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Notice of Independent Review Decision

DATE OF REVIEW: 4-20-2011

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

The item in dispute is the prospective medical necessity of a repeat EMG/NCV right upper extremity.

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 Physical Medicine and Rehabilitation. The reviewer has been practicing for greater than 10 years.

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 repeat EMG/NCV right upper extremity.

INFORMATION PROVIDED TO THE IRO FOR REVIEW

Records were received and reviewed from the following parties:
Clinic, MD, and Clinic. Network treatment guidelines were not provided.

These records consist of the following (duplicate records are only listed from one source):

- Outpatient Clinical Records, M.D., 5/26/2010, 6/21/2010, 7/12/2010, 8/25/2010,
- Outpatient Clinical Records, M.D., 9/24/2010, 10/19/2010, 12/22/2010, and 2/12/2011
- letter of appeal submitted by Dr. 2/28/2010
- Electrodiagnostic Studies, M.D., 10/19/2010.
- Notification of adverse determination February 17, 2011
- notification of reconsideration of adverse determination March 17, 2011
- DWC-Forms 73
- Operative reports dated May 11, 2010 and May 13, 2010.
- Laboratory test results May 15, 2010.

PATIENT CLINICAL HISTORY [SUMMARY]:

Worker sustained a work related injury to the right wrist when he fell into a deep hole and sustained a laceration to the right wrist across the base of the right palm. Evaluation by Dr. revealed decreased sensation in the fourth finger globally, ulnarly and radially. There was decreased sensation over the ulnar aspect of the long finger. The patient went to surgery on May 11, 2010 and underwent initial debridement and repair of multiple structures including flexor digitorum superficialis to ring and small fingers and the flexor digitorum profundus to middle finger, repair of the median nerve, ligation of the ulnar artery, and carpal tunnel decompression. Findings at the time of surgery included a partial laceration on the ulnar aspect of the median nerve.

The postoperative diagnosis was

- Dirty complex wound right wrist.
- Ulnar artery partial laceration
- Flexor tendon injuries [multiple]
- Partial median nerve laceration.

The patient returned to the operating room on May 13, 2010 for repeat irrigation and debridement and underwent re-repair of the right index flexor digitorum superficialis.

On the follow-up visit May 26, 2010 there was diminished sensation in the ring finger and long finger. The surgeon advised him that nerve growth proceeds at a rate of one millimeter per day. Dr. started a dynamic protocol with wrist block at 45 degrees, MP block at 60 degrees. On June 21, 2010 Dr. noted some decreased sensation at the tip of the small finger and the tip of the index finger. There was some scarring down of the flexors. He plans to continue treatment in a stepwise fashion making sure the repair has healed "and then get more aggressive with his range of motion of his wrist". He advised that further surgery "debridement and tendon releases" might become necessary at some point.

On July 12, 2010 there was numbness of the long finger, ring finger and some of the index finger and the small finger. Dr. was concerned that "we may have a progressive problem here, and I worry about the development of scar tissue". He was also concerned about the possibility of reflex sympathetic dystrophy. He plans to continue to work on desensitization

and occupational therapy and started treatment with Neurontin. He stated that he may consider an exploratory evaluation with lysis of adhesions and median nerve exploration and decompression if need be. He suggested getting a hand surgeon involved.

On August 25, 2010 the flexor tendon repairs were doing well. There was some wrist stiffness and some numbness. "The only place he is not numb is on the ulnar border of his little finger and the radial border of his index finger; otherwise, the remainder of the fingers are numb. I may have him see Dr. and see if he thinks there is anything else we might want to offer at this time, maybe even lysis of adhesions or exploration".

The patient was referred to Dr. for hand surgery consultation September 24, 2010. Examination revealed absent function of the flexor digitorum superficialis to the index finger. There was essentially absent two-point discrimination throughout the hand. Motor function of the median and ulnar nerve was reported to be 5/5 throughout. He diagnosed posttraumatic median and ulnar sensory neuropathy (354.0/354.2). He recommended electrodiagnostic studies.

Electrodiagnostic studies were performed October 19, 2010. Findings were indicative of a right median nerve injury at the wrist, with evidence of continuity and evidence of improvement clinically and electrophysiologically. On the nerve conduction studies the median nerve distal motor latency was prolonged at 7.0 milliseconds, whereas the ulnar nerve motor latency was normal at 3.0 milliseconds. On the sensory nerve conduction studies the median nerve peak latency was prolonged at 4.8 milliseconds, whereas the ulnar latency and radial latencies were normal at 3.0 milliseconds and 2.8 milliseconds, respectively. EMG of hand intrinsic muscles was reported to show a reduced volitional pattern in the first dorsal interosseous muscle in the abductor pollicis brevis muscle. No positive sharp waves or fibrillation potentials were seen.

Dr. saw the patient again on October 19, 2010. Examination revealed normal two-point discrimination at the thumb and index fingers, with essentially absent two-point discrimination in the middle, ring and small fingers both radially and ulnarward. Median and ulnar motor function was reported to be 5/5. There was a Tinel over the ulnar nerve radiating to the fingertips and a Tinel over the median nerve radiating to the fingertips. Dr. noted that the electrodiagnostic studies were encouraging for the propensity for recovery. He recommended follow-up in six weeks for a repeat sensory examination and possibly a repeat electrodiagnostic study in 12 weeks. If the subsequent electrodiagnostic study shows minimal improvement, then one might consider surgical decompression.

