

Full-endoscopic interlaminar and transforaminal lumbar discectomy versus conventional microsurgical technique: a prospective, randomized, controlled study.

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Abstract

STUDY DESIGN:

Prospective, randomized, controlled study of patients with lumbar disc herniations, operated either in a full-endoscopic or microsurgical technique.

OBJECTIVE:

Comparison of results of lumbar discectomies in full-endoscopic interlaminar and transforaminal technique with the conventional microsurgical technique.

SUMMARY OF BACKGROUND DATA:

Even with good results, conventional disc operations may result in subsequent damage due to trauma. Endoscopic techniques have become the standard in many areas because of the advantages they offer intraoperatively and after surgery. With the transforaminal and interlaminar techniques, 2 full-endoscopic procedures are available for lumbar disc operations.

METHODS:

One hundred seventy-eight patients with full-endoscopic or microsurgical discectomy underwent follow-up for 2 years. In addition to general and specific parameters, the following measuring instruments were used: VAS, German version North American Spine Society Instrument, Oswestry Low-Back Pain Disability Questionnaire.

RESULTS:

After surgery 82% of the patients no longer had leg pain, and 14% had occasional pain. The clinical results were the same in both groups. The recurrence rate was 6.2% with no difference between the groups. The full-endoscopic techniques brought significant advantages in the following areas: back pain, rehabilitation, complications, and traumatization.

CONCLUSION:

The clinical results of the full-endoscopic technique are equal to those of the microsurgical technique. At the same time, there are advantages in the operation technique and reduced traumatization. With the surgical devices and the possibility of selecting an interlaminar or posterolateral to lateral transforaminal procedure, lumbar disc herniations outside and inside the spinal canal can be sufficiently removed using the full-endoscopic technique, when taking the appropriate criteria into account. Full-endoscopic surgery is a sufficient and safe supplementation and alternative to microsurgical procedures.

PMID:

[18427312](#)

DOI:

[10.1097/BRS.0b013e31816c8af7](https://doi.org/10.1097/BRS.0b013e31816c8af7)

[PubMed - indexed for MEDLINE]