

## Whiplash and Degenerative Changes

Two studies published in 2021 took a look at degenerative changes in the cervical spine and how they relate to “whiplash” victims. Evaluating the studies together provides some interesting food for thought. What I found particularly interesting is that one of the studies considered the same hypothesis as Dr. Michael Yoel and I used when presenting our research during our master’s program in biomechanical trauma over 20 years ago. In this newsletter, I will summarize the two studies and offer some insights that I found interesting.

The first study from the International Journal of Spine Surgery is titled [Is Preexisting Cervical Degeneration a Risk Factor for Poor Prognosis in Whiplash-Associated Disorder?](#) The authors performed a meta-analysis literature review and accepted nine studies that included 894 patients between 16 and 76 years of age. They found that there is a statistically significant association between degenerative changes of the facet joints and nonrecovery. They also found that degeneration of the facet and disc joints together also correlated with non-recovery. Interestingly, they found that disc degeneration alone did not have an association with poor recovery.

The Second study from the journal SPINE is titled [The Long-term Impact of Whiplash Injuries on Patient Symptoms and the Associated Degenerative Changes Detected Using MRI: A Prospective 20-year Follow-up Study Comparing Patients with Whiplash-associated Disorders with Asymptomatic Subjects](#) . In this study the researchers did a longitudinal study over 20 years of patients diagnosed with Whiplash Associated Disorders (WAD). The study included 1005 subjects including 497 asymptomatic controls and 508 acute WAD patients. All subjects had MRIs and had physical exams. After 20 years, 75 WAD subjects and 181 control subjects remained available from the cohort. MRIs were performed on all of them looking for disc protrusions, dural compression, disc narrowing, foraminal stenosis, and disc signal intensity changes. The study result demonstrated an increase in the prevalence of shoulder stiffness (72.0% vs. 45.9%), headache (24.0% vs. 12.2%), and arm pain (13.3% vs. 3.9%) that were significantly greater in WAD patients than in control subjects. However, even though the WAD subjects had more degenerative changes in the initial MRIs performed, at 20 years there were no significant difference in the MRI findings. In other words, the more significant MRI findings initially were correlated with a less favorable outcome.

Here is my takeaway from these 2 investigations (which happen to correlate well with the results of the research Dr. Yoel and I had done for our master’s program). Both studies demonstrate that people with pre-existing degenerative changes have a greater likelihood of suffering long term sequelae from a whiplash trauma than those that don’t. Although I’ve read other research suggesting that there is an acceleration of the degeneration process after a whiplash trauma (something that I personally have

experienced) the second study suggests that pre-existing degenerative changes do not result in a greater degree of future degeneration.

How does this relate to you and your practice? For years, I have been told by trial attorneys that pre-existing degenerative changes are blamed by opposing council for the symptoms our patients have after sustaining an acceleration trauma like a whiplash. They claim that your client must have had neck pain and related symptoms simply due to the existence of the degeneration. This is not the case, and the literature does not support it. The presence of degenerative changes at the time of the trauma is a predisposing factor to a more serious and long-standing residuals, not proof that your client had pain associated with the degenerative changes before the trauma. In fact, it's shocking to see how many patients cross our offices with very advanced degenerative joint disease and absolutely no history of neck pain. The only way to claim that the pain pre-existed is through historical medical records or patient/witness testimony. This is a classic example of your eggshell client.

So, when opposing council or an adjuster makes the statement about the pre-existing degenerative changes being proof of prior pain you should tell them to prove it with medical records or testimony from someone that can support that contention. If they cannot, then you should be making larger demands simply because your eggshell client will have a less favorable prognosis and greater level of pain and suffering for the remainder of their lives resulting in a increased need for future medical care.