On December 22, 2010 Dr. saw the patient for follow-up. Examination again showed intact two-point discrimination at thumb and index finger. At the middle, ring and small fingers, two-point sensation was essentially absent. Tinel's sign was present over both median and ulnar nerves to the proximal to mid palm. He diagnosed posttraumatic median and ulnar sensory neuropathy. Because of lack of improvement, he recommended follow-up again in six weeks.

On the follow-up visit February 2, 2011, examination was essentially unchanged from the previous exam. He recommended follow-up electrodiagnostic studies to be compared with those done in October.

On February 17, 2011 the requested repeat studies were denied. Denial was upheld on appeal.

On February 28, 2010 Dr. submitted an appeal, reiterating that the electrodiagnostic study was requested for the purpose of this assessment of the median nerve traumatic injury and the possible ulnar nerve injury, as documented in the previous electrodiagnostic studies. He noted that the literature is replete with data and studies to support repeat electrodiagnostic studies while following the recovery of a transected nerve at 12 week intervals. Electrodiagnostic studies were performed by MD in October 2010.

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

Based on the records submitted for review, the requested procedure is recommended at this time.

BASIS FOR THE DECISION

- The documented clinical findings of sensory loss in the long, ring and small fingers of the right hand are consistent with injury to sensory branches of the median and ulnar nerves. Furthermore, the sensory examination appears correlate well with the injuries of XX/XX/XXXX: the examination findings of 2/28/10 revealed intact sensation over the thumb and index fingers, which receive sensory nerve supply from the radial aspect of the median nerve, whereas the sensation was impaired over the long and ring fingers, which receive their sensory nerve supply from the ulnar aspect of the median nerve, the very portion of the nerve that was injured, as reported in the operative note of May 11, 2010.
- Although sensation to the small finger (in the distribution of the ulnar nerve) appeared to be intact initially, Dr. subsequently documented impaired sensation in the ulnar aspect of the ring finger, also supplied by the ulnar nerve. The ulnar nerve may be susceptible to compression injury in the wrist or hand due to scars or adhesions which can develop during the course of healing of such complex, extensive wound.
- The EMG of October 19, 2010 showed abnormalities in the distribution of both the median and the ulnar nerves.
- The nerve conduction studies of October 19, 2010 did not specifically evaluate sensory branches to the long or ring fingers. Nerve conduction studies of the sensory branches to the thumb and/or the index finger are not sufficient for evaluation of injury to the nerve fascicles which supply the areas of impaired sensation in the long and ring fingers. Therefore, in order to assess the actual areas of impaired sensation, further electrodiagnostic studies are clinically warranted.
- Criteria for electrodiagnostic studies to evaluate carpal tunnel syndrome do not apply in this case, as the patient has sustained a laceration to the median nerve, (diagnosis code

955.1) extensive surgical repair, and may have developed some scarring in or around the median nerve and possibly the ulnar nerve. For the purpose of diagnosis and treatment, diagnosis code 955.1 is appropriate.

According to the ODG Guidelines regarding Injury to peripheral nerve(s) of shoulder girdle and upper limb, median nerve (955.1), ODG Treatment UR Advisor: Motor and Sensory nerve conduction tests are acceptable procedures for treatment of such injuries.

According to the American Association of Neuromuscular & Electrodiagnostic Medicine, American Academy of Neurology, American Academy of Physical Medicine and Rehabilitation: Recommended Policy for Electrodiagnostic Medicine, Regarding repeat electrodiagnostic studies, the Policy states:

- Where a single diagnosis is made on the first visit, but the patient subsequently develops
- A new set of symptoms, further evaluation is required for a second diagnosis that treatment can begin.
- Unexpected course or change in course of the disease. In certain situations, management of a diagnosed condition may not yield expected results or new, questionably related problems may occur (e.g., failure to improve following surgery for radiculopathy). In these instances, reexamination is appropriate.
- Recovery from injury. Repeat evaluations may be needed to monitor recovery, to help establish prognosis, and/or to determine the need for and timing of surgical intervention (e.g., traumatic nerve injury). Repeat EDX consultation is therefore sometimes necessary
- Reasonable limits can be set concerning the frequency of repeat EDX testing per year in a given patient by a given EDX consultant for a given diagnosis: Three tests for motor neuronopathy and plexopathy. These limits should not apply if the patient requires evaluation by more than 1 EDX consultant (i.e., a second opinion or an expert opinion at a tertiary care center) in a given year or if the patient requires evaluation for a second diagnosis in a given year.
- Additional studies may be required or appropriate over and above these guidelines. In such situations, the reason for the repeat study should be included in the body of the report or in the patient's chart. Comparison with the previous test results should be documented. This additional documentation from the physician regarding the necessity for the additional repeat testing would be appropriate.

ADDITIONAL REFERENCES

Sunderland S: Nerves and Nerve Injuries, Ed. 2. Edinburgh, Churchill Livingstone, 1978, pp 672-675 as cited by Johnson and Terebuh, Sensory and Mixed Nerve Conduction Studies in Carpal Tunnel Syndrome, Physical Medicine and Rehabilitation Clinics of North America, 8:477-501.

Recommended Policy for Electrodiagnostic Medicine, American Association of Neuromuscular & Electrodiagnostic Medicine, American Academy of Neurology, American

Academy of Physical Medicine and Rehabilitation: September 1997; updated 1998, 1999, 2000, 2001, 2002, and 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)