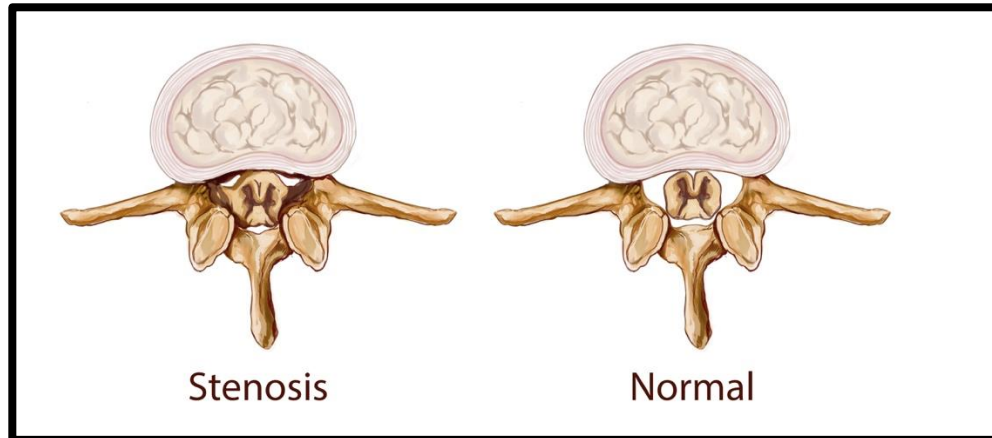


Causality Bulletin

Minor Trauma and Spinal Cord Injury

Pre-existing Stenosis as a Risk Factor

Trauma Series #168



Understanding the RISK FACTORS for bodily injury after a traumatic event such as a motor vehicle collision is a very important aspect of clinical evaluation. A risk factor is just that, a factor that increases the RISK of injury when compared to a patient without that “factor”. In a recent study by Jung et al (2018), the authors looked at one important risk factor for spinal injury which is spinal stenosis. This case reviewed ONE of the most common causes of spinal stenosis which is calcification of a major spinal ligament. The authors reported, “The aim of this study was to identify the risk factors for acute progression of myelopathic symptoms (PMS) associated with ossification of the posterior longitudinal ligament (OPLL) after minor trauma and to compare the prognosis between an acute PMS group and a chronic PMS group.” [pp E171]

Basically, what the spinal stenosis does is pre-dispose the patient to spinal cord injury with less trauma since there is “less room” around the spinal cord when compared to a “healthy patient”. The authors continue by reporting, “However, OPLL tends to predispose patients to the progression of myelopathic symptoms (PMS) after trauma. Trauma is clearly hazardous for individuals with cervical OPLL, and recent research has reported an alarmingly high prevalence of OPLL (34%) in patients with cervical spinal cord injuries (SCIs). [pp E171]. This means that “myelopathic symptoms” which is compression of the spinal cord is seen at a much higher rate in patients with pre-existing spinal stenosis. The continue by stating, “One risk factor for acute PMS in patients with OPLL after minor trauma is a higher rate of. stenosis of the spinal canal.” [pp E175]

When evaluating the risk factors for bodily injury and persistent functional loss in a trauma victim, it is critically important to evaluate risk factors which can make the injury consequence much worse than what would be seen in a healthy patient. The astute clinical will not only identify those risk factors but will also be able to apply the consequences of those risks as part of the short and long-term care plan.

Reference:

1. Jung, J. M., Chung, C. K., Kim, C. H., & Choi, Y. (2018). Risk Factors and Prognosis for Acute Progression of Myelopathic Symptoms in Patients Ossification of the Posterior Longitudinal Ligament After Minor Trauma. *Spine*, 43(3), E171-E176.