

USA HEALTH

Navigating the Different Contours of Landscape in Posterior Fossa Skull Base Tumors

Neurosurgical Society of Alabama, 2024

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No Disclosures

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After taking out a Large Anterior skullbase tumor



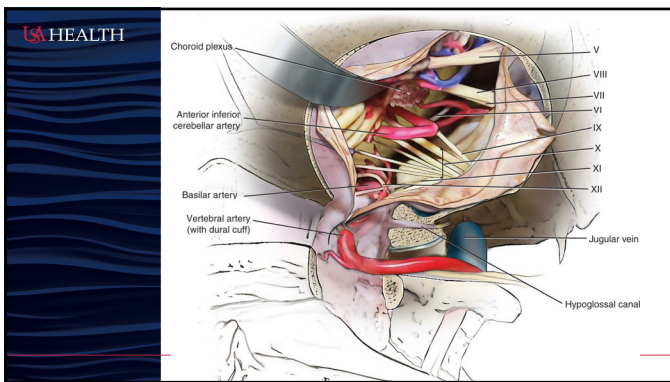
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Nuances of Approach Selection

1. Draw a Line at Middle Fossa
2. Draw a Line at IAC
3. Draw a Line at Foramen Magnum

On Coronal MRI

1. Portion of the tumor anterior to 7th nerve
2. Portion of the tumor posterior to 7th nerve
3. Major bulk of bony attachment – Petrous/Clivus/Tent



Clinical Presentation

History of Present Illness

- 67-years Female
- Double vision, Gait ataxia and vertigo x 3 months

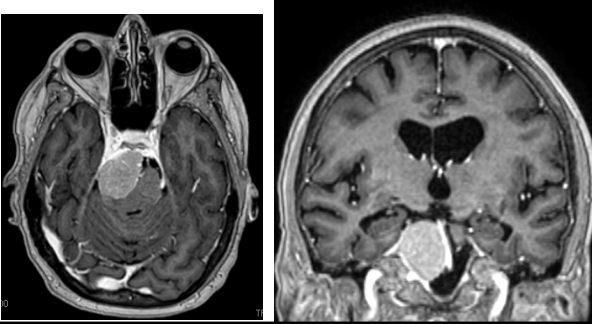
Neurological Exam

- Rt side partial IV and III CN palsy
- Rt side mild Cerebellar signs

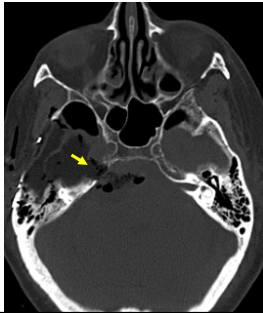
PMH/PSH

- DM type 1
- CAD/ HTN/HLD

Neuro-Imaging



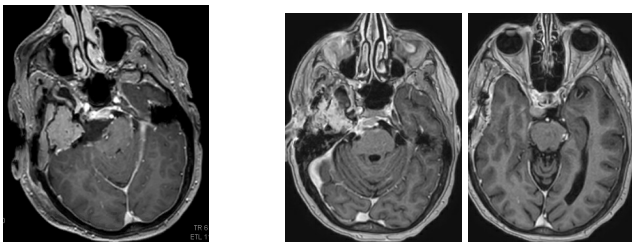
Middle Fossa- Tailored Anterior Kawase Approach



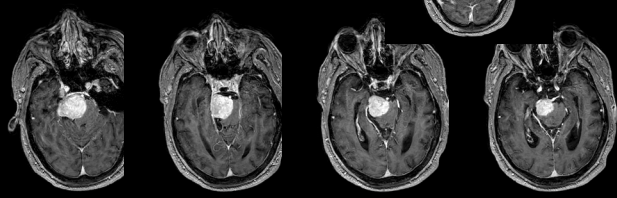
- Exam: 5/5 in all extremities, Gait ataxia improved
- Preop CN 3 complete resolution, Persistent CN 4
- New CN 6 which was improving but still persistent at 3 months
- Discharged Home

