UNILATERAL PEDICLE SCREW FIXATION WITH THE USE OF WIDE-
SURFACE MODULAR INTERBODY CAGES IN DEGENERATIVE
LUMBAR SPINE DISEASE

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INTRODUCTION

Unilateral pedicle screw fixation has similar post-operative outcomes as bilateral fixation in degenerative lumbar spine disease. Unilateral fixation is faster, less invasive and cheaper. Furthermore, a wide endplate coverage by the intersomatic cage improves load sharing, thereby increasing fusion rate and lowering the risk of subsidence.

MATERIALS & METHODS

39 patients (25 men and 14 women, median age 53 years) underwent unilateral TLIF with a modular PEEK cage (InterFuse®, VT). The cage is intraoperatively assembled within the disc space with a variable number of modules. It can be implanted unilaterally through a small access channel. Indications for surgery included spinal stenosis with primary or post-laminectomy instability, recurrent disc herniation, first-grade non-lytic listhesis. All patients underwent immediate post-operative CT scan and follow-up evaluation including a clinical and radiographic assessment 2 months post-operatively and clinical/CT evaluations at 6 and 12 months.

RESULTS & CONCLUSIONS

Median follow-up was 10.2 months (range 1-28). Cage positioning was straightforward, no surgical complication occurred. Postoperative CT always showed appropriate cage positioning and a wide endplate coverage: 55% (range 47-54%) along the transverse diameter and 68% (range 61-74%) along the anteroposterior diameter. Two months after surgery the Oswestry Disability Index was improved in all patients and X-ray did not show any dislocation of the implants, except in one case associated with loosening of a screw. 6-months assessment was available for 33 patients and 12 months assessment for 26 patients: all were still clinically improved and CT did not show signs of pseudarthrosis. According to our experience, unilateral TLIF can be safely and effectively performed with the use of the InterFuse® modular cage, taking advantage of the small size of its modules and allowing a customized coverage of large or irregular endplates. This appears particularly useful in revision surgery and osteoporosis.