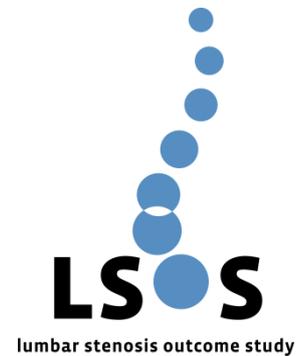


Abstract

Clinical Outcome in Lumbar Decompression Surgery for Spinal Canal Stenosis in the Aged Population



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Purpose

Lumbar decompression surgery without fusion has been shown to improve quality of life in lumbar spinal canal stenosis. In the population older than 80 years, treatment recommendations for DLSS show conflicting results.

Methods/Materials

This is a prospective, multicenter cohort study including 8 medical centers in the metropolitan area of the Canton Zurich, Switzerland. Objectives. To examine whether outcome and quality of life might improve after decompression surgery for degenerative lumbar spinal stenosis (DLSS) even in patients older than 80 years and to compare data with a younger patient population from our own patient collective. Eight centers in the metropolitan area of Zurich, Switzerland agreed on the classification of DLSS, surgical principles, and follow-up protocols. Patients were followed from baseline, at 6 months, and 12 months. Baseline characteristics were analyzed with 5 different questionnaires "Spinal Stenosis Measure, Feeling Thermometer, Numeric Rating Scale, 5D-3L, and Roland and Morris Disability Questionnaire." In addition, our study population was compared with a younger control group. Furthermore, we calculated the minimal clinically important differences.

Results

Thirty-seven patients with an average age of 82.5 ± 2.5 years reached the 12-month follow-up. Spinal Stenosis Measure scores, the Feeling Thermometer, the Numeric Rating Scale, and the Roland and Morris Disability Questionnaire showed significant improvements at the 6-month and 12-month follow-ups ($P < 0.001$). One EQ-5D-3L subgroup "anxiety/depression" showed no significant improvement ($P = 0.109$) at 12-month follow-up. The minimal clinically important difference for the "Symptom Severity scale" in the Spinal Stenosis Measure was achieved with improvement of 70% in the older patient population.

Conclusion

Patients 80 years or older can expect a clinically meaningful improvement after lumbar decompression for symptomatic DLSS. Our patient population showed significant positive development in quality of life in the short- and long-term follow-ups.