



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

DATE OF REVIEW: October 10, 2008

IRO Case #:

Description of the services in dispute:

Items in dispute: Dynamic weight bearing lumbar myelogram with flexion and extension views and thin cuts through the interbody fusion at L4-5.

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

The physician who provided this review is a fellow of the American Board of Orthopaedic Surgery. This reviewer is a fellow of the North American Spine Society and the American Academy of Orthopaedic Surgeons. This reviewer has been in active practice since 1990.

Review Outcome

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

Upheld

Based upon the submitted clinical information, this reviewer would concur with the two previous reviewers that the request for dynamic weight bearing lumbar myelogram with flexion and extension views and thin cuts through the interbody fusion at L4-5 is not medically necessary.

Information provided to the IRO for review

Records from Provider

Chart note dated 9/3/08

Caudal ESI report dated 7/24/08

Chart note dated 6/11/08

MRI lumbar spine 6/3/08

Chart note date 4/30/08

MRI lumbar spine 6/22/06

Records from Insurance Company

Office note , MD 7/3/08

Chart note 4/30/08
Operative report 8/29/06
CT scan lumbar spine 7/21/06
Operative report 10/4/05
CT scan lumbar spine 10/6/05
Three view lumbosacral spine 10/6/05
CT scan lumbar spine 8/3/05
MRI lumbar spine 6/27/05
MRI lumbar spine 3/31/05
Operative report 2/1/05
MRI lumbar spine 10/22/04
ODG Treatment/Disability Duration Guidelines
Work status report 3/17/08
Work status report 10/26/04
Work status report 10/19/04
Work status report 10/14/04
Progress notes 10/26/04 - 3/17/08
Medical records request form

Patient clinical history [summary]

The patient is a xx year old male who is reported to have sustained work related injuries to his low back on xx/xx/xx. On this date he was driving a diesel rig that flipped over because the wench line pulled the truck backwards. He reports that he lost consciousness for a few minutes following the accident. He was seen at the Medical Center emergency room. He was reported to have pain in his low back and right lower extremity following the accident.

The patient was apparently refractory to conservative care and subsequently underwent a right L4 hemilaminectomy with partial medial facetectomy and foraminotomy with L4-5 discectomy on 02/01/05. Postoperatively the patient failed to improve and he was taken to surgery a second time on 10/04/05. On this date he underwent a revision of L5 laminectomy with bilateral partial medial facetectomy and foraminotomy and a revision of an S1 laminectomy with bilateral S1 nerve root exploration. He subsequently underwent an L5-S1 posterior interbody fusion and posterolateral fusion. Records indicate that the patient continued to have substantial low back pain. Imaging suggested the development of pseudoarthrosis at L4-5. The patient was subsequently taken to surgery a third time on 08/29/06. At this time he underwent an L4-5 posterolateral spinal fusion with pedicle screw instrumentation.

On 04/30/08 the patient was referred to Dr. with complaints of sacral pain equaling low back pain, bilateral lower extremity pain left greater than right. Dr. notes that after the patient's third operative intervention he received 100% relief and returned to the workforce in 12/2006. His relief

persisted until the first week of March 2008. On this date he was loosening a connection, pulling on a pipe wrench when he developed low back pain and right lower extremity pain with the addition of sacral and left lower extremity pain. He has no bladder or bowel dysfunction. It is reported that he has received 4 weeks of active and passive therapies following each of his surgeries. He is not currently performing a home exercise program and he walks with all activities of daily living. He is reported to be a smoker. He is further reported to be working full time. Preoperative radiographs and imaging studies are reviewed. On physical examination the patient is 5'10" and weighs 279 pounds. He is hypertensive. The patient can forward flex to 90 degrees without discomfort. Lateral bending reveals paraspinal spasm on the right. Extension and rotation is negative. There is tenderness to palpation of the lumbar paraspinal musculature as well as the spinous processes and the interspinous spaces of the lumbar spine. There are scars consistent with his surgical history. In a seated position deep tendon reflexes are equal and reactive at the knees and absent at the left ankle. Straight leg raising and Lasegue's are negative. Motor strength is graded as 5/5 and is symmetric. Dermatome pattern reveals numbness in the left thigh proximally and distally along the nerve root distributions of L2 and L3. Dr. opines that the integrity of the L4-5 fusion is questionable. There is spondylosis at L3-4 and L5-S1. There is subacute lumbar radiculopathy. He recommends a single high volume caudal epidural steroid injection. He recommends a repeat lumbar MRI.

MRI of the lumbar spine was performed on 06/03/08. This study reports no significant abnormalities at L1-2. At L2-3 there is facet degenerative and mild ligamentum flavum hypertrophy. There is no significant disc abnormality. There is mild encroachment on the central canal dorsally without substantial foraminal narrowing. At L3-4 there is mild endplate osseous ridging slightly effacing the ventral thecal sac. There is evidence of facet hypertrophic degeneration and mild ligamentum flavum hypertrophy. There is mild narrowing of the central canal and neural foramen. At L4-5 there is lateral endplate osseous ridging extending into the neural foramen. There is mild associated narrowing of the neural foramen asymmetric to the right. There is no significant disc abnormality or central canal narrowing. At L5-S1 there is a broad based central disc protrusion measuring 7.5 mm in the anterior posterior dimension. This effaces the ventral thecal sac approximating the S1 nerve roots without definite impingement or displacement asymmetric to the left. There is mild narrowing of the central canal and mild to moderate foraminal narrowing asymmetric to the left. Dr. opines that there is a stable appearing L4-5 fusion.

