



Transforaminal percutaneous endoscopic discectomy for foraminal upward migration at upper lumbar disc herniation: clinical and radiological outcome, and technical consideration

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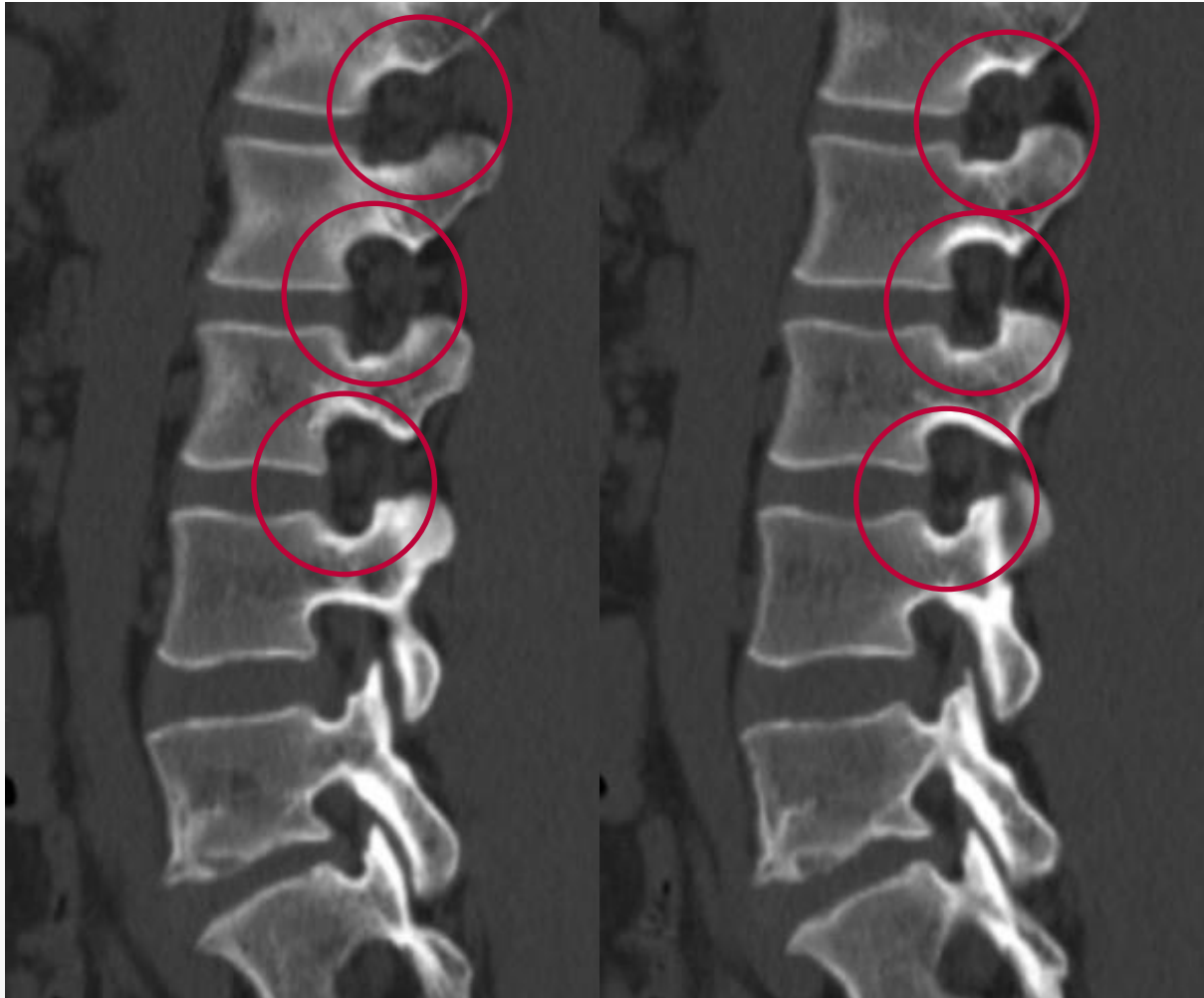
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Anatomical consideration of upper lumbar area



**Narrow
lamina**

**Relatively
wide foramen**

What's your operation plan?



