

Spinal Stenosis

Spinal stenosis is a common entity found in patients above the age of 50 and can involve a multitude of symptoms from radicular (in the distribution of a specific nerve roots) to neurogenic claudications (back or leg pain worsened by walking variable distances and relieved with rest or bending forward). Symptoms and signs can vary between individuals and can be temporal in an individual patient. It can present with varying degrees of lower extremity weakness, pain, dysesthesias, and dysreflexia. Spinal stenosis can occur in various places within the spinal canal including centrally, and around the exiting nerves and can lead to the multitude of symptoms.

Spinal stenosis due to aging, wear, and tear is known as acquired stenosis and can be due to abnormalities in the disc (bulging/degeneration), facets (arthritis), instability (spondylolisthesis), and ligament hypertrophy. Neurogenic claudications as a symptom of spinal stenosis can be differed from vascular claudications in that the claudications distance is variable and there is relief with sitting or flexion with proximal to distal pain opposed to vascular claudications are distal to proximal. The classic patient with neurogenic claudications is one that can walk long distances in a store when they are bent over pushing a cart. Spinal stenosis is usually not confirmed based on physical examination rather it is based on history and radiological findings.

Radiographic findings that may indicate spinal stenosis include entities such as degenerative disc disease, decrease in the size of the foramen on the lateral view, or shifting of one vertebra on top of another (spondylolisthesis). MRI and CT myelogram are the standard studies that look for tightening of the nerves centrally, in the lateral recess, or in the foramen and is used as the basis for treatment.

Non-operative and operative measures are effective at treating this slow, progressive disease. In the early stages, symptoms may be treated with physical therapy, medication or epidural steroid injection to treat the inflammatory component of the pain. This does not change the stenosis found on the MRI but can treat symptoms.

Operative treatment for spinal stenosis should be reserved for patients with progressive pain, failure of conservative care, and the need for improvement in quality of life. Traditionally surgery involved a laminectomy (opening of the posterior elements of the spine to decompress the spinal sac and the nerve roots) with or without a fusion depending on the stability. Newer techniques involve minimally invasive surgery, indirect decompression of the nerves with procedures such as placement of an interspinous process device. Treatment is individualized based on the patient's symptoms, radiological findings, and concurrent medical issues.

Authored by Jaideep Chunduri, MD, Board Certified and Fellowship Trained Orthopaedic Spine Surgery of the Beacon Spine Center.