

# INSIGHTS INTO CHIROPRACTIC

*Discerning the true nature of an alternative health care method*

## Is Chiropractic Manipulation A Safe Procedure?

### INTRODUCTION

A commonly held notion by medical physicians and uninformed lay persons is the idea that chiropractic manipulation is an unsafe procedure seriously injuring or killing hundreds or perhaps thousands of unsuspecting individuals every year. Much of the misinformation that continues to exist regarding the safety of chiropractic manipulation stems from a well orchestrated campaign against the chiropractic profession by the American Medical Association's "Committee on Quackery."

According to AMA records, the Committee on Quackery was established by the AMA in 1963 with its sole mission to destroy the profession of chiropractic as a competitor in the health care market(1,2). As part of their illegal campaign, the AMA commissioned and distributed the text, *At Your Own Risk: The Case Against Chiropractic*, a book written by journalist Ralph Lee Smith. In his text Smith portrayed the chiropractic profession in an extremely unfavorable light and further implied that chiropractic manipulation was an unsafe treatment often resulting in serious injury(3). Smith's book was distributed by the AMA to over 1,000 of the nation's largest libraries(1).

In 1987 the federal court system found the AMA guilty of violating federal antitrust laws in its campaign against the profession of chiropractic and was forced to pay damages and

abandon its overt attacks against the profession(1,2). Unfortunately, myths, legends, and lies die hard and residual effects continue to linger. Perhaps one of the greatest injustices of the AMA's illegal tactics is that today, patients continue to be discouraged from seeking chiropractic services by primary care physicians due to the misinformation pedaled as "truth" in the early 1960s. This makes you, a primary health care physician, as much a victim of the illegal actions of the AMA as any chiropractic physician or patient with a condition amenable to chiropractic treatment.

But, what is the truth? Is chiropractic manipulation safe? How does chiropractic manipulation compare in terms of safety to standard medical treatments used to deal with patients with similar conditions or complaints? Below, evidence from the scientific literature will be presented that will shed light on this topic.

### RISKS OF SPINAL MANIPULATION

Vick et al.(4) performed a retrospective review of the English language medical literature over a 68-yr period from 1926 to 1993. They discovered a total of 128 articles from fifteen different countries which reported injuries as a result of spinal manipulation. From these sources a total of 185 specific serious complications were reported from manipulation of the cervical, thoracic, or lumbar spine. The breakdown of the type and number of injuries reported as a result of this

review is as follows: cerebrovascular accident-123, disc herniation-23, bone fracture/dislocation-14, neural encroachment-12, general increase in pain-6, complication of undiagnosed tumor-3, cardiac arrest-1, tracheal rupture-1, abdominal aorta rupture-1, unreported injury-1.

Regarding these injuries Vick et al state, "Of the estimated several hundred million manipulative treatments performed each year, only 185 reports of injury were found in the published literature during the past 68 years. Comparing these figures with the incidence of adverse effects (including death) associated with many pharmaceutical agents, manipulative treatment remains an extremely safe, therapeutic modality when performed by a knowledgeable and skilled practitioner(4)."

The 123 reported cerebrovascular accidents may lead one to conclude that manipulation of the cervical spine is a particularly risky procedure. However, when placed in the proper context in relation to other health care interventions for patients with cervical spine conditions, it becomes readily apparent that cervical spine manipulation is a safe procedure when provided by a skilled practitioner.

A recent article authored in 1996 by Dabbs and Lauretti(5) compared the risks of serious complications or death for patients receiving a course of manipulative treatment or nonsteroidal anti-inflammatory drugs for the treatment of neck pain. As a result of their review of the scientific literature on the subject the authors stated, ". . . the best available data suggests that the risk of serious neurovascular complication from cervical manipulation is approximately one incident per 100,000 patients receiving a course of treatment per yr, or 0.00025%. The risk of serious gastrointestinal complication requiring hospitalization because of NSAID use for similar conditions (i.e., a diagnosis of osteoarthritis [OA]) is 0.4% per year. The risk of death from hemorrhage or ulcer perforation attributable to NSAID use for OA is 0.04%.

Therefore, based on the best available evidence, we calculate the risk of serious complications or death is 100-400 times greater for the use of NSAIDs than for the use of cervical manipulation in the treatment of similar conditions."(5, emphasis added)

In addition an article published in the medical journal Spine compares the risks for cervical spine manipulations, use of NSAIDs, and cervical spine surgery(6). Hurwitz et al.(6) report an average risk of vertebrobasilar accident, major impairment or death as 7.5 per 10,000,000 manipulations. They further report an average incidence rate of serious gastrointestinal event (bleeding, perforation, or other adverse event resulting in hospitalization or death) from the use of NSAIDs as 1 per 1000 subjects. And finally, they report an average incidence rate of neurologic complication or death from cervical spine surgeries as 11.25 per 1000.

