

MEDICAL CONTESTED CASE HEARING NO. 18021

**DECISION AND ORDER**

This case is decided pursuant to Chapter 410 of the Texas Workers' Compensation Act and Rules of the Division of Workers' Compensation adopted thereunder. For the reasons discussed herein, the Administrative Law Judge (ALJ) determines that:

Claimant is not entitled to the requested left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis.

**ISSUES**

A contested case hearing was held on August 30, 2018 to decide the following disputed issue:

Is the preponderance of the evidence contrary to the decision of the IRO that Claimant is not entitled to left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis?

**PARTIES PRESENT**

Petitioner/Claimant (Claimant) was present, and assisted by KP, ombudsman. Respondent/Carrier (Carrier) appeared and was represented by CF, attorney.

**EVIDENCE PRESENTED**

The following witnesses testified:

For Claimant: Claimant.

For Carrier: None.

The following exhibits were admitted into evidence:

Administrative Law Judge's Exhibits ALJ-1 and ALJ-2.

Claimant's Exhibits C-1 through C-10.

Carrier's Exhibits CR-A through CR-H.

**BACKGROUND INFORMATION**

Claimant sustained a compensable injury on (Date of Injury). The parties stipulated that the compensable injury extends to and includes a left biceps longus tendon tear. Claimant credibly testified that on the date of injury, he was tasked with retrieving electronics, which included plasma screen televisions. While he and a co-worker were lifting a particularly heavy plasma screen television, Claimant put his side down on a dolly, which forced him to put all of the television's weight on his left arm. When Claimant did so, he felt a pop in his left shoulder and was in immediate pain. Claimant immediately reported his injury to his employer, and was advised to go to the nearest emergency department for evaluation and treatment. Claimant testified that he believed he tore his left bicep, as several years prior to this date of injury, he had torn his right bicep, and this was very similar.

Claimant sought treatment at Providence Emergency Department on (Date of Injury). An x-ray of the left humerus indicated no acute fractures, but did indicate a possible soft tissue defect over the left bicep. A differential diagnosis included ruptured tendon, fracture, dislocation, or rotator cuff injury. Since Claimant had a successful resolution of his right bicep tear with NM, M.D., Claimant was advised to follow up with Dr. M as soon as possible. Additionally, since this was a Workers' Compensation injury, an appointment was made with KI, M.D., as he was in network.

Claimant was evaluated by Dr. I on February 13, 2018, who also documented a left biceps tear. Dr. I was established as the treating doctor, and he noted that Claimant had an appointment scheduled with Dr. M the following day. Claimant followed up with Dr. I on several occasions, through August 14, 2018. Each time Claimant was diagnosed with tear of the long head of the biceps tendon, and work restrictions were issued. In response to a request from Claimant, Dr. I authored a brief letter on August 14, 2018 in which he explained:

“(Claimant) has a tear of the long head of the biceps by MRI. It is my understanding that continued pain with functions at the elbow and shoulder and muscle cramping are indications for surgical repair. He has consistently complained of both of those. In addition, he has decreased strength on that side. Dr. R, orthopedist at (Provider) in (City), has consistently recommended surgical repair. I think his opinion is correct.”

On February 14, 2018, Claimant was examined by Dr. M, his surgeon from a prior injury to the contralateral biceps. Dr. M explained that Claimant could elect to proceed with nonsurgical treatment for the left proximal biceps tendon rupture, which may result in some loss of strength, but Claimant would still have good functional use of his left arm. Claimant wanted to pursue surgical repair, so Dr. M recommended an MRI to determine if there was any other injury.

A February 26, 2018, MRI of the left humerus without contrast revealed tear/rupture of the intra-articular long head of the biceps tendon with distal retraction of the torn tender fragments with

associated soft tissue edema surrounding the proximal long head of the biceps myotendinous junction.

A February 26, 2018, MRI of the left shoulder without contrast revealed a tear of the intra-articular long head of the biceps tendon with distal retraction of the torn tendon fragments which are now positioned within the superior bicipital groove. Additionally noted was tendinosis and tiny partial-thickness intrasubstance delamination tear along the subscapularis myotendinous junction and mild supraspinatus and infraspinatus tendinosis without tear.

