Combined Use of Cervical Arthroplasty and Artrodesis: Our Results in 30 Cases
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Traditional anterior discectomy and fusion has been successfully used in the treatment of cervical degenerative disease. However, incidence of degenerative changes at adjacent levels has been raising concerns. Technical development of cervical disc arthroplasty and their rapid diffusion in surgical practice has been sustained by different studies in literature. Cervical disc arthroplasty satisfy the concept of motion preservation, allowing prevention of the adjacent level disease. We present our series of 30 patients treated with cervical arthroplasty (Prestige- Medtronic) and artrodesis at the adjacent level (cage in PEEK- Medtronic). The outcome was assessed using the Visual Analog Scale (VAS), the Neck Disability Index (NDI) for estimation of clinical results and imaging in maximal extension and maximal flexion for evaluation of post-operative range of motion. For all the patients considered in the present study follow-up data were available at 2 months and one year from surgery. We performed artrodesis and arthroplasty as a single surgical procedure in 22 patients with a symptomatic two-level degenerative disease. In 8 patients fusion was achieved as a result of a previous surgical procedure, and the patients were symptomatic for a subsequent development of an adjacent level disease. In 28 patients we reported improvement of VAS and NDI at follow-up. Two patients were unchanged after surgery. At 12 months a good range of motion was documented in flexion and extension at the level of arthroplasty in all cases. In our experience the use of cervical disc arthroplasty combined with artrodesis allowed good clinical results in term of VAS and NDI. Radiological studies at one year demonstrated that cervical prosthesis maintain motion preservation at the treated level.

To our knowledge, there is no study in literature reporting results in patients treated with cervical artrodesis and cervical arthroplasty to date.

Cervical arthroplasty performed in the same setting of artrodesis or applied as a following surgical option, represent a effective instrument in the treatment of cervical degenerative disease.