

Outcomes Evaluation of Stand Alone Cage in The Management of Spondylotic Cervical Myelopathy

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Summary

Cervical spondylotic myelopathy is a hidden complication of cervical degenerative disease that usually discovered incidentally in outpatient clinics. Many factors contribute to the development of this catastrophic sequel may be static or dynamic or both.

Most of patients complain of decreased hand dexterity and fine movement, also some experienced abnormal gait pattern. Obvious signs of cervical myelopathy are upper limb hyper-reflexia, Hoffman sign, inverted radial reflex, finger escape sign, 15 s grip release test and lower limb signs are clonus and Babinski sign.

Many imaging modalities could be used in diagnosis of CSM like, x-ray flexion, extension, oblique views and CT to detect osteophytes formation and OPLL disease. MRI is the study of choice in CSM that can detect level of disc prolapse and degree of cervical spinal canal stenosis and cord signal changes that may predict the prognosis of this condition.

Many surgical techniques used in the management of CSM, may be anterior surgeries: ACDF, ACCF, and cervical disc prosthesis and also posterior surgeries: laminectomy, laminectomy with fusion and laminoplasty. The site of the offending structures, number of levels and the cervical sagittal balance are very important factors that rule the way of surgical interference.

Aim of the study:

This study was conducted on 25 patients in Fayoum university hospitals to evaluate the functional outcome of stand-alone cage in the management of spondylotic cervical myelopathy, clinically by Vas & Mjoa score and radiologically to detect fusion rate, improvement and maintenance of cervical sagittal balance.

Inclusion Criteria:

- Age: 30-70 y and both sexes are involved.
- Patients with spondylotic cervical myelopathy with Single or multiple level disc prolapse.

Exclusion Criteria:

- Patients with compressive cervical non-spondylotic myelopathy.
- A major instability that required anterior and posterior approach.

Patients and methods:

This study was conducted on 25 patients 8 females and 17 males, of different age groups with an average of 49 years (range from 38 to 65y) in Fayoum university hospitals. All patients complained of spondylotic cervical myelopathy with different grades and were operated upon by either single or multiple level stand-alone ACDF. Pre and postoperative clinical assessment was carried out for all patients using Mjoa score and Vas score. Patients were also assessed radiologically by x-ray to detect cervical sagittal alignment and fusion of the operated levels.

Results:

The 25 patients with single and multiple level CSM were operated upon by stand-alone cage ACDF technique and had a significant improvement of the clinical outcomes according to Vas & Mjoa score in all patients of the study group.

Also, radiological outcome of complete fusion for all patients except 12% with incomplete fusion (pseud-arthrosis) without any effect on the clinical results and no need for further revision surgeries.

Also this study found significant improvement of segmental and global lordotic angle for all patients except 12% with cage subsidence which has no effect on the clinical outcomes and no need for further surgeries. Moreover, there is a significant correlation between patient age and cage subsidence.

Conclusion:

Stand-alone cage ACDF is a competent method in treatment of single or multiple levels CSM without the need for revision surgeries.