



# NASS 24<sup>TH</sup> ANNUAL MEETING

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## **Surgery yields good results in patients with symptomatic cervical spondylotic myelopathy**

San Francisco, CA – Surgery is an effective treatment option for patients with symptomatic cervical spondylotic myelopathy (CSM), according to results of a multicenter, prospective cohort study. The findings were presented today at the North American Spine Society's 24<sup>th</sup> Annual Meeting in San Francisco.

“Cervical spondylotic myelopathy is the most common cause of spinal cord impairment worldwide,” said Michael Fehlings, MD, PhD, FRCSC, professor, department of surgery, division of neurosurgery, University of Toronto, and Medical Director, Krembil Neuroscience Center, Toronto, Ontario. “Although it is common, the condition often flies beneath the radar of many primary care physicians because the patient’s chief complaint is neck pain. Left untreated, cervical spondylotic myelopathy may lead to significant disability and long-term impairment.

“The effectiveness of surgery remains a big question. Despite the prevalence of the condition and the evolution of diagnostic and therapeutic techniques, it remains unclear which patients are ideal surgical candidates and even whether surgery results in long-term benefits,” said Fehlings.

Fehlings and his colleagues conducted a study, the largest performed to date on this condition, which included 301 patients treated at 13 North American sites. The patients displayed objective evidence of cervical spondylotic myelopathy according to clinical criteria that was confirmed with either MRI or CT myelography.

Using the modified Japanese Orthopaedic Association (JAO) scale, Fehlings and colleagues stratified patients according to severity degree: mild, moderate and severe. They classified patients with mJOA scores of 15 to 18 as mild; patients with scores of 12 to 14 were moderate and patients with scores of 12 or less were considered severe. The researchers also assessed outcomes with the Nurick, SF-36, Neck Disability Index (NDI) and 30-meter walk test.

Patients underwent either anterior or posterior decompression/reconstruction. All patients completed one-year of follow-up, and 65 patients have reached two years’ follow-up.

“Patients with all three severities of myelopathy showed dramatic improvement in generic outcome measures, as well as disease-specific outcome measures,” said Fehlings. Modified JOA scores rose from 13.0 preoperatively to 15.4 postoperatively. The NDI scores improved from 41.6 preoperatively to 30.9 postoperatively. Average Nurick scores improved from 4.1 preoperatively to 2.6 postoperatively. The 30-meter walk test improved from 28 seconds to 24 seconds. The SF-

36 PCS scores increased from 34.6 to 39, and the mental component summary (MCS) increased from a preoperative score of 41.2 to a postoperative score of 46.7.

The researchers were not surprised that surgery was overall beneficial. “What was surprising was that the effects were so dramatic in patients with so-called milder forms of impairment,” Fehlings said.

A subsequent analysis evaluated how symptom duration affects outcomes. The dogma has been to treat patients with cervical myelopathy conservatively and intervene only when they progressed to severe. “This study demonstrated that might not be the correct approach. Patients who had symptoms for six months or less did better than the other groups. Although patients improved regardless of how long they had symptoms, they showed an incremental drop-off in the extent of improvement,” Fehlings said.

A follow-up study is currently underway to assess whether the results from this North American study are applicable internationally. More than 300 participants have enrolled. Initial results show that these patients present in similar ways and that the responses to surgery are similar, Fehlings said.

### **About NASS**

The North American Spine Society (NASS) is a multidisciplinary medical organization dedicated to fostering the highest quality, evidence-based, and ethical spine care by promoting education, research, and advocacy. NASS is comprised of more than 5,500 members from several disciplines including orthopedic surgery, neurosurgery, physiatry, neurology, radiology, anesthesiology, research, physical therapy and other spine care professionals. For more information, visit [www.spine.org](http://www.spine.org).

### **About NASS’ 24<sup>th</sup> Annual Meeting**

NASS’ 24th Annual Meeting is being held in San Francisco, November 10-14, 2009, at the Moscone Center South. For more information, or to view press releases related to the meeting, please visit [NASS’ Annual Meeting Web site](#).