



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

DATE OF REVIEW: December 21, 2007

IRO Case #:

Description of the services in dispute:

Lumbar discogram

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

The physician providing this review is board certified in Anesthesiology. The reviewer holds additional certification in Pain Medicine from the American Board of Pain Medicine. The reviewer is a diplomate of the National Board of Medical Examiners. The reviewer has served as a research associate in the department of physics at MIT. The reviewer has received his PhD in Physics from MIT. The reviewer is currently the chief of Anesthesiology at a local hospital and is the co-chairman of Anesthesiology at another area hospital. The reviewer has been in active practice since 1978.

Review Outcome

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

Upheld

Provide a description of the review outcome that clearly states whether or not medical necessity exists for each of the health care services in dispute.

Lumbar discogram is not medically necessary.

Information provided to the IRO for review

Records received from State:

- Confirmation of Receipt of a Request for a Review by an Independent Review Organization, 11/30/07
- Request for Review by an Independent Review Organization, 11/1/07
- Notification of Determination letter, 10/5/07
- Letter, 10/24/07

Records received from the Carrier:

- Provider screen
- Letter, 10/12/07

- Appeal, Interventional Spine Associates
- Patient Information, Interventional Spine Associates, 2/7/07
- Workers' Compensation Patient Information, 9/13/06
- TWCC-69 Report of Medical Evaluation
- Designated Doctor Examination, MD, 1/6/05
- Lumbar MRI report, 10/6/06
- Follow up visit notes, Dr. 2/7/07
- Office notes, Dr. 7/11/07
- EMG/NCV report 9/11/07
- Progress notes, Dr. 9/19/07

*ODG Guidelines were not submitted for review.

Patient clinical history [summary]

The claimant is a xx year-old gentleman who allegedly suffered a workplace injury on xx/xx/xx. Subsequently he developed low back pain that radiated down his right leg. Discography revealed concordant pain at L4-5 and L5-S1 and he underwent fusion at those levels. This operation did not result in resolution of his pain. Subsequently he underwent transforaminal steroid injections. A recent EMG/NCV revealed chronic right L4 radiculopathy. He is currently being treated with oral pain medication.

1. Item(s) in dispute: Lumbar Discogram.

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

Discography is not recommended by the ODG Treatment Guidelines, which state: "Discography Not recommended. In the past, discography has been used as part of the pre-operative evaluation of patients for consideration of surgical intervention for lower back pain. However, the conclusions of recent, high quality studies on discography have significantly questioned the use of discography results as a preoperative indication for either IDET or spinal fusion. These studies have suggested that reproduction of the patient's specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. (Pain production was found to be common in non-back pain patients, pain reproduction was found to be inaccurate in many patients with chronic back pain and abnormal psychosocial testing, and in this latter patient type, the test itself was sometimes found to produce significant symptoms in non-back pain controls more than a year after testing.) Also, the findings of discography have not been shown to consistently correlate well with the finding of a High Intensity Zone (HIZ) on MRI. (Carragee-Spine, 2000) (Carragee2-Spine, 2000) (Carragee3-Spine, 2000) (Carragee4-Spine, 2000) (Bigos, 1999) (ACR, 2000) (Resnick, 2002) (Madan, 2002) (Carragee-Spine, 2004) (Carragee2, 2004) (Pneumaticos, 2006) (Airaksinen, 2006) Positive discography was not highly predictive in identifying outcomes from spinal fusion. A recent study found only a 27% success from spinal fusion in patients with low back pain and a positive single-level low-pressure provocative discogram, versus a 72% success in patients having a well-accepted single-level lumbar pathology of unstable spondylolisthesis.

(Carragee, 2006) Discography involves the injection of a water-soluble imaging material directly into the nucleus pulposus of the disc. Information is then recorded about the pressure in the disc at the initiation and completion of injection, about the amount of dye accepted, about the configuration and distribution of the dye in the disc, about the quality and intensity of the patient's pain experience and about the pressure at which that pain experience is produced. Both routine x-ray imaging during the injection and post-injection CT examination of the injected discs are usually performed as part of the study. There are two diagnostic objectives: (1) to evaluate radiographically the extent of disc damage on discogram and (2) to characterize the pain response (if any) on disc injection to see if it compares with the typical pain symptoms the patient has been experiencing. Criteria exist to grade the degree of disc degeneration from none (normal disc) to severe. A symptomatic degenerative disc is considered one that disperses injected contrast in an abnormal, degenerative pattern, extending to the outer margins of the annulus and at the same time reproduces the patient's lower back complaints (concordance) at a low injection pressure."

On the basis of the ODG Guidelines, the subject discogram is not medically necessary.

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

"Discography Not recommended. In the past, discography has been used as part of the pre-operative evaluation of patients for consideration of surgical intervention for lower back pain. However, the conclusions of recent, high quality studies on discography have significantly questioned the use of discography results as a preoperative indication for either IDET or spinal fusion. These studies have suggested that reproduction of the patient's specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. (Pain production was found to be common in non-back pain patients, pain reproduction was found to be inaccurate in many patients with chronic back pain and abnormal psychosocial testing, and in this latter patient type, the test itself was sometimes found to produce significant symptoms in non-back pain controls more than a year after testing.) Also, the findings of discography have not been shown to consistently correlate well with the finding of a High Intensity Zone (HIZ) on MRI. (Carragee-Spine, 2000) (Carragee2-Spine, 2000) (Carragee3-Spine, 2000) (Carragee4-Spine, 2000) (Bigos, 1999) (ACR, 2000) (Resnick, 2002) (Madan, 2002) (Carragee-Spine, 2004) (Carragee2, 2004) (Pneumaticos, 2006) (Airaksinen, 2006) Positive discography was not highly predictive in identifying outcomes from spinal fusion. A recent study found only a 27% success from spinal fusion in patients with low back pain and a positive single-level low-pressure provocative discogram, versus a 72% success in patients having a well-accepted single-level lumbar pathology of unstable spondylolisthesis. (Carragee, 2006) Discography involves the injection of a water-soluble imaging material directly into the nucleus pulposus of the disc. Information is then recorded about the pressure in the disc at the initiation and completion of injection, about the amount of dye accepted, about the configuration and distribution of the dye in the disc, about the quality and intensity of the patient's pain experience and about the pressure at which that pain experience is produced. Both routine x-ray imaging during the injection and post-injection CT examination of the injected discs are usually performed as part of the study. There are two

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1. Carragee EJ, Lincoln T, Parmar VS, Alamin T. A gold standard evaluation of the "discogenic pain" diagnosis as determined by provocative discography. *Spine* 2006;31(18): 2115–23.
2. Derby R, Kim BJ, Lee SH, Chen Y, Seo KS, Aprill C. Comparison of discographic findings in asymptomatic subject discs and the negative discs of chronic LBP patients: can discography distinguish asymptomatic discs among morphologically abnormal discs? *Spine J* 2005;5(4): 389–94.
3. Madan S, Gundanna M, Harley JM, Boeree NR, Sampson M. Does provocative discography screening of discogenic back pain improve surgical outcome? *J Spinal Disord Tech* 2002;15(3): 245–51.
4. Carragee EJ, Tanner CM, Khurana S, et al. The rates of false-positive lumbar discography in select patients without low back symptoms. *Spine* 2000;25(11): 1373–80; discussion 1381.
5. Carragee EJ. Is lumbar discography a determinate of discogenic low back pain: provocative discography reconsidered. *Curr Rev Pain* 2000;4(4): 301–8.

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