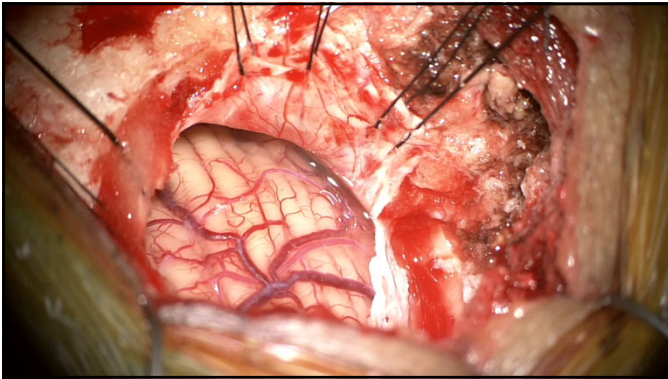
Immediate Postop

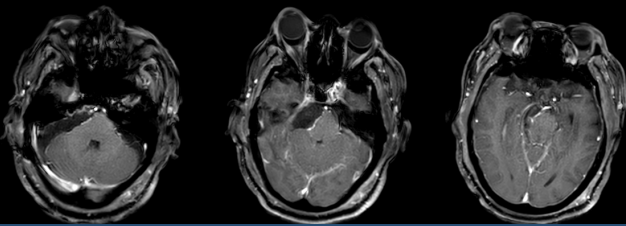
3 Months Postop



74 M
Dizziness, Severe Ataxia, L sided 4/5
R Eye blindness
HB 2 facial droop




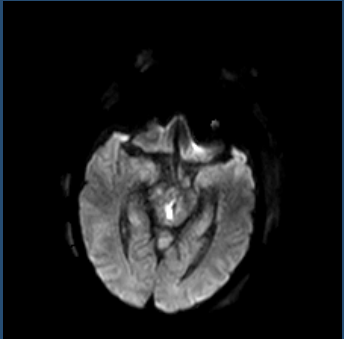




Postop

Improvement in Ataxia
5/5 Strength
INO

1 year follow up
Complete resolution



Clinical Presentation

History of Present Illness

- 70-years male
- Headaches, Some left facial pain, left sensory neural hearing loss, progressive gait ataxia and vertigo for 6 months

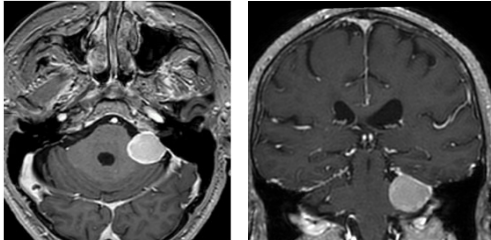
Neurological Exam

- Left SNHL
- Left side dysmetria and cerebellar signs

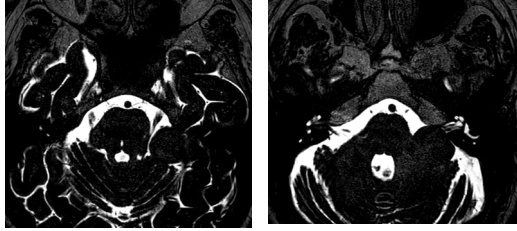
PMH/PSH

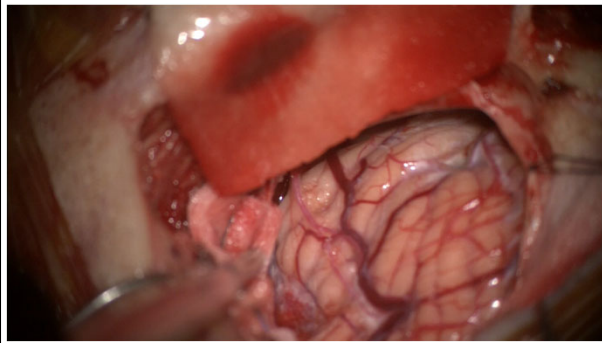
- CHF and CABG on dual antiplatelets
- DM 2

Neuro-Imaging

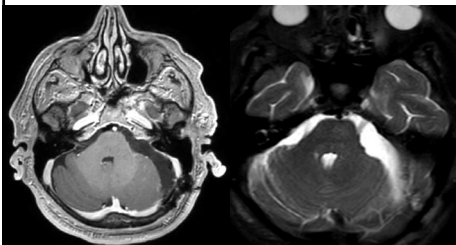


Neuro-Imaging





Imaging Outcome



Postoperative Course:

Left HB 2 CN 7
D/c on POD 4

Three month

- No Ataxia
- No facial Weakness

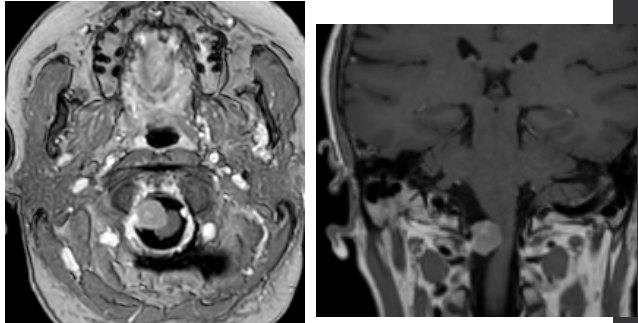
Clinical Presentation

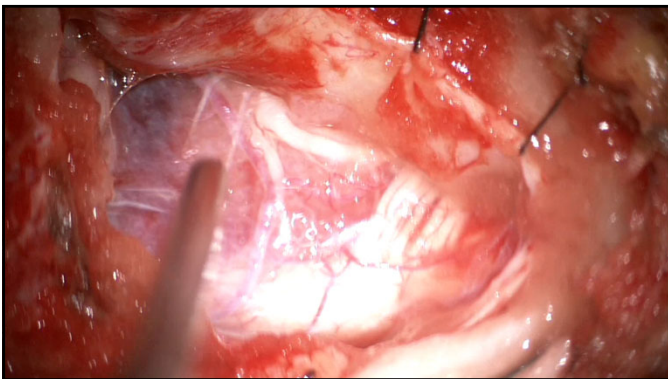
HPI

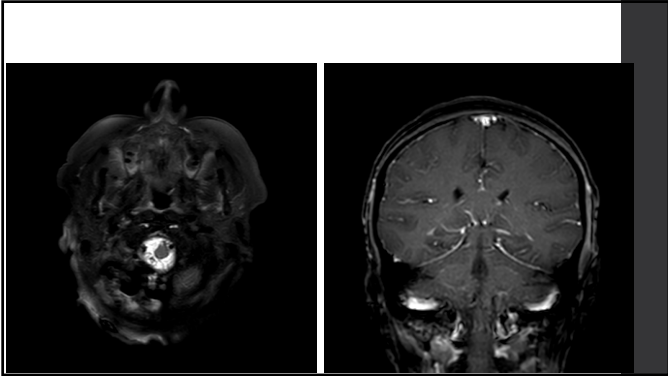
- 60 yo female with headaches and ataxia

Neurological Exam

- No deficits







Clinical Presentation

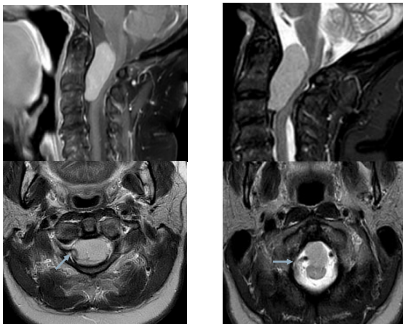
HOPSI

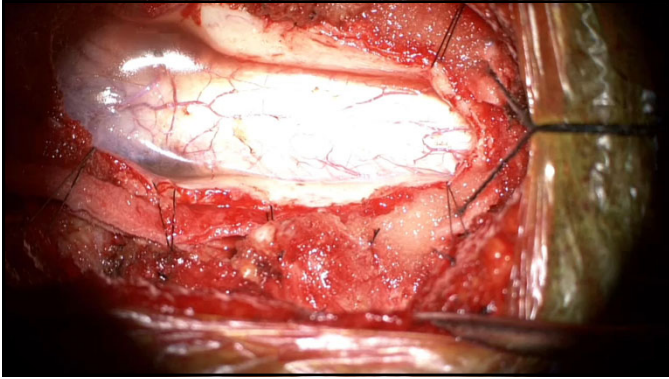
- 72-years female with neck pain, unrelenting headaches and progressive weakness

