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## Majid Reza Farrokhi

Shiraz University of Medical Sciences, Iran

## A new algorithm for surgical management of cervical spondylotic myelopathy

Pervical spondylotic myelopathy (CSM) is the most common progressive degenerative disease of the spine in the geriatric population. This study aims to provide an evidence-based stepwise surgical approach, a new algorithm, to CSM according to the recent literature. We searched for evidence regarding the surgical approach to CSM in medical databases with articles dated from 1985 to 2016. In patients with effective cervical lordosis (fewer than three levels of ventral disease), anterior cervical discectomy and fusion (ACDF) or arthroplasty is preferred. Patients with more than three levels of compression are generally treated by laminoplasty, especially with preserved lordotic curvature. In patients with straightened spine who have less than three involved levels, ACDF with a plate is recommended, whereas patients with more than three involved levels with instability should undergo posterior decompression and fusion. In young patients who have a stable cervical spine, laminoplasty is recommended and in old patients with ankylosed spine, only laminectomy should be performed. Patients with mild cervical kyphosis (kyphotic angle  $\leq 10^{\circ}$ ) should be managed in the same way as patients with straightened spine. However, in severe kyphosis, cervical traction is recommended. If the kyphosis is reducible, further posterior decompression and fusion is adequate. In patients with irreducible kyphosis, if the number of involved levels is less than two, ACDF is adequate, but if it is more than two levels, anterior cervical corpectomy and fusion should be performed using cervical magnetic resonance imaging for evaluation of the patency of the subarachnoid space (SAS). With patent SAS, only posterior fusion is adequate, whereas in closed SAS, posterior decompression with posterior fusion is required. These approaches are based on the most recent evidence. This study provides a stepwise evidence-based surgical approach for the management and treatment of patients with CSM.

## **Biography**

Majid Reza Farrokhi is a Professor of Neurosurgery, Head of Shiraz Neuroscience Research Center, and Dean of Virtual School at Shiraz University of Medical Sciences. He completed his Specialty Degree in Neurosurgery in 1996 and Fellowship of Spine Surgery at Innsbruck University in 2004. He has been the Vice President of Iranian Board of Examiners in Neurosurgery since 2012. He was Chairman of Neurosurgery Department of Shiraz University of Medical Sciences from 2011-2014; Head of Fars and South of Iran AO-Spine Society from 2002-2005 and; Dean of Medical School, Bushehr University of Medical Sciences from 1996-1998. He has published more than 42 papers in reputed journals and two books.

farrokhimr@yahoo.com