

Since beginning to describe the progressions of chronic dysfunctions last year I propose that my research and intuitive extrapolations have tripped over many of the default settings of the human aging process. (1) My instincts suggest that there are more progressions than what has occurred to me. Six appear to be clear.

I have already proposed and described how gall bladder difficulties may underlie many of the gastrointestinal difficulties and their somatic expressions that accompany aging. (2) Included in Part II of that series, the connection between the progression of gall bladder dysfunction and the emergence of Type II or non-insulin-dependent diabetes mellitus was noted. In this present series, I am describing and postulating how many motor coordination and chronic sensory complaints are likely to be associated with cervical stenosis progressing toward cervical spondylotic myelopathy (CMS). (3)

The other four proposed progressions include: osteoporosis, atherosclerosis (the deposition of fatty materials in arterial walls), desiccation and dehydration, and senility (the cognitive decline we experience as humans associated with dementia and Alzheimer's). I plan to explore these in future articles, so I invite you to consider what other progressions may exist and either communicate them to me or write about them yourself. Please send me a copy. Let us combine our profession's capacity for astute observation, our willingness to listen to our clients and, our collective common sense to make a lasting contribution to humanity.

One of the most reliable indicators that one or more of these progressions may be occurring is that a client presents with one or more chronic somatic complaints without a recent precipitating event. My clinical experience has repeatedly shown that for a large majority of clients, chronic difficulties are the "canary in the coal mine" of underlying degenerative progressions. These fly under the radar of medical testing because they take decades to undermine physiologic function until reaching a tipping point of degradation and clinically detectable expression. Understanding such progressions will add to our collective ability to assist clients to make more informed medical and lifestyle choices.

All of these subtle progressions contributing to declining capacity, function, and, pain have two common denominators: the body's capacity for delivering nutritious oxygenated blood, and the length of time it takes for the return of venous and lymphatic fluids to deliver the raw materials so that the lungs and heart can make new blood. As massage therapists, facilitating the movement of bodily fluids is at the core of our training. We are uniquely oriented to assist our clients to maintain the "quality of their lives" as they age.

Returning to the progression of cervical myelopathy, let's begin with my own cervical MRI promised in the previous article. The process of having an MRI done is fairly simple and painless, especially one that allows you to sit or stand. (4) Reading the radiologist's report however, was more of an emotional experience than I had anticipated. Even though I have reviewed thousands of medical reports, to read one that described what is going on inside of my own neck was sobering yet, very educational. Early detection translates into an increased field of choices for us all.

My report described C4-5, C5-6, and C6-7 as having moderate to severe disc compression with posterior bulging of the discs, one of which is impinging upon the left side of the thecal sac (the

meninges). It also noted left-sided and right-sided foraminal narrowings (where the spinal nerves exit) between each of these vertebrae. The report certainly helped me to understand how and why my upper extremity pain and numbness could express itself on either side or bilaterally and why my left lower extremity has been more symptomatic over many years. There was no evidence of frank spinal cord compression presently, only the stenosis or pinching of the left-sided thecal sac at C4-5.

In a discussion with my personal physician, he noted that he has seen many such MRI reports that reflected more significant stenosis (narrowing of the space for the spinal cord) along with frank spinal cord compression but without accompanying symptomatic pain or numbness; instead, the patient's motor coordination was generally more the presenting problem. (5) I also requested a retired radiologist take a look at the films to confirm what the report stated. His response was, "what are you going to do, Dale, you're 55, it's not bad enough for surgery." (6) My response was a declaration that I was going to attend to the integration of my soul and personality, seek out excellent bodywork, refrain from working with my neck in extension and arms over my head, as I do trimming the tropical trees & plants in our yard, and seek out nutritional sources to quell the activation of the inflammatory process. "That makes sense," he concluded. He also noted that more information would have been obtained had the MRI been done with my neck in extension as this would more directly activate the cervical ligaments. So do pass this onto any clients who might seek out such information for themselves. (6)

When I subsequently asked an orthopedic physician who is a client and has had surgery for CMS himself for his opinion of my MRI results, he advised me that what he saw DID warrant surgery. I didn't want to hear that. This is what our clients are very often faced with real dilemmas with differing medical opinions. I took to heart my personal physician's distillation of the human condition from his many years of medical experience, 'clots and inflammation are what disable us leading to our eventual deaths.' (5) Thus, based on his advice, the course of action I am presently pursuing is to contain the inflammatory process through the use of prescription strength Omega 3 salmon oil, baby aspirin therapy, and taking over the counter anti-inflammatory medication at the first sign of an escalation and regulating more judiciously the number of hours I work each day in my clinic. This approach has dramatically reduced the sum total of my daily upper extremity pain and numbness. I am pleased that I followed my instincts in seeking out more information. I consistently offer this caveat to clients: "If you don't look, you don't know." Medical tests have their place and they are not always conclusive. However, with additional information we all have more perspective from which to make a choice.

