Dynamic Chiropractic

CHIROPRACTIC (GENERAL)

More Different Strokes: Journal of Quality Health Care Lays an Egg

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A recent article by Preston Long that appeared in the *Journal of Quality Health Care*[1] unfortunately proves itself to be as lavish with its attacks upon chiropractic health care as it is with its use of uncritical sources of information from which these broadsides have been based. Before delving into the lurid details of this article, I was able to discern with one look at the end of this missive what would be forthcoming.

For starters, only four of the 11 references cited peer-reviewed scientific journals, with more (five) referring to Web site addresses. And the biosketch of the author raised all manner of questions about his freedom from bias, listing among the author's credentials his having published *The Naked Chiropractor: Insiders' Guide to Combating Quackery and Winning the War Against Pain*.[2] I'm sorry - but the title does sort of short-circuit and blow away any expectations of a methodical and objective arrival at conclusions, doesn't it? But here, the more searching, basic issues have to be raised if this article is to be examined correctly:

Number-One Cause of Stroke for Patients Under Age 45? Among the many claims of this article, stated in boldface type, is the following: "The public should be informed that chiropractic manipulation is the number one reason for people suffering stroke under the age of 45."[3]This conclusion undoubtedly was fueled by an observation also not published, but appearing on the notoriously anti-chiropractic CANOE C-Health Web site, which declared: "People under 45 who suffer a stroke are five times more likely to have seen a chiropractor in the previous week than a control group."[4]

But wait - this is a reference to the Rothwell study, which actually concluded that between the patient cohorts compared, there were five incidences that would appear to be attributable to the chiropractic visit over a five-year period, or one per year, only for patients under 45 years of age.[5] Furthermore, Rothwell's own data clearly indicate the vast preponderance (more than 95%) of vertebrobasilar artery stroke victims did not visit the chiro-practor's office within the year preceding the vascular event, and nearly another 3% saw a chiropractor from one month to one year preceding the stroke.[6]

Rothwell's study omitted the most obvious and convincing control group - which would have been a cohort of patients with neck pain seeking treatment by practitioners other than chiropractors, such as allopathic physicians. What was completely ignored was the fact that patients seeking treatment very well may have had a stroke in progress, a hypothesis strongly buttressed by other research pertaining to the widespread occurrence of stroke due to lifestyle activities[7-9] or spontaneous arterial dissections, which appear to occur at substantially higher rates than those ever attributed to spinal manipulation.[10]

Veracity of the Canadian Stroke Consortium? What about the findings of the 62 neurologists in the Canadian Stroke Consortium that form the centerpiece of Long's article? For starters, the work was cited in something called the *Annapolis Valley Skeptic*, hardly what you would find among those peer-reviewed tomes in the National Library of Medicine, Pubmed, MANTIS, or even the public library in Skaneateles, New York. But far more noteworthy are the assessments of the Canadian Stroke Consortium and its findings, directly taken from the transcripts of testimonies provided at the recent Lana Lewis Inquest in Toronto:

1. "(John) Norris states that the Stroke Consortium lacks the knowledge about chiropractic manipulation, chiropractic science. There is no evidence-based data, no concrete scientific conclusions, to show that what a chiropractor does stretches the artery in such a way to cause a dissection."[11]
2. "SPONTADS (the study by the Canadian Stroke Consortium) is merely a feasibility study, and when the statisticians get through with it, some of the principles Norris thinks come from the study could be found to be wrong. Norris states that SPONTADS is at a raw level. As Norris states in his own words, 'So I think that it is an essentially hypothesis- generating, interesting case series, but no more than that ... It is just that. So I think, well, I agree with Mr. Danson, it's irrelevant to this inquest.'"[12]
3. "With respect to the press release signed by 62 neurologists, Sackett says there is no basis in science for this document, and the contents do not rise to evidence at any level capable of determining causation."[13]
4. "Sackett has never heard of any scientist disclosing preliminary results of a study at a press conference in support of a lawsuit. Nor has Sackett ever heard of a proper scientist speculating about occurrence rates on television. Sackett says this is not science at all, since all Norris had was a numerator; no denominator. Sackett calls this behavior 'scientific irresponsibility.'"[14]

