



# Is Cervical Decompression Beneficial In Patients With Coexistent Cervical Stenosis And Multiple Sclerosis

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## Introduction

Cervical stenosis (CS) and multiple sclerosis (MS) are two common conditions with distinctive pathophysiology but overlapping clinical manifestations which may include myelopathy, motor/sensory disturbances, and bowel/bladder dysfunctions. The uncertainty involved in attributing worsening symptoms to cervical stenosis in patients with MS due to extremely high prevalence of asymptomatic radiological cervical stenosis makes treatment decisions challenging.(Figure 1) This retrospective review was performed to analyze the clinical outcome following cervical spine decompression and fusion in patients with coexisting CS and MS.

**Table 1**

<b>Total patients</b>	<b>18</b>
Male	6 (32%)
Female	12 (68%)
Mean Age (years)	52.7 yrs ( 40-72)
Average duration of MS diagnosis	13.9 years (range 3-35 years)

**Demographic Details**

## Methods

A retrospective review was performed analyzing the medical records of all patients with confirmed diagnosis of MS with coexistent CS and underwent surgery for cervical radiculopathy/myeloradiculopathy from October 2009 to June 2013.

## Results

Eighteen patients with coexistent CS and MS who had undergone cervical spine decompression and fusion were identified. There are 6 men and 12 women with an average age of 52.7 years (range 40 to 72 years).( Table 1) Pre-operative symptoms included progressive myelopathy (14 patients), neck pain (7 patients), radiculopathy (5 patients), and bladder dysfunction (7 patients).(Table 2)Thirteen of the 14 patients (92.9%) with myelopathy showed either improvement (4/14, 28.6%) or stabilization (9/14, 64.3%) of their symptoms with neck pain and radiculopathy improving in 100% and 80% of patients respectively. None of the seven patients with urinary dysfunction had improvement in urinary symptoms after surgery.

## Conclusions

Management of patients with concomitant MS and CS can be challenging. Cervical spine decompression and fusion can improve or stabilize myelopathy, and significantly relieve neck pain and radiculopathy in majority of these patients. Urinary dysfunction appear unlikely to improve after surgery. The low rate of surgical complications in our cohort demonstrates that cervical spine surgery can be safely performed in carefully selected patients with concomitant CS and MS with a good clinical outcome and also eliminate CS as a confounding factor in the long-term management of MS patients.

## Learning Objectives

- 1) Understanding the clinical challenges involved in managing patients with coexistent cervical stenosis and multiple sclerosis.
- 2) Role and benefit of cervical spine surgery in patients with multiple sclerosis and cervical stenosis.

**Figure 1**



Pre-operative T2-weighted MRI of a patient who presented with myelopathy demonstrating multilevel cervical stenosis in the cervical spine

**Table 2**

Progressive Myelopathy	14
Neck Pain	7
Radiculopathy	5
Bladder Dysfunction	7
EDSS > 4.5	11/18 ( 62 % )

**Clinical Presentation**

## References

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