

Lumbar spinal canal stenosis

Spinal canal stenosis is a condition where its diameter in the sagittal projection is narrowed below the norm, which is 14–16 mm.

Types of stenosis:

1. **relative**: below 12 mm;
2. **absolute**: below 10 mm.

Stenosis can be both congenital and acquired during life, most often through a degenerative process. It is typically multi-storey.

Symptoms

Characteristic symptoms are:

- **Neurogenic claudication** – Manifested by paresthesias, pain, weakness and fatigue of the lower limbs that appear after a certain period of standing or walking. The patient then has to sit down or lean forward slightly (in forward bending, the spinal canal widens, leaning, on the other hand, worsens the problem). The cause of these difficulties most likely lies in insufficient blood supply to the axons, with their increased metabolism during walking.
- The back pain is mild and does not dominate the symptoms.
- Sphincter problems are rare.

With increasing difficulty, it may arise:

- **Chronic cauda syndrome** – permanent pain, paresthesia and weakness in the lower limbs

Differential diagnosis of vascular claudication

	Neurogenic	Vascular
Relief position	forward bend, sit	also stand
Walking uphill	without problems	with problems
Walking downhill	with difficulty (due to leaning)	without problems
Cycling	without problems	with problems

Examination

- Laségue's sign - usually negative
- Muscle weakness - reduced in chronic disability
- Native X-ray image - image of the lumbosacral spine in anteroposterior and lateral projection;
- MRI - considered the method of choice;
- CT - high radiation exposure, performed when unclear;
- Contrast examination of the spinal canal (PMG - perimyelography, RSG - radiculocography) - invasive, indicated exceptionally, when MR is a co-indication

Therapy

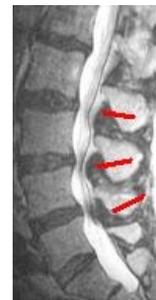
Surgical: To eliminate the problem, the causal therapy is to decompress the spinal cord by laminectomy, in one or more segments as needed.

Links

Related articles

- Lower back pain, Lumbago
- Lumbar intervertebral disc herniation
- Syndroma caudae equinae
- Spondylolisthesis
- Chronic ischemic disease of the lower limbs

References



MRI of the lumbar spine showing spinal stenosis

STENOTIC CANAL



MRI of stenosis of the lumbar spinal canal.

- BEDNAŘÍK, Josef. KADAŇKA, Zdeněk. MECHL, Marek. *Vertebrogenní neurologické syndromy*, E-learning [25. 11. 2015], <https://el.lf1.cuni.cz/vertebrogennisyndromy/?account-id=7&principal-id=2889504&session=breezhw7zw79g9ewo9wnv> (after logging into CAS)
- SAMEŠ, M. *Neurochirurgie*. 1. edition. Jessenius Maxdorf, 2005. pp. 92–93. ISBN 80-7345-072-0.