ANTERIOR LUMBAR INTERBODY FUSION WITH LT-CAGES™: THE INFLUENCE OF WORKER’S COMPENSATION STATUS ON CHRONOLOGICAL CLINICAL OUTCOME

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Purpose:
Worker’s compensation status is a predictor of clinical outcome in patients undergoing spinal fusion. The intent of this study was to examine the influence of worker’s compensation status on the chronological outcome of patients undergoing anterior lumbar interbody fusion with intervertebral fusion cages.

Methods:
Patients with symptomatic lumbar disc disease were enrolled in prospective studies to examine the efficacy of rhBMP-2 on an absorbable collagen sponge (InFuse™, Medtronic) as a bone graft substitute for anterior lumbar interbody fusion (ALIF). All patients underwent single level ALIF with an LT-cage™ (Medtronic) containing either iliac crest autograft (Control) or InFuse™ (Investigation). Clinical outcome data was collected preoperatively, and at 1½, 3, 6, 12, and 24 months following surgery. This included the Oswestry Disability Questionnaire, SF-36 back profile, and back pain questionnaires. Radiographic outcomes were assessed at 6, 12, and 24 months following surgery. Successful fusion required evidence of bridging trabecular bone on CT scans and radiographs, and the presence of < 5° of angular motion and < 3mm translation on flexion-extension radiographs, and no radiolucent lines covering more than 50% of the implant surface. Worker’s compensation status was determined in all patients preoperatively.

Results: Of a total of 413 patients enrolled, 136 patients (33%) were receiving workers’ compensation at the time of surgery and 277 patients (77%) were not. Of these, 109 worker’s compensation and 215 non-compensation patients were seen at the 24 month follow-up point. The following graphs depict the clinical outcome at each of the follow-up periods.

Conclusion:
There were no differences in the fusion rates between compensation and non-compensation patients at each of the evaluation periods. Oswestry, SF-36 PCS, SF-36 MCS, and back pain scores were significantly better in the non-compensation patients at each follow-up period. Non-compensation patients continued to experience improvement in their Oswestry, SF-36 PCS, and back pain scores between the 12 month and 24 month follow-up periods whereas compensation patients reached maximum improvement at the 12 month follow-up period.

Oswestry Disability Scores

SF-36 Health Survey
Mental Component (MCS)

SF-36 Health Survey
Physical Component (PCS)

Fusion Rate

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