

Anterior cervical laser discectomy

The anterior cervical laser discectomy ablates, vaporizes, and decompresses the posterior/central nucleus pulposus. The thermoannuloplasty heats the posterior disc near the annulus, producing contraction of collagen fibers, and thereby, reduces the disc volume.

[Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#) are associated with less approach trauma than conventional open [cervical spine surgery](#). The literature illustrating their appropriate use corroborated with objective outcome evidence is scarce. Hellinger et al. were interested in comparing the clinical outcomes following [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#).

Thirty patients with soft contained symptomatic cervical disc herniations and an average age of 50.5 years (range 26 - 68 years; 16 males and 14 females) were prospectively enrolled in 2 groups of 15 patients to be either treated with [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#). All patients underwent [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#) under local anesthesia and sedation. Clinical outcomes were assessed with the Macnab criteria VAS score for arm pain. Complications and reoperations were recorded.

There were significant reductions in the VAS score for arm pain from preoperative 8.4 ± 2.5 to 3.1 ± 1.2 in the PLDD group ($P < 0.03$), and from preoperative 8.6 ± 2.7 to 2.4 ± 1.1 ($P < 0.01$) in the PEDD group. In the PLDD group, Macnab outcomes were excellent in 21% of patients, good in 44%, fair in 21%, and poor in 14%. In the PEDD group, Macnab outcomes were excellent in 14% of patients, good in 32%, fair in 12%, and poor in the remaining 12%. There were no statistically significant differences in clinical outcomes between the PLDD and the PEDD group. There were no approach-related or surgical complications.

Tissue trauma is significantly reduced with laser and endoscopic surgery techniques. [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#) are both suitable for the specific indication of soft, symptomatic contained cervical disc herniations. This prospective cohort study indicates that [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#) are options for cervical decompression surgery when medical comorbidities or preferences by patients and surgeons dictate more minimally invasive strategies ¹⁾.

1)

Hellinger S, Knight M, Telfeian AE, Lewandrowski KU. Patient selection criteria for percutaneous anterior cervical laser versus endoscopic discectomy. *Lasers Surg Med*. 2022 Jan 6. doi: 10.1002/lsm.23514. Epub ahead of print. PMID: 34989414.

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Last update: **2024/06/07 02:55**

