

Analysis of Reoperations after Microendoscopic Lumbar Decompressions

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Purpose

The reoperation cases after microendoscopic lumbar decompression (MED) were analyzed.

Patients

We studied all patients who had undergone MED more than 6 months previously.
(from July 2008 to November 12 2012)

No. of patients	250	Preoperative diagnosis	[No. of patients]
Age (yr)	45.0 ± 14.6	Intra-canal disc herniation	225
Gender (M/F)	170/80	Spinal stenosis with LDH	15
		Lateral disc herniation	2
		Re-operation (from other hospitals)	8

Results

Reoperation cases among the MED patients

No. of patients	7
% of all the MED patients	2.8%
Age (yr)	40.9±9.7
Gender (M/F)	4/3
Mean duration from primal surgery	205 (14-469) days
Pre-reoperative diagnosis [No. of patients]	
recurrence of the disc herniation	7

Operation sites of the reoperation MED

Reoperation level and side compared to the primal operation

Same level & side	6
Different level	1

Operation level	
L4/5	3
L5/s	4

Procedures of the reoperation

MED	5
Laminotomy	1
Fusion	1

Laminotomy case: with spinal stenosis
Fusion case: hard labor

Operation outcome

Improvement rate of JOA score
using Hirabayashi's formula

All MED patients: 77.2 ± 18.7 %
Reoperation patients: 69.1 ± 19.3 %

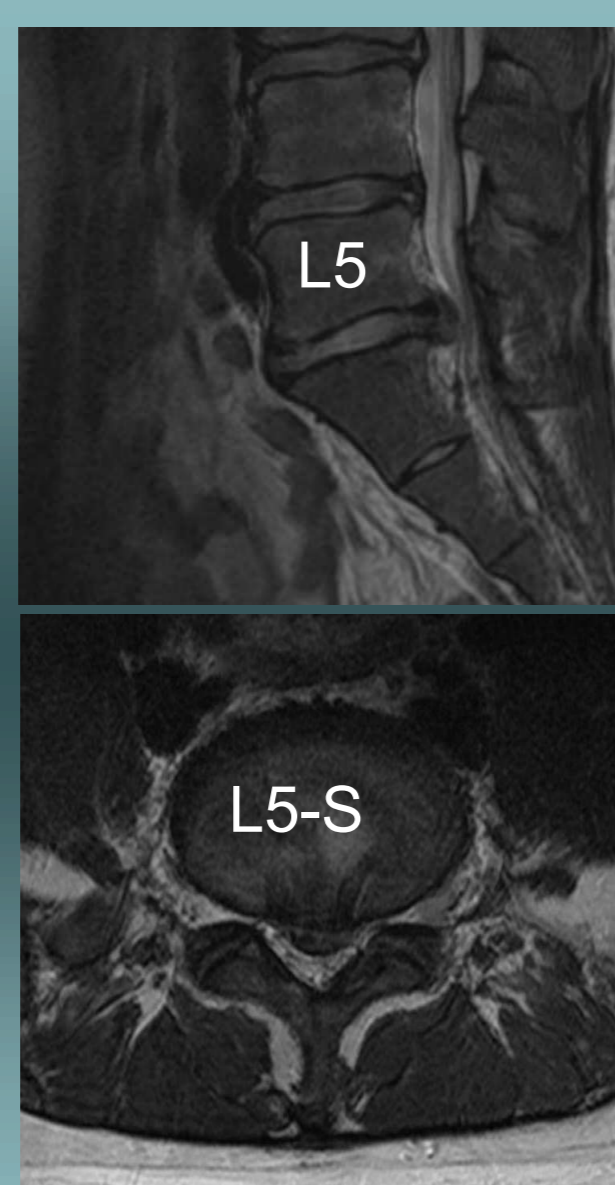
Case presentation (fusion case)

