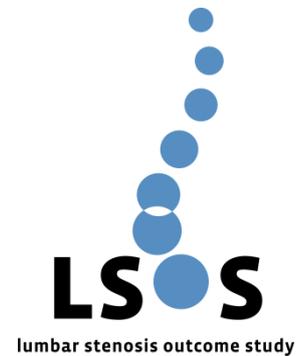


Abstract

Minimal Clinical Improvement in Patients undergoing Treatment for Symptomatic Lumbar Spinal Stenosis during a Follow-Up Duration of Three Years: Findings From the Lumbar Stenosis Outcome Study (LSOS)



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Purpose

Degenerative lumbar spinal stenosis (LSS) is a frequent condition in elderly patients. In patients with moderate to severe symptoms different conservative and/or surgical treatment modalities are recommended. It is still unclear how the patients respond to different treatments over a long-term follow-up.

To study the change in the proportions of patients achieving a meaningful clinical improvement (MCID) during follow-up in a prospective multicenter cohort study in patients undergoing treatment for symptomatic degenerative LSS.

Methods/Materials

Multicenter cohort study in Switzerland. For the current study, we included all patients who completed the three-year follow-up of the thus far included patient population in the Lumbar Stenosis Outcome Study (LSOS).

Patients with neurogenic claudication and radiological findings of lumbar spinal stenosis included in the LSOS and completed 36-months follow-up assessment.

Outcome measures: The disease specific spinal stenosis measure (SSM). The SSM consists of a symptom (SSM-sy, range 1–5) and a function (SSM-f, range 1–4) subscale. An MCID for the SSM-sy is 0.48, for the SSM-f 0.52. Descriptive statistics (median, interquartile range (IQR) for continuous parameters; % for the categorical outcomes).

Results

In November 2015, 174 (21%) of the 850 patients included in the LSOS completed the 36 months of follow-up (13% drop-out, 66% no 36-month follow-up) and were analyzed. The proportion of patients with MCID in the SSM-f increased in the surgical group from 58% after 6 months to 68% at 12 months. While the proportion of MCID remained stable over the 24- and 36-month follow-up, we found a cross-over from MCID to no-MCID and vice-versa in 4% to 10% of the patients. In the nonsurgical group, the proportion of patients with MCID increased from 34% to 39% and remained stable over the follow-up period. Findings for patients with crossover (MCID to no-MCID and vice-versa) ranged from 8% to 13%. The findings for the SSM-sy were similar in both groups. The operation rate in the nonsurgical group was 11% between 6 and 12 months, 8% during the second year, and 4% in the third year.

Conclusion

In this elderly patient population with symptomatic degenerative LSS, we found a higher proportion of patients in the spinal surgery group reporting MCID for pain and disability compared to patients undergoing infiltration or conservative treatments at the three-year follow-up. We found a proportion of patients who reported cross-over from previously MCID to no-MCID and vice-versa that indicate a remittent course of symptoms. Furthermore, 10% of patients undergoing surgical treatment report improvement between 6- and 12-month follow-up.