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Notice of Independent Review Decision

MEDICAL RECORD REVIEW:

DATE OF REVIEW: 04/09/2010 **Amended:** 04/13/2010

IRO CASE #:

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

This case was reviewed by a Pain Management (Board Certified) doctor, Licensed in Texas and Board Certified. The reviewer has signed a certification statement stating that no known conflicts of interest exist between the reviewer and the injured employee, the injured employee's employer, the injured employee's insurance carrier, the utilization review agent (URA), any of the treating doctors or other health care providers who provided care to the injured employee, or the URA or insurance carrier health care providers who reviewed the case for a decision regarding medical necessity before referral to the IRO. In addition, the reviewer has certified that the review was performed without bias for or against any party to the dispute.

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Right lumbar epidural steroid injection L5-S1

REVIEW OUTCOME

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

Overtuned (Disagree)

INFORMATION PROVIDED TO THE IRO FOR REVIEW

- o Submitted medical records were reviewed in their entirety.
- o Treatment guidelines were provided to the IRO.
- o 01-22-10 Medical Center ER Discharge Summary
- o 01-22-10 Thoracic MRI read by Dr.
- o 01-22-10 Lumbar MRI read by Dr.
- o 01-27-10 TWCC from Dr.
- o 02-06-10 Medical Report from Dr.
- o 02-15-10 Medical Report from DC
- o 02-17-10 Initial Adverse Determination Letter
- o 02-19-10 TWCC 73 from Dr.
- o 03-01-10 Follow up medical report from Dr.
- o 03-06-10 Patient SOAP Notes from Dr.
- o 03-08-10 Patient SOAP Notes from Dr.
- o 03-10-10 Adverse Determination letter for reconsideration
- o 03-23-10 Patient SOAP Notes from Dr.
- o 03-24-10 Request for IRO from the Claimant
- o 03-27-10 Confirmation of Receipt of Request for IRO from TDI
- o 03-30-10 TWCC from Dr.
- o 03-30-10 Notice of Case Assignment for IRO from TDI

PATIENT CLINICAL HISTORY [SUMMARY]:

According to the medical records and prior reviews, the patient is a xxxx who sustained an industrial injury to

the low back on xx/xx/xx when moving a wheelchair from a ramp. He has been treated with chiropractic treatment. On January 22, 2010 he worsened and presented to ER where he was evaluated and released with instructions to follow-up with a medical physician.

ER Discharge Notes indicate the patient was seen on January 22, 2010 for back pain. He was asked to follow-up in 4-7 days and to return to the ER if pain worsens. He should use Ibuprofen 800 mg every 6 hours as needed. His prescriptions included Valium and Lortab. Back pain and medication instruction was provided.

Thoracic MRI performed January 22, 2010 was given impression disc dessication from T5-T6 through T11-12 shows circumferential bulging, and slight narrowing without focal disc herniation or significant cord impingement. Lumbar MRI of the same date shows L5-S1 right central disc herniation protrusion producing posterior deformity of the right S1 nerve root. Multilevel minimal bulging and L3-4 right lateral disc herniation protrusion producing deformity of the nerve root ganglion.

A work status report (TWCC 73) indicated the patient was allowed to return to work with restrictions on February 1, 2010 and would remain with restrictions through March 1, 2010.

The patient was evaluated orthopedically on February 6, 2010 for back pain of 8/10 that increases with activities and decreases with medications, heat and rest. 20% of the symptoms include intermittent right leg numbness and tingling along the buttocks, anterior thigh and anterior knee. He reports benefit from resting and a TENS unit. His health history is significant for high blood pressure and a prior hemorrhoid surgery. He is using Lortab and Valium. He does not smoke. On examination, he stands erect without a list or splinting. He demonstrates normal gait and bilateral hip range of motion is full and without pain. There is bilateral paravertebral muscular tenderness. He can bend forward to the mid-lower leg level. Sacroiliac joint testing is negative. There is full motor strength in all lower extremity muscle groups. Reflexes are symmetric with exception of Achilles (S1), which shows 2/4 left and 0/4 right. Sensation is normal in all dermatomes. Valsalva is negative. Straight leg raise is negative bilaterally. AP pelvic x-rays taken this exam show a normal study. Lumbar x-rays performed this exam show a normal study. Thoracic MRI performed 1/22/10 was given impression: Degenerative disc disease/dessication at T5-6 and T11-12. Nerve studies have not been performed. Assessment is low back pain and lumbar radiculopathy. Options were discussed. Instruction was given for use of heat, ice and home exercises with stretching. Weight loss was recommended. A diagnostic ESI was recommended which could also have a therapeutic value. The patient desired to proceed with a diagnostic ESI.

