

Manual Therapy for Geriatric Patients

Research indicates that the strongest predictors of usage of complementary and alternative medicine (CAM) in humans include poorer health status, back problems, and chronic pain¹. Listed among the most frequently sought CAM therapies for these conditions are chiropractic and massage – i.e., manual therapy approaches that aid in restoring function, mobility, and a pain-free existence. In the same manner, veterinary clients are increasingly turning to manual therapy techniques for their animals; a 2002 survey performed by the American Animal Hospital Association revealed that 19% of pet owners use massage for their animals, and 2% seek chiropractic.² While the risks of CAM are commonly thought to be minimal, certain types of treatment may in fact injure patients. For example, although low-impact manual therapy (manipulation techniques from chiropractic and/or osteopathic origins) may offer geriatric patients comfort and physiologic restoration, higher-impact techniques can cause serious injury if improperly applied or contraindicated for a given patient.

Clients need direction from their veterinarian as to which CAM modalities are appropriate for their own particular animal. Veterinarians need to know which manual therapy techniques the practitioner to whom they refer will be practicing, and whether that form of treatment is appropriate for their patient. Critically evaluating the literature remains vital. This is especially true for promotional materials such as chiropractic brochures, which may make claims that are either “not currently justified by available scientific evidence or that are intrinsically untestable.”³ As an example, a client information brochure from a leading national animal chiropractic organization claims that “chiropractic can help” any animal over seven years of age, including those who have chronic gastrointestinal, respiratory, urologic, and neurologic disorders, and those who have had surgery.⁴ Chiropractic adjustments, also known as high-velocity, low amplitude (HVLA) techniques, or “thrusting”, involve quick, focused thrusts applied to bony and articular structures. Is this appropriate for geriatric patients or for animals who may have had recent surgery, are critically ill, or who have bone demineralization secondary to hyperadrenocorticism, neoplasia or secondary renal hyperparathyroidism? Is chiropractic safe in the presence of degenerative joint disease?

¹ Astin JA. Why patients use alternative medicine – results of a national study. *JAMA*. 1998;279:1548-1553.

² Anonymous. Pet owner vet expenses rising, survey says [American Animal Hospital Association 1999-2002 Pet Owner Surveys]. *Veterinary Practice News*. January 2003; p. 11.

³ Grod JP et al. Unsubstantiated claims in patient brochures from the largest state, provincial, and national chiropractic associations and research agencies. *J Manipulative and Physiological Therapeutics*. 2001;24(8):514-519.

⁴ AVCA Information Brochure. Obtained at <http://www.avcadoctors.com/AVCA%20Information%20Brochure.htm> on 070103.

A veterinary reference advises chiropractic care for geriatric animals with joint degeneration, muscle weakness, and pain.⁵ Another article on veterinary chiropractic reported that the major indications for chiropractic include: idiopathic lameness, intervertebral disk disease, Wobblers syndrome/cervical vertebral insufficiency, spondylosis, cauda equina syndrome, urinary incontinence, neuropathies, post-surgical rehabilitation, trauma, and organ pathology.^{6 7} In contrast, a research-based human CAM reference places joint hypermobility, arthritis, and neurologic problems from disk disease under the heading of *contraindications* to chiropractic, along with cancer, infectious disease, fractures, clotting disorders, osteopenia, and osteoporosis.⁸ In fact, cases of cauda equina syndrome in humans caused by chiropractic have emerged as a rare but serious complication, constituting a medical emergency possibly requiring rapid surgical decompression.⁹

In light of the unknown safety and effectiveness of HVLA for animals of different age groups and levels of debility, one might ask if there are alternative manual therapy approaches that would be safer and thus more suitable for geriatric veterinary patients, with comparable effectiveness.^{10 11} Various low-impact manual therapy alternatives are available when HVLA techniques are contraindicated.^{12 13} Although evidence of efficacy and safety is unavailable for soft tissue approaches in non-humans as it is for HVLA techniques, clients and practitioners may find that they are more comfortable considering manual therapy techniques from the soft tissue therapy repertoire.

The goals of soft tissue therapy, including massage, are to:

- Relax hypertonic musculature
- Provide passive stretch to fascial structures
- Improve local tissue circulation, nutrition, oxygenation, and waste product removal

⁵ Boldt E. Use of complementary veterinary medicine in the geriatric horse. *Vet Clin Equine*. 2002;18:631-636.

⁶ Taylor L and Romano L. Veterinary chiropractic. *Can Vet J*. 1999;40:732-735.

⁷ Taylor L and Romano L. Claims for veterinary chiropractic unjustified – a reply. *Can Vet J*. 2000;41:169-170.

