Total disc replacement (TDR) for adjacent segment disease after anterior cervical fusion

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【Introduction】
Anterior cervical discectomy and corpectomy for the treatment of cervical spondylosis and cervical disc herniation enjoy favorable rates of fusion and successful clinical outcomes. However, postoperative degenerative changes at adjacent discs may lead to the development of new radiculopathy or myelopathy. In the previous reports, the incidence of symptomatic adjacent segment disease has ranged from 7% to 25%.
The present study was undertaken to investigate the incidence of symptomatic adjacent segment disease after anterior cervical interbody fusion (ACF) and to describe availability for cervical total disc replacement (TDR) for those patients.
【Material & methods】
Between 1999 and 2015, a total of 275 patients underwent anterior cervical interbody fusion for intervertebral disc herniation and cervical spondylosis. A total of 225 of these patients could be followed up clinically and radiologically for more than 2 years (follow-up rate, 82 %). Of these, 138 were men and 87 were women and the average age at operation was 51 years (range, 26 to 75 years). The average length of follow-up was 7.8 years (range, 2 to 16 years). The diagnosis of symptomatic adjacent segment disease was based on the presence of new radiculopathy or myelopathy symptoms referable to an adjacent level, and the presence of a compressive lesion at an adjacent level by magnetic resonance imaging.
【Results】
Symptomatic adjacent segment disease developed in 37 of 225 patients (16.5%) followed. We performed fusion extension two, fusion plus total disc replacement (TDR) 20 and only TDR 15 patients. All patients were improved after surgery without any complication except two transient hoarseness and one soft tissue swelling
【Conclusion】
The cervical total disc replacement (TDR) is a reasonable treatment option for patients who have had previous surgery in which interbody fusion has been performed and who have developed degeneration of adjacent levels.

CURRICULUM VITAE

Education
1972. 3 - 1978. 2 : The Catholic Univ. of Korea, College of Medicine (M.D)
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Postgraduate Training
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Academic and Hospital Experiences
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National Social Activity
2006. 5 – 2008. 5; President, Korean Neurotruamatology Society
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International Social Activity
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