The patient returned to his chiropractic provider on February 15, 2010. He has been attending therapy and exercises for nearly one month with slight improvement. MRI studies were ordered and performed on January 22, 2010 demonstrating a L5-S1 central disc herniation producing posterior deformity of the S1 nerve root. A right lateral disc herniation was noted at L3-4 producing deforming of the nerve root ganglion. He was sent for an orthopedic consultation and the specialist has recommended an epidural injection at L5-S1. He would also benefit from additional therapy and exercises consisting of mild mechanical traction, interferential current and low impact cross crawl exercises. 12 sessions are recommended.

Request for right lumbar epidural steroid injection L5-S1 was considered in review on February 17, 2010 with recommendation for non-certification. The claimant has a diagnosis of low back pain with no radiculopathy. The physical examination of February 6, 2010 is not consistent with radiculopathy as the findings noted normal sensation, muscle strength and negative SLR bilaterally. ODG requires radiculopathy to be present to perform ESI.

A work status report (TWCC 73) dated February 19, 2010 indicates the patient is allowed to return to regular work on March 1, 2010.

The patient was reevaluated orthopedically on March 1, 2010. He states he is only able to tolerate light duty with use of medications. His low back pain reaches levels of 8/10. The right leg radicular numbness and tingling persists. He reports a new cramping pain that can last up to 2 days along the posterior aspect of the right lower leg. He ambulates with stiffness and lumbar motion is restricted. Rotation, extension and flexion increase his pain. The lower extremities have a decreased sensation along the right anterior thigh and the anterior aspect of the knee. There is a positive right straight leg raise and an absent right Achilles reflex. Assessment is lumbago, lumbar radiculopathy and lumbar herniated disc. Work restrictions are provided restricting lifting to 20 pounds. Appeal is made for epidural injection. He does have radiculopathy as clearly mentioned on the initial note along with the absence of reflexes.

Patient SOAP Notes dated March 23, 2010 note the patient is working with restrictions. He feels worse since the prior visit. Pain diagram notes pain over the L1-S1 region and bilateral buttocks.

Request for reconsideration right lumbar epidural steroid injection L5-S1 was considered in review on March 10, 2010 with recommendation for non-certification. The patient is almost 2 months post injury. The reported numbness in his anterior thigh and knee would not be consistent with the reported L5-S1 disc abnormality. As noted in the prior review, there was a normal straight leg raise and motor strength on the February 5, 2010 examination. The clinical exam findings do not validate the L5-S1 disc abnormality as a basis for his radicular symptoms. A peer discussion was attempted but not realized and a time constraint was noted.

The claimant requested an IRO.

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

ODG supports ESI as a possible option for short-term treatment of radicular pain (defined as pain in dermatomal distribution with

corroborative findings of radiculopathy) with use in conjunction with active rehab efforts. Generally, ESI are provided to patient's who are headed for surgery but seek a means of temporary relief so they can engage in further aggressive rehabilitation efforts and perhaps avoid a surgery.

The patient has been allowed to work without restrictions by the primary provider since March 1, 2010; work restriction have been provided by his orthopedic provider most recently on march 1, 2010.

Lumbar MRI shows L5-S1 right central disc herniation protrusion producing posterior deformity of the right S1 nerve root. Multilevel minimal bulging and L3-4 right lateral disc herniation protrusion producing deformity of the nerve root ganglion. In February 2010, 20% of the symptoms include intermittent right leg numbness and tingling along the buttocks, anterior thigh and anterior knee. There is full motor strength is all lower extremity muscle groups. Reflexes are symmetric with exception of Achilles (S1), which shows 2/4 left and 0/4 right. Sensation is normal in all dermatomes. Valsalva is negative. Straight leg raise is negative bilaterally. Lumbar x-rays performed this exam show a normal study. The patient was advised to lose weight, although his height and weight are not reported. He is being provided chiropractic treatment consisting of mild mechanical traction, interferential current and low impact cross crawl exercises with 12 additional sessions recommended.