Based on my research thus far, my current guidelines for encouraging clients, or myself to explore a surgical option for CMS include any of the following somatic profiles individually or in combination: unrelenting upper extremity/neck pain or numbness, atrophy of the deltoid muscle group or, muscular hand wasting usually associated with the muscles of the thumb or the central portion of the palm, the development of an ataxic gait pattern (a clumsy and jerky walking style), and/or an escalating frequency of urinary or bowel urgency or episodes of incontinence. This last symptom is the one that slides under the radar for many.

It is important to consider that more than one degenerative progression may simultaneously co-exist in the same body. This was the case for both of the clients with CMS for whom I was unable to stem the tide of its progression. One was a male client who has been chronically overweight for years and I suspect has gall bladder dysfunction and/or has progressed into a

pre-diabetic state. For the other, a female client, her osteoporosis had insidiously accelerated despite her best efforts to track it with periodic bone density tests.

Researching this progression has been a humbling and rewarding personal and professional experience. Humbling to experience the “zone of limits” that my genetics and trauma history may be signaling in my own aging process. Rewarding in the vast appreciation for how well our bodies do adapt overall and in the realization that the progression of CMS is truly a broad symptomatic continuum that affects some more than others both functionally and clinically across a wide spectrum of somatic expressions.

There has been an assumption that the progression of CMS emerges in males more often than females according to my Google searches of the literature. (7) My own clinical experience with clients thus far is fairly 50-50 in gender occurrence since beginning to recognize and research this progression 8 years ago.

Dr. Richard MacDonald D.O. related an Osteopathic distillation in his Functional Anatomy courses that, based on his profession’s cadaver studies, males have a tendency toward lower back weakness because the iliolumbar ligament generally does not extend to L4 as it does more typically in women. The inferred evolutionary implication of this anatomic difference is that this extended stabilization represents a pragmatic genetic selection providing women with more low back – pelvic stability for birthing a child. Correspondingly, the first rib and sometimes the 2nd rib of most women tend to be less stable in their uniaxial mooring to the T1 and T2 spinal vertebrae. (8)

These anatomical gender specific differences have been cited as a possible explanation to why males experience more low back pain and dysfunction while females tend to experience more craniofacial, neck, and upper extremity pain and dysfunction. (8) A further inference based on personal speculation is that these gender differences have functioned in our human evolution as sexual stimuli - the quality of power reflected in the strut of a male as he walks and the elevated positioning of the breasts in females. Nature is relentless in its drive for the genders to notice each other and to reproduce. In my opinion both of these anatomic tendencies can feed into the eventual expression of CMS.

The principle assertion in the orthopedic literature is that men have larger cervical vertebral bodies relative to the space for the spinal canal (canal/body ratio) that may encroach upon the circumference of the spinal canal more easily than for females, thus they have a greater tendency to exhibit the more acute symptoms of CMS. In numerous Google searches I was unable to verify with recent studies that this gender difference in etiology is generally accepted. My speculation is that CMS is simply less often diagnosed in females because it is more often diagnosed in its acute expression in males. The orthopedic notion that a congenitally smaller spinal canal in either gender was highly correlated to the expression of CMS was verified. (9)

Let’s now add to the theories about how and why CMS begins and progresses beginning with the obvious the carriage of the head. “Wherever the head goes, the rest of the body must follow”. (10) There exists within human neurology an exquisitely fine-tuned sense of tracking where the head is in relationship to the field of gravity. The subcortical flexor/extensor relationships are intimately linked to two of nature’s most crucial imperatives -- “don’t fall” and

“live long enough to reproduce”. (11) The writings of Thomas Hanna are one of the few places you will find a comprehensive description of these righting reflexes. (12) With gratitude, I had the opportunity to study and receive many treatments from him shortly before his too youthful passing.

