

Cervical Myelopathy

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Cervical Myelopathy is a syndrome characterized by progressive narrowing of the spinal canal in the cervical spine. The narrowing of the spinal canal causes compression of the spinal cord. There may be several contributing factors that lead to the problem. The most common cause is degeneration due to cervical spondylosis, a term used to describe arthritic changes in the cervical spine. Over time, these arthritic changes lead to narrowing and mechanical compression of the spinal cord. The spinal cord is responsible for sending signals to and receiving signals from the arms and legs. These signals within the spinal cord are responsible for pain, sensation and motor strength in the arms and legs. In some people the compression of the spinal cord does not lead to symptoms. On the other hand, spinal cord compression can cause a complex variety of symptoms. Interestingly, the severity of symptoms does not necessarily correlate with the magnitude of compression seen on spinal imaging studies. Patients with severe spinal cord compression can be completely without symptoms. Thus, the diagnosis is made by the presence of the clinical syndrome and compression of the spinal cord.

Because cervical myelopathy most commonly occurs as a result of the aging process, it is not surprising that the early symptoms are slow in onset. In fact, the symptoms may be so vague or mild and slow to progress that the patient may be unaware the problem exists. Cervical myelopathy can be a progressive process. In most patients it will worsen, then not progress for an extended period, then worsen again. Symptoms are not identical from patient to patient.

Neck pain is commonly associated with cervical myelopathy but is not always present. The most common reasons why patients consult a physician are numbness and tingling in the arms or hands, problems with function of the hands, and weakness in the arms or hands. Symptoms in the legs usually include difficulty with gait or a sense of imbalance. Weakness in one or both legs may be present. If there are pinched nerves in the neck along with compression of the spinal cord, arm pain may be an associated feature. Another common symptom includes a sharp, stinging, shock-like sensation

extending from the neck down the spine or into the arms by looking directly up or down.

If some of these symptoms are present, even in a mild fashion, and physical signs are noted on the examination, an x-ray and MRI will be ordered. MRI is the best study to assess the size of the spinal canal, degree of compression, and overall condition of the spinal cord. X-rays are also taken and are best used to assess the bony structure around the spinal cord and to show the degree of arthritic changes in the cervical spine. Cervical alignment and stability are also best assessed with x-rays.

If the clinical syndrome of cervical myelopathy is present with compression of the spinal cord noted on the MRI, initial treatment will usually consist of physical therapy to address any painful symptoms in the neck or extremity weakness. Medications such as anti-inflammatories or pain medications may be prescribed to address any painful symptoms. Should the symptoms be mild or not progressive, monitoring the clinical course over time may be recommended. Should the symptoms be progressive, advanced, or if weakness is noted in the arms or legs, surgery is usually recommended. Surgery consists of removing the arthritic bone that has narrowed the spinal canal and can be approached from the front of the spine or from the back, depending on several variables. A fusion procedure to stabilize the affected areas is usually performed at the same time. The type of surgery is dependent on the age and general condition of the patient, number of levels involved, location of the compression, and alignment of the cervical spine. The main objective of surgery is to stop the progression of myelopathy. Significant improvement in symptoms can occur, but it is often difficult to predict which patients will have noticeable clinical improvement once the compression is relieved from the spinal cord. Fortunately, the success rate for halting the progression of myelopathy with surgery is quite high.

If cervical myelopathy is a concern for you, additional information regarding your specific case will be provided. Please do not hesitate to contact our office with any questions regarding this or any other educational handout we have provided.