First line denial rationale noted lack of documentation for radiculopathy per physical examination findings. The patient was subsequently reexamined. Examination findings were significant for decreased sensation along the right anterior thigh and anterior aspect of the knee, a positive right straight leg raise and an absent right Achilles reflex.

Per the second line reviewer, the reported numbness in his anterior thigh and knee would not be consistent with the reported L5-S1 disc abnormality. As noted in the prior review, there was a normal straight leg raise and motor strength on the February 5, 2010 examination. The clinical exam findings do not validate the L5-S1 disc abnormality as a basis for his radicular symptoms.

A diagnostic ESI was recommended which could also have a therapeutic value. The patient is not improving with therapy and continues to have work restrictions. Imaging indicates possible neurocompression both at the level of the right S1 nerve root and the L3-4 nerve root ganglion on the right. He reports a new cramping pain that can last up to 2 days along the posterior aspect of the right lower leg. He ambulates with stiffness and lumbar motion is restricted. Given the lack of an Achilles reflex, positive right straight leg raise and sensation abnormality in the anterior thigh and knee, a diagnosis of radiculopathy has been established, however I would agree that at this time it is not clear whether the patient's symptoms are coming from the level of the right sided L3-4 ganglion, which could produce anterior thigh symptoms as the patient is noted to have, or the S1 level, which can contribute to the patient's posterior leg pain, cramping and achilles reflex changes. There do not appear to be other treatment options at this time. A single diagnostic ESI at L5-S1 could be supported.

Therefore, my determination is to overturn the previous decision of non-certification of the right lumbar epidural steroid injection L5-S1.

The IRO's decision is consistent with the following guidelines:

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

The Official Disability Guidelines (03-26-2010) Lumbar Chapter: Epidural Steroid Injections:

Recommended as a possible option for short-term treatment of radicular pain (defined as pain in dermatomal distribution with corroborative findings of radiculopathy) with use in conjunction with active rehab efforts. See specific criteria for use below. Radiculopathy symptoms are generally due to herniated nucleus pulposus or spinal stenosis, although ESIs have not been found to be as beneficial a treatment for the latter condition.

Short-term symptoms: The American Academy of Neurology recently concluded that epidural steroid injections may lead to an improvement in radicular pain between 2 and 6 weeks following the injection, but they do not affect impairment of function or the need for surgery and do not provide long-term pain relief beyond 3 months. Epidural steroid injection can offer short-term pain relief and use should be in conjunction with other rehab efforts, including continuing a home exercise program. There is little information on improved function or return to work. There is no high-level evidence to support the use of epidural injections of steroids, local anesthetics, and/or opioids as a treatment for acute low back pain without radiculopathy. This recent RCT concluded that both ESIs and PT seem to be effective for lumbar spinal stenosis for up to 6 months. Both ESI and PT groups demonstrated significant improvement in pain and functional parameters compared to control and no significant difference was noted between the 2 treatment groups at 6 months, but the ESI group was significantly more improved at the 2nd week.

Use for chronic pain: Chronic duration of symptoms (> 6 months) has also been found to decrease success rates with a threefold decrease found in patients with symptom duration > 24 months. The ideal time of either when to initiate treatment or when treatment is no longer thought to be effective has not been determined. Indications for repeating ESIs in patients with chronic pain at a level previously injected (> 24 months) include a symptom-free interval or indication of a new clinical presentation at the level. Transforaminal approach: Some groups suggest that there may be a preference for a transforaminal approach as the technique allows for delivery of medication at the target tissue site, and an advantage for transforaminal injections in herniated nucleus pulposus over translaminar or caudal injections has been suggested in the best available studies. This approach may be particularly helpful in patients with large disc herniations, foraminal stenosis, and lateral disc herniations.

Fluoroscopic guidance: Fluoroscopic guidance with use of contrast is recommended for all approaches as needle misplacement may be a cause of treatment failure.

