Clinical: Posterior dynamic pedicular stabilization

Comparison of Posterior Dynamic and Posterior Rigid Transpedicular Stabilization with Fusion to Treat Degenerative Spondylolisthesis

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This article describes the clinical and radiological outcomes of a comparison of posterior dynamic transpedicular stabilization and posterior rigid transpedicular stabilization with fusion after decompression in the treatment of degenerative spondylolisthesis. This prospective clinical and radiologic study was conducted between 2004 and 2007 and included 46 patients, of whom 33 were women (71.7%) and 13 were men (28.3%). Mean patient age was 61.67 ± 10.80 years (range, 45-89 years). Twenty-six patients who underwent lumbar decompression and posterior dynamic transpedicular stabilization were followed for a mean of 38 months (range, 24-55 months). In the fusion group, 20 patients who underwent lumbar decompression and rigid stabilization with fusion were followed for a mean of 44 months (range, 26-64 months). The intervertebral space measurements of the dynamic group at the preoperative examination and at 12 and 24 months postoperatively were statistically significantly higher than the intervertebral space measurements of the fusion group (P < 0.05). In the dynamic group, complications occurred in 2 patients; the first was a screw malposition, which was improved with revision surgery within 1 month of the initial surgery, and the second was a fusion performed in the 2nd year in 1 patient because the patient reported continued pain. In the fusion group, adjacent segment disease was observed in 1 patient, with subsequent reoperation. Lumbar decompression and posterior dynamic transpedicular stabilization yield satisfactory results in the treatment of degenerative lumbar spondylolisthesis and can be considered a valid alternative to fusion.