What I find missing in the orthopedic theories of CMS are four principles of anatomy and physiology that have evolved from my trainings and my clinical experience with clients:

- the flexors dominate the extensors in how the righting reflexes protect us in “almost -or actual falling episodes” when one adds the echoing effects of actual and accumulated head, neck, or impact traumas this influence ratchets the tension between the flexors and extensors more exquisitely (12)
- the viscera are slung forward and down from the axial skeleton as a result their suspensory ligaments can transmit tensions directly to their osseous moorings further adding to the sum total flexor and extensor tension (13)
- neurologically, the autonomic nervous system discharges the tensions of the viscera into the musculoskeletal system via viscerosomatic reflexes adding an compounding stream of neurological tension to the central nervous system which eventually disrupts the neurovascular delivery of nutritious and oxygenated blood and impeding venous and lymphatic return to the heart (14)
- the difference in the pressure relationships between the body’s great cavities (the cranium, thorax, and abdominal/pelvic) is “how” the efficiency of the low pressure venous & lymphatic systems is normally maintained. (15)

Based on my clinical experience, what is totally neglected is the capacity of the esophagus to pull the head down onto the neck and thus adding a direct quality of compression to the cervical discs. The fascial mooring of the esophagus, the pharyngeal raphe, attaches to the basilar portion of the occipital bone just posterior to the sphenobasilar junction. (16) To my perception the influence of a shortened esophagus is completely overlooked in most whiplash style/impact injuries and as an influence in progressive anterior kyphosis of the spine. Additional soft tissue structures that I consistently find to be locked in a state of contracture or spasm include the SCM’s, the longus colli muscles and the scalenes. Diaphragmatic and iliopsoas contracture or spasm add further strain to the extensor musculature.

The most commonly spoken somato-emotional statements of my clients over the years mirror this strain pattern. These include; that someone or some situation is a prevailing “pain in the neck,” that they feel an overwhelming sense of pressure within their body, or that they feel “all twisted up inside.” Trace the pattern down and forward from the neck pressure strains the cervical vertebrae given its build-up within the thoracic and abdominal/pelvic cavities. The gut tube is suspended directly from craniocervical junction. Both of these influences are speculated to directly contribute to the how and why cervical stenosis can progress toward spinal cord compression and CMS symptomatic expressions.

I am admittedly postulating an interface between anatomy, physiology, and consciousness here so please do consider these as theories yet, as I have implemented these notions in practical terms day after day, my clients benefit more and more quickly.

In the last article I encouraged you to attend to releasing the tension and lengthening the fascia of any muscular structures that have attachments to the back and to the front of the body applying whatever touch techniques that is your training base to ease the tensions of these myofascial elements. The sternocleidomastoid muscle is a clear example of the list provided in that article.

What is needed for those massage therapists who desire to become more comprehensive in their work with clients is to seek out training in how to therapeutically work with the visceral suspension of organs and to explore how consciousness can participate in escalating the tensions of visceral organs themselves thus, adding a significant strain to the musculoskeletal system. The three best places to begin such training(s) are with the Upledger Institute, the Barral Institute, or with the founder of Integrated Awareness®, Lansing Barrett Gresham. Each of these educational resources has provided dynamic insights leading to my most significant leaps in comprehension of how the dance between psyche and soma expresses itself. (17)

My intention in this series has been to draw open the curtain of the CMS neurological progression which is highly correlated to diminishing the quality of life during the aging process and is often not considered, diagnosed, or, treated by physicians until it reaches an acute expression. Many clients will end up on your doorstep in the early and moderate phases of the progression.

In conclusion, the possibility that CMS may underlie many of the chronic somatic complaints of our clients aged 50 and older is what we want to anchor in our awareness. Do remember to inquire as to whether the client has or is currently experiencing any difficulty with urination ranging from urgency to difficulty initiating a stream. Sharing with them that it is your understanding that an inability to interrupt one's urinary stream is one possible clinical indication that warrants a visit to their physician.

The somatic complaints of CMS tend to come and go over the years sometimes being expressed in upper extremity problems then switching to lower extremity difficulties commonly expressed as sciatic pain or the internal feeling of heaviness in the thigh or leg. Often they will bounce back and forth between the upper & lower extremities. As noted in the earlier articles, when the complaints involve the same-sided upper & lower extremity there is a high probability that the CMS progression is expressing itself.

Another significant caveat is that in a study that followed-up on patients who had had surgery for CMS it was their conclusion that the degree and longevity of a successful outcome was based on the symptom profile being discovered earlier than later in its progression.(18)

Our job is to enhance the functional capacity and coordinated mobility of our clients. This translates into “quality of life”. Allow your perception to become a therapeutic modality. Sense, feel, and touch from the “inside-out”.