Claimant was referred to RR, M.D., orthopedic surgeon, for a consultation on March 7, 2018. Dr. R agreed with Dr. M's diagnosis, and discussed non-surgical and surgical options with Claimant. Claimant preferred surgical intervention, and Dr. R requested pre-authorization of biceps tenodesis and arthroscopy. Dr. R noted in later examinations that a rotator cuff repair may also be necessary.

In evidence are five utilization reviews, all of which determined that the proposed surgery was not medically necessary. The utilization reviews noted that there was no documented failure of conservative care for three months. Conservative care was defined as active therapy, NSAIDs, and an injection.

Claimant completed a physical therapy evaluation on May 8, 2018. The assessment was as follows:

“Skilled therapy indicated: No. Comment: pt is a 57 y/o RHD male who presents 3 months s/p tear of the long head of biceps with possible partial subscapularis tear. MRI and MD examination notes indicate this is a complete tear of the long head of the biceps tendon. The patient has been recommended for surgical intervention for repair by orthopedic surgery. Due to the complete nature of this tear, we do not have a conservative therapy option for the patient at this time. Supervised therapy not indicated for this patient due to nature of complete tear of long head of biceps tendon.”

The utilization review dated June 11, 2018, specifically noted that during a peer to peer discussion, Dr. R stated that Claimant had been offered an injection, which had been declined by Claimant. Additionally, Claimant was performing a home exercise program, but had not completed active physical therapy. In light of the treatment information provided by Dr. R, GG, M.D., a board certified orthopedic surgeon, determined that the request for left shoulder arthroscopy with rotator cuff repair and biceps longus tendon/tenodesis, remained not medically necessary.

The day following the most recent utilization review, June 12, 2018, Dr. R administered an injection in the left shoulder subacromial space. In a follow up examination with Dr. R on July 3, 2018, Claimant reported improvement in his shoulder pain, but no improvement with his left bicep cramping. Surgery was again recommended.

Notice of Independent Review Decision (IRO) was sent to all of the parties on June 26, 2018. The reviewing physician is a board certified orthopedic surgeon. The reviewing physician upheld the prior adverse determination. In doing so, it was noted that the MRI was consistent with a rupture of the long head of the biceps, but did not show any evidence of full thickness rotator cuff tearing. Additionally, it was noted that Claimant did not meet the ODG recommendations for surgery for biceps tenodesis or rotator cuff repair. Specifically, Claimant's response to the subacromial steroid injection was not yet known at the time of the IRO, Claimant was reportedly doing well per Dr. R (e.g. pain level was 0 at time of occupational therapy evaluation), and there was no evidence of a full thickness rotator cuff tear.

Texas Labor Code Section 408.021 provides that an employee who sustains a compensable injury is entitled to all health care reasonably required by the nature of the injury as and when needed. Health care reasonably required is further defined in Texas Labor Code Section 401.011 (22a) as health care that is clinically appropriate and considered effective for the injured employee's injury and provided in accordance with best practices consistent with evidence based medicine or, if evidence based medicine is not available, then generally accepted standards of medical practice recognized in the medical community. Health care under the Texas Workers' Compensation system must be consistent with evidence based medicine if that evidence is available. Evidence based medicine is further defined in Texas Labor Code Section 401.011 (18a) to be the use of the current best quality scientific and medical evidence formulated from credible scientific studies, including peer-reviewed medical literature and other current scientifically based texts and treatment and practice guidelines. The Commissioner of the Division of Workers' Compensation is required to adopt treatment guidelines that are evidence-based, scientifically valid, outcome-focused, and designed to reduce excessive or inappropriate medical care while safeguarding necessary medical care. Texas Labor Code Section 413.011(e). Medical services consistent with the medical policies and fee guidelines adopted by the commissioner are presumed reasonable in accordance with Texas Labor Code Section 413.017(1).

In accordance with the above statutory guidance, the Division of Workers' Compensation has adopted treatment guidelines by Division Rule 137.100. This rule directs health care providers to provide treatment in accordance with the current edition of the Official Disability Guidelines (ODG), and such treatment is presumed to be health care reasonably required as defined in the Texas Labor Code. Thus, the focus of any health care dispute starts with the health care set out in the ODG. Also, in accordance with Division Rule 133.308(s), "A decision issued by an IRO

is not considered an agency decision and neither the Department nor the Division are considered parties to an appeal. In a Contested Case Hearing (CCH), the party appealing the IRO decision has the burden of overcoming the decision issued by an IRO by a preponderance of evidence-based medical evidence."

The ODG for the requested procedures indicates the following:

*ODG INDICATIONS FOR SURGERY™ -- ROTATOR CUFF REPAIR:*

Criteria for rotator cuff repair with diagnosis of *moderate to large full-thickness* rotator cuff tear AND cervical pathology and frozen shoulder syndrome have been ruled out:

1. Subjective Clinical Findings: Shoulder pain and inability to elevate the arm; tenderness over the greater tuberosity is common in acute cases. PLUS
2. Objective Clinical Findings: Weakness with abduction/external rotation testing. May also have mild atrophy of shoulder musculature. Should have full passive range of motion. PLUS
3. Imaging Clinical Findings: Conventional x-rays, AP, and true lateral or axillary views AND MRI, ultrasound, or arthrogram shows positive evidence of deficit in rotator cuff *without significant fatty infiltration* (atrophy).

Criteria for rotator cuff repair AND/OR anterior acromioplasty with diagnosis of *small full-thickness or partial-thickness* rotator cuff tear OR acromial impingement syndrome (80% of these patients will get better without surgery.)

1. Conservative Care: Recommend 3 to 6 months: Three months is generally adequate if treatment has been continuous, six months if treatment has been intermittent. Exercise must be directed toward gaining full ROM, with both stretching and strengthening to balance muscles. Earlier surgical intervention may be required with failure to progress with therapy, high pain levels, and/or mechanical catching. PLUS
2. Subjective Clinical Findings: Pain with active arc motion 90 to 130 degrees. AND Pain at night. PLUS
3. Objective Clinical Findings: Weak or absent abduction; may also have mild atrophy of shoulder musculature, AND Tenderness over rotator cuff, greater tuberosity, or anterior acromial area. AND Positive impingement signs AND Temporary relief of pain with anesthetic injection (*diagnostic injection test*). PLUS
4. Imaging Clinical Findings: Conventional x-rays, AP, and true lateral or axillary views AND MRI, ultrasound, or arthrogram shows positive evidence of at least partial deficit in rotator cuff without significant fatty infiltration (atrophy).

For average hospital LOS if criteria are met, see *Hospital length of stay (LOS)*.

*Risk versus benefit:*

Repair of rotator cuff tears can improve pain and function for carefully selected patients, although conservative treatment has reported outcomes often equivalent to surgical management, but without surgical risks. Results following physical therapy, debridement/acromioplasty, and rotator cuff repair for symptomatic *non-traumatic* rotator cuff tears were similar at mid-term follow-up. One-third of rotator cuff repairs ultimately fail, 3 out of 4 within three months of surgery. The re-tear rate has been somewhat predictable based on tear size, between 10% for  $\leq 2$  cm<sup>2</sup> up to almost 60% for  $>8$  cm<sup>2</sup>. Surgical outcomes are much better in younger patients who are less likely to have degenerative changes. Outpatient rotator cuff repair is well-accepted and relatively cost effective. Workers' compensation status and/or diabetes predict generally worse outcomes following repair. Revision repairs are inferior to primary, having doubled failure rates at 2 years. Post-operative infection following cuff repair has been  $<1\%$  overall, but higher for open approaches and male sex. Open repairs also have more than double the incidence of early complications (infection, readmission, or return to surgery) compared to arthroscopic procedures. Problematic postoperative stiffness occurs in 5-10% of arthroscopic repairs. Fatty infiltration on pre-operative MRI portends poor surgical outcomes. For specific research and discussion see below.

