**Poster #35 - 2006**

**Cervical Disc Replacement: Prevalence of Indications in a Cohort of Patients Treated with ACDF**
Andrew P. Manista, MD, Baltimore, MD (*), David M. Matusz, MD, Baltimore, MD (*), Richard L. Skolasky, MA, Baltimore, MD (a-NIH, DePuy Spine), Lee H. Riley, MD, Baltimore, MD (a-DePuy Spine)

INTRODUCTION: A retrospective analysis of a cohort of patients treated with anterior cervical decompression and fusion (ACDF) and enrolled in the Cervical Spine Research Society (CSRS) Outcomes Study.

To estimate the proportion of individuals undergoing ACDF that would be likely candidates for cervical total disc replacement (TDR) and to establish comparative functional and medical outcomes following surgery of these individuals.

With the promise of total disc replacement (TDR) in the cervical spine, it is necessary to establish a comparator group against which to judge functional outcome following surgery.

METHODS: We retrospectively reviewed consecutive adult patients with cervical spine disorders who were seen and evaluated by CSRS surgeons at twenty-three national sites between January 1998 and November 2001. Two-hundred and seventy-one patients were submitted for outcomes evaluation following single-level ACDF with plating and had complete radiographic records. These patients were classified by identification of published indications and contraindications for TDR of the cervical spine. Data regarding functional outcome following surgery was compiled.

RESULTS: One hundred and eight-seven patients out of the two hundred and fifty-seven ACDF patients studied (72.8%) were considered candidates for TDR. Those individuals had a reduction of Oswestry NDI scores from a mean score of 37.8 (SD) at baseline to 20.5 (SD) at two years (p<0.0001). This group also demonstrated improvement in their SF-36 physical health scores from a mean score of 33.1 (SD) at baseline to 41.1 (SD) at two years in their physical score (p<0.0001). Improvement in SF-36 mental scores was 41.3 (SD) at baseline to 48.5 (SD) at two years (p=0.0002). Improvements in all aspects of the Cervical Spine Outcomes Questionnaire (CSOQ) were demonstrated.

CONCLUSION: 72.8% of patients currently treated with ACDF are candidates for TDR. To justify utilization of TDR outcomes of TDR should exceed those established for ACDF.

If noted the author indicates something of value received. The codes are identified as a - research or institutional support; b - miscellaneous funding; c - royalties; d - stock options; e - consultant or employee; n - no conflicts disclosed and * disclosure not available at the time of printing. For full information, refer to inside cover.