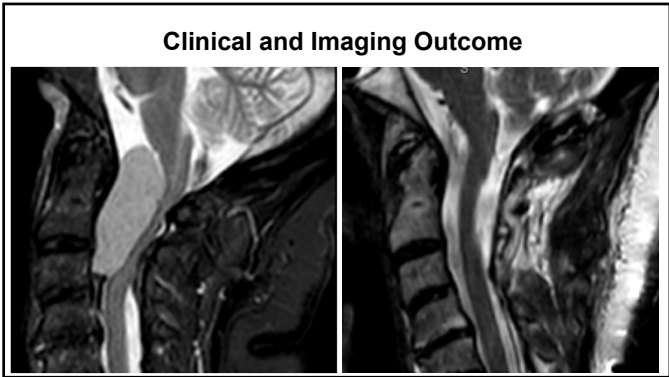
Neurological Exam

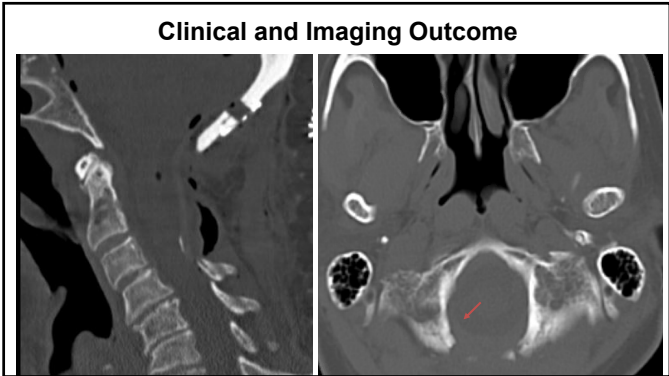
- Power - 4/5 in Bilateral triceps and 3/5 in bilateral plantar and dorsiflexion
- Hyperreflexia
- Hoffman sign in bilateral UE
- No sensory or cranial Nerve deficit

Neuro-Imaging Findings









Clinical and Imaging Outcome

Postoperative Course:

Immediate post op had slight increased weakness in left triceps 4-/5 with expected myelopathic gait. Discharged to rehab

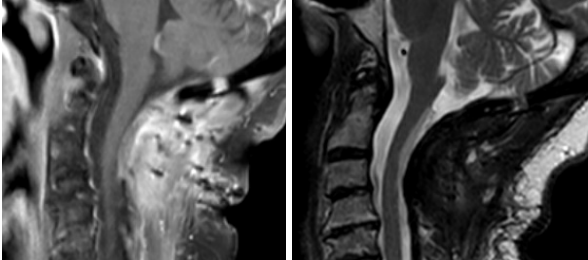
One month Follow up:

Improvement in left triceps from 4-/5 to 4/5 and 4+/5 in bilateral plantar and dorsiflexion with persistent myelopathic gait needing ongoing physical therapy

Three month Follow up:

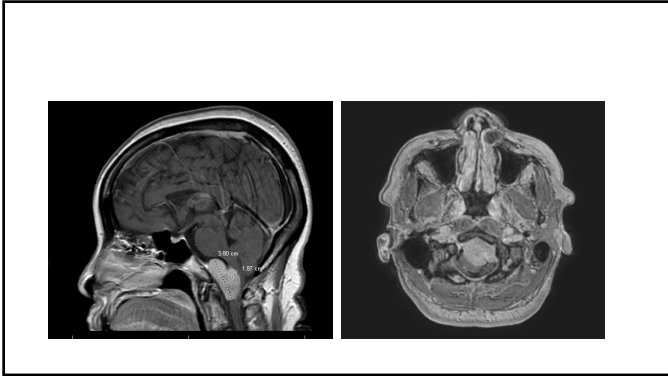
Improvement in strength on left 4+/5, right 5/5 with still using RW for walking