Factors that decrease success: Decreased success rates have been found in patients who are unemployed due to pain, who smoke, have had previous back surgery, have pain that is not decreased by medication, and/or evidence of substance abuse, disability or litigation. Research reporting effectiveness of ESIs in the past has been contradictory, but these discrepancies are felt to have been, in part, secondary to numerous methodological flaws in the early studies, including the lack of imaging and contrast administration. Success rates also may depend on the technical skill of the interventionalist.

Also see Epidural steroid injections, "series of three" and Epidural steroid injections, diagnostic. ESIs may be helpful with radicular symptoms not responsive to 2 to 6 weeks of conservative therapy. Epidural steroid injections are an option for short-term pain relief of persistent radiculopathy, although not for nonspecific low back pain or spinal stenosis. As noted above, injections are recommended if they can facilitate a return to functionality (via activity & exercise). If post-injection physical therapy visits are required for instruction in these active self-performed exercise programs, these visits should be included within the overall recommendations under Physical therapy, or at least not require more than 2 additional visits to reinforce the home exercise program.

With discectomy: Epidural steroid administration during lumbar discectomy may reduce early neurologic impairment, pain, and convalescence and enhance recovery without increasing risks of complications.

An updated Cochrane review of injection therapies (ESIs, facets, trigger points) for low back pain concluded that there is no strong

evidence for or against the use of any type of injection therapy, but it cannot be ruled out that specific subgroups of patients may respond to a specific type of injection therapy. Recent studies document a 629% increase in expenditures for ESIs, without demonstrated improvements in patient outcomes or disability rates. There is fair evidence that epidural steroid injection is moderately effective for short-term (but not long-term) symptom relief. This RCT concluded that caudal epidural injections containing steroids demonstrated better and faster efficacy than placebo.

Criteria for the use of Epidural steroid injections:

Note: The purpose of ESI is to reduce pain and inflammation, thereby facilitating progress in more active treatment programs, and avoiding surgery, but this treatment alone offers no significant long-term functional benefit.

(1) Radiculopathy must be documented. Objective findings on examination need to be present. For unequivocal evidence of radiculopathy, see AMA Guides, 5th Edition, page 382-383. (Andersson, 2000)

(2) Initially unresponsive to conservative treatment (exercises, physical methods, NSAIDs and muscle relaxants).

(3) Injections should be performed using fluoroscopy (live x-ray) and injection of contrast for guidance.

(4) Diagnostic Phase: At the time of initial use of an ESI (formally referred to as the "diagnostic phase" as initial injections indicate whether success will be obtained with this treatment intervention), a maximum of one to two injections should be performed. A repeat block is not recommended if there is inadequate response to the first block (< 30% is a standard placebo response). A second block is also not indicated if the first block is accurately placed unless: (a) there is a question of the pain generator; (b) there was possibility of inaccurate placement; or (c) there is evidence of multilevel pathology. In these cases a different level or approach might be proposed. There should be an interval of at least one to two weeks between injections.

(5) No more than two nerve root levels should be injected using transforaminal blocks.

(6) No more than one interlaminar level should be injected at one session.

(7) Therapeutic phase: If after the initial block/blocks are given (see "Diagnostic Phase" above) and found to produce pain relief of at least 50-70% pain relief for at least 6-8 weeks, additional blocks may be required. This is generally referred to as the "therapeutic phase." Indications for repeat blocks include acute exacerbation of pain, or new onset of symptoms. The general consensus recommendation is for no more than 4 blocks per region per year. (CMS, 2004) (Boswell, 2007)

(8) Repeat injections should be based on continued objective documented pain relief, decreased need for pain medications, and functional response.

(9) Current research does not support a routine use of a "series-of-three" injections in either the diagnostic or therapeutic phase. We recommend no more than 2 ESI injections for the initial phase and rarely more than 2 for therapeutic treatment.

(10) It is currently not recommended to perform epidural blocks on the same day of treatment as facet blocks or sacroiliac blocks or lumbar sympathetic blocks or trigger point injections as this may lead to improper diagnosis or unnecessary treatment.

