**XLIF with plate**

OPERATIVE PROCEDURE

Preoperative diagnosis: Patient with failed back syndrome with previously failed two-disc decompression surgeries with persistent back pain and radicular pain at L3-4 on the left side. Patient also has degenerative spondylolisthesis at L3-4

Postoperative diagnosis: Patient with failed back syndrome with previously failed two-disc decompression surgeries with persistent back pain and radicular pain at L3-4 on the left side. Patient also has degenerative spondylolisthesis at L3-4

Surgeon Dr. Amit Bhandarkar M.D.

Asst: none

Complications: none

Specimens: none

Blood loss: 150mL

Procedure #1 Anterior lumbar interbody fusion with transpsoas approach

Procedure #2 Placement of biomechanical interbody device at L3-4

Procedure #3 Placement of lateral plate and screws

Procedure #4 Use of bone allograft

Procedure #5 Use of C-arm imaging for localization navigation and placement of implants as well as final AP and lateral images.

Preoperative area: All the risks of the procedures and the steps involved were again outlined in details patient gave us informed consent to proceed with the procedure. The patient had real trouble managing his blood sugar we already had postponed this surgery once. His HbA1c has been well controlled recently. We may understand that he carries a lot of risk for infection after the procedure. He was also at high risk for CSF leak because I he had a CSF leak up his first procedure. So we discussed that we might just go ahead from the front and then put the plate in the front as well and avoid any posterior incision.

Operative procedure

The patient was taken to the operative suite and was placed in a lateral position on the operating room table and was prepped and draped sterilely. After anesthesia induction and site and marked verification timeout was performed. We then brought the C-arm in to localize and mapped out our incision. Patient was positioned in a lateral position with left side. I marked the incision on the left side below the 12 th rib. I dissected sharply down to the skin and subcutaneous tissue to the muscular layer which was external oblique. The abdominal muscles were then dissected bluntly taking care not to damage any cutaneous nerves. The muscles were split in the direction of the fibers.

The transverse abdominis muscle was then divided transversely and the transversalis fascia was then incised cleanly. the retroperitoneal space was then entered and the contents were then bluntly dissected. Further blunt dissection was carried out to the reached the transverse process of the L 3 vertebra. A Deaver retractor was then put in and the retroperitoneal contents retracted medially so as to gain access to the spine. We then visualized psoas fascia which was bluntly dissected to enter the psoas muscle and slowly under vision it was split between the fibers so as to reach the disc space. The first dilator was then used and its location was confirmed under C-arm guidance at L2-3 disc place. After that was completed I did perform a neuro testing as we dilated to our final dilator and placed a retractor into place. We had a safe EMG response at all times. I did gently retract and then directly visualize the disc and saw that there were no nerve elements. I also used a probe to probe the nerve and there was nothing demonstrative any kind of significant EMG activity there either. We then inserted posterior shim after checking the C-arm and I expanded the retractor in the front and back direction and also expanding it in all directions. I then removed the L3-4 disc using Cobbs pituitaries and curettes to get good bone surface for fusion. I also released the annulus on the contralateral side. I then sized to an appropriate size which was a cage size 18 into 50 mm with 0 degrees of lordosis. Once the cage was sized up. I then packed it with 10 cc of bone marrow graft material and also we then implanted the cage device into the L3-4 disc space seating into a good depth.

 The C arm images showed cage was sitting snugly fit and also reduce the spondylolisthesis and the scoliosis little bit. We then started making dissection is for the up and down the end plate so as to expose the bone surface for putting a plate. In the process was removed the osteophytes. We then further retracted the psoas muscle so as to obtain good view of the vertebrae. Hemostasis was achieved. We then used #10 plate and we were able to put the 4 screws through the plate anchoring the plate to the bone. We achieved a stable construct. The plate and the screw was then checked with AP lateral and oblique views to confirm that they're within the bone. We did not receive any changes included EMGs or free-flowing and EMGs during that period.

 The wound was then locally infiltrated with a mix of Marcaine and Depo-Medrol and Toradol we had irrigated the wound multiple times during the procedure and at the conclusion of the procedure with copious amount of saline. After completing irrigation, we removed retractor there was no substantial bleeding noted at all. Retractors were then removed and I closed the wound in layers followed by skin glue and sterile dressing. The patient tolerated the procedure very well he was then transferred on a gurney. We're able to extubate him in the OR patient was then transferred to recovery where his pain was controlled with morphine and and fentanyl. Patient was stable throughout the procedure and during his recovery in the PACU. He was neurologically intact after stabilization in the recovery he was transferred to ACU for further care.

X-ray report

 AP and lateral images at the conclusion of the procedure demonstrative good position of all implants excellent cage size good restoration of disc height. There was reduction in some degree of spondylolisthesis also some degree of a scoliosis that he has and there was good position of all screws.