Upper lumbar



lower lumbar

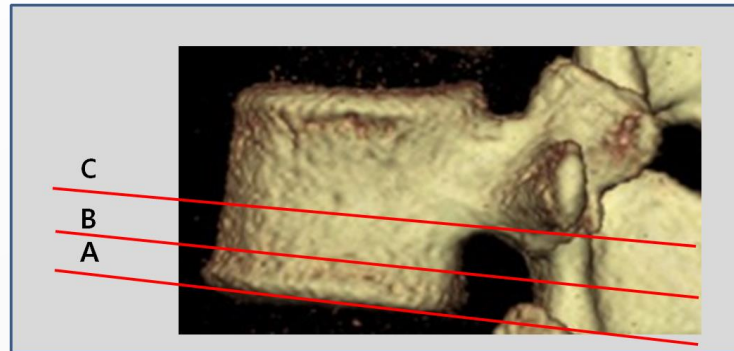
Risk of Conventional Microdiscectomy
→ **facetectomy, Retraction injury of caudal equina**

Material and Methods

- **Upper lumbar: L 1-2, 2-3, 3-4**
- **Foraminal upward migration of ruptured disc particles**
- **Full endoscopic approach**
- **Radiologic and Clinical outcomes**

Material and Methods

Classification of migrated discs



Type A



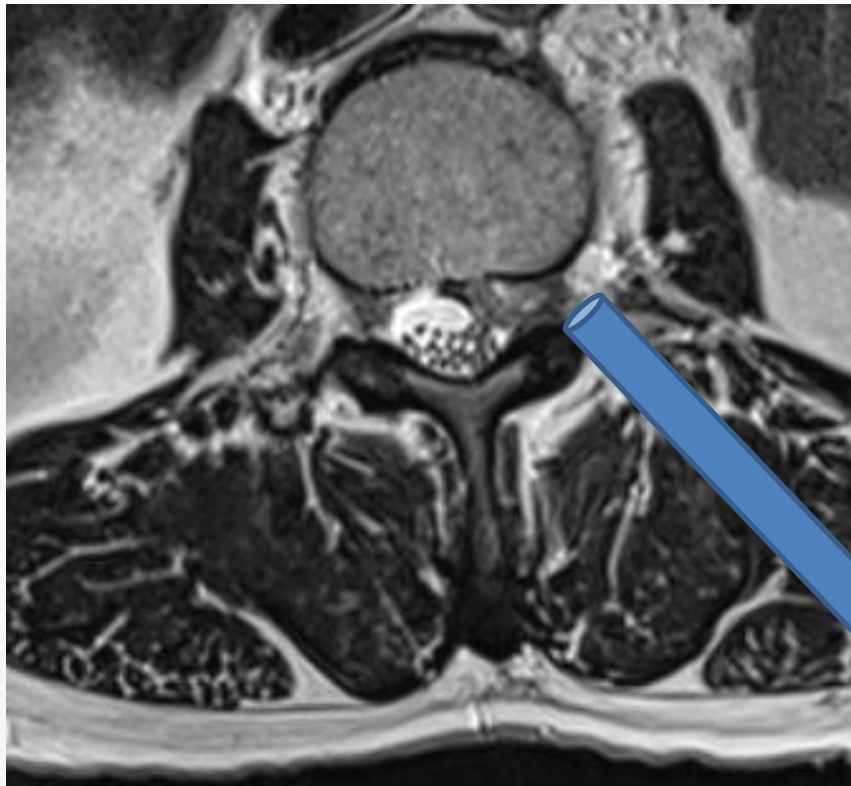
Type B



Type C

Material and Methods

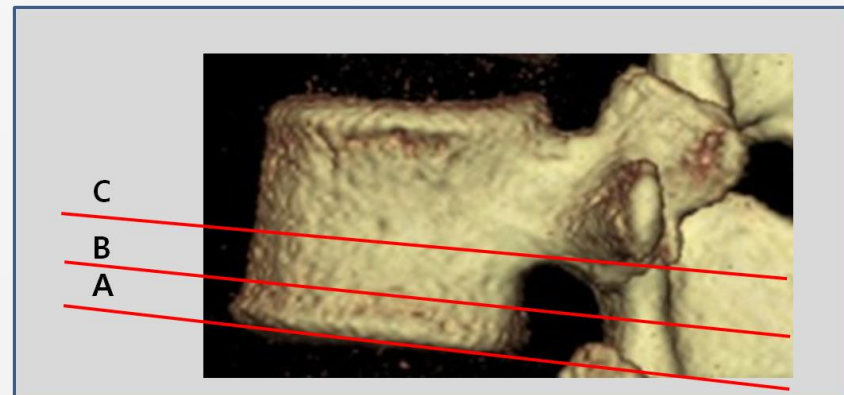
Approach trajectory of endoscope



Out and In technique

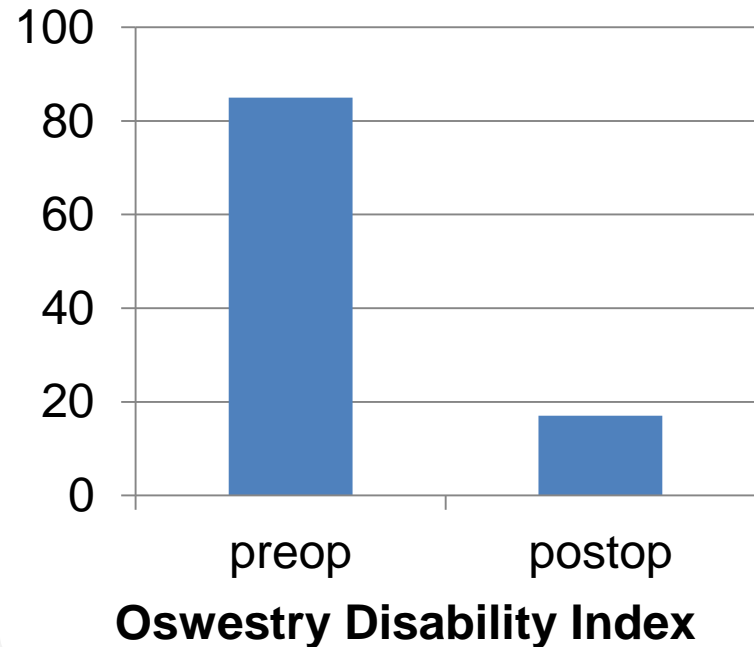
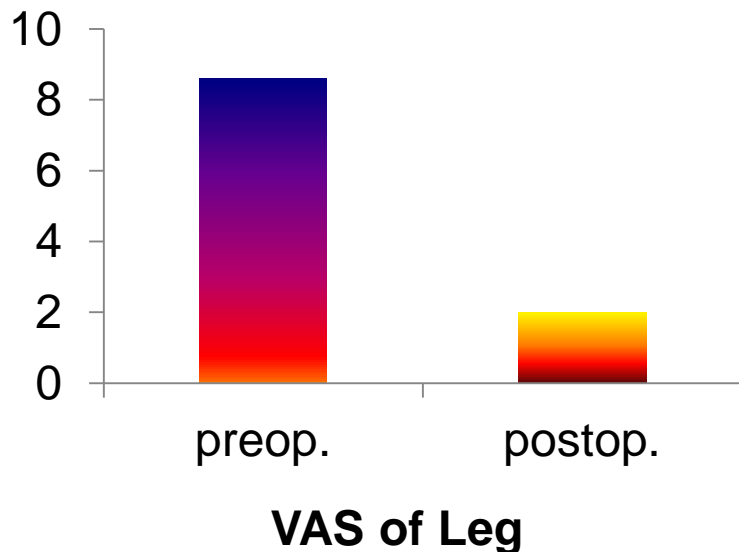
Results

- 25 patients (Mean age 51.1)
- Mean follow up periods: 18.5 ± 6.3 months
- M/F: 16/9
- Upper lumbar: L 1-2 (3), 2-3 (11), 3-4 (11)
- Migration zone: Type A 13. B 6. **C 6**
(highly migrated disc)

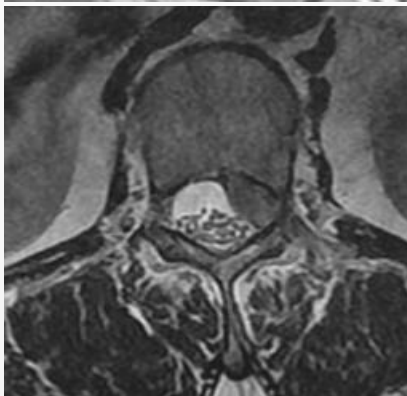


Results

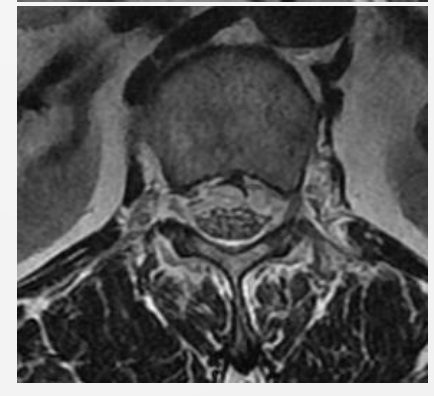
- PELD was Successfully performed in all enrolled 25 patients.
- Total removal of herniated disc particles 23 cases /
- Partial removal 2 cases (Very small remnant disc particle)



Case (47/M Left leg pain)



**Transforaminal
Endoscopic
approach**



Pre-Operative MRI

Post-Operative MRI

Complications related with surgical procedures

- **Recurrence: Only 1 case, needed open discectomy**
- **Partial small remnant disc particle: 2 cases**
- **Transient numbness of Leg: 3 cases**

@ There were no serious complications, such as infection, nerve injury or dura tear.

Conclusions

- **PELD is a safe and effective treatment option for upward migrated disc in the upper lumbar spine.**
- **For the anatomical aspect, this approach is favorable because of its wide foramen and small diameter of nerve root in the upper lumbar spine.**



E-Poster #P111

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Presenter : Dong Chan Lee No Relationships

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