The patient was seen in follow up by Dr. on 06/11/08. At this time Dr. reports that on his review he agrees with the reports and sees no definitive evidence of the L4-5 interbody fusion being intact. He reports type II Modic changes in the endplates, no evidence of a transverse process fusion on either side, at any level. He reports a significant HNP to the left at L5-S1 with foraminal stenosis on the left and pedicle screws at L4-5 bilaterally. He again recommends high volume caudal epidural steroid injection and counsels the patient on smoking cessation and opines that the patient is a candidate for repair of pseudoarthrosis at L4-5 with discectomy and fusion of L5-S1. On 07/24/08

the patient underwent a caudal epidural steroid injection. The patient was seen in follow up on 09/03/08. This note indicates that the patient underwent radiographs on 04/30/08 which revealed evidence of an XLIF procedure in the anterior inner space at L4-5 with bilateral percutaneous pedicle screws L4 to L5. L5-S1 has a narrowed interspace with no evidence of fusion; L3-4 interspace appears normal. At this time the patient reports he was pain free for 10 days post injection. On day 11 he was taking his blood pressure medication when he choked on water and his pain returned in his left leg and sacrum immediately. He reports a different kind of pain. He is reported to be taking 8-10 extra strength Tylenol per day. On physical examination it is reported that the patient forward flexes to 40 degrees without discomfort. Lateral bending has decreased range of motion. Extension and rotation are fairly well tolerated. Tenderness is not present. His motor strength is graded as 5/5. His dermatomal pattern reports numbness in the left thigh proximally and distally as well as along the lateral aspect of the left foot. Dr. recommends a myelogram CT weight bearing with upright flexion/extension views and thin cuts through the interbody fusion at L4-5. The request was referred for utilization review on 09/09/08. The case was reviewed by Dr. . Dr. reports that she reviewed the clinical information. She reports that the patient has a stable fusion per radiologist report of the MRI scan dated 06/2008. A telephonic consultation was performed with PA who stated the surgeon would like the bony detail from the myelogram CT scan. Dr. finds the medical necessity is not established for dynamic weight bearing lumbar myelogram with flexion/extension views and non-certifies the request.

This determination was appealed and subsequently reviewed on 09/17/08 by Dr. . Dr. notes the MRI from June 2008 reports a stable intact fusion at L4-5 and identified a disc herniation at L5-S1. He subsequently non-certifies the request.

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

Based upon the submitted clinical information, this reviewer would concur with the two previous reviewers that the request for dynamic weight bearing lumbar myelogram with flexion and extension views and thin cuts through the interbody fusion at L4-5 is not medically necessary. The submitted clinical records indicate that the patient has undergone multiple operative interventions. The most recent was performed on 08/29/06 which was an L4-5 posterolateral spinal fusion with pedicle screw instrumentation. Postoperatively after this procedure the patient is reported to have done well until 03/2008. The patient came under the care of Dr. on 04/30/08 and at this time it is reported that the patient underwent radiographs which are interpreted by Dr. to show no evidence of fusion. The patient was subsequently referred for MRI of the lumbar spine interpreted by Dr. This study dated 06/03/08 reports that the patient has a stable L4-5 fusion and identifies a broad based lobular central to left paracentral disc protrusion at L5-S1 which mildly narrows the central canal and neural foramen associated with facet degeneration. This finding correlates with the patient's reported development of recurrent low back pain. In the absence of an independent imaging study which indicates the presence of pseudoarthrosis or failure of posterolateral fusion,

there would be no indication for a dynamic weight bearing lumbar myelogram with flexion and extension views and thin cuts through the interbody fusion at L4-5.

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

The Official Disability Guidelines, 11th edition, The Work Loss Data Institute.

CT & CT Myelography (computed tomography): Not recommended except for indications below for CT. CT Myelography OK if MRI unavailable, contraindicated (e.g. metallic foreign body), or inconclusive. (Slebus, 1988) (Bigos, 1999) (ACR, 2000) (Airaksinen, 2006) (Chou, 2007) Magnetic resonance imaging has largely replaced computed tomography scanning in the noninvasive evaluation of patients with painful myelopathy because of superior soft tissue resolution and multiplanar capability. Invasive evaluation by means of myelography and computed tomography myelography may be supplemental when visualization of neural structures is required for surgical planning or other specific problem solving. (Seidenwurm, 2000) The new ACP/APS guideline as compared to the old AHCPR guideline is more forceful about the need to avoid specialized diagnostic imaging such as computed tomography (CT) without a clear rationale for doing so. (Shekelle, 2008)

Indications for imaging -- Computed tomography:

- Thoracic spine trauma: equivocal or positive plain films, no neurological deficit
- Thoracic spine trauma: with neurological deficit
- Lumbar spine trauma: trauma, neurological deficit
- Lumbar spine trauma: seat belt (chance) fracture
- Myelopathy (neurological deficit related to the spinal cord), traumatic
- Myelopathy, infectious disease patient
- Evaluate pars defect not identified on plain x-rays
- Evaluate successful fusion if plain x-rays do not confirm fusion (Laasonen, 1989)

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