



Pain Management

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NEW TREATMENT OPTION FOR DISC HERNIATION

Discogenic leg pain is a major health care expenditure in the United States. This pain is often caused by one or more disc herniations or disc bulges, which result in mechanical and/or chemical irritation of nerve roots. There are two types of disc herniations: compressive and non-compressive.

Compressive herniated discs are usually treated with open surgical discectomy and decompression when a progressive motor, sensory, and/or reflex change (i.e., radiculopathic pattern) is noted on neurological exams. Clinical improvement is achieved by reducing pressure within the intervertebral disc and its adjacent nerve root. The efficacy of open surgical discectomy may be limited by re-herniation and problems associated with the subsequent development of perineural scarring and postoperative fibrosis. As a result open surgical disc decompression may be ineffective in some patients causing the

syndrome commonly referred to as “failed back surgery syndrome”. Open surgical disc decompression can also be associated with significant morbidity, including permanent structural abnormalities produced by invasion of the spinal canal, dissection of the



ligamentum flavum, removal of lamina, and disruption of the disc annulus. Percutaneous discectomy avoids all of these problems, as well as avoiding the risks associated with general anesthesia and possible blood transfusions often needed in open surgical decompression. Because of its comparatively low complication and morbidity rates, percutane-

ous discectomy is much less expensive both financially and physically.

Non-compressive herniated discs are the more common of the two types. The typical presentation in this group is a painful, non-progressive radicular pattern. In this group open surgical disc decompression plays a limited role in management even when other non-operative therapies also commonly fail. These patients are initially treated with rest, physical therapy, chiropractic, and non-steroidal anti-inflammatory medications. If symptoms persist, spinal injection therapy becomes important to clarify the diagnosis and to treat the nerve root inflammation/radiculitis caused by the herniated disc. Refractory pain can be effectively treated with percutaneous microdiscectomy, avoiding the potentially serious morbidities from invasive open surgical discectomy.

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Points of Interest

- ... Pain Management Consultations
- ... In office procedure room with fluoroscope Guided Injections Including:
 - ... Epidural Steroid Injections
 - ... Facet Injections
 - ... Discograms
- ... **Microdiscectomy**
 - ... Nerve Blocks
 - ... Sacroiliac Injections
 - ... Sympathetic Blocks
 - ... Celiac Plexus Blocks
 - ... Radiofrequency Neural Ablation
 - ... Onsite X-ray
 - ... Musculoskeletal Diagnostic Ultrasound
 - ... DEXA Bone Density
 - ... Physical Therapy
 - ... Nerve conduction/EMG

PERCUTANEOUS MICRODISCECTOMY

Non-radicular low back pain may also be caused by a central herniated disc that places pressure on the posterior longitudinal ligament. These patients may also benefit from percutaneous microdiscectomy when other therapies have failed.

All intervertebral levels (cervical, thoracic, and lumbar) can be potentially treated with percutaneous microdiscectomy. However, some patients will not be good candidates for this minimally invasive procedure. These include the following: progressive neurological deficit (motor, sensory, reflexes, bowel/bladder changes), more than two symptomatic disc levels, spinal instability, spinal fracture or tumor, significant coexisting medical or psychological conditions, and pain drawing inconsistent with clinical diagnosis. Other clinic diagnoses can usually be made with spinal procedures that identify and treat primary pain generators (such as facets, torn or leaking discs, spinal stenosis, etc). In addition, intervertebral disc space height must be at least preserved by 50% to benefit from this procedure. This is because there must be adequate elasticity within the disc material for it to be able to move off of the nerve root area after percutaneous microdiscectomy is done. In addition, patients who have had previous open surgical decompressions may be candidates for percutaneous microdiscectomy after at least six months have passed, even at the disc level for which the surgery failed.

Based on these criteria, the patients who will most likely benefit from percutaneous microdiscectomy

are young or middle-aged people with radicular symptoms without evolving neurological deficit that have a demonstrated disc bulge/herniation on MRI with a diag-

Advantages of Percutaneous Discectomy

- ... Outpatient procedure performed under local sedation
- ... Short procedure time (30 minutes)
- ... No incision (17 gauge)
- ... No surgical scarring, leading to further pain
- ... Quick recovery time
- ... Cost-effective
- ... Safe
- ... Covered by most insurance

nostically positive selective nerve root block (that is, blocking the nerve root at the level of the disc herniation gives significant radicular pain relief). The pain specialists at FirstChoice HealthCare will perform thorough exams as well as any blocks necessary in order to determine which patients meet these criteria.

Under fluoroscopic guidance, a Dekompressor® 1.5-mm Percutaneous Discectomy probe is inserted through a 17g or 19g cannula into the nucleus pulposus of the problem disc on the symptomatic side. Following injection of anesthetic and a small amount of steroid into the disc, the probe

is turned on and creates a small channel through which a small amount of nucleus pulposus material is aspirated (1/2-2 cc depending on size of herniation). The microdiscectomy procedure takes about 20-30 minutes and is done under local anesthetic, using little to no sedation. Patients are discharged shortly afterwards (the same day) and are placed on physical restriction for 5-7 days. Complete healing takes about 3-5 weeks as the aspirated portion of the disc space is gradually “filled in” by herniated disc material, effectively removing the source of nerve root irritation.

Percutaneous microdiscectomy has been studied and found to be effective for those patients who meet these inclusion criteria⁽¹⁾. One year follow up data show sustained reductions in VAS (visual analog scale) score, functional improvement, medication reduction, and patient satisfaction. Percutaneous disc decompression/microdiscectomy can be successfully integrated into a long-term conservative treatment program for chronic discogenic leg and back pain. We at FirstChoice HealthCare are pleased to be able to offer this service to your patients with unremitting low back pain without the need for invasive spine surgery.

REFERENCE

1. Alo KM, Wright RE, Sutcliffe J, Brandt S. Percutaneous Lumbar Discectomy: Pain Practice. 2005;5:116-124.

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