

Manipulation Contraindicated for Disk Herniation? When the Literature Conflicts

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An article was published in the October 1994 issue of *Spine*¹ which reviews the many interventions for treating lumbar disc herniation. The treatment protocols included were: various surgical procedures, drug regimes and numerous conservative therapies (bed rest, supports, crutches, back school, traction, ice, manipulation, etc.). Regarding manipulation, the author simply states, "Manipulation -- abrupt passive movements of a vertebrae beyond its physiologic range, but within its anatomic range -- is contraindicated." It was interesting that no reference was given to support this strong statement and of all the therapies noted, manipulation was the only one considered "contraindicated." The author described the value of all other physiotherapeutic interventions as ranging from "helpful" to "questionable." Let us now turn to a similar review that strictly evaluated the use of manipulation for disc herniation by Cassidy, Thiel and Kirkaldy-Willis published in *JMPT* in February 1993.² When these authors performed their literature review they concluded, "The treatment of lumbar intervertebral disk herniation by side posture manipulation is both safe and effective."

It is common to find such conflicting viewpoints in biomedicine. Often this is because adequate safeguards are not in place to control bias or there just is not enough information available to the researcher to make an accurate and complete information. Because of the rapid proliferation of research literature, decisions often cannot be made from texts where the primary research data is a couple of years old by the time the work is published. They can't always be made by relying on postgraduate classes where the presenter may not always be current. They can be made by looking directly at the primary journal literature coupled with some critical reading skills. Computerized online searching provides the greatest opportunity for the clinician and researcher to gather information and make intelligent decisions.

So what about manipulation for disc herniations? These two research articles represent diametrically opposing statements from two of the most respected medical and chiropractic peer-reviewed journals. The questions become: first, what is the nature and quality of the articles and second, what point of view does the preponderance of the literature support. The first question involves critical reading and the second involves the use of online searches through databases like Medline and ChiroLars.

As we look at the two articles, they are similar in many respects despite their conclusions. They both represent authors expressing views based on their review of the literature and do not provide any new primary research conducted by either author. If one study were a large, well-controlled randomized clinical trial and the other a case report or literature review, we would have to give far greater credence to the findings of the clinical trial. However, how could these authors perform a similar review of the literature and arrive at opposite conclusions about the value of manipulation for treating intervertebral disc herniation? The answer (assuming bias is not present) is that the pool of articles related to the subject available to one or both authors was incomplete. In order to determine if the authors have made a complete literature review, we can perform a simple online

search of the appropriate database(s) and compare this to the references used by the authors. This process takes only a few minutes with online computer access to databases. In choosing the appropriate database to search we should know that the National Library of Medicine produces the largest index of medical literature, MEDLINE. However, this database only indexes 18 percent of the biomedical literature. There is very little research included from osteopathic, chiropractic or manual medicine journals dealing with manipulation. One of the strengths of the chiropractic index CHIROLARS is that it does include most of the significant research on adjustments and manipulation from all disciplines. In this instance, CHIROLARS would be the most valuable resource.

When searching CHIROLARS with the appropriate headings (manipulation, orthopedic [and] manipulation, chiropractic [and] intervertebral disk displacement [or] sciatica) we locate approximately 150 articles. As we look at the review articles from JMPT and Spine, we see that the authors have neglected much of the most valuable literature necessary to make an informed decision. Reading the abstracts of these articles from medicine, osteopathy and chiropractic, we find that with few exceptions manipulation is considered effective and safe in the treatment of disk herniations and sciatica. There is however some important work that suggests that the physician should exercise caution with acute disks. There are also many issues including the method of manipulation, patient position and the amount of force used that must be addressed. All forms of manipulation for all disks can hardly be considered "safe" as malpractice claims will verify. The truth then appears to lie somewhere between the two extreme positions published in Spine and JMPT, but heavily favoring the use of manipulation as described by Cassidy et al. Again, assuming no intentional bias, neither author really did a thorough literature review and their conclusions suffered. (A subsequent letter to the editor criticized the weakness in the "selective" kind of review published in JMPT).³

This case exemplifies several points: 1.) The literature can be selectively used (although perhaps not intentionally) to support either side of many clinical issues. 2.) The peer review process does not always insure quality of research, especially when related to reviews of the literature. Despite skills at research design, sampling, statistics, etc., very few researchers exhaust all relevant database sources. Those responsible for peer review often are incapable of evaluating the thoroughness of a literature review because they also lack the skills necessary for proper online searching. 3.) There is no substitute for having a command of online searching and critical reading in order to resolve these conflicts in the literature. There is also no substitute for each practicing chiropractor to have the power that information access provides. It permits the doctor to help educate patients; to provide expert testimony; to serve as a consultant; to rebut insurance denials and, most importantly, to deliver quality treatment consistent with the literature.

References

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3. Slosberg M. Side Posture Manipulation for Lumbar Intervertebral Disk Herniation Reconsidered. Journal of Manipulative and Physiological Therapeutics 1994; 17(4):258-62.

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