PREOPERATIVE DIAGNOSES:

1. IMPLANT FAILURE SPINOUS PROCESS FRACTURE ANCHORING L3-L4 AND L4-L5 COFLEX.
2. DISLODGEMENT OF COFLEX DEVICE IN A PATIENT WITH LUMBAR CANAL STENOSIS WITH DEGENERATIVE SPONDYLOLISTHESIS GRADE 1 AT L3-4 WITH SYNOVIAL CYST AT L3-L4 WITH LATERAL RECESS STENOSIS AT L4-L5 AND WITH BILATERAL L3-L4 AND L4-L5 RADICULOPATHY.

POSTOPERATIVE DIAGNOSIS:

1. IMPLANT FAILURE SPINOUS PROCESS FRACTURE ANCHORING L3-L4 AND L4-L5 COFLEX
2. DISLODGEMENT OF COFLEX DEVICE IN A PATIENT WITH LUMBAR CANAL STENOSIS WITH DEGENERATIVE SPONDYLOLISTHESIS GRADE 1 AT L3-4 WITH SYNOVIAL CYST AT L3-L4 WITH LATERAL RECESS STENOSIS AT L4-L5 AND WITH BILATERAL L3-L4 AND L4-L5 RADICULOPATHY.

Surgeon: Amit Bhandarkar, M.D.

Assistant: Ruben

Complications: None

Specimen: None

Blood Loss: 750 cc

Implants: Nuvasive pedicle screw and Synthes interbody cages.

PROCEDURES:

1. Transforaminal lumbar interbody fusion L4-L5 on the right side with posterior spinal fusion.
2. Transforaminal lumbar interbody fusion L3-L4 on the left with posterior spinal fusion.
3. Placement of biomechanical interbody device L4-L5.
4. Placement of biomechanical interbody device L3-L4.
5. Revision decompression with facetectomy and foraminotomy at L3-L4 on the left side
6. Revision decompression with facetectomy and foraminotomy on the right side at L4 -5.
7. Nonsegmental spine instrumentation on L3 through L5
8. Use of bone Autograft.
9. Use of bone allograft.
10. Use of C-arm imagery AP and lateral spine images for proper positioning of pedicle screws and implants.
11. Added degree of difficulty due to procedure being immediate postop with lots of bleeding interop.
12. Removal of previous Coflex devices.
13. Re-exploration and revision of previous decompression.
14. Attempted posterolateral fusion using mix of bone Auto allograft.

The patient was brought to the operating room and was identified as the correct patient by the anesthetist and chief nurse. IV access lines were established. Anesthesia was then administered. Arterial lines were secured. Sequential compression devices were placed. Foley catheter was then placed. The patient was then positioned prone. All bony prominences were padded. Monitoring baseline was then carried out all looked okay. The patient was then prepped and draped in routine fashion. ChloraPrep was used for prepping she was draped free exposing her lumbar spine.

A formal timeout was carried out and everything including, but not limited to, her name, type of surgery, duration of surgery and site was confirmed for midline incision. Midline exposure was then carried out in the lumbar spine. Then the previous scar from previous surgery was incised and extended. All the remaining suture material was removed. The Vicryl was removed. The wound was pretty good. There were no signs of any collections or any pus.

The C-arm was utilized to localize the extent of the incision. The previous plane was re-explored and was taken down to expose the midline L4 lamina L4 pars, L3-L4 facet joint, L4 TPs also L5 lamina, L4-5 pars and L5 TPs on both sides. After completing exposure, we started preparing for the pedicle screw insertion. Pedicle screws were then inserted bilaterally at L3 to L5 level and screws were 45 mm in length and 6.5 mm in diameter. Freehand technique and fluoroscopy was used intermittently to ascertain that they are positioned correctly. After putting the screws, all the screws were stimulated to see how their proximity to the nerve roots. They scored good on neuro monitoring and all screws were above 40.

The attention was then diverted to the Coflex devices which were placed anchored on the spinous process facture of L4 vertebra, which was then removed with a ronguer along with the Coflex device. The L4-L5 Coflex device was also removed with the help of an osteotome and a ronguer. Midline laminectomy was then performed to increase the decompression.

Attention was then diverted to L3-L4 facet area. There was distraction put across L3-L4 pedicular screws on the right side and the L3-L4 facet was then exposed on the left side. Facetectomy of L3-L4 was then performed using osteotome and a burr. The inferior facet of L4 and superior facet of L5 was partially osteotomized and the lateral access to the disc was obtained.

There was a bleeding on dissection of the L3-L4 facet, which was controlled with the Surgi-Flo and with bipolar. A rectangular window was then cut into the disc space after retracting the traversing nerve root, which we were always then checking, also exiting nerve root which was L3 nerve root. After ascertaining that we are in a safe window, we removed that rectangular chunk of the disc and the disc space was then prepared using the ronguer rasps and offset curettes. After appropriate disc space graft bed preparation around 12 mm of height and width which was found to appropriate on trial was inserted. The Size of disc space was checked on both AP and lateral view before insertion of allograft. Before insertion of the graft, disc space was further impacted with morselized bone graft which was a mixture of autologous bone graft DBX and bone putty. Following which a bone peek cage impacted with bone graft was inserted through the foramen and into the disc space. The disc space was then compressed. X-rays were rechecked and the position looked really good. The patient had enough volume of good local bone graft. Iliac crest bone graft harvesting was not required. The exact same procedure was then carried out on the right side at L4-L5 area on the right. L4-L5 facetectomy was then allograft of similar dimension was inserted through the foramen and into the disc space after impacting it with morselized mix of autologous bone and bone putty.

Wound site was irrigated and with bacitracin mixed with and normal saline. We then double checked the decompression with ball tip probe which I was able to pass freely without jumping of the leg. I was feeling very happy with the foramen opening. The bone over the transverse process and sacroiliac was then made raw using a burr. I used some of the local bone often from the laminectomy and facetectomy with allograft and I packed approximately 10 cc of her bone graft mixture of posterolateral. to be able to obtain a posterolateral fusion. Hemostasis was ensured using a Gelfoam and was put above the exposed dura.

Powdered vancomycin 500 mg of was then applied to muscles before closure. The wound was closed in layers under negative suction drain underneath the deep fascia. Fascia was approximated using 1-0 Vicryl. Subcutaneous stitches were taken with 2-0 Vicryl and subcuticular stitches were taken with 5-0 Vicryl. Sterile dressing was then applied. The wound was injected both superficially and deep with a mix of Depo-Medrol 40 mg, Toradol 30 mg, 0.5% of Marcaine with epinephrine, 30 cc for postoperative pain control.

Patient was then turned supine and extubated. She was then taken to PACU for recovery. The procedure took approximately to give us some extra time because of bleeding because of she was seven days fresh out of surgery. Otherwise, there were no complications. There was no CSF leak and she was neurologically intact. The patient tolerated the procedure and there were no complications. Total blood loss was 750 cc. She was then taken to PACU, and in the PACU vitals were stable and her pain was within tolerable limits. She had no new neurological deficit and good pulsations in the extremities.