Repair of the rotator cuff is indicated for significant tears that impair activities by causing weakness of arm elevation or rotation, particularly when acute for younger working individuals. However, rotator cuff tears are frequently only partial-thickness or smaller full-thickness tears. These present primarily as subacromial impingement, and surgery is reserved for cases failing conservative therapy for at least three months. Surgery is not indicated for patients with mild symptoms or those who have no limitations of activities. (*Ejnisman-Cochrane, 2004*) (*Grant, 2004*) Lesions of the rotator cuff are best thought of as a continuum, from mild inflammation and early degeneration to full avulsions. "Full-thickness tear", also called complete tear, has been defined as a split of the soft tissue into two pieces, basically creating a hole in a portion or the entire tendon. "Partial-thickness tear" represents damage to the soft tissue without completely severing it. (*AAOS, 2011*) Partial-thickness tears are commonly described either on MRI or during arthroscopy based on a percentage of the "thickness" or depth of the tendon involved, with higher numbers representing worse tearing. Partial-thickness tearing can occur on either the articular side (undersurface) or subacromial side (outer or superior surface). As a continuum of the impingement process, eventually a hole (small full-thickness tear) can develop, most commonly at the anterior insertion of the supraspinatus. Studies of normal subjects document the universal presence of degenerative tearing including full avulsions without symptoms. Conservative treatment can have results similar to surgical treatment but without surgical risks. Studies of conservative treatment for full-thickness tears have demonstrated 82-86% success for patients presenting within three months of injury. Surgical outcomes are much better in younger patients with rotator cuff tears, than in older patients who often have degenerative changes. Surgical consultation is indicated for patients who have: Activity limitations for more than three months, plus a surgical lesion; Failure of exercise programs to increase range of motion and

strength of the shoulder musculature; Clear clinical and imaging evidence of a surgically repairable lesion; Red flag conditions (e.g., acute full-thickness cuff tear in a young working individual, glenohumeral joint dislocation, etc.). Proven traumatic tears of the rotator cuff in young workers may be surgically repaired acutely to restore function; in older workers, most of these tears are treated conservatively at first. Partial-thickness tears are treated the same as impingement syndrome regardless of MRI findings. Outpatient rotator cuff repair is a well-accepted and cost effective procedure. (*Cordasco, 2000*) There is significant variation in surgical decision-making and a lack of clinical agreement among orthopedic surgeons regarding indications for rotator cuff surgery. (*Dunn, 2005*) For rotator cuff pain with an intact tendon, a trial of 3 to 6 months of conservative therapy is reasonable before orthopaedic referral. Patients with small tears of the rotator cuff may be referred after 6 to 12 weeks of conservative treatment. (*Burbank2, 2008*) Patients with workers' compensation claims have worse outcomes following rotator cuff repair. (*Henn, 2008*) An incidence of problematic postoperative stiffness occurs in about 5% of arthroscopic repairs, being higher with calcific tendinitis, age under 50, and worker's compensation status. (*Huberty, 2009*)

