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Standalone cage for the treatment of symptomatic adjacent segment stenosis in the degenerative cervical spine.

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Introduction: ACDF with cage is considered to be the standard technique in the treatment of degenerative cervical stenosis. Cervical adjacent segment disease (ASD) is not a common pathology like in the lumbar spine. In case of ASD treated with interbody fusion, the stresses expected on the implant make the use of standalone cages debatable. Data dealing with this subject is few in the literature.

Material and Methods: A retrospective study of prospectively collected patients undergoing ACDF for ASD using standalone cage (1/2013 and 1/2022). Total of 101 levels in 87 patients (48 m. and 39 f., mean age: 57.3 years). The data were analysed with emphasis on the sagittal profile, cage subsidence and fusion rate at the final follow-up (FU).

Results: ASD occurred after monosegmental fusion in 30 cases, bisegmental fusion in 42, and trisegmental fusion in 15 patients. ASD was cranial to the fusion in the majority of cases (71%) and affected mostly a single disc. Mean FU period of two years with minimum one year. The analysis revealed an improvement of the mean SL of adjacent disc from 4,2° preop. to 7.5° postop. At the final FU, the mean SL remained more or less unaffected with a value of 7.2°. Cage subsidence occurred in 12 patients (13.8%). A patient was re-operated due to postoperative hematoma. Temporary unilateral recurrent laryngeal palsy occurred in 3 patients (recovered). CL improved from 15,1° to 21.2° at the final FU. Fusion rate in one-year postop, full radiologic fusion was achieved in 85 patients with a pseudoarthrosis rate of 3,4% (three patients). These 3 patients were asymptomatic. Neither the number of fused segments at the index surgery nor the location of the ASD did have a significant effect on the final results.

Conclusion: Standalone cage for ACDF in case of ASD is a safe procedure yielding good results in terms of cervical sagittal profile and fusion rate, regardless the number of fused segments at the index surgery.