



Specialty Independent Review Organization

## Notice of Independent Review Decision

**DATE OF REVIEW:** 11/5/2007

**IRO CASE #:**

### **DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE**

The item in dispute is the prospective medical necessity of a left carpal tunnel release.

### **A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION**

The reviewer is a Medical Doctor who is board certified in Orthopedic Surgery with greater than 15 years of experience.

### **REVIEW OUTCOME**

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be:

- Upheld (Agree)
- Overturned (Disagree)
- Partially Overturned (Agree in part/Disagree in part)

The reviewer disagrees with the previous adverse determination regarding the prospective medical necessity of a left carpal tunnel release.

### **INFORMATION PROVIDED TO THE IRO FOR REVIEW**

Records were received and reviewed from the following parties:  
Orthopaedic Group

These records consist of the following:

Records from the Carrier: Request for IRO, Denial letter - 8/29/07, Appeal denial letter - 9/18/07, Orthopaedic preauthorization request - 8/23/07, Dr. electrodiagnostic report - 5/29/07, Orthopaedic notes - 8/16/07,

Rehabilitation Medicine and Clinic notes – 8/8/07-7/12/07, Dr. notes – 7/16/07, Orthopaedic appeal letter – 9/10/07, Orthopaedic reconsideration letter – 10/3/07.

Records from Doctor/Facility (excludes records previously mentioned): None – All records received from the Doctor/Facility were also submitted by the Carrier.

The Carrier/ URA did not submit a copy of the ODG Guidelines for this review.

**PATIENT CLINICAL HISTORY [SUMMARY]:**

Patient is a xx-year-old right hand dominant female who sustained a work related injury to her left wrist on xx/xx/xx. She reports numbness and tingling in fingers of both hands, left greater than right day and night. She drops objects and relates forearm aching. She has undergone conservative treatment including physical therapy, bracing and injections receiving only temporary relief. Her physical exam noted no thenar atrophy, positive Tinel's and Phalen's signs and decreased sensation in the median distribution. Electrodiagnostic studies reveal advanced sensory median nerve neuropathy consistent with the clinical diagnosis of carpal tunnel syndrome. Dr has evaluated the patient and requested left carpal tunnel release.

**ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION.**

The reviewer states that the patient has a correct diagnosis of left carpal tunnel syndrome, has been appropriately conservatively treated and has not received lasting relief. She has no co-morbidities. Surgical decompression of the median nerve has a high rate of long-term success. Recommended after an accurate diagnosis of moderate or severe CTS. Surgery is not generally indicated for mild CTS. See Severity definitions. Carpal tunnel release is well supported, both open and endoscopic (with proper surgeon training), assuming the diagnosis of CTS is correct. (Unfortunately, many CTR surgeries are performed on patients without a correct diagnosis of CTS, and these surgeries do not have successful outcomes.) Outcomes in workers' comp cases may not be as good as outcomes overall, but still support surgery. Carpal tunnel syndrome may be treated initially with a splint and medications before injection is considered, except in the case of severe CTS (thenar muscle atrophy and constant paresthesias in the median innervated digits), but outcomes from carpal tunnel surgery justify prompt referral for surgery in moderate to severe cases. Nevertheless, surgery should not be performed until the diagnosis of CTS is made by history, physical examination and possible electrodiagnostic studies. Symptomatic relief from a cortisone/anesthetic injection will facilitate the diagnosis, however the benefit from these injections although good is short-lived. Surgical decompression of the median nerve usually has a high rate of long-term success in relieving symptoms, with many studies showing success in over 90% of patients where the diagnosis of CTS has been confirmed by electrodiagnostic testing. (Patients with the mildest symptoms display the poorest post-surgery results, but in