Evidence regarding various operative and nonoperative treatments for rotator cuff tears has been limited and inconclusive, according to an AHRQ comparative effectiveness review. While data is sparse, patients improved substantially with all interventions; there were few clinically important differences between approaches, and complications were relatively rare. A majority of patients completes a course of physical therapy before considering surgery, but there is very little good quality research to guide the type or timing of nonoperative treatment, or who might best benefit from various modalities. Most studies found no difference in health-related quality of life, function, pain, range of motion, and strength with one therapy approach versus another (e.g., with or without aquatics, individualized vs at home, videotape vs therapist-based, etc.). Four of the five studies comparing surgical and nonsurgical management favored operative repair, but the evidence was too limited to make conclusions regarding comparative effectiveness. 113 studies comparing various operations noted little difference in functional outcomes between open vs mini-open repair, mini-open vs arthroscopic repair, arthroscopic repairs with or without acromioplasty, and single-row vs double-row fixation. 11 trials showed moderate evidence for no differences in function or pain. In 72 studies assessing prognostic factors, older age, increasing tear size, and worse preoperative symptoms were consistently associated with recurrent tears; whereas gender, workers' compensation status, and duration of symptoms was not generally predictive of poorer outcomes. Adding continuous passive motion to postoperative physical therapy does not appear to be helpful; (*Seida, 2010*) A prospective cohort study concluded that PT is effective for most patients with *atraumatic* full-thickness rotator cuff tears and shoulder pain, without a need for surgery. By six weeks fewer than 10% of patients had elected surgery; and at 2 years only 2% of those remaining had subsequently opted for surgery. (*Kuhn, 2011*) One-third of rotator cuff repairs re-tear, with 74% of the failures occurring within three months of surgery. Healed tendons at six months are predictive of good outcomes at seven years.

(Kluger, 2011) Not surprisingly, larger tears are more difficult to successfully repair. The re-tear rate based on rotator cuff tear size is: 10% for  $\leq 2$  cm<sup>2</sup>; 16% for 2–4 cm<sup>2</sup>; 31% for 4–6 cm<sup>2</sup>; 50% for 6–8 cm<sup>2</sup>; & 57% for  $> 8$  cm<sup>2</sup> (Murrell, 2012) There is insufficient evidence to suggest comparative efficacy for operative vs nonoperative treatment of rotator cuff tears in patients aged older than 60 years. (Downie, 2012) An RCT demonstrated that full-thickness rotator cuff repair outcomes were the same, with or without acromioplasty. Acromioplasty is often added at the time of arthroscopic cuff repair, but it does not necessarily improve outcomes at 2-years. (Abrams, 2014) Non-contrast MRI is sufficient for rotator cuff tear diagnosis. (Spencer, 2013) (Farshad-Amacker, 2013) (Arnold, 2012) (Major, 2011)

Recent research: Conservative treatment is a good option for the initial treatment of isolated, symptomatic, *non-traumatic*, supraspinatus tears in older patients as demonstrated by an RCT comparing the effectiveness of physical therapy, simple acromioplasty, or cuff repair; there was no significant difference in clinical outcomes among differing interventions at 2-years. (Kukkonen, 2015) There is little evidence that the outcomes of rotator cuff repair are improving, according to a systematic review (SR) of 108 articles, including 8011 shoulders, where the mean re-tear rate was 27% at 2-years, being associated with *fatty infiltration* on MRI, larger tear size, advanced age, and double-row repairs. Patient reported outcomes were generally improved regardless of whether the repair ultimately restored tendon integrity. (McElvany, 2015) Another SR noted mixed results, some studies showing improved function and strength with intact repairs, but others reporting that tendon re-tear does not lead to inferior clinical outcomes. (Galanopoulos, 2017) A retrospective multi-center cohort of 288 isolated supraspinatus repairs followed for 10-years indicated that complications occurred in 10% (mostly stiffness), and that pre-operative *fatty infiltration* and post-operative cuff re-tear resulted in significantly worse long-term outcomes. (Collin, 2017) Another retrospective cohort of 442 rotator cuff repairs followed for 3-years reported that 19% failed to heal, but of those only 45% showed subsequent increase in tear size. Healed tendons had better function than non-healed, and non-progressive re-tears (MRI at 6-months) showed better function and strength than progressive ones. (Jeon, 2017) A prospective study of 55 patients having rotator cuff surgery noted similar functional outcomes between surgically observed findings of tendinosis/partial-thickness tears and full-thickness tears. (Hsu, 2017) Post-operative infection rates for 1,824 rotator cuff repairs (open, mini-open, and arthroscopic) was 0.77% overall, but significantly lower for both arthroscopic approach and female sex. (Vopat, 2016) A population analysis involving 175,000 patients with 1/3 being diabetic, noted both cuff repair incidence and surgical hazard ratios to be 33% higher among diabetes, showing this disease to be an independent negative risk factor. (Huang, 2016) Significantly lower early complications (infection, readmission, or return to surgery) were reported among veterans undergoing arthroscopic (0.9%) vs. open repairs (2.1%). (Owens, 2015)

