L5-S1 disc herniation

- Lumbar disc herniation modelling: a review of ex-vivo mechanical models and a comparison with clinical data
- Transdural Lumbosacral Disc Herniation: When a Benign Pathology Raises Diagnostic and Therapeutic Challenges
- Diagnostic performance of lumbar spine CT using deep learning denoising to evaluate disc herniation and spinal stenosis
- Conjoined nerve root, epidural varicose vein, and extruded lumbar disc: Triad of refractory sciatica
- Comparison and evaluation of percutaneous transforaminal endoscopic discectomy treatment efficacy in patients with lumbar disc herniation of different age groups
- Mechanisms and management of self-resolving lumbar disc herniation: bridging molecular pathways to non-surgical clinical success
- Cauda Equina in Pregnancy: Early Management and Outcome
- Does Metabolic Syndrome Exacerbate Spinal Degeneration in Patients with Lumbar Disc Herniation: A Two-Year Retrospective Cohort Study

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Describing a new syndrome in L5-S1 disc herniation: Sexual and sphincter dysfunction without pain and muscle weakness [1].

Another case about sildenafil treatment in neurogenic female sexual dysfunction caused by L5-S1 intervertebral disk rupture in 2007 [2].

Classification

- Impact of Transforaminal Epidural Steroid Injection on Pain and Disability Outcomes by Lumbar Intervertebral Disc Herniation Class: A Prospective Study
- How to prevent preoperative adjacent segment degeneration L5/S1 segment occuring postoperative adjacent segment disease? A retrospective study of risk factor analysis
- Sagittal alignment of the spine and lumbar disc herniation in young adults: A historical, case-control study
- Radiographic Study of L5-S1 Transforaminal Endoscopic Access in a Sample from the Brazilian Population
- Treatment of L5-S1 Floating Calcified Lumbar Disc Herniation with Percutaneous Endoscopic Interlaminar Discectomy
- L4/5 Disc Herniation: Not Unusually Accompanied with L5/S1 Low-Grade Spondylolytic Spondylolisthesis
- Radiographic characteristics-based classification system for percutaneous endoscopic lumbar discectomy surgical approach selection in patients with L5-S1 disc herniation: a hierarchical clustering analysis
- Traumatic lumbar disc herniation: A systemic case review and meta-analysis

Clinical features

see Lumbar disc herniation clinical features

Diagnosis

Yilmaz et al. suggested that a proposed method “Yilmaz-Ilbay plantar flexion test” can serve as a useful, practical, and effective test to detect quantitative evaluation of plantar flexion in L5-S1 herniation [3].

Treatment

L5-S1 disc herniation treatment

Case series

A total of 32 patients (average age: 49.4 years, range: 23-78) with L5-S1 disc herniations were included. The patient to be tested stood next to a table on which they could lean with their hands. The leg closer to the table was fully flexed at the knee, and the other foot was brought to maximum plantar flexion on the toes. At this point, a stopwatch was started to measure the time that passed until the muscles fatigued and the heel fell. The differences between the right and left plantar flexion times were noted. In addition, three different physicians graded muscle strength by using the classical “The Medical Research Council of the United Kingdom” method.

The time until fatigue in right and left plantar flexion was measured using the proposed method, and each test underwent a video recording. The Yilmaz-Ilbay plantar flexion test yielded the correct classification for all cases.

They suggest that the proposed method “Yilmaz-Ilbay plantar flexion test” can serve as a useful, practical, and effective test to detect quantitative evaluation of plantar flexion in L5-S1 herniation [4]

Case reports

A 72- year-old female patient was admitted to our outpatient clinic complaining of right leg pain for 6 months. A 4/5 motor paresis was observed on her right toe with a positive Lasegue test at 45°. On her magnetic resonance imaging (MRI), a L5-S1 disc herniation was detected. The patient was planned for percutaneous endoscopic interlaminar disc surgery. The extruded disc was adherent to the dura. During removal, a dural tear was observed. She was relieved of her right leg pain immediately after surgery, but after 30 min postoperatively, she complained of double vision with left abducens nerve paralysis. On cranial MRI, no abnormality could be observed. Intravenous fluids were administered and the paralysis resolved on the postoperative 24th hour. The patient was discharged from the hospital and did not show any complaints on her follow-ups. A 6th nerve palsy can be caused due to alterations of intracranial pressure or mechanic injury. We believe that the durotomy following removing of the disc fragment caused a rapid drainage of CSF, leading to intracranial hypotension and injury of the abducens nerve. Intracranial pressure should be monitored perioperatively and brisk deteriorations has to result in immediate finishing of the surgery to avoid further secondary damage [5)].

A 35-year-old woman with a history of hypertension who successfully received microendoscopic L5-S1 lumbar discectomy for lumbar disc herniation at L5-S1 under general anesthesia. Six hours after surgery, she suffered from headache, nausea, visual disturbance, and seizures. Magnetic resonance imaging revealed vasogenic edema in the occipital lobe, and she was diagnosed with PRES. Prompt symptomatic treatment resulted in a full recovery at 3 days after surgery. Subsequently, we reviewed the literature pertaining to PRES following spine surgery. The review of the relevant literature on PRES following spine surgery identified 12 cases (male, n = 2; female, n = 10; average age, 59.5 years). Approximately 92% patients received multi-level decompressive laminectomy and/or fusion. This case and the review of the relevant literature suggest that even minimally invasive spine surgery in a young woman with specific characteristics (eg, hypertension) can cause PRES [6)].

