Supplementary pedicle screw fixation in spinal fusion for degenerative spondylolisthesis in patients aged 65 and over: outcome after a minimum of 2 years follow-up in 82 patients.

Acta Orthop. 2008 Feb;79(1):67-73

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BACKGROUND: There have been few reports assessing the outcome of laminectomy and posterolateral fusion with pedicle screw fixation for degenerative spondylolisthesis in the elderly. In a retrospective study, we assessed the clinical and radiographic outcome of this treatment in degenerative spondylolisthesis patients aged >or= 65 years. PATIENTS AND METHODS: 82 patients (61 females) aged >or= 65 years underwent laminectomy and posterolateral fusion with pedicle screw fixation for degenerative spondylolisthesis. The median age at surgery was 69 (65-79) years. The mean bone mineral density before surgery was -1.9 (-1.0 to -2.5). After an average of 3 (2-11) years follow-up, patients were classified as "satisfied" or "dissatisfied" according to self-reported outcomes and also as "solid fusion" or "no solid fusion" according to the radiographic findings. RESULTS: At final follow-up, the average Oswestry disability index (ODI) score was lower than the preoperative score (30 vs. 56) ($p = 0.03$). Four-fifths of the patients stated that they were satisfied with the outcome. Almost three-quarters of the patients achieved definite fusion. Although patients with advanced age or reduced bone mineral density were not more likely to have dissatisfactory results ($p = 0.8$ and $p = 0.6$, respectively) they were more likely to have radiographic results showing "absence of solid fusion" ($p = 0.005$ and $p < 0.001$, respectively). INTERPRETATION: We believe that supplementary pedicle screw fixation after laminectomy and posterolateral fusion will be an effective choice for the ever-increasing number of patients aged >or= 65 years who will be prone to develop degenerative spondylolisthesis.

PMID: 18283575 [PubMed - indexed for MEDLINE]