Revision rotator cuff repair: The results of revision rotator cuff repair are inferior to those of primary repair. While pain relief may be achieved in most patients, selection criteria should



include patients with an intact deltoid origin, good-quality rotator cuff tissue, preoperative elevation above the horizontal, and only one prior procedure. (*Djurasovic, 2001*) Although revision rotator cuff repair had similar short-term outcomes with primary surgery, by 2 years symptomatic re-tearing was twice as likely. (*Shamsudin, 2015*)

*Irreparable rotator cuff tear surgery:* 151 debridement/smoothing procedures for irreparable cuff tears with retained active elevation followed for 7-years showed clinically significant improvement in 70% of patients. (*Hsu, 2017*)

#### CRITERIA FOR SURGERY FOR BICEPS TENODESIS (OR TENOTOMY):

- History, physical examination, and imaging indicate significant shoulder biceps tendon pathology or rupture
- After 3 months of failed conservative treatment (NSAIDs, injection, and PT) unless combined with acute rotator cuff repair
- An alternative to direct repair for type II SLAP lesions (fraying, some detachment) and type IV (> 50% of biceps tendon involved, vertical or bucket-handle tear of the superior labrum, extending into biceps)
- Generally, type I and type III SLAP lesions do not need any treatment
- Age > 35 with Type II and IV SLAP tears (younger optional if overhead throwing athlete)
- Age  $\leq$  55 for non-SLAP biceps pathology, especially with concomitant rotator cuff repair; *tenotomy* is more suitable for older patients (past age 55)

*Risk versus benefit:* Compared with primary SLAP repair, risks are lower with tenotomy or tenodesis. Complications of tenotomy are mild and include cosmetic deformity, residual pain or achiness, and slight strength deficit for elbow flexion and forearm supination. Patient satisfaction over 90% can still be expected following tenotomy with mild and/or infrequent reports of cosmetic deformity (13%), occasional cramping (19%), and subjective weakness (17%), mostly in men. Satisfaction is remarkably high for tenotomy, especially for females and middle-age or older individuals. Tenodesis complications can include failure of fixation resulting in cosmetic deformity and/or residual pain, stiffness, infection, hematoma, neurologic or vascular injury, fracture, and complex regional pain syndrome (CRPS). Tenodesis in young (avg. age 38) active duty military resulted in only 5% complications and less than 1% failures requiring revision.

Biceps tenodesis (suture of the end of the tendon to the bone) is a surgical procedure sometimes performed for refractory biceps tendonitis of the shoulder. Tenodesis may be performed as an isolated procedure, or as part of a larger shoulder surgery such as a rotator cuff repair. There can

be a partial detachment of the biceps tendon from the socket of the shoulder (SLAP tear), or simply advanced inflammation and irritation of the biceps tendon itself. Tenodesis is more commonly performed in patients over age 40, whereas other procedures like direct SLAP repair may be more appropriate for younger patients. Individuals older than 35 years with an isolated type II SLAP lesion had a shorter postoperative recovery, a more predictable functional outcome, and higher rate of satisfaction and return to activity with tenodesis compared to direct biceps repair. These authors concluded that biceps tenodesis is preferable to biceps repair for isolated type II SLAP lesions in non-overhead athletes older than 35. (*Denard, 2014*)

