



Editorial



Preservation Versus Elimination of Segmental Motion in Anterior Cervical Spine Surgery


Wen-Cheng Huang, Jau-Ching Wu

Department of Neurosurgery, Taipei Veterans General Hospital, School of Medicine, National Yang-Ming University, Taiwan

Corresponding Author

Jau-Ching Wu

E-mail: jauching@gmail.com

 <https://orcid.org/0000-0002-6996-3409>

Department of Neurosurgery, Taipei Veterans General Hospital, Taiwan

See the article "Effect of Myelopathy on Early Clinical Improvement After Cervical Disc Replacement: A Study of a Local Patient Cohort and a Large National Cohort" on page 563.



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Since almost 60 years ago, anterior cervical discectomy and fusion (ACDF) has been a well-accepted surgical approach for cervical spondylotic myelopathy (CSM) caused by disc herniations. In the past 15 years, the emerging technology of cervical disc arthroplasty (CDA) has become a popular surgical option to treat herniation of disc or cervical spondylosis. The published reports of several prospective, multi-center, randomized control studies of the U.S. Food and Drug Administration on CDA versus ACDF have demonstrated the viability and safety for CDA for up to 7–10 years follow-up.¹⁻⁶ These clinical trials included patients with medical refractory cervical radiculopathy, myelopathy, or both, caused by 1- or 2-level cervical disc herniation or spondylosis.⁶⁻¹⁰ However, none of these trials has specifically addressed patients with myelopathy, although none of the trials excluded these patients. From the reports, it remains elusive as to whether or not CDA is equally effective as ACDF in management of patients with only cervical myelopathy.^{6,11,12}

There are a few reports on retrospective series of CDA applied to patients with myelopathy.¹³⁻¹⁵ They unanimously demonstrated the improvement of neurological function after CDA.¹⁶⁻¹⁸ However, there has not been a randomized trial to evaluate the efficacy of CDA on CSM. The differences between CDA and ACDF in the management of CSM would likely be more evident in multiple levels of disease, in which cases more segmental mobility is maintained by CDA.¹⁹⁻²¹ Although segmental instability, abnormal segmental motion, could also contribute to the pathophysiology of CSM, there has not been evidence as to whether the fixation or fusion is mandatory after decompression for cervical myelopathy. This could be corroborated by the wide acceptance of cervical laminoplasty for the management of severe CSM.

In this report, entitled: Effect of myelopathy on early clinical improvement after cervical disc replacement: A study of a local patient cohort and a large national cohort, the author demonstrated that the perioperative complication rates were indifferent between CDA and ACDF. There are limitations of the study, including the small number of patients with myelopathy treated in the institutional cohort, heterogeneity among the myelopathy patients, and lack of quantified measurement of neurological improvement in neurological function among patients with CSM. However, the authors should be commended for the attempt to address such a topic of potentials for a paradigm-shift. The balancing among decompression, preservation of motion rather than elimination like that which has been done for de-

caes, and maintaining appropriate alignment with stability, would likely advance the treatment strategy of CSM. The introduction of CDA might allow earlier intervention and supposedly improved outcomes of surgical management for CSM.^{14,22}

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Title: Two Women Running on the Beach

Artist: Pablo Picasso

Year: 1922

The rounded monumental figures of Picasso's neo-Classical period of the early 1920s sees a return to his 1922 painting *Two Women Running on the Beach*, with all its traditional religious connotations. The vivid blues and the flowing hair here are anchored in the elongated brown limbs, contorted yet supple. There's a sense of fullness that makes you feel that this is how life must be lived - and war must be abandoned.

More information: <https://www.pablocicasso.org/two-women-running-on-the-beach.jsp>

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