24y.o. male
appeared 2009 July 10th
with 3 months left leg pain

SLR 45-30
Left S1 radiculopathy

Operation 2009 July 22nd
MED for left L5-s

JOA score improved
from 9/29 to 27-29



Preoperation MRI

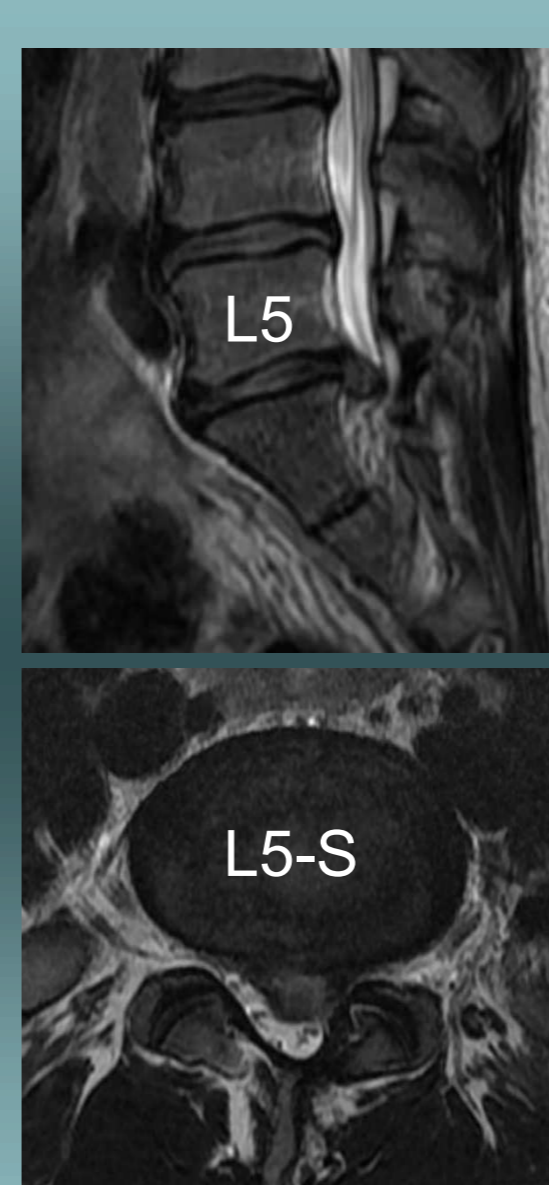
After 2.5 years later, the
patient visited with left leg pain
again for 1 month and couldn't
work as before.

