

腰薦椎退化之融合手術應為症狀導向而非影像導向

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Fusion for Lumbosacral Degeneration Should be Symptom-Guided, Absolutely Not Image-Guided

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Introduction: Low back pain (LBP) is the most common complaint of lumbosacral degeneration patients. Most of the LBP is just paraspinal muscle ache. However, some patients' back pain is pathologic. This can be divided into axial back pain which should be compatible with positive knocking pain and neurological referred pain to buttock(s) or sacral area. Only the patients with axial back pain need to be fused, not decided by the severity of images.

Materials and Methods: From Jan.2006 to Mar.2012, we studied 208 lumbosacral degeneration patients who received index surgeries. The diagnosis was lumbar stenosis with or without spondylolisthesis, retrolisthesis, degenerative scoliosis and herniated disc. The patients were divided into two groups; the fusion group and decompression alone group. There are three criteria for fusion; (1) chief complaint of LBP, (2) positive knocking pain and (3) image proof of instability or degenerative disc or facet. In the fusion group, there were 65 patients (male:31, female:34) with average age of 61.8 years (range: 37-85). The procedure included decompression (undercut or fenestration) and posterolateral fusion with pedicle screw fixation or combined with posterior lumbar interbody fusion (PLIF). In the decompression alone group, there were 143 patients (male:72, female:71) with average age of 60.3 years (range:29-84). The procedure was unilateral or bilateral fenestration.

Results: Average follow-up was 37.2 and 35.5 months for each group respectively. In the fusion group, the axial back pain was almost resolved with radiographic solid fusion. The average VAS pain score was decreased to 1.8 post-operatively from 7.5 pre-operatively. In the decompression alone group, there was no axial back pain before or after decompression. Relief of lower extremities complaints was satisfactory in both groups. In total 208 patients, only 65 (31.3%) met our fusion criteria and the majority of 143 (68.7%) needed decompression alone.

Discussion: The fusion for lumbosacral degeneration is controversial. We pointed out a new concept of "symptom-guided" fusion for real lumbosacral spine axial pain, not "image-guided" by the severity of images. Patients' LBP confirmed by positive knocking pain and proved by the images can define the axial back pain and the need for fusion. Most of the lumbosacral degeneration patients just need decompression alone, no matter how bad the images are.

The Clinical Evaluation of Posterior Dynamic Stabilization for Degenerative Spondylolisthesis

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Introduction: To evaluate whether posterior dynamic stabilization in situ with Dynesys after decompression could provide enough stability to prevent progression of spondylolisthesis and maintain the clinical results in mid-term follow-up.

Materials and Methods: Dec. 2006 to Oct. 2009, 53 patients with lumbar degenerative spondylolisthesis who underwent posterior decompression and dynamic stabilization with DYNESYS without spinal fusion were analyzed. Patients were evaluated clinically, including Visual analog scale (VAS) for back/leg pain, Oswestry Disability Index(ODI), and radiologically, flexion/extension ROM ratio of adjacent/index segment after an consecutive follow-up.

Results: These 53 patients in the study had a mean age of 62.4 years (range, 52~81 years) and the mean follow-up duration was 53.2 months (range, 32~68). Pain on visual analogue score scale (VAS) and Oswestry Disability Index (ODI scale) had significant improvement after operation and the results remained unchanged at final follow-up. Radiographically, spondylolisthesis did not progress and the motion segments remained stable. There was no screw breakage at the index level in flexion/extension views. Mean Pre-op and post-op varieties in ROM of flexion/extension was 1.5/0.5/1.4 (upper adjacent/index/lower adjacent segment) in ratio. Overall, patient satisfaction rate remained high.

Discussion: In patients with degenerative spondylolisthesis, significant improvement in VAS and ODI post decompression and dynamic stabilization was compatible with previous studies of posterior fusion. The DYNESYS could provide enough stability to maintain clinical results and prevent progression of spondylolisthesis in mid-term follow up. Because no bone grafting is necessary, donor site morbidity, which is one of the main drawbacks of fusion is eliminated.