**Cervical total disc replacement**

Preoperative diagnosis: C4-C5 and C6-C7 degenerative disc disease with herniated nucleus pulposus with right-sided C5 and C7 radicular pain.

Postoperative diagnosis:C4-C5 and C6-C7 degenerative disc disease with herniated nucleus pulposus with right-sided C5 and C7 radicular pain.

Surgical procedure.

1.Total disc replacement at C6-7

2. Anterior cervical Decompression at C6-C7

3. Repair of avulsion injury of one of the branches of left internal jugular vein

4. Use of C-arm imagery AP and lateral cervical spine images for proper positioning of the implants.

5. Use of operating microscope for assistance in dissection and decompression.

Assistants : Jennifer

Blood loss: 9 50 cc

Complications: Intraoperative bleeding because of outpatient injury to an anomalous branch of internal jugular vein at C4 5 area

Preoperative area: In the preoperative area all the risks of the procedures with again rediscussed patient was reassessed and the side and site of pathology was to re-conformed. The risk and all the procedure which include but not limited to our because of anterior approach, decompression surgery, and instrumentation-related complications short-term and long-term explained one more time. Patient gave full informed consent to proceed with the present plan which was two-level disc replacement at C4 5 and C6-C7.

Patient was brought to the operating room and was identified by the anesthetist and the chief nurse. IV access lines were established and anesthesia was then administered. Arterial lines were secured SCDs were placed. Foley's catheter was then placed. Patient was then positioned supine. All bony prominences were well-padded.. Monitoring baseline was then carried out and all looked okay. Patient was then prepped and draped in routine fashion.. DuraPrep was used for prepping and his anterior neck was exposed. A formal timeout was then carried out and everything including but not limited to his name type of surgery duration of surgery and site and side was confirmed for a left-sided approach. Midline exposure was then carried out. The site of incision was then confirmed radiologically using a C-arm. Using C-arm appropriate incision site was marked on the skin. Used anterolateral and posterior cervical spine to the transverse incision. The upper separation from the left side. Sharp dissection through the skin and subcutaneous tissue was taken to the platysma. No polar cautery for hemostasis and I bluntly dissected out the platysma over the sternomastoid north and south freeing of the soft tissue plane and then bluntly dissected medial to the sternomastoid and Antral towards the carotid sheath down to the prevertebral fascia. I used Kitners to bluntly dissect the prevertebral fascia away from the disc and then I placed a Caspar pin at C6 confirming this on the lateral C-arm image and placed an additional pin at C7 I then took the bipolar along the medial aspect of the longus coli bilaterally bluntly reflected this and we were able to place retractors in the position. Afterward placed I then incised the disc anteriorly and remove the disc material going out all the way to the posterior aspect of disc going going and doing a thorough decompression. Rate to bleeding bone using curettes the microscope were then then brought in the field for appropriate visualization with elimination the uncinate process and the disc osteophyte complexes slowly thinned out using a 3 mm diamond bur and and the rest of the posterior osteophyte was squared up using a 1 mm 45 angle case and nontender small bur and took was then used to confirm the adequacy of the decompression. Pedal was slowly scraped out all the disc material was released. All the disc which was also in the foramen on the right side was completely removed. There is a thorough complete decompression. Was the pia was removed then I took appropriate measurement with the with trial cage for placement of the total disc replacement device. We reconfirmed that we are in the midline with regards to the Caspar pin placement in the AP and lateral view. Sized for the endplate with an height using different times. A 17 mm with 5 mm height and 30 mm deep implant fit well following which a movie C device was then implanted and it was appropriately positioned in both AP and lateral views.

Tension was and I would reports the next level which was at C4 5 level we wanted to extend a portion while doing that we tried wanted to remove the omohyoid muscle which was on the left side on the superolateral area for approach when we tried to resect that muscle and it was retracted and all of this and we noticed bleeding the capitate was intact as viewed seeing and visualizing and protecting the carried while doing dissections around the omohyoid we'll figure out its calf and numerous branch of intramedullary vein which was bleeding. We give some pressure and would some Surgi-Flo to prevent any further bleeding but by the time to figure out what we want is actually bleeding we had lost around 400-500 cc of blood. We immediately ask for one blood to be transfused to him and also to give other blood continue ready for crossmatch. Dr. Judith who is a surgeon was called in to assist. In the meantime maintain pressure over the bleeding vein once we had a set of extra hand we've provided proper exposure and we were able to identify the hours branch and which the fascia which was over the carotid sheath was slowly repaired in the bleeding completely stopped. Tetanus of the vessels within reconfirmed by doing a Doppler ultrasonography and I did talk with Dr. Yousuf the radiologist and confirm that there was complete patent flow in both the internal jugular vein and also carotid arteries.

By the time he completely repair the patient is already loss 9 50 cc of blood. We wanted to go ahead and proceed with C4 5 level as well but at this point of time it looked like it was going to do more tension across the sutured area. So we decided to come back later. On the opposite side I decision was made because we thought it would be much more safer than going ahead and risking further avulsion injury. We decided not to put any drain at this point of time and we closed the wound in layers.