

ANTERIOR DECOMPRESSION UND FUSION USING THE ANTERIOR DISTRUCTION DEVICE (ADD) IN PATIENTS WITH CERVICAL SPINAL STENOSIS

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Objective: Cervical myelopathy resulting from spinal canal stenosis became most common in recent years. Anterior decompressive surgery with corpectomy and fusion are standard techniques. The fusion is commonly performed with bone graft and anterior plating. Alternatively, different fusion cages have gained acceptance in cervical spine surgery.

Material and Methods: Here, we present 20 patients with degenerativ cervical spinal canal stenosis. Leading symptom in all patients was myelopathy. Additionally, radiculopathy was present in 16 patients and pain in 14. Radiographic examinations included plain roentgenography, MRI, CT, myelography and lateral tomography. Instability could be demonstrated by flexion/extension radiography in 5 cases. All patients were treated with corpectomy followed by placement of an distractable titanium cage (ADD, Ulrich, Ulm, Germany) packed with autogenous bone graft from the vertebral bodies to reconstruct the anterior column. The used cages can be distracted in situ and so the size of the cage could be adapted to the size of the corpectomy. A cervical plate was added in 15 cases and in 5 cases an all in one system (cage with plate) was used. The follow up period was 6 to 48 months.

Results: After surgery no patient showed signs of neurological deterioration. In all cases a correct placement of the cage and a solid fusion was achieved with no signs of instability in flexion/extension radiograms. However, 2 patients developed a mild kyphosis resulting from cage dislocation into the endplates. Neurological improvement was seen in 11 patients, 9 showed stable disease. Pain relief was seen in all 10 patients presented with pain.

Conclusion: The aims of treatment for cervical spinal canal stenosis is decompression and fusion. We could demonstrate, that distractable cages are useful vertebral body replacements. They are adjustable in hight, provide immediate strong anterior column support and avoid bone graft-site morbidity. Therefore, they offer an effective and safe alternative to bone autografts.

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