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NOTICE OF INDEPENDENT REVIEW DECISION

DATE OF REVIEW:
Aug/30/2009

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:
EMG/NCV to Bilateral Upper Extremities

DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:
MD, Board Certified in Physical Medicine and Rehabilitation
Board Certified in Electrodiagnostic Medicine

REVIEW OUTCOME:

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

[X] Upheld (Agree)

[ ] Overturned (Disagree)

[ ] Partially Overturned (Agree in part/Disagree in part)

INFORMATION PROVIDED TO THE IRO FOR REVIEW
Adverse Determination Letters, 7/16/09, 7/27/09
Letter from Law Firm, 8/28/09
Neurosurgery Consultation, 7/27/09
ODG-TWC
MD, 7/9/09, 11/18/08
CT Spine, Cervical, 7/27/09
MRI Cervical Spine, 12/21/07
Operative Report, 6/30/08, 5/28/09, 5/5/09
MD, 3/6/09, 5/5/09
MD, 10/16/08, 10/27/08
Cervical Myelogram, 5/9/08
CT Post Myelogram Cervical, 5/9/08
Hospital, 8/23/08
MD, 8/25/08
MD, 2/25/08
EMG Report, 10/21/08
Myelogram Cervical, 8/27/08
CT Spine Cervical, 8/27/08

PATIENT CLINICAL HISTORY SUMMARY

This is a man with a date of injury of xx/xx/xx. He had an EMG on 2/25/08 that showed right cubital tunnel syndrome and a right C6/7 radiculopathy. He subsequently underwent an anterior fusion from C3-C7 with a right C6/7 foraminotomy on 6/30/08 by Dr. for spondylitic changes and disc herniations from C3-C7 and radiculopathy. He had continued neck pain. A CT myelogram performed in 8/08 showed postoperative changes. He underwent a wide foraminotomy at C3/4 and C5/6 decompressing the nerve roots. He remained symptomatic. He reportedly had a second EMG that showed a C5 nerve root irritation. The Electrodiagnostic report from Dr. showed a decrement in the amplitude and slowed conduction across the elbow. The EMG was consistent with a possible right C6/7 radiculopathy based upon the changes in the EDC and soft findings in the pronator teres. Due to persistent pain, a repeat CT myelogram was performed on 7/27/09. This reported the fusions were solid, there was mild right foraminal stenosis at C4/5 and mild bilateral stenosis at C6/7. There were degenerative changes that included osteophytes and facet degeneration, but no evidence of nerve root compression. The studies were compared. Dr. professor of neurosurgery, examined the patient on 11/18/09 and 7/27/09 and described no neurological loss. The reflexes and motor strength were intact. There were sensory complaints related to the left 4th and 5th digits. Dr. wrote on 11/18/08 that this was not consistent with a radiculopathy. In the interval, the patient saw other spinal surgeons and pain specialists. Treatment included Botox injections. Dr. requested a repeat EMG study be performed.

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

There is no motor loss. The EMG better evaluates motor involvement than sensory involvement. This can be reflected by the low sensitivity described by the ODG. The prior EMG showed a possible C5 radiculopathy. It did not meet the ODG criteria for a radiculopathy (two muscles same myotome, but different peripheral nerve supply). The ODG does not validate the use of NCS studies for a radiculopathy. It does justify the use of electrodiagnostic studies to differentiate a radiculopathy from a peripheral nerve compression (CTS was the example). This has been established with the ulnar nerve compression. Even Dr. Kim did not feel there was a radiculopathy in the absence of physical findings of a neurological loss. The radiological findings and prior electrodiagnostic studies did not demonstrate the need for a third set of electrodiagnostic studies as being medically necessary or to have a bearing on his treatment. The reviewer finds that medical necessity does not exist for EMG/NCV to Bilateral Upper Extremities.

Electrodiagnostic studies (EDS)

See Nerve conduction studies (NCS) and Electromyography (EMG)

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 reinervation is found at about 3-6 month

Acute findings: Identification of fibrillation potentials in dennervated 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. (Utah, 2006) See also the Carpal Tunnel Syndrome Chapter for more details on NCS. Studies have not shown portable nerve conduction devices to be effective.

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

[ ] ACOEM-AMERICA 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

[X] MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS

[ ] MERCY CENTER CONSENSUS CONFERENCE GUIDELINES

[ ] MILLIMAN CARE GUIDELINES

[X] 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)