2005 International Whiplash and Trauma Congress

I have just returned from the 2005 International Whiplash Trauma Congress conference in Colorado. The scientific program was filled with speakers from all over the world including Australia, England, Switzerland, Denmark, Germany, Norway and Sweden. Of course, there was strong representation from North America with both Canada and the US having it’s fair share of presenters. As indicated in the name, the conference was an opportunity for the world’s leaders in medicine and engineering to gather and share information relating to their research surrounding the Whiplash phenomenon.

The keynote speaker was Dr. Nikoli Bogduk who is an anatomist and surgeon from Queensland Australia. He is an icon in the pain management world and the world of anatomists. To give you an idea of his contribution to the scientific community, he and his cohorts were the first to document the presence of nociceptive nerve fibers (pain fibers) in the human disc in the late 80’s. His discovery revolutionized the management of axial complaints (spine) and has offered us great insight into the nature of the spinal discs and facet joints as pain generators. The result has been a tremendous increase in the number of pain management techniques. As important, we now have a scientific basis the axial complaints of our patients and can better explain to them (and the courts) the reason why pain exists even though objective studies (MRI, CT, X-ray,EMG, etc) do not show fractures, disc herniations or nerve damage.

Dr. Bogduk’s opening presentation reviewed the mechanics of rear-end whiplash trauma and then focused on the facet joints (AKA zygapophysseal, joint, Z joint, apophyseal joints). His explanation of the trauma mechanism identified that the most likely injured structure as the cervical facet joint capsule followed by the facet cartilage and then bone. He reviewed the new concept of whiplash mechanism regarding the compression/translation coupling and stresses occurring in the first 150ms, well before the head has even struck the head restraint. He noted that while the mechanism of injury was becoming universally accepted in the scientific literature, the treatments had been grossly under researched resulting in little scientific basis for any intervention (surgery, medication, physical therapy, chiropractic, exercise). That being said, he acknowledged that this lack of scientific validation exists for nearly all medical therapeutics. He
confronted the audience of researchers to accept the challenge to perform the studies to advance our knowledge.

Bogduk’s introduction was followed by interesting scientific presentations by researchers investigating whiplash and trauma events. A presentation on head restraints and vehicle airbags suggested that safety systems were improving. The same speaker indicated that cars are generally becoming stiffer resulting in greater injury potential. Several other speakers presented their studies with findings indicating that whiplash injured patients develop increased sensitivity (lowered pain thresholds) than non-injured patients. They identified a “central sensitization” in the spinal cord and brain from modulation of the pain signals resulting in increased pain, even in uninjured tissues.