(11) Cervical and lumbar epidural steroid injection should not be performed on the same day. (Doing both injections on the same day could result in an excessive dose of steroids, which can be dangerous, and not worth the risk for a treatment that has no long-term benefit.)

GUIDELINES / REFERENCES: Dermatome Theory and Mapping

Nitta et al: Finally, Nitta et al. published the first investigation that was of high scientific design (2)! In 1992, this group of investigators successfully mapped the sensory-dermatomal distribution of the L4, L5, and S1 nerve roots. They gathered 71 patients, who were suffering disc herniation-associated radicular pain, and 'blocked' (anesthetized) their problematic nerve root with Xylocain; this was done under fluoroscopy to ensure the correct nerve roots were blocked. Next they carefully marked (aka: mapped) the areas on the patients skin that were numbed by the Xylocain nerve blocks.

The results were tabulated and are shown below; however, the bottom line is this: "The L4 nerve root innervates (connects, gives-life-to) the medial side (inside) of the lower leg in 88% of the patients tested. The L5 nerve root innervates the side of the first digit (big toe) on the dorsum (top) of the foot in 82% of the patients. The S1 nerve root innervates the side of the fifth digit of the foot in 83% of the individuals." Although the majority of patients seem to share the same 'nerve root dermatomal distributions' (wiring), this investigation has clearly demonstrated that the neural anatomy of the lumbar spine does have some degree of variation, i.e., some 20% of the patients did NOT have the typical 'nerve root dermatomal distributions'. For example, in some patients, a L5 nerve root block would result in numbness of the S1 dermatome and not the anticipated L5 dermatome.

I've based my recommended Dermatome Maps (as has Volvo Award Winner Dr. Nikolai Bogduk) on Nitta's work simply because today, this is the most accurate information we have on nerve root sensory distribution.

S1 RADICULAR PAIN:

If the L5 disc herniates into the 'lateral recess' (which is where it usually does) and compresses / irritates the descending S1 nerve root, the patient may suffer an S1 radicular pain (aka: S1 root-pain, or S1 Sciatica). Fig.# 4 shows the regions in the lower limb where the patient will most likely suffer the symptoms of S1 sciatica (2). As you can see, the majority of patients (75%) suffer the burning, stinging, and numbing pain of sciatica in the lateral foot, posterolateral leg, thigh, and butt, as well as, the bottom, outer 1/2 of the foot. These pains are the result of damage and irritation to the 'sensory portion' (portion of the nerve root which connects to skin) of the nerve root.

If the 'motor portion' (portion of the nerve root which connects to muscle) of the S1 nerve root is damaged or irritated by the disc herniation, the patient may suffer weakness and/or atrophy in the Gastrocnemius muscle (the calf), the peroneal muscles (foot evertors), and/or the muscles which flex or curl the 'big toe'. The Achilles' Reflex and Plantar Reflex may also be diminished or absent. If severe, the patient will be unable to do 'calf raises' with the effected foot. Calf raising is the 'gold standard' muscle test for S1.

L5 Radicular Pain

If the L4 disc herniates into the 'lateral recess' (which is where it usually does) and compresses / irritates the descending L5 nerve root, the patient may suffer an L5 radicular pain (aka: L5 root-pain, or L5 Sciatica). Fig. # 5 shows the regions in the lower limb where the patient will most likely suffer the symptoms of L5 sciatica (2). As you can see, the majority of patients (75%) suffer the burning, stinging, and numbing pain of sciatica in the top and inner surface (dorsum) of the foot, the outer-front of the leg, and the bottom of the big toe. These pains are the result of damage and irritation to the 'sensory portion' (portion of the nerve root which connects to skin) of the nerve root.

If the 'motor portion' (portion of the nerve root which connects to muscle) of the L5 nerve root is damaged or irritated by the disc herniation, the patient may suffer weakness in the Extensor Hallusis Longus muscle (muscle that lifts the big toe - classic finding) or the muscles that dorsi-flex the foot (lift the foot up) upward. If severe, the patient will be unable to 'walk on their heels' with their toes and ball-of-the-foot off the ground. There is no reliable reflex test for this nerve root.

[[http://www.chirogeek.com/003_DERMATOME-THEORY.htm]]: