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The Czech School of Manual Medicine: Studying with Lewit and Janda

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In September a group of nearly 20 chiropractors spent two weeks studying from the Czech school of manual medicine. The chiropractors included faculty and participants in LACC's rehabilitation diplomate program. Internationally known neurologists Karel Lewit and Vladimir Janda were instructing, along with professors Cihak (anatomy), Jirout (radiology), and Vele (neurophysiology), and Dr. Janda's entire physiotherapy staff.

In upcoming issues I will attempt to share with you some of the pearls from this visit. Most incredible was that while the speakers ranged in age from the late 60s to early 80s, each was charged with youthful enthusiasm for their subject. Witnessing their passion for understanding the function of the locomotor system was in itself one of the most precious gifts of being able to study with them.

Pr. Vele gave a crystal clear talk on the neurophysiology of motor control. He identified certain key concepts to our understanding how muscles work to maintain joint stability. Not only are there postural muscles of the locomotor system as a whole (i.e., gastrosoleus), but there are segmental postural muscles as well (i.e., lower trapezius). Of particular importance were the deep intrinsic muscles (i.e., multifidus) and muscles of respiration (i.e., diaphragm).

Vele's talk explained that the purpose of the postural system is to maintain a stable body position. Each and every movement begins and ends with posture. However, overactivity of postural muscles is undesirable and leads to incoordination. The incoordination seen for instance in Parkinson's patients is due to an inability to inhibit the postural system. An infant's motor development is a wonderful example of the role of postural stability. Head/neck stability is required to verticalize the gaze. Trunk stability is required to verticalize the trunk and facilitate prehension. Crawling requires pelvic stability to verticalize the thighs. Finally, walking depends upon ankle stability so that the lower leg can attain a vertical posture.

A child's motor development can be facilitated by reflex stimulation of certain "points." Vele has been working with another Czech clinician, Pr. Vojta, to study methods of facilitation which could be utilized in adult's with spinal cord injury or children with developmental disorders (i.e., cerebral palsy). Vele, along with Janda's physical therapist at the Charles University, showed us developmental strategies incorporating reflex stimulation along with manual resistance to crawling, kneeling, standing, and gait movements. During our visit we saw a number of adult patients with severe spinal cord injury who were treated with remarkable success by Vojta methods. During a Vojta treatment the patients involuntarily create powerful muscle contractions which recapitulate the developmental sequence (crawling, kneeling, walking).

While we visited with Janda's physical therapists we experimented with the Vojta techniques to determine if they might have an application for chiropractic patients with muscle weakness. By utilizing the crawling positions we were able to arrive at powerful facilitory cues for facilitation of voluntary contraction of weak muscles, such as the gluteus medius or lower scapular stabilizers. Whereas the "classic" Vojta procedures require multiple highly trained therapists, these modifications were far less labor intensive.

In our ACA rehabilitation courses spinal stabilization exercises are taught which focus on segmental (or proximal) stability. Examples include activation of:

- lower trapezius and serratus anterior for the shoulder girdle during prehension movements;
- deep neck flexors for static head/neck posture;
- transverse abdominus and multifidus for static lumbopelvic posture (especially during lifting);
- gluteus medius for static pelvic posture during mid-stance phase of gait.

Specific exercises were demonstrated for improving respiration and for activating the deep spinal intrinsic. Most of these exercises have their origin in yoga and will be gradually integrated into the teaching program of all LACC rehabilitation courses/workshops.¹ Also, a new library file is available on rehabilitation topics which I have put together. This is available by calling LACC's library.²

References

1. LACC Postgraduate Division. Whittier, CA (310) 902-3379.
2. Rehabilitation article file. LACC Library (310) 947-8755.

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