When I teach classes, I often draw upon an agrarian analogy which emerged early in my career—we plow the field, plant the seeds, weed the field, and sometimes are there to assist in the reaping of a harvest of healing. May this continuum reflect your daily opportunity with clients.

Many thanks again to my editorial team for their contributions, my wife, Katie Truax B.A., Glenn Gaffney L.M.T., and Jake Rutherford M.D.

References:

1. The Continuum of Progression, Dale G. Alexander Ph.D. L.M.T., *Massage Today* February 2007, Vol. 07, Issue 02.

2. Part I: Chronic Problems Related to Gall Bladder Dysfunction / Disease, Dale G. Alexander Ph.D. L.M.T., *Massage Today*, April 2007, (Vol. 07, Issue 04)

Part II, *Massage Today* July, 2007 (Vol. 07, Issue 07)

Part III, *Massage Today* October 2007 (Vol. 07, Issue 10)

Part IV, *Massage Today* January, 2008, (Vol. 08, Issue 01).

3. The Progression of Cervical Stenosis toward Cervical Spondylotic Myelopathy (CMS), Dale G. Alexander Ph.D. L.M.T., *Massage Today*, April, 2008 (Vol. 08, Issue 04); Part II, *Massage Today* July, 2008 (Vol. 08, Issue 07)

4. Stand-Up MRI of Miami, 1661 SW 37th Av. Suite 100, Miami, Fla. 33145; Fee: \$500. 305.461.6005. [miamistandupmri@bellsouth.net](mailto:miamistandupmri@bellsouth.net)

5. John R. Van Tuyl, M.D., 1501 Government Rd. Key West, Fla. 33040, 305.295.7550.

6. John Kreinces, M.D., Retired Radiologist, Key West, Fla.

7. Sex Discrepancy in the Canal/Body Ratio of the Cervical Spine Implicating the Prevalence of Cervical Myelopathy in Men. *Spine*. 27(3):250-253, February 1, 2002. Hukuda, Sinsuke MD, PhD, and; Kojima, Yasuji MD, PhD

8. Functional Anatomy Courses, Dr. Richard MacDonald D.O., Upledger Institute Education, April & June 1989, Denver, Colo. & Los Angeles, Ca.

9. Myelopathy, Radiculopathy, and Peripheral Entrapment Syndromes, David H. Durrant, D.C. and Jerome M. True, D.C., CRC Press LLC, 2002.

10. A quote that is imbedded in my memory yet was unable to verify its source.

“The Inside-Out Paradigm: Survival vs. Quality of Life”, Dale G. Alexander Ph.D. L.M.T., *Massage Today*, Part One Nov. 2005, Vol.05, Issue 11, Part Two: Dec. 2005, Vol. 05, Issue

12. *Somatics*, Thomas Hanna Ph.D., Addison-Wesley Publishing, 1988.

13. *Visceral Manipulation Courses*, Jean-Pierre Barral, course notes 1987-93.

14. “Healing From the Core: The Inside-Out Paradigm”, Dale G. Alexander Ph.D. L.M.T., *Massage Today*, Parts 1 & 2 in the Sept. & Oct. 2004 issues, Vol. 04, Issue 09 and Vol. 04, Issue 10.

15. “The Inside-Out Paradigm: Equalizing the Pressure”, Dale G. Alexander Ph.D. L.M.T., *Massage Today*, March 2005, Vol. 05, Issue 03.

16. *Atlas of Human Anatomy 4th Edition*, Frank H. Netter M.D., Plates 63, 65, & 67 via the pharyngeal raphe, Saunders/Elsevier, 2006.

17. [www.upledgerinstitute.com](http://www.upledgerinstitute.com) / [www.barralinstitute.com](http://www.barralinstitute.com) / [www.inawareness.com](http://www.inawareness.com)

18. Anterior Cervical Decompression and Arthrodesis for the Treatment of Cervical Spondylotic Myelopathy. Two to Seventeen-Year Follow-up, SANFORD E. EMERY, M.D., HENRY H. BOHLMAN, M.D., MICHAEL J. BOLESTA, M.D. and PAUL K. JONES, PH.D. CLEVELAND, OHIO, *The Journal of Bone and Joint Surgery* 80:941-51© (1998).