

Evaluation of clinical experience and early outcomes after Extreme Lateral Interbody Fusion (XLIF®) procedure in treatment of thoracolumbar spine diseases

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Introduction: The XLIF procedure has emerged as an alternative approach to stabilize the anterior column in diverse conditions that affect the thoracolumbar spine. More complicated conditions have been treated with this procedure so it has broadened its usage to become a minimally invasive treatment that allows a retroperitoneal access, discectomy, and implant insertion with minimally tissue damage avoiding neurological lesions.

Methods: A prospective study to evaluate clinical and radiographic outcomes in patients where lateral lumbar interbody fusion with XLIF was performed since 2009 for lumbar degenerative disc disease, adjacent segment disease, spondylolisthesis, spinal stenosis or de novo scoliosis. Data includes evaluation at the pre-op, surgery, post-op, 3-month, 6-month, 12-month and 24-month of all patients undergone to XLIF procedure in two sites with the same team of surgeons. Oswestry Disability Index (ODI) and Visual Analogue Scale (VAS) were performed to assess clinical and neurological outcomes.

Results: XLIF was performed in 65 patients with 117 levels from T12 to L5 (mean 1.8 levels, range 1-4), mean age was 60.6 (range: 29-82 yrs) and 78.46% female, mean operation room time was 146.11 minutes/patient (including posterior instrumentation). Estimated blood loss ranged from 50 to 80cc, mean length of hospital stay was 2.9 days. Mean back pain VAS improved from 8.14 preoperatively to 4.06 at 24 months and 3.75 at 1 year, ODI went from 38% to 12% at first year. A 7.69% rate of perioperative complications were noted, the more common postoperative complication was thigh paresthesia (30.76%) and hip weakness in 4.61% of patients, this tends to recover within 4 to 6 weeks. Subsidence was noted on radiographs in 15.38%.

Conclusion: This data matches with studies of XLIF procedure results and contributes with Latin American research where few long term outcomes have been observed. These results corroborate the remarkable clinical improvement that persists in time, for spinal diseases XLIF is a safe and reproducible procedure that allow to patients a quick recover with low rates of complications.