

American Back Society: Millennium Meeting Sums It All Up, Part III

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Myofascial Pain Syndrome: Fact or Fiction?

We commonly ascribe the diagnosis "myofascial pain syndrome" to chronic pain patients without a more specific, tissue-based (structural, morphological) diagnosis. Some use the term more or less synonymously with "myofascial trigger points," the histological and neurological basis of which has always been controversial.

Dr. David Wolens will have none of this. As soon as his talk was announced as "Myofascial Pain Syndrome: Fact or Fiction?", it was clear where this doctor was going. After reviewing the evidence on the reliability and validity of myofascial and trigger point pain syndromes, most of it entirely non-flattering,¹⁻⁴ Wolens cut to the quick: myofascial pain syndrome should be at best a diagnosis of exclusion, and should probably not be used at all. Giving questionable diseases a name does a real disservice to the patient and makes it more difficult for the next doctor to help the patient. Must we give such poorly understood entities a name at all?

Finally, Wolens opined that the spray-and-stretch technique⁵ may aggravate symptoms and is at best highly technique-dependent, perhaps not to be distinguished from placebo. The described method (he read from a manual to prove his point) is "all a bunch of gibberish." As for injecting trigger points: many different drugs have been used, including saline and dry needles, but there have been no differences in outcome, so the very existence of the syndrome must be held in doubt.

On Cooking Discs to Shrink Collagen

My report on the 1998 ABS meeting⁶ discussed new procedures for minimally invasive disk surgery. One involves nonablative low-level laser (LLL); the other employs a heating filament. Both are designed to affect collagen shrinkage up to 25%. The past year, according to some of the meeting's presenters, has seen a massive increase in the utilization of these procedures, called respectively laser thermodiskoplasty and IDET (intradiscal electrothermal) treatment.

Dr. John Chiu described his experience since 1995 with LLL, treating 720 cases and 1,224 discs. He reported that 95.5% of patients had a good or excellent outcome. All of his target patients had

symptomatic, non-extruded herniated nucleus pulposus in the cervical, thoracic or lumbar spines. (Bogduk would not find the anatomy of the cervical discs amenable to such treatments, as described later in this article.)

Dr. Stephen Esses, urging caution before adopting new surgical procedures, was dismayed that there may already be 1,000 users of IDET, proving that "feral behavior in the U.S. probably can not be controlled." He predicted that within 10 years time, IDET will have gone the way of chemonucleolysis. I did not hear him say why.

A Critical Voice: Who Needs Surgery?

Having complained about the new disc-heating surgeries coming in, Dr. Esses next discussed more traditional surgeries and discographic diagnostic techniques for back disorders. The mainstay of medicine is that we need to know the diagnosis to render effective treatment indeed, "When we know the diagnosis, surgical treatment is very effective" he explained, That is a very big "if," however, since "very often surgery is diagnostic"; i.e., not really based on a pre-existing diagnosis.

Lacking neurological symptoms or a diagnosis of scoliosis or HNP, there is very little support for operative treatment. Nonetheless, 200,000 spinal fusions per year are performed in the U.S., even though studies show only about half the patients improve when there is low back pain without neurological complications.^{7,8} Just how unimpressive is that? Esses said 70% of discogram-positive untreated low back pain cases improve over a three-year period,⁹ which provides all the more reason to discount uncontrolled studies: "When studies are controlled prospectively and randomized, the treatment success is much less than with uncontrolled, historically controlled studies. If you don't have randomized prospective controls, you will never know what happened."

Esses, not content with throwing a towel on unnecessary surgeries, also evidenced his skepticism on the validity and utility of discographic procedures. Injections affect tissues beyond the hypothetical pain-generating tissue, such as the endplates and contiguous vertebral bodies. Moreover, pain relief does not necessarily identify the pain generator, and certainly does not automatically suggest the appropriate treatment. For example, toe pain can be numbed by blocking the L5 nerve root, but that does not imply that the L5 nerve root needs a surgery.

