

Endoscopy assisted oblique lateral interbody fusion: The prototype of full endoscopic minimally invasive lumbar interbody fusion

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Introduction

Direct neural decompression cannot be achieved by performing lateral lumbar interbody fusion (LLIF). To overcome the indirect decompressive effect of LLIF, additional endoscopic discectomy with oblique lateral interbody fusion (OLIF) has been attempted. The purpose of this study was to assess the clinical and radiological outcomes of patients who underwent OLIF with additional endoscopic discectomy.

Methods

Spinal endoscopic discectomy-assisted OLIF was attempted to remove herniated disc material. Only patients with a follow-up time that exceeded 6 months were enrolled. Clinical parameters examined were the Oswestry Disability Index and visual analog scale scores of back and leg pain. Postoperative MRI was also performed within 3 days of operation to evaluate the decompression status.

Results

Eighteen patients were enrolled. Central and foraminal disc herniations were evident in 8 and 6 patients, respectively. Four patients had impending cauda equina syndrome due to severe spinal canal compromise. Concomitant central or foraminal herniated discs were removed completely after additional endoscopic discectomy, and disc removal was confirmed by postoperative MRI. Mean preoperative visual analog scale scores and Oswestry Disability Index scores improved postoperatively.

Conclusions

OLIF with additional endoscopic discectomy results in successful direct neural decompression without posterior decompressive procedures. Endoscopic assistance might overcome the limitations of LLIF.

Learning Objectives

By the conclusion of this session, participants should be able to know the innovative and minimally invasive lumbar interbody fusion using spinal endoscopy.

References

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