

Osification of the thoracic ligamentum flavum

Diagnosis

Plain X-Ray Films

Plain [X-ray](#) films can show the characteristic features of diffuse idiopathic skeletal hyperostosis, OPLL, posterior vertebral osteophytes, OLF, skeletal fluorosis and typical or atypical Scheuermann disease. However, they may show no abnormalities. Plain films can also help to decide whether there are anatomical variants such as transitional vertebrae that make it essential to confirm the level precisely intraoperatively.

MRI

Magnetic resonance imaging can show OLF, OPLL, posterior vertebral osteophytes and posterior marginal cartilaginous nodes as well as deformation of the spinal cord caused by compression and signal changes within the spinal cord.

CT

Computed tomography can show OLF, OPLL, posterior vertebral osteophytes, thoracic disc herniation combined with ossification of the annulus fibrosus, posterior marginal cartilaginous node, and so on.

Seed-type partial ossification of the ligamentum flavum (OLF) causing severe radiculopathy after rupture has not yet been described in the literature.

Guideline

Thoracic spinal stenosis is a relatively common disorder causing paraplegia in the population of China. Until nowadays, the clinical management of thoracic spinal stenosis is still demanding and challenging with lots of questions remaining to be answered. A clinical [guideline](#) for the treatment of symptomatic thoracic spinal stenosis has been created by reaching the consensus of Chinese specialists using the best available evidence as a tool to aid practitioners involved with the care of this disease. In this guideline, many fundamental questions about thoracic spinal stenosis which were controversial have been explained clearly, including the definition of thoracic spinal stenosis, the standard procedure for diagnosing symptomatic thoracic spinal stenosis, indications for surgery, and so on. According to the consensus on the definition of thoracic spinal stenosis, the soft herniation of thoracic discs has been excluded from the pathological factors causing thoracic spinal stenosis. The procedure for diagnosing thoracic spinal stenosis has been quite mature, while the principles for selecting operative procedures

remain to be improved. This guideline will be updated on a timely schedule and adhering to its recommendations should not be mandatory because it does not have the force of law ¹⁾.

Treatment

TSS secondary to OLF: posterior en bloc or segmental laminectomy or floating decompression is recommended. A high speed drill should be used. Internal fixation and fusion can be performed in patients with thoracolumbar regional stenosis and those who have undergone multiple segmental laminectomy

Miao et al., applied the percutaneous endoscopic technique for the treatment of thoracic OLF. It performed direct decompression of the ossified ligaments with minimizing trauma and instability which could be used as a alternative choice. However, the fused types would be performed prudently due to the operational difficulties ²⁾.

¹⁾

Chen ZQ, Sun CG; Spine Surgery Group of Chinese Orthopedic Association. Clinical Guideline for Treatment of Symptomatic Thoracic Spinal Stenosis. Orthop Surg. 2015 Aug;7(3):208-12. doi: 10.1111/os.12190. PMID: 26311094; PMCID: PMC6583714.

²⁾

Miao X, He D, Wu T, Cheng X. Percutaneous endoscopic spine minimal invasive technique for the decompression therapy of thoracic myelopathy caused by ossification of the ligamentum flavum. World Neurosurg. 2018 Mar 7. pii: S1878-8750(18)30425-X. doi: 10.1016/j.wneu.2018.02.152. [Epub ahead of print] PubMed PMID: 29524712.

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