

Through a Glass Darkly, or Different Strokes for Different Folks

Anthony Rosner, PhD, LLD [Hon.], LLC

With apologies to the title of the somber film classic by Ingmar Bergmann, one has to question through what lens the chiropractic profession is being perceived by the media. The continuing cavalcade of medical journal articles attempting to link cervical manipulation to almost anything short of a nuclear arsenal is ludicrous, if not a frightening blow of dizzying proportions to the chiropractic profession. As much of the media would have it, cervical spinal manipulation has indeed been hinted to be a "weapon of mass destruction."¹⁻⁶ It has been reported that the miasma surrounding the perpetual Lana Lewis inquest in Toronto has already cost the profession \$100 million in lost visits,⁷ to say nothing of a wave of anxiety and inquiries as to whether cervical manipulation is actually as destructive as it is cracked up to be.

A grim example of this innuendo, and living proof that satire has not died, was plainly evident when I had the opportunity in June 2002 to witness firsthand a day of the Lana Lewis inquest in Toronto. Actually, it was more like the Marx Brothers classic, "A Day at the Races." Anyone present will tell you it was far from being one of the best days for Dr. John Norris, the primary witness for the prosecution. Without digressing, suffice it to say, Dr. Norris issued a bushel of unsubstantiated and contradictory statements, which he had to retract.

Instead of devoting even a microsecond to this major turn of events, however, many of the television newscasts that evening focused on the bereaved family of Lana Lewis. About half the airtime seemed to dwell on one particular member of the party who showed up in a wheelchair, which of course had nothing whatsoever to do with the manipulation or chiropractor called into question, but obviously provided good street theatre to the effect that chiropractic could be wiping out our population. This was not a news story about the "miracle of Lourdes," folks - it was supposed to have attempted to clarify what might have brought on Ms. Lewis' stroke. It comes down to some issues in human nature, and just who is reporting these issues of stroke. This story can be traced back at least a decade, when F.C. Powell published a report in *Neurosurgery* that suggested:

"The risk/benefit ratio for patients with midline neck pain is unacceptably high, and cervical SMT should be discouraged as treatment. Moreover, it is unlikely that a sufficiently high benefit for SMT in patients with benign disease processes will be achieved to justify the risk of severe complications, no matter how infrequent the occurrence." [emphasis mine]⁸

It does not take more than a few "milliwatts" of intelligence to perceive that this statement is dripping with bias and has no place in a scientific journal. Students of 9th-grade algebra will immediately take note that with the benefits of spinal manipulation not given any attention and set to zero, the risk/benefit ratio with even an infinitesimal numerator will skyrocket toward infinity.

Things did not get any better two years later with the infamous publication by Lee, Carlini and others in the journal *Neurology*. This was a survey of 486 patients, only 177 of whom even

responded at all, yielding the underwhelming participation rate of 36 percent. With the questionnaire not even validated; failure to indicate that the vast majority of VBAs are spontaneous;^{9,10} failure to indicate that the respondents even documented their outcomes directly from their files; lack of a baseline (frequency of cervical manipulations); or even comparisons to other treatments for similar conditions, it was easy to conclude this was one sick paper.¹¹ In fact, it led no less an authority than Scott Haldeman, DC, MD, PhD, to conclude:

"Unfortunately, this article tells us more about the biases of the surveyed neurologists, the authors, and the editorial board of *Neurology* than it does about the complications of manipulation. It should never have been published."¹²

What about the more recent case-control studies,^{13,14} intended to be more rigorous than these retrospective reviews? Hardly an improvement, if you consider the simple fact that in both papers, the most obvious control - visits of the patients with complaints of neck pain to a nonchiropractor - was never even considered.

