

## **Anterior Endoscopic Cervical Discectomy For Cervical Disc Herniation: Clinical Results Of 928 Consecutive Patients From A Major Spine Center**

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**Background:** Anterior endoscopic cervical discectomy (AECD) is a minimally invasive technique for treating cervical soft disc herniations. Current application of the endoscopic procedures has evolved into treatment options that are comparably to open spinal surgeries. However, it is not as widely used as lumbar endoscopy due to a steep learning curve. **Objective:** We report the clinical results of AECD for the past 22 years at a single major spine center.

**Methods:** Between 2000 and 2021, 928 patients underwent AECD at the Cheongdam Wooridul Spine Hospital. Cervical radiculopathy or myelopathy due to soft disc herniations, not responding to the conservative treatment was indicated for AECD. The procedure was mainly performed under the local anesthesia. A 3.6mm endoscopy (Joimax GmbH, Germany) was introduced through an anterior transdiscal approach and herniated fragments were removed with endoscopic forceps and Ho-YAG laser. Retrospective review of chart and radiological data were performed for clinical and radiological analysis.

**Results:** There were 861 cases of one level, 63 cases of two level, and 4 cases of three level surgeries. For one level surgeries, the C5-6 was most common (388 patients) followed by C6-7 (262 patients), C4-5 (157 patients), C3-4 (45 patients) and C7-T1 (3 patients). There were significant improvements of pain and functional status after AECD. During a mean 36 months follow-up, 62 (6.6%) patients required revision surgery at the index level. They were treated by anterior discectomy and fusion or artificial disc replacement (65.7%), AECD (22.4%) and anterior foraminotomy (8.9%). There were no major vessels and esophageal injury associated with this procedure.

**Conclusion:** AECD is a safe and feasible surgical procedure for soft cervical disc herniation. The most common complications were recurrence and incomplete decompression that require another surgery during early postoperative period. Careful attention to neural decompression and proper indications may lead to better result.