

Background: The incidence of degenerative cervical myelopathy (DCM) is increasing as the elderly population grows. Indications for and results after surgery for DCM in the elderly remain unclear.

Research question: Do clinical outcomes in patients aged ≥ 70 undergoing decompressive surgery for DCM differ from those of younger patients (50–70 years) at one year?

Design: Nationwide, registry based observational study

Methods: Prospectively obtained data from the Norwegian Registry for Spine Surgery were used. Patients included had a primary diagnosis of DCM, were ≥ 50 years and had undergone decompressive surgery between 2012 and 2018. They were dichotomized into 50 to 70 years, and ≥ 70 years. Primary outcome was change in Neck Disability Index (NDI). Secondary outcomes were changes in European Myelopathy Score (EMS), quality of life (EQ-5D), numeric rating scales (NRS) for headache, neck and arm pain, Global perceived effect (GPE) and complications.

Results: We analyzed data from 474 patients aged 50–70 years, and 177 patients aged ≥ 70 years. For both age cohorts combined, NDI changed from 33.8 to 25.2 (mean change 9.2, 95% CI 7.7 to 10.6, $P < 0.001$). Both age cohorts had significant improvement of NDI, EQ-5D, GPE, pain scores and EMS scores.

128 patients (27.0%) in the younger age group and 64 patients (36.2%) in the elderly patients experienced complications or adverse effects within three months of surgery.

Discussion:

Cervical spinal degeneration and comorbidity increase with age, and as expected, the cohorts were not balanced for baseline factors. Still, the older age cohort experienced similar improvement of NDI, EQ-5D, GPE and pain scores, and even larger improvement of the EMS score. This was due to a higher proportion of moderate-to-severe myelopathy in the older age cohort.

Surgical treatment not only arrested further progression of myelopathy, but also improved functional status and quality of life with reasonable complication rates in both age cohorts.

Patients' global perceived effect of surgery