In fact, it gets even more bizarre: In addition to continuing to ignore the benefits of cervical manipulation, and thus deriving the aforementioned mushrooming risk-benefit ratios, the Smith paper¹⁴ stretches the critical reader's imagination to the breaking (or at least dissecting) point by:

1. failing to distinguish between transient ischemic attack and stroke; and
2. excluding a greater number of patients⁸ with iatrogenic dissection with or without stroke than were even considered as possible candidates for manipulation-induced TIA or stroke.^{7,14}

Wait a minute: Have I missed something here? You would think something has been just swept under the rug; that we have been slipped a rubber peach; or, as Damon Runyon used to say, we have been given the "Old Phonus Balonus." I will spare the details of this unfortunate exposition here, other than to say that there is a complete and annotated rebuttal available.¹⁵ One does get the unmistakable sensation, however, that asking certain neurologists whether chiropractors are responsible for a multitude of strokes is, well, like asking George Bush whether Saddam Hussein has been hiding "weapons of mass destruction." In all fairness, however, the difference of perception between the two professions can perhaps be traced to the fact that patients experiencing a stroke can be attributed to a selection bias - in which such individuals are likely to have been seen by three neurologists to every one chiropractor.¹⁶

Basically, the recurrent problems with these foregoing stroke studies appear to fall into seven major categories:

1. failure to disclose that the majority of VBAs are spontaneous, cumulative, or caused by factors other than spinal manipulation;
2. failure to disclose the potential benefits of the procedure in the interest of reporting true risk/benefit ratios;
3. failure to place the risks of manipulation in the context of those produced by other medical treatments or lifestyle activities;
4. failure to indicate the actual frequency of the manipulations administered;
5. failure to account for the possibility that patients undergoing cerebrovascular accidents (CVA) are reported more than once;
6. failure to report the rates of CVA following manipulation by parties other than licensed chiropractors; and
7. incorrectly assuming that patients undergoing adverse events following a manipulation would not report such instances to either the attending chiropractor or appropriate

authority.

These are sobering thoughts for peer-reviewed studies, actually having more to do with matters of perception (and by whom). It's enough to leave you walking away from this entire issue humming the refrain "Different Strokes for Different Folks,"¹⁷ from the 1969 classic by Sly and the Family Stone. Sly and his "posse" may have gotten it right.

References

1. Brody J. When simple actions ravage arteries. *New York Times*, April 30, 2001.
2. Bill Carroll Show, CFRB 1010 radio, Feb. 6, 2002, posted on the Internet.
3. Evenson B. *National Post*, Feb. 7, 2002.
4. Hamburg J, Medical Minute, WOR-AM 710 radio, Feb. 22, 2002.
5. Jaroff L. Back off, chiropractors! TIME.com, Feb. 27, 2002.
6. A different way to heal. Episode of Scientific American Frontiers Public Broadcasting System telecast, June 4, 2002.
7. Carey P. Summary of the Lana Lewis inquest. International Spinal Trauma Conference, Chicago, IL, June 22, 2003.
8. Powell FC, Hanigan WC, Olivero WC. A risk/benefit analysis of spinal manipulative therapy for the relief of lumbar or cervical pain. *Neurosurgery* 1993;33 (1):73-79.
9. Sturzenegger M. Headache and neck pain: The warning symptoms of vertebral artery dissections: a review of 13 cases. *Stroke* 1987; 18: 1037-1047.
10. Caplan LR, Zarins CK, Hemmati M. Spontaneous dissection of the extracranial vertebral arteries: 15 cases studied at 0.5 Tesla. *Neuroradiology* 1991;33:111-113.
11. Lee KP, Carlini WG, McCormick GF, Walters GW. Neurologic complications following chiropractic manipulation: a survey of California neurologists. *Neurology* 1995;45:1213-1215.
12. Haldeman S. Letter to the editor. *Neurology* 1996;46:885.
13. Rothwell DM, Bondy SJ, Williams JI. Chiropractic manipulation and stroke: a population-based case-control study. *Stroke* 2001;32(5):1054-1060.
14. Smith WS, Johnston SC, Skalabrin EJ, Weaver M, Azari P, Albers GW, Gress DR. Spinal manipulative therapy is an independent risk factor for vertebral artery dissection. *Neurology* 2003;60:1424-1428.
15. Rosner A. Response to vertebral artery dissection study: synopsis paper by Smith, et al., published in May 13, 2003 issue of *Neurology*. www.fcer.org.
16. Haldeman S, Carey P, Townsend M, Papadopoulos C. Clinical perception of the risk of vertebral artery dissection after cervical manipulation: the effect of referral bias. *The Spine Journal* 2002;2: 334-342.
17. Chorus to "Everyday People." Sylvester Stewart, composer. Recorded by Sly and the Family Stone on the 1969 (Epic catalog #26456) "Stand" album.

Anthony Rosner, PhD
Brookline, Massachusetts
rosnerfcer@aol.com

AUGUST 2003