⁸ Freeman LW. Chiropractic. In Freeman LW and Lawlis GF: *Mosby's Complementary & Alternative Medicine – A Research-Based Approach*. St. Louis: Mosby, 2001. pp. 286-310.

⁹ Markowitz HD and Dolce DT. Cauda equina syndrome due to sequestered recurrent disk herniation after chiropractic manipulation. *Orthopedics*. 1997;20(7):652-653.

¹⁰ Hurwitz EL et al. A randomized trial of chiropractic manipulation and mobilization for patients with neck pain: clinical outcomes from the UCLA neck-pain study. *American Journal of Public Health*. 2002; 92(10):1634-1642.

¹¹ Cherkin DC et al. A review of the evidence for the effectiveness, safety, and cost of acupuncture, massage therapy, and spinal manipulation for back pain. *Ann Intern Med*. 2003;138:898-906.

¹² Smith MC. Benefits of massage therapy for hospitalized patients: a descriptive and qualitative evaluation. *Altern Ther Health Med*. 1999;5(4):64-71.

¹³ Smith MC et al. Outcomes of touch therapies during bone marrow transplant. *Altern Ther Health Med*. 2003;9:40-49.

- Reduce reflex activity stemming from maladaptive somatovisceral and viscerosomatic reflexes, and restore healthful neurophysiologic communication between somatic and visceral structures
- Improve immune function and lymphatic circulation

Patients who are especially fragile or ill usually benefit from shorter treatments involving less digital pressure and compression. Soft tissue techniques are contraindicated directly over areas of infection, acute inflammation, tumor, recent surgical procedures, or thrombosis.

Veterinarians need to establish ongoing communication with CAM caregivers also involved with their patient, especially for geriatric animals, for whom conventional treatment delay, drug-herb interactions, and injury from over-treatment could have disastrous consequences and reflect liability onto the referring clinician.¹⁴

Practitioners interested in referring to manual therapy practitioners might consider asking the following questions, to maximize safety and minimize liability:

- Will making the referral delay or eliminate the patient's opportunity to obtain necessary conventional medical treatment? "[I]f the patient has a progressive neurologic deficit and the patient's condition is deteriorating, referring the patient to a chiropractor (without continuing necessary conventional care) could constitute a failure to exercise appropriate medical judgment and thus negligence."¹⁵
- What are the practitioner's background, quality of training, practice history, and competence? Are you referring to or supervising a non-veterinarian? Are you required to provide on-site, direct supervision of a human chiropractor, as required in some states?
- How will the manual therapy practitioner evaluate and treat the patient? Will s/he do a standard musculoskeletal and/or myofascial examination, providing an assessment that you can understand, using standard anatomic and physiologic terminology? Or, will s/he rely upon diagnostic and treatment approaches that transgress scientific convention? One such approach is applied kinesiology (AK), popular among chiropractors and some veterinarians, in which the practitioner tests the resistance of a muscle or group of muscles to the examiner's applied pressure.¹⁶ Not only is the overall health evaluation of animal patient dependent on the practitioner's subjective interpretation of the muscle test,¹⁷ but for animal

¹⁴ Cohen MH and Eisenberg DM. Potential physician malpractice liability associated with complementary and integrative medical therapies. *Ann Intern Med.* 2002; 136:596-603.

¹⁵ Ibid.

¹⁶ Haas M et al. The reliability of muscle testing response to a provocative vertebral challenge. *Chiropractic Technique.* 1993; 5(3):95-100.

¹⁷ Klinkoski B and Leboeuf C. A review of the research papers published by the International College of Applied Kinesiology from 1981 to 1987. *Journal of Manipulative and Physiological Therapeutics.* 1990;13(4):190-194.

- patients, practitioners instead perform “surrogate testing” on the client who stands in for the patient, because the individual being tested needs to be able to understand and follow instructions from the examiner. AK thus diverges widely from the AVMA Guidelines’ advice that, “Diagnosis should be based on sound, accepted principles of veterinary medicine.”¹⁸
- Finally, what other CAM approach(es) does the practitioner use in treatment? Will the practitioner be making other recommendations (herbal, nutritional, lifestyle) in addition to providing manual therapy? A national survey of human chiropractors in 2000 showed that over 80% of chiropractors “utilized ten or more modalities in their practices”, including homeopathy, nutritional supplementation, and acupuncture.”¹⁹ On what basis will he or she make these recommendations for your patient? Does he or she have adequate training in animal health and disease to do so? Will these treatments interact with conventional treatments that the patient is currently receiving?

¹⁸ AVMA Guidelines for CAM, Op. cit.

¹⁹ National Board of Chiropractic Examiners. *Job Analysis of Chiropractic*. January 2000; p. 130.