


TRANSFORAMINAL LUMBAR INTERBODY FUSION (TLIF)



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TRANSFORAMINAL LUMBAR INTERBODY FUSION

- TLIF
 - INTRODUCED BY HARMS 1982
 - ACCOMPLISHES GOALS OF:
 - INTERSEGMENTAL FIXATION
 - REMOVAL OF PAIN GENERATOR
 - LIMITING COLLATERAL DAMAGE
 - CREATION OF AN ADEQUATE FUSION BED
 - OPEN VS. MINIMALLY INVASIVE ACCESS

TRANSFORAMINAL LUMBAR INTERBODY FUSION

- TLIF (Perc>mini-open>Open)
 - OPEN VS. MINIMALLY INVASIVE APPROACHES
 - LESS MUSCLE INJURY
 - 80 PATIENTS - POSTOP MRI - S/P FUSION
 - APPEARANCE OF INJURY = RETRACTION TIME
 - RETRACTION TIME = LBP Gejo, et al, 2001
 - GREATER EXTENSION STRENGTH
 - LESS BLOOD LOSS
 - LESS NARCOTIC USAGE
 - SHORTER HOSPITAL STAY



TRANSFORAMINAL LUMBAR INTERBODY FUSION

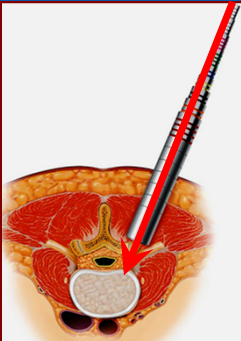
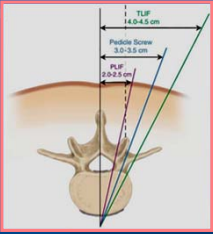
- TLIF
 - TECHNICAL ASPECTS
 - LIMITING MUSCLE STRIPPING / NERVE ROOT RETRACTION
 - UNILATERAL DISCECTOMY – 69% DISC TISSUE REMOVED / 56% AVAILABLE SURFACE AREA
 - ~30% X-SECTIONAL AREA RELATIVE TO BONE DENSITY SUFFICIENT FOR TRANSMITTING LOADS WITHOUT SUBSIDENCE




TRANSFORAMINAL LUMBAR INTERBODY FUSION

- COMBINED FUSION / STABILIZATION TECHNIQUES
 - Percutaneous Fixation
 - Submuscular bone graft
 - Interbody stabilization
 - Interbody fusion

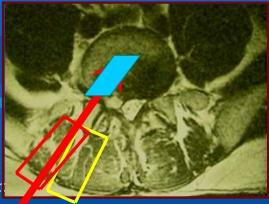




Positioning



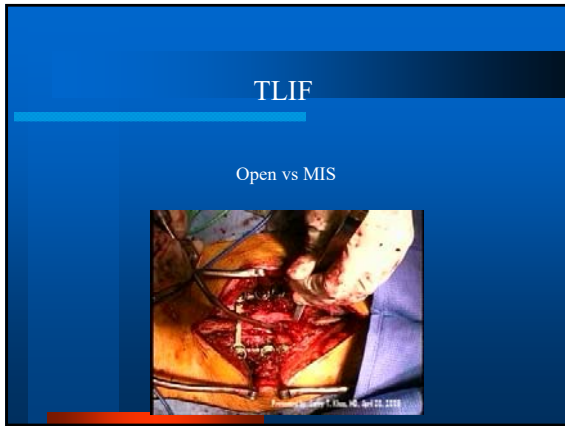
- Patient prone, avoid knee-chest
- Radiolucent table & frame used
- C-arm draped in for lateral images
 - Bilateral easier and faster
- SSEP/tcMEP/EMG monitoring
- No muscle paralytics



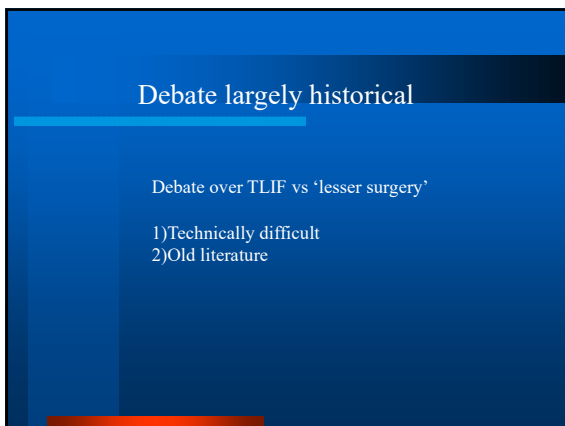
- Unilateral Hemilami-total facetectomy
- Interbody spacer & autograft
- Instrument optimized for MIS
- Clear visibility / guided channel
- Intradiscal distraction not off screws
- Improved workflow of procedure
- Placement of graft under distraction

