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C0520 - CERVICAL DISC ARTHROPLASTY EMPLOYING A NOVEL COMPRESSIBLE PROSTHESIS: A SINGLE ARM OBSERVATIONAL STUDY OF 101 PATIENTS

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Resumen

Objectives: Cervical disc arthroplasty is intended to address cervical radiculopathy and preserve functional motion between two vertebral bodies in patients with cervical degenerative disease. The study aims to evaluate the radiological, clinical efficacy and safety of a compressible cervical disc prosthesis.

Methods: The study was designed as an observational non-randomised case series based in two centres. Outcome measures employed included Neck Disability Index (NDI), Visual Analogue Score (VAS) for neck and arm pain and Euro Quality of Life -5D survey. Surgically treated level and global range of movement, heterotopic ossification, adjacent level disease, re-intervention rate and safety profile were assessed. Pre-operative clinical and radiological assessment, post operative outpatient and questionnaire based follow up, radiological follow up at 6, 12, 24 months and at time of study were employed.

Results: The cohort comprised 101 consecutive patients (137 artificial discs) treated for cervical radiculopathy secondary to cervical disc degeneration. Mean age at operation 45.4 years. 67 single level, 32 two- level and 2 three level procedures took place. Index range of movement was 7.9 degrees pre operatively, 6.3 at six weeks post operative, 7.3 at six months, 7.7 at one year, 7.6 at two years. 2 re operations at supradjacent levels and 4 nerve root injections took place post treatment in a 35 month follow-up period. 1 post-operative haematoma and 1 delayed infection occurred. All four primary outcome measures exhibited significant improvement from baseline to last follow up; NDI (47.5 to 24.9, $p < 0.001$) EURO QOL index (0.36 to 0.84, $p < 0.0001$) and VAS Arm (5.6 to 0.85 $p < 0.0001$) and VAS Neck (7.1 to 1.7, $p < 0.0001$).

Conclusions: The compressible disc prosthesis preserved 96.2% of the initial range of movement at the surgically treated level whilst exhibiting a favourable re operation rate and safety profile.