In concluding, Esses observed that what we know about low back pain is 90% BS and 10% fact (BS=bold speculation). (Dr. Anthony Yeung, during his talk on percutaneous spinal endoscopy, defended discography from Esses' criticisms, while discussing its limitations.¹⁰)

Bogduk: A Disc Disruption Paradigm

There has been something of a revolution in our understanding of disc pathology, or at least how it relates to symptoms. In part I of this series, I discussed Dr. Bogduk's "goodbye, herniated disc" presentation. He returned to further discuss how and why internal disc disruption, not a herniated disc, is the primary culprit. On the affected side, radial fissures force a few layers of intact collagen to bear more stress, coupled with chemically sensitized - and thus increased - nociception.¹¹ Although in normal patients most of the weight is born in the middle layers of the annulus,¹² in pain patients, the middle layers offload weight-bearing to annular peripheral fibers, predisposing them to fatigue failure, in which less force applied repetitively may cause tissue failure at a point smaller than the "normal

ultimate strength." The final link in the chain has to do with disc profiles under repetitive loading.^{12,13}

According to Bogduk, we now have an almost complete model of disc failure:

- Repeated loading causes fatigue failure, producing vertebral endplate fracture.
- This exposes matrix substance and leads to nuclear degradation and depressurization and increased stress.
- This results in increased chemical sensitivity and annular disruption, with attendant chemical and mechanical nociception.

Bogduk went on to defend discography and IDET (while acknowledging some limitations), an apparently direct response to Esses' negative remarks. When it was his turn again, Esses tried, but did not succeed, in getting Bogduk to consider primary muscle pain and kinetic chains as possible spinal pain generators. (Bogduk, in the forefront of attempts to identify the pain-provoking spinal tissues, has not considered muscles, even though by his own admission some 30% of the pain remains idiopathic even after using diagnostic injection techniques.) Bogduk would hear none of it. He received support from Dr. Richard Derby, who covered discography protocols, the indications and prognosis for IDET, and the chemically-sensitive disc.

I just don't have the space to discuss some other interesting presentations, but I must note in passing the following:

- An osteopath, discussing his integrative approach to treatment, began by recalling my rather harsh review the last time he addressed the ABS ("like having an astrologer address a meeting of the astrophysics society, or perhaps Tiny Tim performing 'Tiptoe Through the Tulips' during an intermission of the Julliard String Quartet.")¹⁴ He asked, essentially, that his audience lighten up this time. In that spirit, I will just leave his very light talk alone. As I noted in a previous column,¹⁵ there is a curious double standard at ABS meetings, wherein non-DCs can get away with remarks that would probably draw fire coming from chiropractors.
- Dr. Roger Minkow's riveting talk on subtle signs of cervical myelopathy was more precisely an autobiographical sketch of his own experience as a patient with a disc herniation. All spine doctors deserve to be in the patient's shoes for once, as Minkow so eloquently demonstrated.
- Bogduk's workshop on the anatomy of the cervical disc was truly extraordinary. I need not go into the details, which are largely covered in his must-read article in Spine.¹⁶ Every spine doctor should know that cervical and lumbar discs are entirely different animals: cervical discs feature oblique fibers that converge toward the midline (like toward a vanishing point), except for some interlacing fibers near the anterior midline. They do not sport the concentric layers and oppositely inclined annular arrangement of lumbar discs. Since the cervical annulus is really more like an intervertebral ligament, there can't be internal disk disruption or radial fissures in the cervical spine. Indeed, IDET on the neck would be insane, because there is nothing there to cook. Since McKenzie's centralization phenomenon is even more reliable in the neck, despite the lack of an annulus comparable to that seen in the lumbar spine, his explanation of the anatomical basis of centralization is in some serious need of revision. Bogduk said that when such a metaphor is forthcoming, it may explain the lumbar results better.

- Attorney Steven Mendelson stressed the importance of subscribing to Spine. He also admonished the doctors who attended his workshop as follows: "Never, ever change chart notes at the request of a patient, unless you think there is a mistake; and even at that, the change must be initialed and dated."

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