SLR 80-45
Left S1 radiculopathy

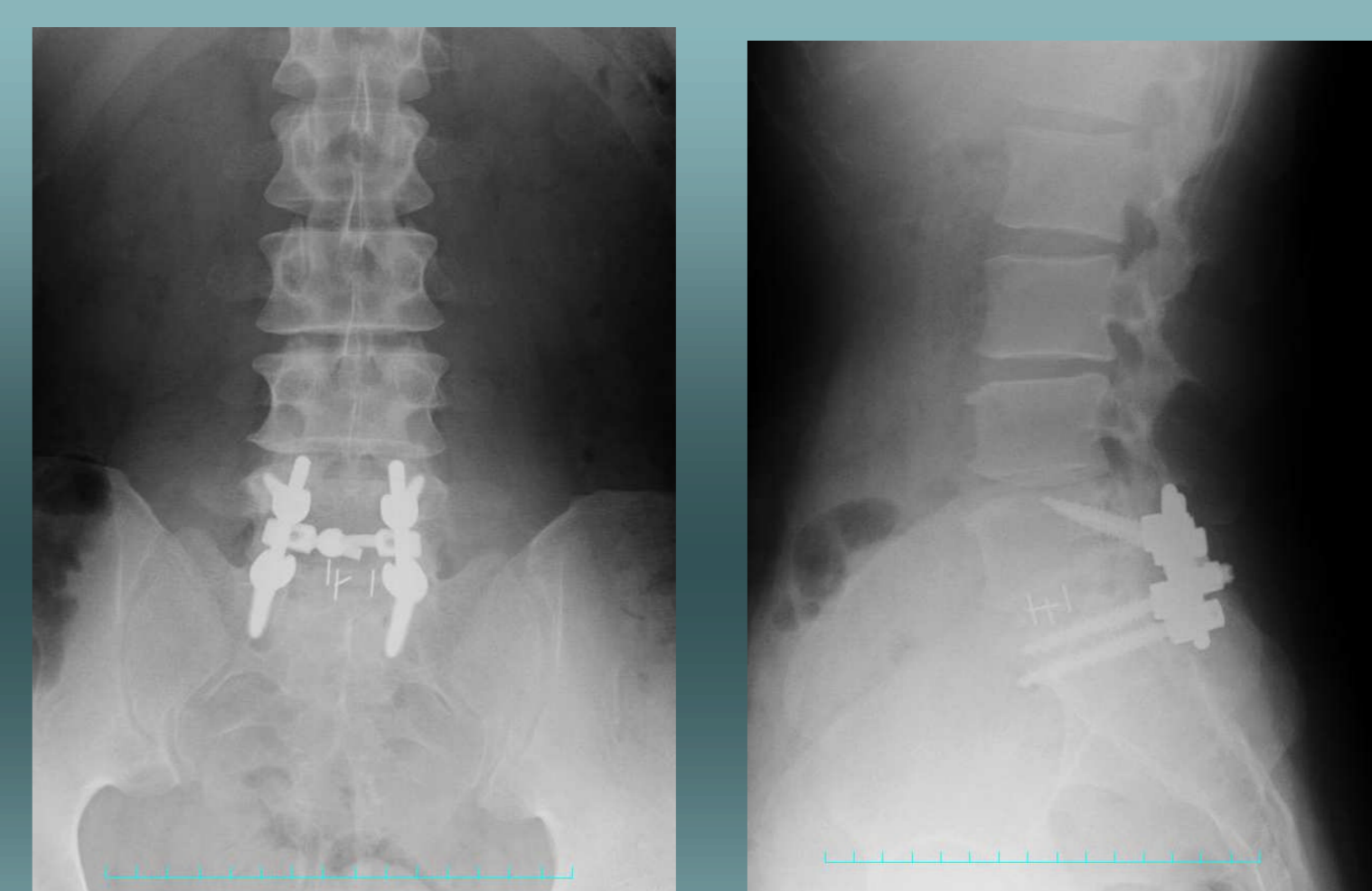
Pregabalin was not effective

Operation 2012 February 29th
TLIF for left L5-s level

JOA score 12 improved to 26



Pre-reoperation MRI



Post-reoperation plain X-P

Discussion

Frequency of reoperation

The reported reoperation rate of
standard open or microsurgical methods
was 2% to 5%

- Hurme M, et al: *Spine (Phila Pa 1976)* 1987
- Soldner F, et al: *Acta Neurochir (Wien)* 2002
- An HS, et al: *J Spinal Disord* 1999
- Wenger M, et al: *Neurosurgery* 2001
- Carragee EJ, et al: *Spine (Phila Pa 1976)* 2006
and so on.

The reoperation rate of *our study* was 2.8%

Clinical success of recurrent disc herniation surgery

Clinical success of primary discectomy: 79.3%
Reoperation: 71.1%
Cinotti G et al: *Spine (Phila Pa 1976)* 1999

Satisfactory results of primary discectomy: 88%
Reherniation: 85%
Cinotti G et al: *J Bone Joint Surg Br* 1998

Improvement for primary herniation: 80%
Reherniation: 85%
Papadopoulos EC et al: *Spine* 2006

Improvement rate of primal MED: 77%
Reoperation: 69%
Our series

Choice of the methods of surgery for recurrent disc herniation

Many authors do not recommend fusion after
a first-time recurrent disc herniation.

Herron L: *J Spinal Disord* 1994
Stambough JL: *Orthop Rev* 1994

In our series, 5 patients were treated with MED.
1 case was underwent fusion because of his
hard work. Fusion is not necessary for all
recurrent disc herniation.

Conclusion

In conclusion, the reoperation rate of the MED was not as high as standard open and microsurgical methods. Reoperation can be performed with the same microendoscopic procedure.