

## Manipulation Under Anesthesia: Treatment or Pretender?

John J. Triano, DC, PhD

Over the course of professional experience for the current generation of chiropractic physicians, the public attitude toward our profession and its primary tool has evolved. We have heard the potential benefits from manual treatment of the spine, even for musculoskeletal disorders, variously declared by society's experts. The conclusions have ranked on a continuum (Figure 1) with one distinguishing feature: a gradual evolution from left to right. Until recently, none of these experts were professionals with significant experience in the use of manipulation methods of treatment for spine-related disorders.

Office-based Manipulation for Low Back Pain

Unproven=> Unproven=>	Unproven=> Unproven=>	Promising=> Accepted=>?
Harmful=> Harmless	Doubtful=> Limited	Limited=> Limited/
<=1950s & 1960s=>/	<=1970s & 1980s=>	/1990s=>

Figure 1

Many in the health care field now conceive that there are patients for whom the first treatment of choice may be manipulation/adjustment. The broader interest in the potential benefits from these procedures is evident from the participation of such prestigious groups as the RAND Corporation, the North American Spine Society, and the Agency for Health Care Policy Research (AHCPR) in addressing their appropriate use.

So what about manipulation under anesthesia (MUA)? Are we seeing the cycle of nay-saying beginning again? In a television report March 18 on ABC's "World News Tonight" (see article in April 10, 1992 issue of "DC"), MUA was the target for "sound-bite" journalism. A report filed by Dr. Timothy Johnson presented all of the elements we find in today's broadcast media to expose a story without truly assessing the available information.

It is interesting to note the types of interviews that were included in the broadcast: a patient who responded favorably; a medical expert and clinical scientist (Alf Nachemson) whose experience with the procedure was unexplored and who panned the procedure; a chiropractic researcher and educator (Dr. Al Adams) who expressed interest in and the legitimate need for studying clinical utility of MUA; a hospital administrator appeared who extolled the economic benefits to the hospital as well as an insurance industry representative; a number of scenes portraying stretching in preparation for MUA; and a view of Dr. Scott Haldeman performing an outpatient lumbar procedure completed the imagery.

The moderator stated the purpose of using MUA was to be able to manipulate with "more force" rather than the real issue of reducing the confounding and competitive internal load effects caused by excessive spasm. Later comments were made regarding potential injury by anesthesia overcoming the "protective" response of the muscles. Unfortunately, the scientific fact that manipulation forces, even under typical office-based applications, rise so quickly (approximately 100 mS) that muscle reactions are probably unable to prevent forces from being transmitted to the

spine was not considered. Rather, such muscle response may act only after the fact.

The final conclusion of the moderator was interesting: "But manipulation under anesthesia appears to be an example of what our system does not need, another group of practitioners driving up costs with unproven and possibly dangerous procedures."

First, let me begin the following discussion by pointing out that, personally, I have made no final assessment on the clinical utility of MUA. The procedure was used in medicine and osteopathy from the 1940s into the 1970s. In medicine, it was known as the Pritkin maneuver (that's right, one procedure for the low back in contrast to today's 45 plus in modern chiropractic). In contrast to the blatant sound bite quotation from Alf Nachemson, M.D., during the television report that denied availability of any scientific studies that have been reported in the literature, one needs to know what definition Dr. Nachemson was using in that edited clip. Neither we nor the public will ever know.

A more objective view of the evidence currently available leads this reviewer to the following conclusions.

1. As Al Adams, D.C., from LACC was quoted during the report, there are no controlled clinical trials on MUA. That is the problem. (But only 15 percent of all medical procedures have "scientific" backing. Only one controlled clinical trial on back surgery is available while manipulation has had more studies than any other treatment procedure for LBP.)
2. Prospective observational studies leave the impression that there may be a population of patients who will benefit from the procedure when properly selected.
3. Prospective electrodiagnostic studies suggest that chronic back patients having EMG evidence of nerve root compression may not have permanent relief but those with negative EMG evidence may have permanent relief.
4. Conditions considered to respond favorably include chronic disorders that, in today's terms, would fall in the rubric of myofascial pain disorders, facetal, and discal complaints.
5. None of the studies thus far reported are compelling and all have significant scientific methodological weaknesses that prevent an objective conclusion on clinical utility.

So, how does that stack up against "scientific" health care delivery? Let's look at the editing of Dr. Nachemson's comments. Dr. Nachemson, in other appearances, has presented many a lecture of high quality that review the various forms of scientific evidence to support treatment interventions of any type. For example, they include case study models, observational and cohort studies as well as the highest quality of information from randomized, controlled clinical trials.

In discussions with him, I am left with the opinion that he would prefer to exclude any but randomized controlled clinical trials as a basis for determining clinical utility of any treatment modality. The Quebec task force review of treatment procedures in which he took part is an excellent example of the result of such an analysis. Nearly all existing methods of treatment for low back pain alone fail to meet that standard. Yet, it is obvious that these treatments are still in use. The preponderance of evidence for some is favorable (such as manipulation) and will continue to be

used. For others, only tradition serves as a basis for continuation. New methods and old unproven methods of treatment should be evaluated. However, the blatant dismissal of procedures for which there is empirical and observational and cohort study evidence warranting further investigation is itself scientifically irresponsible.

It is interesting to note that no discussion was held regarding patient selection for MUA procedures, yet Dr. Nachemson is permitted to wax eloquently on camera about the possibility of damage to pathologically effected vertebrae or hip joints. The fact that published articles list these conditions, and others, as consideration for these procedures was not addressed. Misleading? Informed commentary? Scientific? While Dr. Nachemson refers to these methods of treatment as having been abandoned by "the rest of the world," he misses the obvious parallels. Functional capacity evaluation and functional restoration programs used today for chronic back patients, for example, are a similar set of methods used by occupational therapists in the 1930s. Functional methods were abandoned primarily because we lacked the knowledge and sophistication to effectively implement the procedures. Today, functional restoration approaches have a high profile and are accumulating much supportive data for their use in appropriately selected chronic back cases. In this viewer's opinion, an eminent clinical scientist with Dr. Nachemson's background would be furious to learn that he was portrayed as being so biased and unbalanced in his views.

There are some points given by the report that ring true. MUA was intended for use in chronic cases where multidisciplinary acute intervention methods including a trial of manipulation have been performed unsuccessfully. A referral for second opinion prior to recommending MUA for treatment of a single area is also a common practice. Too often, there is a head long rush to get a patient into the operating room for full spine treatment at a separate fee for each area. The costs and combativeness of some of the providers promoting this method offer a new opportunity for a self-centered public image of chiropractic. According to most available information and protocols on MUA, rarely is there a need for treatment of multiple areas. Patient selection perhaps is the most critical issue for sorting out the truth behind clinical usefulness. These procedures have a high profile and are expensive. Their use should be carefully considered and constrained to application only in truly chronic cases as a last resort in conservative management. Treatment too early or unnecessary piling-on of multiple manipulation sites will simply add to our public relations difficulties.

Will MUA climb the continuum of nay-saying as manipulation for other low back disorders has managed to do? Pontification on either side will not settle the question. Only time and the results of studies that need to be done will tell. Perhaps a place to begin is to remind ourselves and the public of the fundamentals. Step one, there are babies and there is bath water. It is important to be able to tell the difference.

*John J. Triano, M.A., D.C.*  
*Batavia, Illinois*

APRIL 1992