Flaws in the Smith Study. Further problems abound. The identification by Smith, et al., that manipulation is an independent and significant risk factor in vertebral artery dissection (as cited by Long) is fraught with problems. Specifically, the Smith study used a nested case-control design to attempt to demonstrate an elevated risk of vertebral artery dissection following spinal manipulative therapy. Unfortunately, the study failed to identify the actual numbers and locations of manipulations administered; failed to identify the qualifications and backgrounds of the individuals providing manipulations; and actually excluded more patients due to iatrogenic causes[8] than were actually presumed to bear a relationship to manipulation[7] because their events occurred within 30 days of treatment. The diminutive number of seven patients thus presented has to raise questions about the robustness of this study, in addition to the implausibly long period of time between dissection and treatment (30 days).

Actual Risks of Manipulation. More definitive studies than the ones cited by Long, which address the frequency of cerebrovascular accidents (CVA), have actually informed us that their actual occurrence is 5-10 per 10 million adjustments.[16] A more recent Canadian study suggests that the occurrence rate of serious cerebrovascular accidents is less than one-fifth of the previous rate, or 1 per 5.85 million adjustments.[17]

Risks are inherent in every medical procedure or lifestyle activity that we encounter. In terms of interventions of the spine, chiropractic has been shown to be many orders of magnitude safer than medication or surgery. Assuming that each patient receives an average of 10 manipulations in treatment,[18] death rates following cervical manipulation calculate to anywhere between 1/100-1/400 the rates seen in the use of NSAIDs for the same condition.[19,20] Death rates from lumbar spine operations have been reported to be 300 times higher than the rate produced by

cerebrovascular accidents in spinal manipulation;[21,22] for cervical surgeries, recent death rates have been estimated to be 700 times greater.[21] As Australian researcher P.L. Rome, DC, has pointed out,[23] risks for "virtually all" medical procedures, ranging from the taking of blood samples,[24] use of vitamins, drugs,[25] "natural" medications,[26] and vaccinations[27] are routinely accepted by the public, as a matter of course.

How risks are interpreted is another matter. The VA rate for chiropractic described previously, while extremely low, does represent a challenge to be improved upon. On the other hand, as Rome further notes,[23] such phenomena as patient informed consent; "low and acceptable rates of complications" stated in a policy by the Australian College of Ophthalmologists;[28] or "trading off" risks of surgeries and stroke, as stated in a recent study of endarterectomies[29] all attest to the fact that certain levels of risk have been habitually accepted in our society, until improvements could be made. Why should chiropractic be singled out as having an unacceptable risk?

In his distinction of specific provider types associated with cerebrovascular accidents, Dr. Allen G.L. Terrett has identified 34 deaths associated with manipulation over 61 years worldwide.[30] For the sake of comparison, 12,000 deaths per year from unnecessary surgery, 7,000 deaths per year from medication errors in hospitals, about 80,000 deaths per year from nosocomial infections in hospitals, and 106,000 deaths per year from nonerror, adverse effects of medications have been recently reported with regard to conventional medicine.[31-33] These data are presented simply to prevent our losing perspective on the entire issue of risk/benefit ratios raised by the arguments of Long.[1]

Actual Benefits of Manipulation. Long is quick to seize upon Williams and Biller's contention that "in the absence of randomized controlled trial evidence demonstrating the efficacy of cervical manipulation, the best current evidence suggests that the small risk of dissection and stroke outweigh the benefit of this treatment modality for patients with acute neck pain."[34] First, let it be known that this conclusion was reached in an editorial, not an evidence-based scientific paper. Second, it is in flagrant conflict with the summations of 73 randomized clinical trials by Meeker and Haldeman which clearly delineate largely positive outcomes for several conditions involving manipulations in the cervical region.[35,36] As any student of 9th-grade algebra knows, risk benefit ratios will approach infinity if one is not willing to set the denominator (benefits) to something other than zero, as appears to be the predilection of Williams and Biller[34] and uncritically accepted at face value by Long.[1]

To conclude, the Long paper published in the Journal of Quality Health Care falls far short of the mark of what is customarily considered to be definitive, systematic scientific evidence. Rather, this missive appears to have been permeated with bias and discredited references to bring it to the brink of folly. In today's environment of evidence-based medicine, this paper must never be confused with the definitive information that is needed to document potentially beneficial, safer, and cost-saving health care interventions.

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