

## البحث السابع

### **Evaluation of minimally invasive lumbar interbody fusion in degenerative lumbar disc disease**

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**Background:** Less invasive strategies are ideal that can achieve the same goals as traditional methods while minimizing the morbidity associated with the process. Advances in surgical technique and technology have made it possible to "reinvention" many widely performed spinal operations by introducing minimally invasive techniques. These advancements in microscopy, tissue retractors, and advanced techniques have allowed surgeons to perform procedures through smaller incisions. This study aims to report our results about minimally invasive transforaminal lumbar interbody fusion (MI-TLIF) with bilateral pedicle screw fixation, in patients with degenerative lumbosacral spine disease.

**Patients and Methods:** This is a prospective case series study that included twentyfive patients who underwent MISS TLIF Early postoperative results data were obtained before hospital discharge, while late postoperative results data were obtained at 3, 6 months, and 1 year, postoperatively.

**Results:** Preoperative VAS score of LBP (mean 7.96) showed a statistically significant decrease in values in the early postoperative period, a significant decrease three and six-month post-operative (reaching 1.6 at 1 Year follow-up), as well as Preoperative VAS score of limb pain (mean 7.32), showed a statistically significant decrease of values starting of the immediate postoperative period with mean 4.4 (reaching 1 at 1 Year follow-up). The ODI for all patients showed significant improvement from a mean value of 51.8 % preoperative to a mean of 29.96%. Three months postoperative & mean 13.8 % at 1 Year postoperative). As regards fusion, employing the Bridwell interbody fusion grading system, 72% of the patients (18 patients) attained a grade 1 fusion and 24% (6 patients) attained a grade 2 fusion, and 4% (one patient) attained a grade 3 at 6 months follow-up. No cases with grade 4.

**Conclusions:** Regardless of the number of fused levels, satisfactory clinical and radiological outcomes of MITLIF were seen in patients with degenerative spondylolisthesis associated with spinal stenosis, which suggests that a safe and effective expanding the spectrum of minimally invasive transforaminal lumbar interbody fusion (MI-TLIF).