Although anyone would agree that even one tragic event is one too many, when placed in the proper context it becomes readily apparent that cervical spine manipulation is an extremely safe procedure when applied by appropriately trained professionals.

In-so-far as manipulation of the lumbar spine is concerned, the cauda equina syndrome would be the most serious complication that could potentially result. Shekelle(7), a researcher with the prestigious Rand Corporation, reports: ". . . we used the available data from case reports on the number of complications and from our epidemiologic study on the use of chiropractic services to estimate the number of lumbar spinal manipulations received during a time period covered by the case reports. Then, we estimated that the rate of occurrence of the cauda equina syndrome as a complication of lumbar spinal manipulation is about one case per 100 million manipulations(7)."

## CONCLUSION

The safety issue of spinal manipulation can really be shown to be a "non-issue" when emotional embellishment and negative rhetoric give way to scientific fact. Armed with this knowledge primary care physicians should be able to more accurately advise their patients who may wish to consult with a doctor of chiropractic for treatment of their ailments.

Finally, because chiropractic manipulation has been shown to be clinically effective(8,9-14), cost-effective(10,11,13-15), and safe(4-7,16,17), with high levels of patient satisfaction(9,12,16-18), it seems logical that a clinical trial of chiropractic treatment should perhaps be the standard of care for patients with conditions known to be responsive to such interventions.

## REFERENCES

1. Wolinsky H, brune T. The serpent on the staff. New York: GP Putnam's Sons 1994.
2. Wardwell WI. Chiropractic: History and evolution of a new profession. St. Louis: Mosby Year Book 1992.
3. Smith RL. At your own risk: The case against chiropractic. New York: Pocket Books 1969.
4. Vick DA, McKay C, Zengerle CR. The safety of manipulative treatment: review of the literature from 1925 to 1993. *JAOA* 1996;96:113-115.
5. Dabbs V, Lauretti WJ. Risk assessment of cervical manipulation vs. NSAIDs for the treatment of neck pain. *J Manip Physiol Ther* 1995;18:530-536.
6. Hurwitz EL, Aker PD, Adams AH, Meeker WC, Shekelle PG. Manipulation and mobilization of the cervical spine: A systematic review of the literature. *Spine* 1996;21:1746-1760.
7. Shekelle PG. Spine update: spinal manipulation. *Spine* 1994;19:858-861.
8. Bigos S, Bowyer O, Braen G, et al. Acute low back problems in adults. Clinical practice guideline No. 14. AHCPR Publication No. 95-0642. Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, U.S. Department of Health and Human Services. December 1994.
9. Meade TW, Dyer S, Browne W, Townsend J, Frank AO. Low back pain of mechanical origin: Randomised comparisons of chiropractic and hospital outpatient treatment. *Br Med J* 1990;300:1431-1437.
10. Wolf C. Industrial back injury. *Int Rev Chiro* 1974;26:6-7.
11. Wolk S. An analysis of Florida workers' compensation medical claims for back-related injuries. *J Am Chiro Assoc* 1974;25:50-59.
12. Kane R, Olsen D, Leymaster C, Woolley F, Fisher F. Manipulating the patent, a comparison of the effectiveness of physician and chiropractic care. *Lancet* 1974;1:1333-1336.
13. Johnson M, Schultz M, Ferguson A. A comparison of chiropractic, medical and osteopathic care for work-related sprains and strains. *J Manipulative Physiol Ther* 1989;12:335-344.
14. Ebrall PS. Mechanical low-back pain: A comparison of medical and chiropractic management within the Victorian workcare scheme. *Chiro J Australia* 1992;22:47-53.
15. Jarvis KB, Phillips RB, Morris EK. Cost per case comparison of back injury claims of chiropractic versus medical management for conditions with identical diagnostic codes. *J Occupational Med* 1991;33:847-852.
16. Manga P. The effectiveness and cost effectiveness of chiropractic management of low-back pain. Ottawa, Ontario, Canada: Ontario Ministry of Health 1993.
17. Commission of Inquiry into Chiropractic. Chiropractic in New Zealand. Wellington, New Zealand: Government Printer 1979.
18. Cherkin D, MacCornack F, Berg A. Managing low back pain-A comparison of the beliefs and behaviors of family physicians and chiropractors. *West J Med.* 1988;149:475-480.