Direct surgical repair has been a gold standard for most type II and type IV SLAP lesions that fail nonoperative management. However, more recent reports have demonstrated unacceptably high failure rates following primary repair of type II SLAP lesions. Biceps tenodesis may also offer an acceptable, if not better alternative to primary repair of many SLAP lesions. (*Gottschalk, 2014*) Biceps tenodesis is a viable proven treatment option for SLAP repair. (*Huri, 2014*) Successful arthroscopic repair of symptomatic superior labral tears in young athletes has been well documented. But, superior labral repair in patients older than 40 years is controversial, with concerns for residual postoperative pain, stiffness, and higher rates of revision surgery. While studies demonstrate that good outcomes can be obtained with SLAP repair in some older cohorts of patients, *age over 40* and *workers' compensation* status are independent risk factors for increased surgical complications. It was concluded that the cumulative evidence is more supportive of labral debridement or biceps tenotomy over direct labral repair when an *associated rotator cuff* tear is present. (*Erickson, 2014*) Practice trends indicate that the proportion of SLAP repairs has decreased over time, with an increase in biceps tenodesis and tenotomy. Increased patient age correlates with more likelihood of treatment with biceps tenodesis or tenotomy, replacing SLAP repair. For patients with *isolated* SLAP lesions, the proportion of SLAP repairs decreased from 69.3% to 44.8%, while biceps tenodesis increased from 1.9% to 18.8%, and biceps tenotomy increased from 0.4% to 1.7%. For patients undergoing *concomitant rotator cuff repair*, SLAP repair decreased from 60.2% to 15.3% (often simple labral debridement), while biceps tenodesis or tenotomy increased from 6.0% to 28.0%. There was a significant difference in the mean age of patients undergoing SLAP repair (37.1 years) versus biceps tenodesis (47.2 years) versus biceps tenotomy (55.7 years). (*Patterson, 2014*)

Another U.S. analysis of almost 45,000 biceps tenodesis procedures reported yearly increases almost doubling since 2008, with significant regional variations in incidence. (*Werner, 2015*) A national insurance database of almost 30,000 rotator cuff repairs (RCR) including over 6,300 having concomitant biceps tenodesis (arthroscopic and open) was analyzed for subsequent re-operation rates. Significantly more patients required repeat surgery by 6 months and 1 year who had also had biceps tenodesis. The tenodesis group also had higher dislocation, nerve injury, and surgical site infection rates. (*Erickson, 2017*) A randomized controlled trial (RCT) of 129 rotator cuff repair patients divided to debridement, tenodesis, or tenotomy groups, demonstrated equally

effective improvements in pain and function regardless of technique. Debridement resulted in the lowest occurrence of Popeye deformity, which was reported in only 37% of *tenotomy* and 26% of *tenodesis* patients. Tenodesis was recommended primarily for males who needed to specifically preserve supination strength. (Oh, 2016) Another RCT comparing 151 rotator cuff repair patients older than age 55 noted equal outcomes with associated tenodesis or tenotomy, but shorter surgical time and faster pain relief with tenotomy, suggesting more suitability for older patients. (Zhang, 2015) A systematic review/meta-analysis (SR/MA) of 9 studies and 650 patients, mostly having concomitant shoulder pathology, compared outcomes of tenodesis vs. tenotomy, with no significant differences in functional scores, elbow flexion, or supination strength between groups. Popeye deformity and temporary cramping occurred somewhat more frequently with tenotomy. (Gurnani, 2016) An RCT of 128 tenodesis and tenotomies also showed no significant differences in functional scores but a 3-times higher incidence of Popeye deformity with tenotomy. Interestingly, 80% of *tenotomy* patients did not have the cut end of the tendon retract distal to the bicipital groove on MRI at 12 months. (Lee, 2016) Most studies comparing tenodesis to tenotomy are limited to lower level evidence and have confounding factors such as other concomitant shoulder procedures and surgeon preferences, suggesting a need for more high-powered studies. (Patel, 2016) Biceps tendinopathy is commonly associated with other shoulder pathologies, and persistent shoulder symptoms following tenodesis is commonly related to missed or untreated lesions. Tenodesis should be reserved for younger, high-demand patients since it requires more rehabilitation time and has a higher cost. (Mellano, 2015)

