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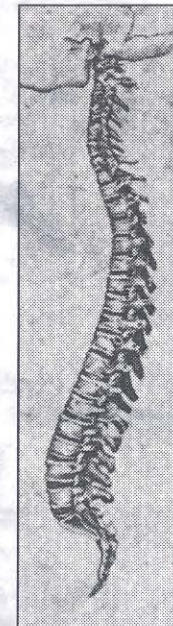
Since the patient already has the condition of spinal stenosis by the time these recommendations are made, the patient should remain as active as possible with low-impact exercises, primarily walking and swimming; short courses of anti-inflammatory medications as listed above may be helpful.

A back support brace, such as a lumbar corset may be beneficial; however, a lumbar support seat is not usually helpful.

If you smoke, QUIT! This may be beneficial in allowing the pinched, compromised nerves in the spinal canal to obtain improved blood flow and oxygen, and to heal. Circulation of blood-carrying oxygen is restricted with smoking.

Guide To Spinal Disorders

Spinal Stenosis



Provided by the Joint Section on
Disorders of the Spine and Peripheral Nerve of
The American Association of Neurological Surgeons
and Congress of Neurological Surgeons.

DEFINITION

Spinal stenosis is defined as narrowing of the bony spinal canal which pinches the nerves traveling through the lumbar spine into the legs. This usually occurs in elderly patients, and always worsens with time and age.

What kind of pain and other symptoms will I experience?

Spinal stenosis typically produces an aching, sometimes sharp pain into both buttocks, thigh regions and sometimes into the calves and feet. The pain is usually in both legs, but may involve only one leg; it is worsened by walking even short distances, and is relieved by rest.

Spinal stenosis causes the patient to lean forward while standing or walking, and prevents them from standing up in a fully straightened posture. This is due to the arthritis in the facet joints of the spine, which are enlarged. This enlargement of the facet joints of the spine is what produces the narrowed spinal canal and the pinching of nerves in the spinal canal, which is partially relieved by a flexed forward posture.

Findings on examination typically show no weakness of the legs, only pain. Reflexes may be absent. Low back pain is not a characteristic finding of spinal stenosis; however, when it is present in association with spinal stenosis, it is a result of arthritis.

What diagnostic tests are used for evaluation?

MRI is an excellent initial evaluation, as this will demonstrate spinal stenosis. More importantly, this will reveal any tumor or herniated disc which must be differentiated from spinal stenosis. Plain x-rays of the lumbar spine will demonstrate arthritis, which is the precursor to spinal stenosis with disc space narrowing and straightening of the spine. However, x-rays will not show pinching of the nerve roots, as demonstrated on MRI tests.

Non-invasive Doppler studies are used to diagnose lower extremity vascular problems often confused with spinal stenosis. Nerve testing (EMG) is beneficial to confirm nerve involvement and degree of damage.

A lumbar myelogram with subsequent computerized axial tomography or MRI (Magnetic Resonant Imaging) are the best tests to diagnose lumbar spinal stenosis. These tests are significantly better than a CT scan without intrathecal contrast, as they can detail nerves, soft tissue such as disc, as well as bony detail.



Sagittal MRI of degenerative spondylolisthesis and spinal stenosis showing annular bulging (white arrow) and ligamentum flavum hypertrophy (black arrow) causing stenosis in first story and upper portion of adjacent third story.

TREATMENT

Treatment frequently includes non-steroidal anti-inflammatory medications such as Motrin, Voltaren, Naprosyn, Lodine, Feldene, Indocin, Clinoril, Tolectin, Dolobid, Advil or Nuprin.

Initially, treatment commonly involves postural training with physical therapy to flex the spine forward. This creates a postural decompression of the nerve roots. Also, swimming pool exercises may be beneficial.

Lumbar epidural steroid injections may be helpful in relieving the inflammation of the pinched nerves, which can relieve the pain in the legs and buttocks region.

Spinal stenosis patients may require surgical decompression in the form of lumbar laminectomy at

the involved narrowed spinal levels where the nerve roots are being pinched.

This surgery is indicated if:

- the patient's pain is severe enough to warrant it
- there is increasing muscle weakness
- if the patient has not responded to anti-inflammatory medications and physical therapy.

Notably, patients with spinal stenosis are generally in the older age group and, therefore, their general medical condition must be considered. The operation is very successful in relieving spinal pain. The procedure takes one to two hours and involves minimal blood loss.

PROGNOSIS

The prognosis without surgery is for recurrent episodes of spinal stenosis type pain, with achiness as described. This sometimes includes weakness in both legs which can be treated with repeated epidural steroid injections, anti-inflammatory medications, and short courses of physical therapy. However, if these treatment methods do not offer relief, then surgery becomes necessary.

The overall prognosis of spinal stenosis, without surgery, is to progressively increase, consistent with the rate of progression of spinal arthritis as it further narrows the spinal column, pinching the nerves traveling down the spinal canal down into the legs.

RECOMMENDATIONS

The recommendations for spinal stenosis are the same for any arthritis. We recommend the following:

Lose weight, if overweight, down to your ideal body weight, so as to put less force on the joints of the spine and consequently lessen spinal stenosis symptoms.