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Dynamic stabilization in patients with degenerative spinal stenosis and borderline stable spondylolisthesis

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This study provides evidence suggesting that the LimiflexTM paraspinous tension band is well tolerated in patients with degenerative spondylolisthesis and lumbar spinal canal stenosis. Our data show that within 3 months after the operation it limits hypermobility in the operated segment, making it suitable for the treatment of patients with spinal stenosis and Meyerding grade I degenerative spondylolisthesis, where instability at the operated segment is likely to happen, but a patient is not indicated for a spinal fusion.

Long-term results with dynamic stabilization methods are satisfactory, and the outcomes are non-inferior to other surgical methods. These methods significantly improve pain and subjective wellbeing, and patient satisfaction is high following these interventions. Furthermore, dynamic stabilization methods have several advantages compared to fusion such as less invasive and shorter surgery, less blood loss, lower risk of complications, shorter hospitalization, and improved quality of life.

Further prospective randomized studies should prove whether the mechanical effect of the LimiflexTM paraspinous tension band improves the patient outcome on the long run as well.