

True Decisions Inc.

An Independent Review Organization

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Notice of Independent Review Decision

DATE OF REVIEW: August 11, 2008

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Medical necessity for repeat right upper extremity EMG and bilateral upper extremity NCV.

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

Board Certified Orthopedic Surgeon

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)

INFORMATION PROVIDED TO THE IRO FOR REVIEW

OD Guidelines

Office notes, Dr. 11/8/07, 01/03/08, 03/20/08, 06/03/08

Dr., 01/24/08

Cervical spine MRI, 5/19/08 C/S MRI

Peer reviews, 06/18/08, 07/01/08

PATIENT CLINICAL HISTORY [SUMMARY]:

The claimant is a male with the diagnosis of chronic neck pain, cervical radiculopathy, lumbago and lumbosacral radiculopathy reportedly following an injury on xx/xx/xx when he was struck by a tree in the anterior chest. Subsequent treatment included cervical epidural steroid injections, ganglion blocks, trigger point injections, pain management

and therapy. Reportedly a lumbar MRI note some spondylitic changes and small indentation at L4-5, L5-S1. Shoulder MRI noted a rotator cuff on the left and a minimal tear in the supraspinatus tendon on the right.

The claimant continued with neck and back pain. Cervical MRI on 05/19/08 noted mild degenerative changes C4-5 and C5-6 with mild central canal and neuroforaminal stenosis. There was no significant change from a previous study on 02/15/07. Exam findings on 06/03/08 noted decreased sensation in C5-C8 on the left with complaints of neck pain and numbness and tingling in the left hand. There was no evidence of muscle weakness or atrophy. Left upper extremity EMG testing was recently certified.

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

Repeat right upper extremity EMG and nerve conduction study cannot be justified based on the information reviewed. The claimant reportedly has diminished sensation of multiple dermatomes on the left side with reports of numbness and tingling on the left hand. There is no mention of right sided radicular symptoms. There is no mention of objective signs of radiculopathy involving the right upper extremity since there are no radicular symptoms or findings on the right upper extremity, the request for the right upper extremity EMG and nerve conduction study is unclear and unable to be justified based on the information reviewed.

Official Disability Guidelines Treatment in Worker's Comp 2008 Updates, Neck and Upper Back

Electromyography (EMG): Recommended (needle, not surface) as an option in selected cases. The American Association of Electrodiagnostic Medicine conducted a review on electrodiagnosis in relation to cervical radiculopathy and concluded that the test was moderately sensitive (50%-71%) and highly specific (65%-85%). ([AAEM, 1999](#)) EMG findings may not be predictive of surgical outcome in cervical surgery, and patients may still benefit from surgery even in the absence of EMG findings of nerve root impingement. This is in stark contrast to the lumbar spine where EMG findings have been shown to be highly correlative with symptoms.

Positive diagnosis of radiculopathy: Requires the identification of neurogenic abnormalities in two or more muscles that share the same nerve root innervation but differ in their peripheral nerve supply.

Timing: Timing is important as nerve root compression will reflect as positive if active changes are occurring. Changes of denervation develop within the first to third week after compression (fibrillations and positive sharp waves develop first in the paraspinals at 7-10 days and in the limb muscles at 2-3 weeks), and reinnervation is found at about 3-6 months

Acute findings: Identification of fibrillation potentials in denervated muscles with normal motor unit action potentials (usually within 6 months of symptoms: may disappear within 6 weeks in the paraspinals and persist for up to 1-2 years in distal limbs).

Chronic findings: Findings of motor unit action potentials with increased duration and phases that represent reinnervation. With time these become broad, large and polyphasic and may persist for years.

Anatomy: The test primarily evaluates ventral (anterior) root function (motor) and may be negative if there is dorsal root compression (sensory) only. Only C4-8 and T1 in the neck region have limb representation that can be tested electrodiagnostically. The

anatomic basis for this lies in the fact that the cervical nerve roots have a motor and a sensory component. It is possible to impinge the sensory component with a herniated disc or bone spur and not affect the motor component. As a result, the patient may report radicular pain that correlates to the MRI without having EMG evidence of motor loss.

Paraspinal fibrillation potentials: May be seen in normal individuals and are nonspecific for etiology. The presence of these alone is insufficient to make a diagnosis of radiculopathy and they may be absent when there is a diagnosis of radiculopathy secondary to sampling error, timing, or because they were spared. They may support a diagnosis of radiculopathy when corresponding abnormalities are present in the limb muscles.

Indications when particularly helpful: EMG may be helpful for patients with double crush phenomenon, in particular, when there is evidence of possible metabolic pathology such as neuropathy secondary to diabetes or thyroid disease, or evidence of peripheral compression such as carpal tunnel syndrome.

H-reflex: Technically difficult to perform in the upper extremity but can be derived from the median nerve. The test is not specific for etiology and may be difficult to obtain in obese patients or those older than 60 years of age.

([Negrin, 1991](#)) ([Alrawi, 2006](#)) ([Ashkan, 2002](#)) ([Nardin, 1999](#)) ([Tsao, 2007](#)) See [Discectomy-laminectomy-laminoplasty](#). (Surface EMG and F-wave tests are not very specific and therefore are not recommended. For more information on surface EMG, see the [Low Back Chapter](#).)

Nerve conduction studies (NCS): Not recommended. There is minimal justification for performing nerve conduction studies when a patient is presumed to have symptoms on the basis of radiculopathy.

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)