Symptomatic thoracic spinal stenosis (TSS) is a reduction in the capacity of the thoracic spinal canal with associated compression of the spinal cord and (or) nerve roots giving rise to a variety of clinical symptoms, the reduction in capacity being caused by one or more pathological factors, including ossification of ligaments in the spinal canal, hard disc herniation, posterior vertebral osteophytes and developmental spinal stenosis <sup>1) 2)</sup>.

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## Etiology

Many pathological factors may result in reduction in the capacity of the thoracic spinal canal and consequent compressing of the spinal cord or nerve roots, including ossification of the thoracic ligamentum flavum (OLF) and thoracic longitudinal ligament (OPLL), thoracic disc herniation with ossification of the annulus fibrosus, osteophytes of the posterior edges of vertebral bodies and hyperplasia of the facet joints.

The definition of TSS does not include myelopathy secondary to calcification of thoracic discs, thoracic soft disc herniation, thoracic carcinoma (primary or metastatic), thoracic active tuberculosis, thoracic fracture or dislocation or thoracic scoliosis or kyphosis.

## Osification of the thoracic ligamentum flavum

Osification of the thoracic ligamentum flavum

## **Case series**

Dützmann et al. presented a cohort of 9 patients operated in a time frame of 7 years using a ventral approach, 89% of whom reported a substantial reduction in pain <sup>3)</sup>.

Hypertrophy of the posterior spinal elements leading to compromise of the spinal canal and its neural elements is a well-recognized pathological entity affecting the lumbar or cervical spine. Such stenosis of the thoracic spine in the absence of a generalized rheumatological, metabolic, or orthopedic disorder, or a history of trauma is generally considered to be rare. Over a 2-year period the authors have treated six cases of thoracic myelopathy associated with thoracic canal stenosis. In four patients the deficits developed gradually and painlessly. The three older patients had a clinical profile characterized by complaints of pseudoclaudication, spastic lower limbs, and evidence of posterior column dysfunction. Two patients were younger adults with low thoracic myelopathy associated with local back pain after minor trauma. Both patients also had congenital narrowing of the thoracic spinal canal. Oil and metrizamide contrast myelography in the prone position were of limited value in diagnosing this condition; in fact, myelography may be misleading and result in erroneous diagnosis of thoracic disc protrusion, when the principal problem is dorsal and lateral compression from hypertrophied facets. Magnetic resonance imaging and computerized tomography sector scanning

Thoracic spinal stenosis

were more useful in the diagnosis of this disorder than was myelography. Thoracic canal stenosis may be more common than is currently recognized and account for a portion of the failures in anterior and lateral decompression of thoracic disc herniations <sup>4</sup>.

## **Case reports**

A Rare Case of Thoracic Spinal Stenosis in a White Male <sup>5)</sup>.

1)

Chen ZQ. Summary of the Chinese symposium on thoracic spinal stenosis in 2006. Zhonghua Gu Ke Za Zhi, 2007, 27: 39-42 (in Chinese).

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Barnett GH, Hardy RW Jr, Little JR, Bay JW, Sypert GW. Thoracic spinal canal stenosis. J Neurosurg. 1987 Mar;66(3):338-44. PubMed PMID: 3819827.

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