

# Epiduroscopic laser neural decompression

Neuroplasty using a [Racz catheter](#) or epiduroscope and percutaneous endoscopic laser discectomy are performed as treatment for chronic refractory low back and/or lower extremity pain, but they are limited in that they cannot completely remove the causing pathology.

Epiduroscopic laser neural decompression (ELND) is considered to be an effective treatment alternative for chronic refractory low back and/or lower extremity pain, including lumbar disc herniation, lumbar spinal stenosis, and failed back surgery syndrome which cannot be alleviated with existing non-invasive conservative treatment <sup>1)</sup>.

Choi et al. introduce the novel combination of [Percutaneous Endoscopic Lumbar Discectomy](#) (PELD) and ELND for high grade down-migrated disc herniation.

An 87-year old woman presented with severe pain radiating down her leg due to high grade down-migrated disc herniation at L4-5. The therapeutic plan was organized into 3 steps. First, the patient underwent PELD to remove the paracentral extruded disc and open the epidural space between the traversing nerve root and disc space. Second, ELND was performed to remove the down-migrated disc and simultaneously push the free fragment to the L4-5 disc space. Lastly, repetitive free fragments were picked up and streamed upward using ELND. The patient reported significant reduction of pain after surgery. Postoperative magnetic resonance imaging (MRI) showed complete removal of the ruptured disc fragment. A combination of PELD and ELND may be an option of treatments for down-migrated disc herniation <sup>2)</sup>.

## Complications

Various complications occur due to the invasiveness of this procedure and epidural adhesion, and rarely, cranial nerve damage can occur due to increased intracranial pressure.

Yoon et al. report case in which double vision occurred after epiduroscopic laser discectomy and neural decompression in a patient with failed back surgery syndrome (FBSS) <sup>3)</sup>.

<sup>1)</sup>

Jo DH, Yang HJ. The survey of the patient received the epiduroscopic laser neural decompression. Korean J Pain. 2013 Jan;26(1):27-31. doi: 10.3344/kjp.2013.26.1.27. Epub 2013 Jan 4. PubMed PMID: 23342204; PubMed Central PMCID: PMC3546206.

<sup>2)</sup>

Choi KC, Lee DC, Park CK. A Novel Combination of Percutaneous Endoscopic Lumbar Discectomy and Epiduroscopic Laser Neural Decompression for Down-migrated Disc Herniation. Pain Physician. 2017 May;20(4):E605-E609. PubMed PMID: 28535570.

<sup>3)</sup>

Yoon KJ, Lee EH, Kim SH, Noh MS. Occurrence of trochlear nerve palsy after epiduroscopic laser discectomy and neural decompression. Korean J Pain. 2013 Apr;26(2):199-202. doi: 10.3344/kjp.2013.26.2.199. Epub 2013 Apr 3. PubMed PMID: 23614087; PubMed Central PMCID: PMC3629352.

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