Dynamic Chiropractic

Morphology Versus Function

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Have you ever looked at a roentgenogram of a degenerated hip or spine and wondered how the patient could even stand upright? Often the patient complains of pain in the area where there is the least degeneration. In a recent review of the literature regarding the curves of the cervical spine in normal and injured persons, it was concluded that "there is little evidence to support the contention that altered cervical curvatures are of prognostic significance."[1]

Morphological changes should always be factored into the final decision on the source of pain. While misalignments seen on x-ray may not appear significant, they may indicate a predisposition to a functional problem which would be realized on a functional examination. Morphology aside, most of the complaints in the locomotor system of the human body are due to disturbed function. I will always remember the 85-year-old patient from Iowa who visited my office for an adjustment. She brought with her full spine x-rays from the Gonstead Clinic and practically ordered me to adjust her L3 vertebra on the knee-chest table, listing "PRS." Her spine was rampant with disc degeneration, lumbar scoliosis, and osteophytes and from a purely morphological point of view you would guess that her spine was in a state of severe fixation. Upon palpation, her spine revealed a beautiful wave-like motion except for an L3 fixation. This lady had been receiving chiropractic adjustments for the last 50 years. Her L3 segment easily clunked into motion. She smiled and left the office satisfied. She's probably about 95 years old now, so if anyone out there gets her as a patient, she may need a new set of x-rays.

The point of this story is that our treatments should be predicated on the evaluation and improvement of function. Which leads to a very important second point. We must look for and treat disturbed function wherever it lies. Lewit in his textbook[2] (which all chiropractors should own) coins the term "functional pathology of the locomotor system." This refers to disturbed function and all of the reflex changes that result from nociceptive stimulation. One of the most important and prevalent sources of nociceptive stimulation involves the spinal column and as chiropractors we spend our lives evaluating the spine and its reflexogenic actions on the human body. But the locomotor system involves the total structure. If we have decided to treat problems of the locomotor system we must be familiar with the function and reflex effect of other areas besides the spine. That is where soft tissue analysis comes into play.

Lewit[2] feels that besides trauma and reflex stimulation from other spinal segments and the viscera, the chief cause of spinal fixations is faulty movement patterns. The chief causes of faulty movement patterns are muscle imbalances and postural overstrain. Faulty movement patterns refer to the quality of movement: sequence of muscle action in hip extension; shoulder abduction; or a forward positioned head or altered movements of the spine itself. Both a chronic short muscle and a spinal fixation can be equally responsible for faulty movement patterns. Either the muscle or the segmental fixation can alter the functioning of the spinal column as a whole. The quality of motion of the extremities may be equally causative. The adjustment in the early stages of locomotor aggravation may be the principle

treatment for such reflexogenic effects such as muscle spasm, muscle inhibition, hyperalgesic skin, spinal tenderness, and autonomic phenomena.

In later stages of locomotor dysfunction the surrounding soft tissues may come into play: tautness and limitation in the deep layers of the fascia, muscles, ligaments and tendon insertions. Dystrophic changes may also occur due to the tropic function of an impaired autonomic system. Spinal subluxations may cause altered movement patterns and altered movement patterns may create spinal subluxations. Soft tissue evaluation and treatment compliments the spinal adjustment and allow us to treat the total dysfunction of the locomotor system.

References

1. Gay RE: The curve of the cervical spine: variations and significance. JMPT 16,9:591-4,1993.

2. Lewit, K: Manipulative Therapy in Rehabilitation of the Locomotor System 2nd. ed., Boston, MA: Butterworth 1991.

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Editor's Note: Dr. Hammer will conduct his next Subluxation Myopathology (SM) seminars March 12-13 in Davenport, Iowa and on April 16-17 in Scottsdale, Arizona. You may call 1-800-359-2289 to register.

Dr. Hammer's book, Functional Soft Tissue Examination and Treatment by Manual Methods: The Extremities, is available. Please see the Preferred Reading and Viewing List, pages XX, Part #T-126, to order your copy.

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