direct infusion is as effective as or more effective than conventional pre- or postoperative pain control using oral, intramuscular or intravenous measures. (Barber, 2002) (Quick, 2003) (Harvey, 2004) (Cigna, 2005) (Cho, 2007) Recent studies: Three recent RCTs did not support the use of these pain pumps. This study neither supports nor refutes the use of infusion pumps. (Banerjee, 2008) This study concluded that infusion pumps did not significantly reduce pain levels. (Cicccone, 2008) This study found no difference between interscalene block versus continuous subacromial

infusion of a local anesthetic with regard to efficacy, complication rate, or cost. (Webb, 2007) Adverse reactions: A small case series (10 patients) concluded that use of intra-articular pain pump catheters eluting bupivacaine with epinephrine appear highly associated with post-arthroscopic glenohumeral chondrolysis (PAGCL), and therefore intra-articular pain pump catheters should be avoided until further investigation. (Hansen, 2007) On the other hand, a retrospective study of 583 patients concluded that subacromial pain pumps used for arthroscopic shoulder procedures are safe in the short-term. (Busfield, 2008).

Decision rationale: The California MTUS and ACOEM Guidelines do not provide criteria relevant to this request. The Official Disability Guidelines do not recognize post-operative pain pumps as medically necessary due to the lack of proven efficacy. The request cannot be considered medically necessary.