

Chiropractic Manipulation in the Presence of Acute Cervical Intervertebral Disc Herniation

A RISK MANAGEMENT PERSPECTIVE

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The management of patients with neck and arm pain is a very common practice in the chiropractic profession. The causes of neck and arm pain are varied, but the vast majority of these cases are within the treatment realm of the average chiropractor. One frequent cause is cervical disc herniation compressing a nerve root, with resulting radicular involvement to the arm. Even this condition is readily responsive to chiropractic intervention in the vast majority of cases.

When one of these patients has a poor outcome while under the care of a chiropractor, a malpractice lawsuit may occasionally ensue. This article will examine the current state of chiropractic involvement in the treatment of cervical disc herniations and the steps necessary to prevent an unpleasant lawsuit.

Cervical disc herniations often succeed trauma, but gradual onset or episodes of mild trauma may result in annular weakening with a subsequent shift of nuclear contents.¹ The patient may present with the appearance of a cervical sprain injury or merely a stiff neck with a gradual onset.² The condition follows a natural progression of signs and symptoms and often, no matter what treatment regimen is established, deterioration will occur.

Orthopedic and neurological testing are often negative for a radicular component in the beginning, with a gradual onset of arm pain, numbness and weakness after days or weeks. According to Turek,² the first sign of cervical disc herniation is often a restriction of neck extension.

There have been a number of articles published in recent years characterizing the management of cervical intervertebral disc herniations with chiropractic manipulation. These articles have typically been case studies from a general practice perspective describing the effects of chiropractic management of this condition. In most instances no distinction is offered between acute or chronic cases; however, Polkinghorn and Brouillette have specifically mentioned acute occurrences.^{3,4} In light of current chiropractic literature, it is apparent that chiropractic manipulation in the presence of acute and chronic cervical disc herniations has become well established. According to a 1997 survey by Croft, 93 percent of responding chiropractors indicated that they would manipulate a patient who presented with a cervical disc herniation.⁵

Positive outcomes with chiropractic manipulation of cervical disc herniations have resulted in almost every article that this author reviewed, even in the presence of neurological deficit. Hubka described two patients who had an exacerbation of arm pain and increased neurological deficit after manipulation at the level of disc herniation with the neck rotated toward the side of radiculopathy.⁶ Overall, the outcomes have been very good. The incidence of complications from cervical spine manipulation is generally very low. A 1996 RAND study⁷ estimated the complication rate at 1.46 per million cervical manipulations, most of which were CVA. Major impairment was

found to be only 0.639 per million. BenEliyahu specifically states: "Patients with and without nerve root compression secondary to cervical disk herniation can and do respond well to chiropractic care. Chiropractic management of this condition can and should be employed prior to more invasive treatment."⁸

Chiropractic management of cervical disc herniations can become problematic; such as when the patient enters the practitioner's office with a cervical sprain and is later diagnosed with a disc extrusion and attendant neurological deficit by a medical neurologist after the disc symptoms become fully manifest. In cases like this, the patient and the legal counsel may not view the chiropractic management as innocuous. The chiropractic profession is wholeheartedly involved in the treatment of cervical disc herniations, so practitioners should initiate protective measures, not only to ensure the best patient care, but also to prevent litigation.

Known risks to chiropractic manipulation in the presence of cervical disc herniation include increasing the size of the herniation and aggravation of the herniation producing an extrusion.⁹

This deterioration of the condition may result in increased radicular symptoms and objective signs of neurological deficit. Several authors mention contraindications, but the precise circumstances vary. Notably:

- The Mercy guidelines state that manipulation is absolutely contraindicated" ... in extreme extrusions with severe neurological deficit."¹⁰ Bergman specifies that manipulation is contraindicated in the presence of "disc prolapse with neurological deficit."¹¹
- Haldeman suggests: "In the acute phase of cervical spine disc herniation with neurological deficit, manipulation and mobilization of the affected segments are contraindicated, as there is a high risk of spinal cord compression due to massive prolapse."⁹
- In a study by Saal, exclusionary criteria from conservative medical treatment included symptomatic cervical myelopathy and severe central canal stenosis.¹²

All patients with significant cervical injuries should be monitored for the development of neurological signs or symptoms. When symptoms begin to develop in the upper extremities that could be correlated to a nerve root, an appropriate examination should be instituted. The neurological examination should include muscle testing, deep tendon reflexes and superficial sensation examination. Provocative tests for the presence of radiculitis should be performed, such as foraminal compression and maximum cervical rotary compression tests. The cervical distraction test can be important in differentiating radicular from referred arm pain. MRI is necessary when radicular signs are readily apparent, and neurosurgical referral may be a requisite when progressive neurological deficits develop.¹³

When neurological deficit is detected, the patient should be informed concerning the extent of the condition and the possible outcomes of treatment. The patient should also be apprised of the possibility of deterioration and be advised to watch for signs of myelopathy. Manipulation can still be an important part of the management of the condition, but appropriate modifications should be implemented. The patient should exhibit a positive response to manipulative treatment within a reasonable time. Lack of improvement after approximately four weeks is another signal for prompt referral; severe neurological deficit is a mandate for immediate referral.

In recent years, chiropractors have become prey to members of the legal profession who are

involved in malpractice litigation, and the manifestation of a ruptured disc following manipulation of the cervical spine can be considered an easy mark. The plaintiff's attorney will attempt to show that the defendant chiropractor was negligent, and that the negligence caused harm. However, there is no malpractice as long as the chiropractor has followed the standard of care, even if the chiropractic adjustment did aggravate a herniation. If it can be shown through the doctor's records that proper procedures were adhered to, it may be difficult to find the practitioner at fault in the presence of disc herniation/prolapse following manipulation.

The best approach to take in dealing with cervical disc herniation cases is to practice defensively by complying with proper examination and treatment procedures. In light of Hubka's findings, the specific level of disc herniation should not be manipulated with the neck rotated toward the side of radiculopathy. In fact, any manipulation in the vicinity of a cervical disc herniation should be applied with great care. Use of nonrotary techniques should be considered, and focusing on adjacent segments that are dysfunctional may be the prime focus for manipulation in the early stages of the disease.

The chiropractic malpractice tide has been changing in a positive direction recently, primarily due to the education of practitioners and their resulting progress in following appropriate practice procedures. However, there is still room for improvement. In light of the evidence presented in this article, the chiropractor can manage the treatment of acute cervical disc herniation safely, efficiently and with appropriate standards of care.

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