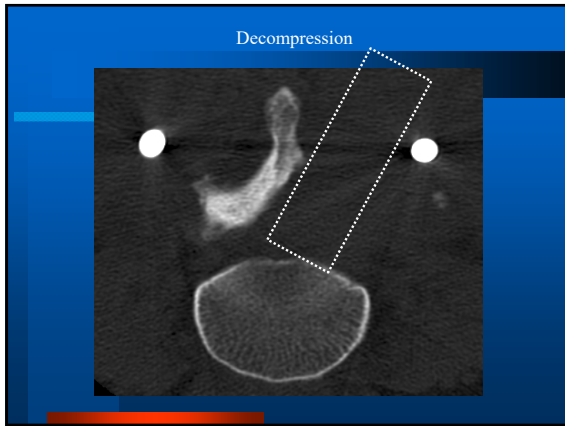
Treatment Goals

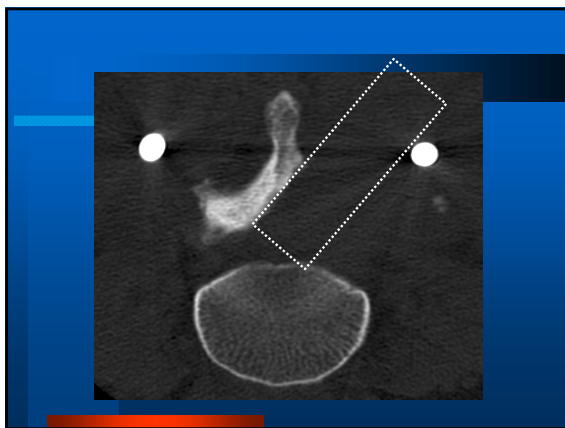
- 1- Decompress Neuro-structures
- 2- Minimize painful motion
- 3- Correct the deformity
- 4- Perform as little surgery as necessary

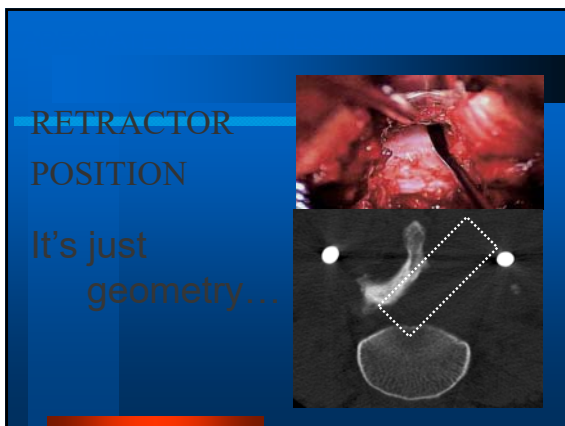




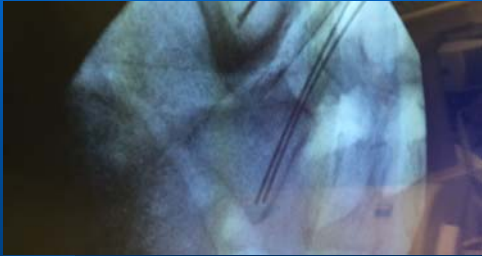




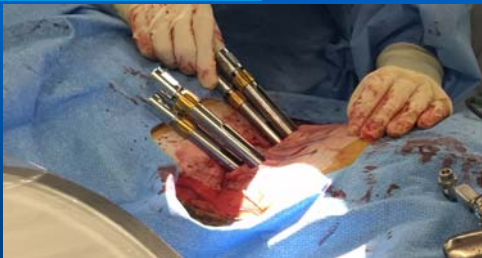




Deformity



Correction



Correction



Easier Surgery

- Single position in OR
- Small incision
- ASC/ outpatient compatible
- Modular approach to surgery

- Modular approach to surgery
 - Direct vs indirect
 - Expandable implants
 - Uni vs bilateral decompression
 - Cement augmentation as needed