Lumbar Disc Herniation

Lumbar disc herniation typically presents in patients who already have some degree of degeneration or deterioration of the lumbar discs. L4-5 and L5-S1 are most commonly affected. Typically, they present with leg pain greater than low back pain, and possible numbness, tingling or weakness. This may depend upon the character of the disc herniation. If the disc herniation is central, axial back pain may be the predominating symptom. If the disc herniation is posterolateral and compressing or abutting the nerve root, then the leg symptoms may predominate. Less frequently, a far lateral disc herniation may occur in which typically leg pain predominates. Rare, but also of greatest concern, is a disc herniation which can cause "cauda equina syndrome". This may present with numbness in the perineal region, often usually with symptoms in both legs and possible bladder and bowel incontinence/dysfunction.

In previous studies at Midwest Spine Institute, patients referred for treatment of lumbar disc herniation, posterolateral type, were found to have substantial improvement with observation and physical therapy in 40%. In a prospective, randomized, Level I study performed at Midwest Spine Institute and published as lead article in the prestigious *Journal of Bone and Joint Surgery (Vol. 86-A, April 2004)*, we found that of those patients who did not improve by six weeks that epidural steroid injections were effective in approximately 45%. Surgical treatment, discectomy, was 92% to 98% successful in these patients and had the quickest relief of symptoms. Additionally, we found that our disc herniation patients had uniform resolution of mild or moderate weakness even with nonoperative treatment. Based upon our research, we no longer make patients suffer for six weeks prior to spinal steroid injections, but offer these early on in their treatment course combined with physical therapy, use of nonsteroidal antiinflammatory medications and rare, selective use of opioids. Oral steroids may also be effective.

Our study had a 2-3 year follow-up. Longer term studies suggest that some patients may have continued axial low back pain despite relief of their leg symptoms of which some of these patients then undergo spinal fusion or disc replacement. Recurrent disc herniations occurred from 5-10% of which slightly over half benefit from revision surgery whereas others may be treated nonoperatively.

Patients who have central disc herniations with predominantly axial low back pain usually have unpredictable improvement with discectomy alone. Cauda equina syndrome cases need to be treated surgically in an urgent fashion.