Case report about nucleus pulposus reabsorption of L5-S1 giant disc herniation [7)]

Case reports from HGUA

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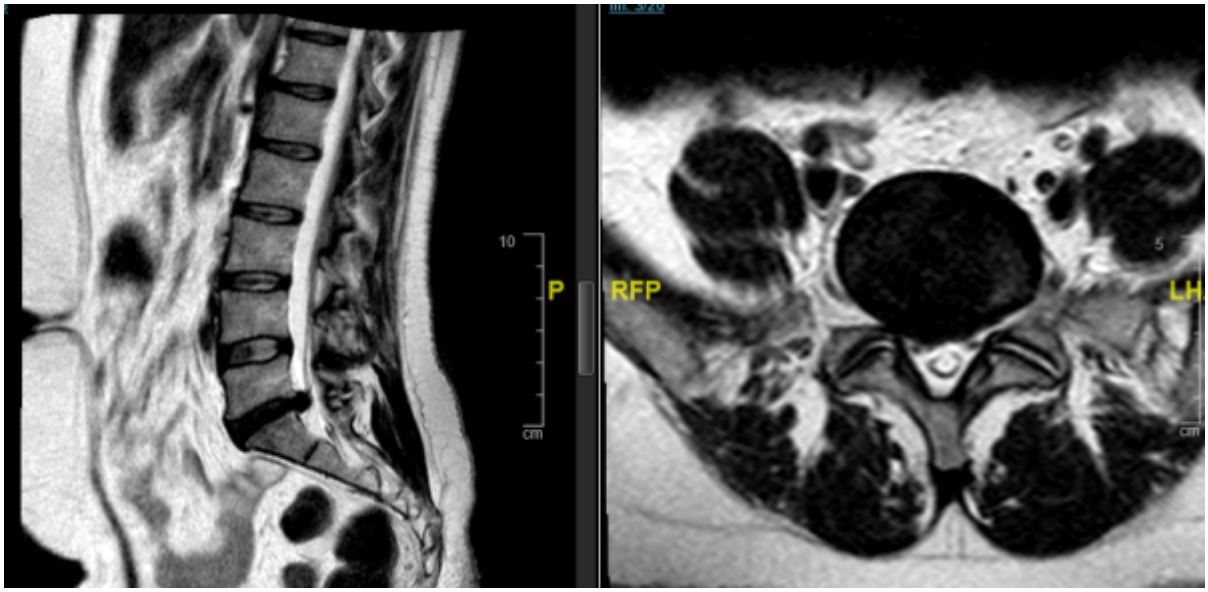

Right L5-S1 lumbar disc herniation in a a 31 year old female.

-DIAZEPAM 5MG

-Tapentadol RETARD 50MG 60 TABLETS OF PROLONGED RELEASE.

-PREGABALIN CAPSULES 75 MG.

Strength 3/5 to plantar flexion and eversion of the right foot. Hypoesthesia in right S1 territory. Gait possible but in antalgic position

Signs of degenerative disc dehydration of the L5-S1 disc only, presenting a posterior extruded lumbar disc herniation lateralized to the right with descending right S1 compression.

1)
Akca N, Ozdemir B, Kanat A, Batcik OE, Yazar U, Zorba OU. Describing a new syndrome in L5-S1 disc herniation: Sexual and sphincter dysfunction without pain and muscle weakness. J Craniovertebr Junction Spine. 2014 Oct;5(4):146-50. doi: 10.4103/0974-8237.147076. PMID: 25558144; PMCID: PMC4279276.
2)
Ferrara D, Zaslau S. Success of sildenafil treatment in neurogenic female sexual dysfunction caused by L5-S1 intervertebral disk rupture: a case report. Int J Urol. 2007 Jun;14(6):566-7; discussion 568. doi: 10.1111/j.1442-2042.2007.01518.x. PMID: 17593108.
3) , 4)
Yilmaz M, Ilbay G, Yilmaz HE, Ertem O, Erbayraktar S, Ilbay KM. Quantifying Neurological Examination in 21st Century: Yilmaz- Ilbay Plantar Flexion Test, A Novel and Reliable Test for Evaluation of Plantar Flexion in L5-S1 Disc Herniation. Neurol India. 2022 Sep-Oct;70(Supplement):S259-S262. doi: 10.4103/0028-3886.360913. PMID: 36412378.
5)
Avci İ, Gürsoy T, Paksoy K, Şentürk S, Yaman O, Özer AF. Temporary 6TH cranial nerve paralysis after accidental durotomy in endoscopic disc surgery. Asian J Endosc Surg. 2022 Dec 29. doi: 10.1111/ases.13157. Epub ahead of print. PMID: 36582116.
6)
Matsuo M, Morimoto T, Kobayashi T, Tsukamoto M, Yoshihara T, Hirata H, Mawatari M. Posterior reversible encephalopathy syndrome following spine surgery: A case report and review of the literature. Radiol Case Rep. 2022 Dec 1;18(2):635-638. doi: 10.1016/j.radcr.2022.11.004. PMID: 36471737; PMCID: PMC9718998.

7)
Wang K, Wen H, Song M. Special clinical phenomena: Case report about nucleus pulposus reabsorption of L5-S1 giant disc herniation. Asian J Surg. 2022 Oct 20:S1015-9584(22)01418-X. doi: 10.1016/j.asjsur.2022.09.139. Epub ahead of print. PMID: 36273999.