Complications of tenotomy are mild and include cosmetic deformity, residual pain or achiness, and slight strength deficit for elbow flexion and forearm supination. Tenodesis complications include failure of fixation resulting in cosmetic deformity and/or residual pain, stiffness, infection, hematoma, neurologic or vascular injury, fracture, and complex regional pain syndrome (CRPS). (Virk, 2016) A large (166 patients) retrospective series of unicortical suture button tenodesis in young (avg. age 38) active duty military resulted in only 5% complications and less than 1% failures requiring revision. (Cook, 2017) A patient satisfaction analysis of 104 tenotomy patients reported 91-95% overall satisfaction with mild and/or infrequent reports of cosmetic deformity (13%), occasional cramping (19%), and subjective weakness (17%), mostly in men. Satisfaction is quite high, especially for females and middle-age or older individuals. (Meeks, 2017)

*Surgical tenodesis techniques:* 46 patients had either open or arthroscopic long head tenodesis with similar pain relief and clinical outcomes. (Gombera, 2015) An RCT of 80 patients compared outcomes of suture anchor or interference screw (IS) fixation over 2 years, with similar functional results, except for a significantly higher fixation failure rate for IS, especially for *workers* with more *physically demanding* work levels. (Park, 2017) 211 patients had either arthroscopic keyhole or IS techniques with less pain, visible deformity, distal tendon migration, as well as fewer complications and less cost using keyhole fixation. (Kany, 2016) Another cost-

effective, reliable, and innovative method of arthroscopic biceps tenodesis involves a lasso-loop attachment to the antero-medial footprint rotator cuff repair suture anchor, requiring no additional anchors or secondary surgical scars. (*Uschok, 2016*)

Based on the evidence presented, Claimant did not meet his burden of proof to overcome the decision of the IRO by a preponderance of evidence-based medical evidence. Claimant's evidence discussed the recommendation of two physicians for the proposed surgical procedures, however, Claimant did not present persuasive evidence-based medical evidence to support his position. As a preponderance of the evidence is found not to be contrary to the decision of the IRO that the requested left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis are not health care reasonably required for the compensable injury of (Date of Injury), Claimant is held not to be entitled to those procedures.

Even though all the evidence presented was not discussed, it was considered. The Findings of Fact and Conclusions of Law are based on all of the evidence presented.

### **FINDINGS OF FACT**

1. The parties stipulated to the following facts:
  - A. The Texas Department of Insurance, Division of Workers' Compensation has jurisdiction to hear this matter.
  - B. Venue is proper in the (City) Field Office of the Texas Department of Insurance, Division of Workers' Compensation.
  - C. On (Date of Injury), Claimant was the employee of (Employer), Employer.
  - D. On (Date of Injury), Employer provided workers' compensation insurance coverage through New Hampshire Insurance Company, Carrier.
  - E. On (Date of Injury), Claimant sustained a compensable injury.
  - F. The compensable injury of (Date of Injury), extends to and includes a left biceps longus tendon tear.
  - G. The Independent Review Organization determined Claimant should not have the requested treatment of left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis.

2. Carrier delivered to Claimant a single document stating the true corporate name of Carrier, and the name and street address of Carrier's registered agent, which document was admitted into evidence as Administrative Law Judge's Exhibit Number 2.
3. The preponderance of the evidence is not contrary to the decision of the Independent Review Organization that Claimant is not entitled to the requested left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis.

### **CONCLUSIONS OF LAW**

1. The Texas Department of Insurance, Division of Workers' Compensation, has jurisdiction to hear this case.
2. Venue is proper in the (City) Field Office.
3. Claimant is not entitled to the requested left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis.

### **DECISION**

Claimant is not entitled to the requested left shoulder arthroscopic rotator cuff repair and biceps longus tendon tenodesis.

### **ORDER**

Carrier is not liable for the benefits at issue in this hearing. Claimant remains entitled to medical benefits for the compensable injury in accordance with §408.021.

The true corporate name of the insurance carrier is **NEW HAMPSHIRE INSURANCE COMPANY** and the name and address of its registered agent for service of process is:

**CORPORATION SERVICE COMPANY  
211 EAST 7TH STREET, SUITE 620  
AUSTIN, TEXAS 78701-3218**

Signed this 4<sup>th</sup> day of September, 2018.

Amber Morgan  
Administrative Law Judge