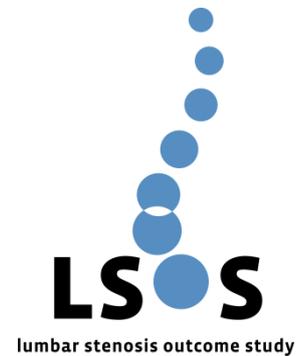


## Abstract

# The impact of incidental durotomy on the outcome of decompression surgery in degenerative lumbar spinal canal stenosis: Analysis of the Lumbar Spinal Outcome Study (LSOS) data – A prospective multi-center cohort study



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### Purpose

Incidental durotomy is a well-known complication during surgery for degenerative lumbar spinal stenosis (DLSS). In this prospective multicenter cohort study including eight medical centers our aim was to assess whether incidental durotomy during first-time lumbar spinal stenosis decompression surgery without fusion has an impact on long-term outcome.

### Methods/Materials

Patients of the multi-center Lumbar Stenosis Outcome Study (LSOS) with confirmed DLSS undergoing first-time decompression without fusion were enrolled in this study. Baseline patient characteristics and outcomes were analyzed at 6, 12, and 24 months follow-up respectively with the Spinal Stenosis Measure (SSM), the Numeric Rating Scale (NRS), Feeling Thermometer (FT), the EQ-5D-EL, and the Roland and Morris Disability Questionnaire (RMDQ).

### Results

A total of 167 patients met the inclusion criteria. Fifteen (9%) of those patients had an incidental durotomy. Baseline characteristics were similar between the durotomy and no-durotomy group. All patients improved over time. In the group of durotomy patients, the median improvement in SSM symptoms scale was 1.1 points at 6 months, 1.1 points at 12 months, and 1.6 points at 24 months after baseline. For the no-durotomy group, these improvements were 0.8, 0.9, and 0.9. For SSM function the improvements were 1.0, 0.8, and 0.9 in the durotomy group, and 0.6, 0.8, and 0.8 in the no-durotomy group. None of the between-group differences were statistically significant.

### Conclusion

Incidental durotomy in patients with DLSS undergoing first-time decompression surgery without fusion did not have negative effect on long-term outcome and quality of life.