**XLIF she only L3-4**

Preoperative diagnosis: Degenerative spondylolisthesis with disc height loss and degenerative arthritis at L3 4 with severe L3 -4 radicular pain and axial back pain amd Right L3/4 facet synovial cyst.

Postoperative diagnosis: Degenerative spondylolisthesis with disc height loss and degenerative arthritis at L3 4 with severe L3 -4 radicular pain and axial back pain amd Right L3/4 facet synovial cyst.

Surgeon: Dr. Amit Bhandarkar M.D.

Asst: none

Complications: none

Specimens: none

Blood loss 50 mL

Procedure #1 Anterior lumbar interbody fusion with transpsoas approach

Procedure #2 Placement of biomechanical interbody device at L3 -4 from the left side.

Procedure #3Use of bone autograft

Procedure #4 Use of C-arm imaging for localization navigation and placement of implants as well as final AP and lateral images.

Preoperative area: in the preoperative area on the risk of the procedure were discussed in details with the patient. It was counseled that she might have a chance of perioperative paresthesias coming from retraction of the lumbar plexus. This was supposed to be first part of the 2 part procedure. We decided to go ahead with the posterior part at a later date depending on how much symptomatic improvement that she get after doing the first part of the surgery.

Operative procedure

The patient was taken to the operative suit 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 up patient had convexity of the spine on the left side and hence it was decided to approach from the left side. I marked the incision on the left side using C-arm just at the level of disc. 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 internal obligate muscles were also then splayed up and bluntly dissected to expose the transversalis fascia. The transverse fascia was dense incised and slowly bluntly dissected pushing away the peritoneal and the retroperitoneal contents down. At this a window was then slowlyt developed using blunt dissection and pushing the retroperitoneal and the pleural and contents anteriorly and superiorly. Further blunt dissection was carried out to the reached the transverse process of the L3 vertebra. A Deaver retractor was then put in and the retroperitoneal the peritoneal and the retroperitoneal contents were then 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 L3-L4disc 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 L1-2 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 55 mm with 10 of lordosis. Once the cage was sized up I then packed it with 10 cc of bone graft material and also minced rib that we had obtained as an autograft and we then implanted the cage device into the L3- L4 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 meticulously closed the layers of muscles. 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.

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 she had.