patients with moderate or severe CTS, the outcomes from surgery are better than splinting.) Carpal tunnel syndrome must be proved by positive findings on clinical examination and may be supported by nerve conduction tests before surgery is undertaken. Mild CTS with normal electrodiagnostic studies (EDS) exists, but moderate or severe CTS with normal EDS is very rare. Positive EDS in asymptomatic individuals is not CTS. Any contributions to symptoms by cervical radiculopathy (double crush syndrome) will not be relieved by the surgery, however. (Various references listed under "Surgical Considerations") (Chung, 1998) (Verdugo, 2002) (Shin, 2000) (AHRQ, 2003) (Lyall, 2002) (Gerritsen-JAMA, 2002) (Verdugo-Cochrane, 2003) (Hui, 2004) (Hui, 2005) (Bilic, 2006) (Atroshi, 2006) (Ucan, 2006) Being depressed and a workers' compensation claimant predicts being out of work after carpal tunnel release surgery. This highlights the importance of psychosocial management of musculoskeletal disorders. (Amick, 2004) (Karjalainen-Cochrane, 2002) (Crossman, 2001) (Denniston, 2001) (Feuerstein, 1999) Older age should not be a contraindication to CTR. (Weber, 2005) (Hobby2, 2005) In a sample of patients aged 70 years and older, patient satisfaction was 93 percent after surgical treatment versus 54 percent after nonsurgical treatment. (Ettema, 2006) Mini palm technique may be as good or better than endoscopic or open release. (Melhorn, 1994) (Cellocco, 2005) Steroid injections and wrist splinting may be effective for relief of CTS symptoms but have a long-term effect in only some patients. Symptom duration of less than 3 months and absence of sensory impairment at presentation are predictive of a lasting response to conservative treatment. Selected patients (i.e., with no thenar wasting or obvious underlying cause) presenting with mild to moderate carpal tunnel syndrome may receive either a single steroid injection or wear a wrist splint for 3 weeks. This will allow identification of the patients who respond well to conservative therapy and do not need surgery. (Graham, 2004) (Ly-Pen, 2005) See Injections. While diabetes is a risk factor for CTS, patients with diabetes have the same probability of positive surgical outcome as patients with idiopathic CTS. (Mondelli, 2004) Statistical evaluation identified five factors which were important in predicting lack of response to conservative treatment versus surgery: (1) age over 50 years, (2) duration over ten months, (3) constant paraesthesiae, (4) stenosing flexor tenosynovitis, and (5) a Phalen's test positive in less than 30 seconds. When none of these factors was present, 66% of patients were cured by medical therapy, 40% of patients with one factor, 17% with two factors, and 7% with three factors, and no patient with four or five factors present was cured by medical management. (Kaplan, 1990) Operative treatment was undertaken for 31% of new presentations of carpal tunnel syndrome in 2000. (Latinovic, 2006)

#### ODG Indications for Surgery -- Carpal Tunnel Release:

- I. Severe CTS, requiring ALL of the following:
  - A. Symptoms/findings of severe CTS, requiring ALL of the following:
    1. Muscle atrophy, severe weakness of thenar muscles
    2. 2-point discrimination test > 6 mm

- B. Positive electrodiagnostic testing
- OR ---
- II. Mild/moderate CTS, requiring ALL of the following:
  - A. Symptoms (pain/numbness/paresthesia/impaired dexterity), requiring TWO of the following:
    - 1. Abnormal Katz hand diagram scores
    - 2. Nocturnal symptoms
    - 3. Flick sign (shaking hand)
  - B. Findings by physical exam, requiring THREE of the following:
    - 1. Durkan's compression test
    - 2. Semmes-Weinstein monofilament test
    - 3. Phalen sign
    - 4. Tinel's sign
    - 5. Decreased 2-point discrimination
    - 6. Mild thenar weakness (thumb abduction)
  - C. Comorbidities: no current pregnancy
  - D. Initial conservative treatment, requiring FOUR of the following:
    - 1. Activity modification  $\geq$  1 month
    - 2. Wrist splint  $\geq$  1 month
    - 3. Nonprescription analgesia (i.e., acetaminophen)
    - 4. Physical therapy referral for home exercise training
    - 5. Successful initial outcome from corticosteroid injection trial (optional)
  - E. Positive electrodiagnostic testing [note that successful outcomes from injection trial or conservative treatment may affect test results] (Hagebeuk, 2004)

**A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:**

- ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE
- AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES
- DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES
- EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN
- INTERQUAL CRITERIA

- MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- MILLIMAN CARE GUIDELINES**
- ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**
- PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR**
- TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS**
- TEXAS TACADA GUIDELINES**
- TMF SCREENING CRITERIA MANUAL**
- PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)**
- OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**