- Clinical effect of full endoscopic lumbar annulus fibrosus suture
- A Suture Technique for Ruptured Annulus Fibrosus Following Decompression Under Percutaneous Transforaminal Endoscopic Discectomy
- A retrospective study of the mid-term efficacy of full-endoscopic annulus fibrosus suture following lumbar discectomy
- A Pilot Study of Full-Endoscopic Annulus Fibrosus Suture Following Lumbar Discectomy: Technique Notes and One-Year Follow-Up
- Analysis of the technical key points and clinical effect of full-endoscopic lumbar annulus fibrosus suture

Full endoscopic lumbar annulus fibrosus suture (FELAFS) is a specialized surgical technique used to repair tears or defects in the annulus fibrosus, which is the tough outer layer of the intervertebral disc in the lumbar spine. These tears can occur as a result of trauma or degenerative changes and can lead to disc herniation and related symptoms such as back pain and leg pain.

In FELAFS, a surgeon uses an endoscope, a thin, flexible tube with a camera and light attached to it, to visualize and access the affected disc through a small incision in the back. Through the endoscope, the surgeon can identify the tear or defect in the annulus fibrosus. Specialized instruments are then used to place sutures within the annulus fibrosus, effectively closing the tear and restoring the integrity of the disc.

This technique offers several potential advantages over traditional open surgery, including smaller incisions, less disruption to surrounding tissues, reduced risk of complications, and faster recovery time. By repairing the annulus fibrosus, FELAFS aims to stabilize the affected disc, prevent further herniation, and alleviate symptoms associated with disc pathology.

FELAFS is a relatively new and evolving procedure, and not all patients with lumbar disc pathology may be suitable candidates. The decision to undergo FELAFS should be made in consultation with a qualified spine surgeon, who can evaluate the individual's condition and determine the most appropriate treatment approach.

## **Retrospective comparative studies**

The aim of this study was to investigate the clinical efficacy of Full endoscopic lumbar annulus fibrosus suture in the treatment of single-segment lumbar disc herniation (LDH).

The clinical data of patients with single-segment LDH who underwent full endoscopic lumbar discectomy from January 2017 to January 2019 were retrospectively analysed. Patients with full endoscopic lumbar discectomy combined with annulus fibrosus suture were divided into group A, and those with simple full endoscopic lumbar discectomy were divided into group B. The general information, surgery-related data, visual analog scale (VAS), Oswestry disability index (ODI), Modified Macnab Criteria at the last follow-up, reoperation rate and recurrence were compared between the two groups.

All patients were followed up for 12 to 24 months, and the surgical time was 133.6  $\pm$  9.6 min in group A and 129.0  $\pm$  11.7 min in group B. The difference was not statistically significant (p > 0.05). The blood loss of group A was higher than that of group B, and the difference was statistically significant when comparing the groups (p < 0.05). The postoperative symptoms of patients in both groups were significantly relieved, and the VAS score of low back pain and ODI index were significantly lower than the preoperative ones at all postoperative time points (1 month after surgery, 3 months after surgery, and at the last follow-up) (p < 0.05), but there was no significant difference between the groups (p > 0.05). The excellent rate of MacNab at the last follow-up in the two groups were 93.55% and 87.80%, respectively, with no statistically significant difference (p > 0.05). At the last follow-up, the recurrence rate of group A was significantly lower than that of group B, and the difference was statistically significant (p < 0.05), while the difference between the reoperation rate of the two groups was not statistically significant (p > 0.05).

Full endoscopic lumbar discectomy combined with annulus fibrosus repair reduces the postoperative Recurrent lumbar disc herniation rate and achieves satisfactory clinical outcomes <sup>1)</sup>

1)

Peng YX, Zhang Y, Yang Y, Wang F, Yu B. Clinical effect of full endoscopic lumbar annulus fibrosus suture. J Orthop Surg Res. 2024 Apr 24;19(1):261. doi: 10.1186/s13018-024-04725-9. PMID: 38659063.

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