



















# Anatomical keyhole Landmark of upper lumbar spine





## 4 Types of Keyholes (Depends on Direction of Migration)



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#### TECHNICAL NOTE

CrossMark

Contralateral Interlaminar Keyhole Percutaneous Endoscopic Lumbar Surgery in Patients with Unilateral Radiculopathy Jae Ha Hwang, Woo Min Park, Cheul Woong Park

OBJECTIVE: Percutaneous endoscopic surgery is increasingly used as an alternative to open microsurgery for treating lumbar spinal disease. The purpose of this study was to determine the feasibility and efficacy of outralateral keyhole endoscopic surgery for treating unilateral radiculopathy.

unilateral radiculopathy. = METHODS: We performed percutaneous endoscopic sublaminar decompression via the contralateral interfam-inar approach in 14 patients with unilateral radiculopathy. All procedures were performed under epidural anesthesia. The epidural space was accessed under fluorescopic guidance, only the tongue pertoin of the handmade working sheath was placed within the epidural space to prevent nerve compression injury by the instruments. The base of the spinous process, candal edge of the upper lamina, and total edge of the lower lamin were partially removed using a 32-smm drill bit under direct endoscopic visual-ziton. After undercutting the ventral surface of the lamina by an endoscopic drill, the ligamentum flavum was removed using a punch, rongeura, and forceps. The laterati-decompressed. =RESULTS: Symatoms were relieved immediately after

accompressed. = RESULTS: Symptoms were relieved immediately after surgery. The mean operating time was 68.2 minutes. Visual analog scale and Oswestry Disability Index scores improved significantly from 6.8 points and 61.5% prooperatively to 2 points and 22.2% at 6 months after surgery. A postoperative epidural hematoma was observed in 1 patient. No postoperative complications, such as dural tear, neurologic injury, or infection, were reported.

#### TRODUCTION

INTRODUCTION Service of the service

Immunity executions possible are maximized in 1998, Withsen AG Specier<sup>2</sup> Drelfly described the concept of a contralisteral approach. Several microscopic tubular decompressions using a contralisterial approach for lumbar disc hermistions or lumbar spinal stenois have been reported.<sup>1318</sup> Lee et al.<sup>10</sup> eported the use of a percutaneous endoscopic.





Figure 7. Preoperative (A) and postoperative (B) computed tomography images. Note the decompression of the lateral recess stenosis with bony





# Contralateral Keyhole Endoscopic Surgery ADVANTAGES

- Facet Joint Preservation
- CKES looks good for the following three situations

Two roots (Exiting & Traversing root) decompression w/ single surgery

Facet joint cyst or OLF w/ severe adhesion

Upper lumbar spinal stenosis w/ facet hypertrophy

| INDICATIONS   | CONTRAINDICATIONS           |
|---|-----------------------------|
| I. Migrated disc herniation   | I. Central HNP              |
| 2.Asymmetric Spinal stenosis<br>(Facet joint cyst & OLF etc)                          |                             |
| 3. Dual nerve root compression<br>(central spinal stenosis and<br>foraminal stenosis) | 2. Infection and Tumor etc. |
|   |                             |

























































# Two-root decompression (exiting and traversing nerve roots)

#### Case2 M/66











## CONCLUSION

**Contralatera App, is the best and safe approach for high grade upper lumbar migrated disc herniation in a selective cases.** 

This approach has efficient accessibility for the treatment of high grade lumbar disc herniation along with canal stenosis and includes major advantage of preserving the facet joint.

This technique is highly recommended to kill 2 birds with 1 stone without harming the tree.

