

Patient Information

Cervical Stenosis With or Without Cervical Spondylitic Myelopathy

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General Information

You have a problem that is causing compression of your spinal nerves or spinal cord. The most common form of this problem is a herniated disk. Some people may have multiple levels herniated. Other patients, in addition to a disk herniation, may have overgrowth of degenerative spurs of bone that may also cause additional nerve compression. The combination of these problems leads to spinal cord compression. If the symptoms are localized to one or two nerves, the patient will have severe arm pain or a **radiculopathy**. If the symptoms involve compression of the nerves and the spinal cord itself, the patient may have arm, neck and altered function into the legs. This last condition, **myelopathy**, is often confused with other problems.

Clinical Symptoms

This problem usually begins with progressively worsening neck pain with steady deterioration of arm and/or leg function, which may eventually lead to paralysis. One of the early hallmarks of this disease is altered grip strength with or without deterioration of handwriting. Late findings include clumsiness when walking leading to tripping as well as arm and leg weakness.

Non-operative Treatment

Initially we will try nonsteroidal antiinflammatory drugs (NSAIDs) such as Motrin or Aleve or more expensive prescription products that have few side effects. (Ref NSAID handout) Usually medication is combined with a physical therapy evaluation and some exercises. This is effective early on in the vast majority of cases. As the degenerative process progresses, the clinical symptoms may become more frequent and unremitting.

Depending on the severity of compression, additional test(s) may be necessary such as an MRI, CT myelogram, or EMG studies. All or some of these tests may be necessary. If the symptoms are severe, a rapid diagnosis of your condition is necessary because chronic compression of the spinal cord may lead to irreversible neurological changes.

The natural course of spinal cord compression, if severe, is progressive loss in function and possible paralysis. You must understand that Dr. Heilman can not determine or predict the exact time course of your condition since all people progress differently. Some patients have studies showing mild

compression and have severe clinical problems, while others have severe compression and minimal symptoms. The degeneration of the disks and the appearance of bone spurs occur over time. These problems may be inherited or advanced with accidents or injuries.

Physical Therapy

There is little a therapist can do to make your spinal canal larger. A trial of neck exercises may be beneficial unless your symptoms are severe and the risk of injury too great. Chiropractic manipulations are not recommended to myelopathic patients for this reason.

If medication and therapy fail, additional imaging is usually requested. In 1999 open MRI studies did not provide the detail of the spinal cord that was needed; thus we now prefer closed MRI's and in addition may require a CT myelogram or EMG as well.

Imaging

Usually the spinal canal is at least 12 to 15mm in cross-sectional size at its largest point. We measure the size of the spinal canal. In myelopathic patients a spinal canal that is less than 10mm is at risk for progression of disease. If the dimension is less than 7 or 8mm, surgery is usually recommended.

Injury Risk

Any patient with a small canal of 7 to 8mm is at increased risk of spinal paralysis if he/she is in an accident or fall with neck trauma. This risk is higher with instability or severe stenosis.

Epidural Steroids and Pain Management

The use of pain management has been a welcome option in the treatment of a vast number of spinal conditions. Pain management may include epidural steroid injections and facet and/or nerve root blocks. All these modalities are temporary fixes that work variably in patients. Some patients have tremendous relief for three to six months while other may have no relief of symptoms. Remember that the underlying condition is rarely changed with these procedures which work by decreasing the amount of inflammation around the spinal area into which they are injected. A series of these injections are not ordered since recent studies show no validity to this approach if x-ray imaging is used during the procedure.

Dr. Heilman does not perform these procedures himself. He will refer you to either a radiologist or a spinal pain anesthesiologist for these procedures. If you have questions about this, please inform Dr. Heilman, so he may discuss concerns with you.

There are several aggressive pain management clinics in Houston who cite all types of wonderful results. The results are never permanent and vary with the severity and length of time you have had your problem (i.e. the shorter you have had symptoms, the more effective these treatments can be).

The uses of spinal pumps and spinal cord stimulation are end-stage options that are still under investigation for routine use. The cost of these procedures can be prohibitive, and no one is ever normal or pain-free after this operation. Prior to undergoing this type of procedure, adequate imaging and spinal evaluation by a spinal surgeon should be done.

Imaging

MRI

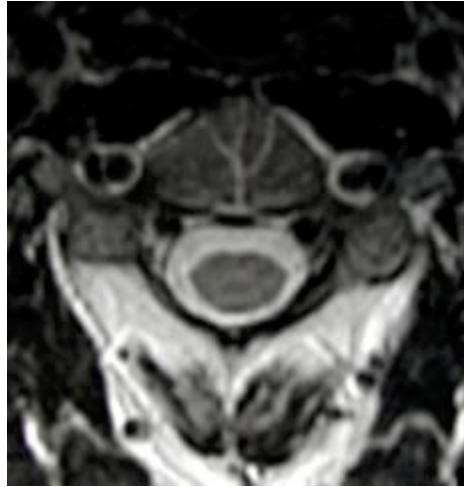


Normal MRI showing white band of fluid (CSF) around spinal cord.



Lateral MRI of cervical spine showing compression and displacement of the spinal cord

Normal MRI cross section



Normal C-spine MRI showing large canal and fluid (CSF) ring around cord

CT myelogram - abnormal



CT Myelogram cross-section picture showing severe cord compression at C6-7 especially on the right

Surgical Management would include:

The operations to correct this situation may include

1. Anterior cervical discectomy,
2. Anterior cervical vertebrectomy,
3. Posterior cervical foraminotomy,
4. Posterior cervical laminectomy.

Dr. Heilman performs all of these operations. At times he may request the assistance of a neurosurgeon. Dr. Heilman is a Board Certified Orthopedic Surgeon. He is also Board Certified by the American Board of Spinal Surgery. His fellowships are in spinal surgery and neurosurgery as it relates to the spine.

His practice involves only spinal conditions.

If you are considering treatment for this condition, you will need to make an appointment for evaluation.

**To make an appointment to consider treatment, please contact our office at
713-799-2300 (Medical Center) or 281-359-5115 (Kingwood).**