

Abstract #863.doc

Title COMPARISON BETWEEN THE AUTOLOGOUS ILIAC BONE AND A PEEK CAGE -A PROSPECTIVE STUDY IN THE ANTERIOR CERVICAL DISCECTOMY AND FUSION WITH MICROSCOPE-

Introduction

In spite of the advantages of a polyetheretherketone cage(PEEK-C), including less donor site morbidity and prevention of graft collapse. Improved clinical and radiological outcomes have not been reported. A prospective study of anterior cervical decompression and fusion (ACDF) was conducted to determine whether usage of a PEEK-C improves the outcome of ACDF in comparison to the ACDF with autologous iliac bone (AIB).

Materials & Methods.

Thirty six patients were enrolled to a PEEK-C (n= 17) or AIB group (n= 19). Japanese Orthopedic Association Scores (JOA scores), Bone fusion rate, interbody height(IBH), and interbody lordotic angle(IBLA) were investigated. Blood loss, operation time, perioperative laboratory data, dose of NSAIDs administrated for pain control were also studied.

Results.

The mean age was 53 ± 10 years. ACDF was done at C3/4 in 2, C4/5 in 2, C5/6 in 13, C6/7 in 17 and C7/T1 in 2 patients. The mean follow-up period was ranging 2.0 to 5.5 years. In JOA score, blood loss, operation time, perioperative laboratory data, there was no significant difference between PEEK-C and AIB group. In IBH, No significant difference was found between the 2 group. The mean IBLA immediately after surgery was significantly greater in PEEK-C ($5.56 \pm 4.39^\circ$) than in AIB group ($0.12 \pm 5.29^\circ$) ($p < 0.05$). At the final follow-up, the mean IBLA was also significantly greater in PEEK-C ($2.06 \pm 6.52^\circ$) than in AIB group ($-2.65 \pm 4.57^\circ$) ($p < 0.05$). The dose of NSAIDs administrated for pain control was significantly fewer in PEEK-C (19 ± 31 mg) than in AIB group (121 ± 105 mg) ($p < 0.01$). The bone fusion rate and latency were very similar between the 2 groups.

Conclusions.

Except for the fewer dose of NSAIDs administrated for pain control, the clinical outcome with a PEEK-C is same as with AIB. But a PEEK-C provides a more lordotic alignment in comparison to the ACDF with AIB.