



*The South's Leading Center for
Minimally Invasive Spine Surgery*

MINIMALLY INVASIVE TRANSFORAMINAL LUMBAR INTERBODY FUSION (MITLIF) – RESULTS OF 620 CASES DISCHARGED THE DAY OF SURGERY

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INTRODUCTION:

MITLIF patients can return home on the day of surgery. Data is needed to evaluate results in a diverse large series of patients undergoing single and two level procedures.

METHODS:

Surgery: One or two level MITLIF through a single incision using a 21mm diameter working channel with titanium or polymeric interbody devices, BMP2 or Silicated Calcium Phosphate bone graft substitutes and unilateral pedicle screw fixation.

Study Design: Prospective study of 620 procedures from 3/18/03 to 8/02/11 in 562 patients (292 male, 270 females) ages 17 to 83 (average 50). Diagnoses included chronic back pain, stenosis, listhesis, segmental instability and central disk herniation. A large majority needed relief from involvement of neuroforamina or the spinal canal.

Outcomes: Outcomes were evaluated for: incidence of transfusion, infection or reoperation at index level; Waddell's Severity Score; VAS for back, upper leg and lower leg pain. Return to work was evaluated for those who were working within 30 days prior to surgery (362), with data available on 358 patients.

Fusion: Patients returned for reformatted thin slice CT scans at 1 year or longer after 290 procedures to evaluate interbody fusion.

RESULTS:

Transfusion: 0.3% (2/620)

Surgical Infection: 0

Reoperations: 1.9% (12/620)

Interbody Fusion: Complete 95% (275/290); Incomplete 4% (12/290); Non-union 1% (3/290)

Return to Work: 95% (341/358); two the next day.

Average Outcomes				
	Waddell Severity Score	VAS Back Pain	VAS Upper Leg Pain	VAS Lower Leg Pain
Pre-op	5.0	6.7	4.9	3.7
Three Months (n=486)	3.0	2.0	0.9	1.0
One Year (n=238)	1.7	2.3	1.0	0.8
Two Years (n=118)	1.9	2.5	1.4	1.4
Effectiveness				
Improved at 1 Year	91%	93%	88%	81%
Average Improvement	73%	70%	87%	90%
Improved at 2 Years	89%	94%	83%	78%
Average Improvement	74%	68%	86%	82%

CONCLUSIONS:

1. MITLIF is a successful outpatient procedure with patients routinely discharged the day of surgery.
2. MITLIF with unilateral pedicle fixation has low morbidity and provides excellent results out to two years.