Asia-Pacific Chiropractic Journal

Regarding the 'Prevalence of abnormal findings in a cohort of 737 patients referred for MRI examination by Doctors of Chiropractic and potential neurological consequences associated with Vertebral Subluxation'.

Charles Blum

Dear Drs. Christopher Kent and Kathleen Costello:

Thanks so much for your article (1). Your article and its findings have been on my mind all day and evoked many feelings. In the past over 30 years of clinical practice I don't really recall any patient who had a completely normal cervical or lumbar MRI. What can this possibly mean?

Initially in the 1990s it seemed that the orthopedic surgeons used anything close to a 4-5mm herniation to justify a surgical intervention, but the outcomes from those surgeries were less than encouraging, leaving patients often worse than not having a surgery. During the early 2000s it seemed that conservative care, including chiropractic, was the best way to go initially, particularly if the patient didn't have any serious red flags.

Starting particularly during the early 2000s studies of asymptomatic patients' MRIs with abnormal findings led to much discussion over what is the best option for this subset of 'normal' patient. For instance, a 2001 study by Borenstein et al (2) determined that lumbar MRIs findings were not predictive of the development or duration of low-back pain. Individuals with the longest duration of low-back pain did not have the greatest degree of anatomical abnormality on the

original MRI, 7-year prior study. Their conclusion was that '*clinical correlation is essential to determine the importance of abnormalities on magnetic resonance images*.'(2)

Similarly to the Borenstein et al study Kato et al (3) utilized MRIs to investigate the cervical spine in 1200 asymptomatic subjects and found there was a '*relatively high prevalence of abnormal MRI findings of the cervical spine.*' (3) They also cautioned that this finding 'emphasizes the dangers of predicating operative decisions on diagnostic tests without precisely correlating these findings with clinical signs and symptoms.' (3)

A later cervical spine MRI study or 1211 asymptomatic subjects by Nakashima et al (4) found that disc bulging in the cervical spine was frequently observed in asymptomatic subjects, even including those in their 20s. The number of patients with minor disc bulging increased from age 20 to 50 years. Also, the frequency of spinal cord compression and increased signal intensity increased after age 50 years, with increased severity of disc bulging. (4)

Shen-yun et al (5), performed a comparative study of pathological (modic) changes in lumbar and cervical spinal vertebra and their study assessed five patient sub-groups: '*1. 1,223 patients with low-back pain/radiculopathy only; 2. 1,023 patients with neck pain/radiculopathy only; 3. 497 patients with concurrent low-back and neck symptoms; 4. 304 asymptomatic subjects with lumbar MRIs; and 5. 120 asymptomatic subjects with cervical MRIs*.' (5) While greater modic changes was found in subjects presenting with spinal pain still they found that regardless of pain the '*prevalence of lumbar and cervical modic changes increased with age, disc degeneration, (descending) spinal level, and increased kyphosis.*' (5)

So what does this all mean to our patients and the chiropractic encounter? It does seem like symptoms may not be not the best predictor of what type of vertebral subluxations, osseous pathology, neuropathology, or associated discopathy might be presenting with a patient. While there is a general philosophy that if there isn't any pain then everything is fine, that is where I have given myself some pause.

What about subclinical progressive spinal pathology, which might be what subluxations are all about. One major powerful aspect of the chiropractic profession is its conservative, wellness, and preventative care. (6, 7, 8) If we can prevent progressive osseous and discal pathologies would that not seem to be an important consideration? With our epidemic of low back (9) and neck (10) pain and the subsequent loss of work, quality of life, pharmaceutical abuse, and dangers of surgical interventions – wouldn't conservative options such as rehabilitative exercises, ergonomic modifications, and particularly chiropractic care be an important consideration?

After all the most recent chiropractic practice guidelines are suggesting that the chiropractic profession play an important role in providing health promotion and clinical preventive services for adult patients with musculoskeletal pain. (11)

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