



Medical Review Institute of America, Inc.
America's External Review Network

DATE OF REVIEW: January 14, 2011

IRO Case #:

Description of the services in dispute:

This is the final level appeal of services being denied as not medically necessary. Services denied: (#63075, #63076, #22554, #22845, # 22585, #22851, #20931) C5-6, C6-7 anterior cervical diskectomy and fusion.

A description of the qualifications for each physician or other health care provider who reviewed the decision

The physician who provided this review is board certified by the American Board of Neurological Surgery. This reviewer is a member of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons. The reviewer has completed training in both pediatric and adult neurosurgical care. This reviewer has been in active practice since 2001.

Review Outcome

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

Overtured.

The request for C5-6, C6-7 anterior cervical diskectomy and fusion (#63075, #63076, #22554, #22845, # 22585, #22851, #20931) is medically necessary.

Patient clinical history [summary]

The patient is a female who was involved in a motor vehicle accident on xx/xx/xx. The patient states that she was rear ended and initial CT studies of the cervical spine performed on the date of injury revealed multi level degenerative disc disease and spondylosis, most severe at C5-6 and C6-7. The patient was initially followed for aching and burning pain in the neck and in the low back. No radiating pain into the upper extremities was initially reported. The patient was initially treated with Cyclobenzaprine, Tramadol and Naproxen and referred for physical therapy. The patient began to develop radiating pain in the upper extremities in March of 2010 and an MRI of the cervical spine dated 3/16/10 reveals moderate spondylosis at C5-6 with minor degenerative retrolisthesis of C5-6. No focal disc herniation at this level was noted and there is no evidence of cord impingement or exiting nerve root impingement. Mild foraminal narrowing was present. At C6-7 there is moderate

spondylosis with mild central canal stenosis noted due to disc bulging. There is also mild foraminal narrowing however no cord or exiting nerve root impingement is noted. Physical exam performed on 3/31/10 revealed decreased strength in the left shoulder in all ranges of motion. Loss of range of motion in the cervical spine was also noted however no focal neurologic deficits were present. The patient was recommended for an epidural steroid injection however this was for the lumbar spine.

Follow up on 7/1/10 states the patient has continued complaints of pain in the cervical spine. Physical exam again reveals no significant focal neurologic deficits. The patient was recommended for trigger point injections for the cervical spine. Physical exam on 8/4/10 revealed decreased grip strength in the left hand as compared to the right. There was weakness on left shoulder resisted Abduction and the patient was decreased sensation in the left upper extremity in the C5-T1 dermatomes. The patient had a designated doctor evaluation on 9/16/10 which revealed no focal neurologic deficits in the upper extremity. A CT myelogram study performed on 10/8/10 revealed vacuum disc phenomenon at C6-7 with effacement of a ventral aspect of the cervical cord secondary to calcified posterior disc. Partial effacement of the fat surrounding the exiting left C7 nerve root was noted. Mild unconvertible spurring at C5-6 is noted; no disc herniation at this level or cord deformity was noted. The addendum for the CT myelogram states that there is no cord deformity or abnormal movement on neck flexion and extension views. Electrodiagnostic studies performed on 10/13/10 revealed no evidence of cervical radiculopathy. Follow up on 10/21/10

states the patient has continued complaints of neck pain with numbness and paresthesia in the upper extremities. Physical exam reveals mild weakness in the left tricep wrist flexors and wrist extensors. No reflex changes or sensory changes were noted; a positive left sided Hoffman's sign is noted.

The request for C5–6 anterior cervical discectomy and fusion was denied by utilization review in 2 occasions. The first occasion states that there was insufficient objective evidence regarding radiculopathy to warrant the procedure. The second rationale for denial states that there was no evidence of instability and the patient did not have any documents of psychosocial evaluation.

Analysis and explanation of the decision include clinical basis, findings and conclusions used to support the decision.

Based on the clinical documentation provided for review the prior denials are overturned. The previous denials did not recommend the requested procedure due to lack of instability and insufficient objective evidence regarding cervical radiculopathy. The patient's most recent physical exam in October of 2010 did reveal a positive left sided Hoffman's sign with mild weakness in the triceps and weakness in the shoulder consistent with both the C5–6 and C6–7 levels. These findings are new based on the patient's previous exam findings. The most recent CT myelogram did demonstrate possible nerve root impingement at the C6–7 level and continuing bony pathology at C5–6. The patient has not improved with medication management or physical therapy to date and continues to report radicular pain. As the clinical documentation does reveal evidence of radiculopathy consistent with the MRI findings and the patient has not improve with conservative therapy, medical necessity for the procedure is established.

A description and the source of the screening criteria or other clinical basis used to make the decision:

1. Official Disability Guidelines Online Version Neck and Upper Back Chapter

Fusion, anterior cervical Recommended as an option in combination with anterior cervical discectomy for approved indications, although current evidence is conflicting about the benefit of fusion in general. (See Discectomy/laminectomy/laminoplasty.) Evidence is also conflicting as to whether autograft or allograft is preferable and/or what specific benefits are provided with fixation devices. Many patients have been found to have excellent outcomes while undergoing simple discectomy alone (for one- to two-level procedures), and have also been found to go on to develop spontaneous fusion after an anterior discectomy. (Bertalanffy, 1988) (Savolainen, 1998) (Donaldson, 2002) (Rosenorn, 1983) Cervical fusion for degenerative disease resulting in axial neck pain and no radiculopathy remains controversial and conservative therapy remains the choice if there is no evidence of instability. (Bambakidis, 2005) Conservative anterior cervical fusion techniques appear to be equally effective compared to techniques using allografts, plates or cages. (Savolainen, 1998) (Dowd, 1999) (Colorado, 2001) (Fouyas–Cochrane, 2002) (Goffin, 2003) Cervical fusion may demonstrate good results in appropriately chosen patients with cervical spondylosis and axial neck pain. (Wieser, 2007) This evidence was substantiated in a recent Cochrane review that stated that hard evidence for the need for a fusion procedure after discectomy was lacking, as outlined below:

(1) Anterior cervical discectomy compared to anterior cervical discectomy with interbody fusion with a bone graft or substitute: Three of the six randomized controlled studies discussed in the 2004 Cochrane review found no difference between the two techniques and/or that fusion was not necessary. The Cochrane review felt there was conflicting evidence of the relative effectiveness of either procedure. Overall it was noted that patients with discectomy only had shorter hospital stays, and shorter length of operation. There was moderate evidence that pain relief after five to six weeks was higher for the patients who had discectomy with fusion. Return to work was higher early on (five weeks) in the patients with discectomy with fusion, but there was no significant difference at ten weeks. (Jacobs-Cochrane, 2004) (Abd-Alrahman, 1999) (Dowd, 1999) (Martins, 1976) (van den Bent, 1996) (Savolainen, 1998) One disadvantage of fusion appears to be abnormal kinematic strain on adjacent spinal levels. (Ragab, 2006) (Eck, 2002) (Matsunaga, 1999) (Katsuura, 2001) The advantage of fusion appears to be a decreased rate of kyphosis in the operated segments. (Yamamoto, 1991) (Abd-Alrahman, 1999)