Abstract

Baseline Characteristics of Patients in the Lumbar Spinal Stenosis Outcome Study (LSOS)

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Background and Purpose

Lumbar spinal stenosis 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 which treatment is the most adequate for a specific patient. The main purpose of the Lumbar Spinal Stenosis Outcome Study (LSOS) is to identify prognostic factors in patients treated for lumbar spinal stenosis and to develop a probability function in order to predict the outcome of the disease. This is a preliminary report of the thus far included patient population in the LSOS.

Methods/Materials

Multicenter cohort study in Switzerland. Patients with neurogenic claudication and radiological findings of lumbar spinal stenosis included in the LSOS and completed 6-month follow-up assessment. Outcome measures: the disease specific spinal stenosis measure (SSM, range 1-5). The SSM consists of a symptoms (SSM-sy) and a function (SSM-f) subscale. A Minimal Clinically Important Difference (MCID) for the SSM-sy is 0.48, for the SSM-f 0.52. Descriptive statistics were used to describe the patient population included in this cohort study between December 2010 and December 2014.

Results

Between December 2010 and December 2014, 1,751 patients were potentially eligible and 683 patients agreed to participate. In December 2014, 500 (73.2%) patients completed the 6-month follow-up. Between baseline and 6-month follow-up, 48 (7%) patients were lost to follow-up (8 patients died, 2 entered assisted living residences, 30 were no longer interested, 1 due to missing contact information, 7 did not meet inclusion criteria). The median age was 75 years (IQR 12), 265 (53.0%) were female. Treatment modalities applied during the first 6 months were conservative care (physical therapy and/or oral medication) in 55 (11%) patients, epidural injections and conservative care in 156 (31.2%), surgical treatment in 131 (26.2%), and epidural injections followed by surgery in 158 (31.6%). The SSM-sy decreased in the conservative care group from 2.9 (1.4-4.6)* to 2.3 (1-4.4) in the epidural injection group from 3.0 (1.8-4.7) to 2.7 (1-5), in the surgical group from 3.1 (1.6-4.9) to 2.1 (1-4.1), epidural injections followed by surgery from 3.1 (1.9-4.6) to 2.1 (1-3.9). The SSM-f decreased in the conservative group from 2 (1-3.6) to 1.4 (1-3.2); in the injection group from 2.3 (1-3.8) to 1.8 (1-3.6), surgical group from 2.2 (1-3.8) to 1.6 (1-3.2), injection and surgical care from 2.4 (1-3.6) to 1.4 (1-3.4), 27.3% in the conservative group, 26.9% in the injection group, 42.7% in the surgical group and 51.3% in the injection and surgical group fulfilled the criteria for an MCID in SSM-sy and SSM-f. *Values are given in median (minimal and maximal value) if not otherwise indicated.

Conclusion

Every second patient included in the LSOS study population underwent spinal surgery. A remarkable proportion of patients did not show a clinically important improvement of symptoms and function after surgery. There is a need to derive a prognostic probability function to identify patients before surgery with a very low probability of clinical improvement after surgery.