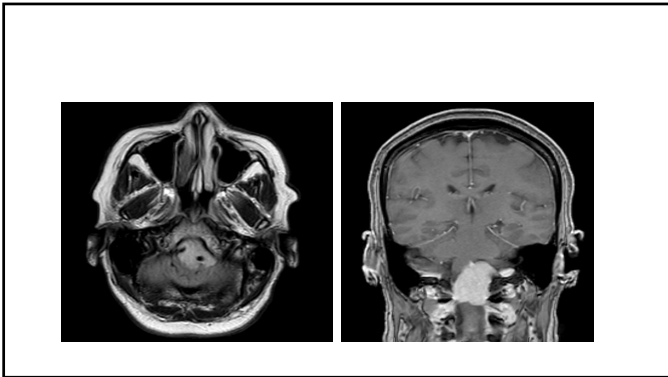
3 month Follow up

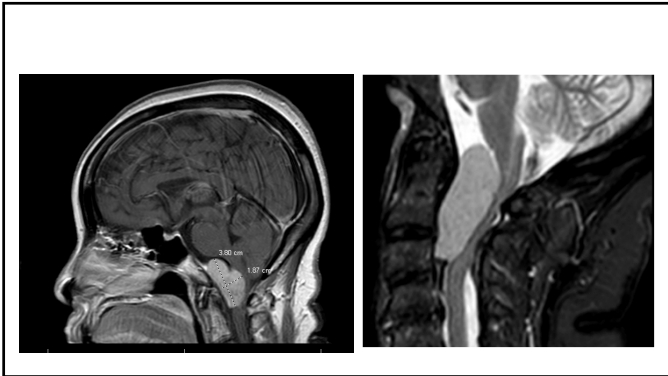


HPI

- 64-year female
- Progressive increase left side weakness and numbness with gait ataxia
- Left side - 4/5 UL and LL.
- Right side - 5/5 UL and LL
- Decrease sensation on left half of face and body by 30%



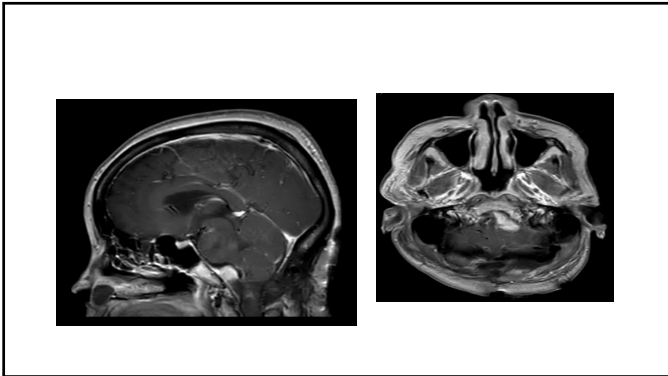


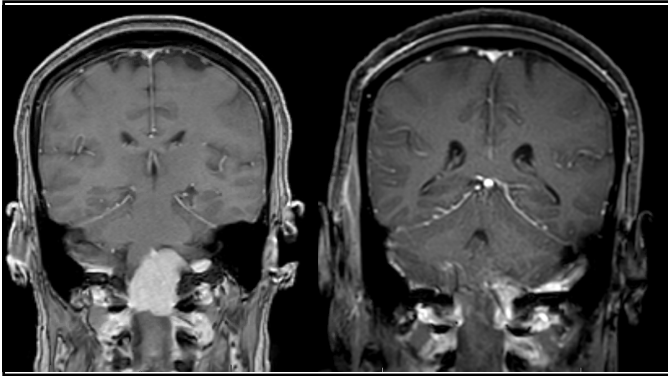


Approach ?

Approach ?

- Left Sided Far Lateral





- Weakness and numbness improved in left LL
- Discharge to rehab on POD 6
- 3 month follow up- left deltoid and bicep 4/5, left triceps 4+/5, Rest 5/5
- Walking
- SRS for residual tumor

Clinical Presentation

History of Present Illness

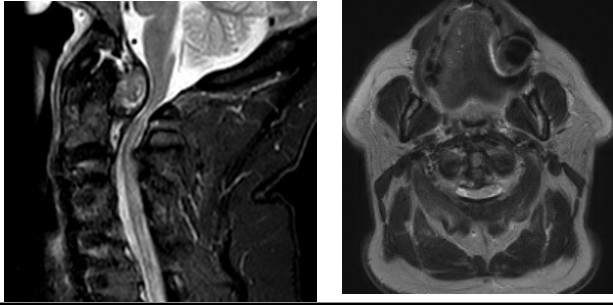
- 73-years Male
- Numbness in bilateral UL and LL x 8 months, progressive since x 2 months

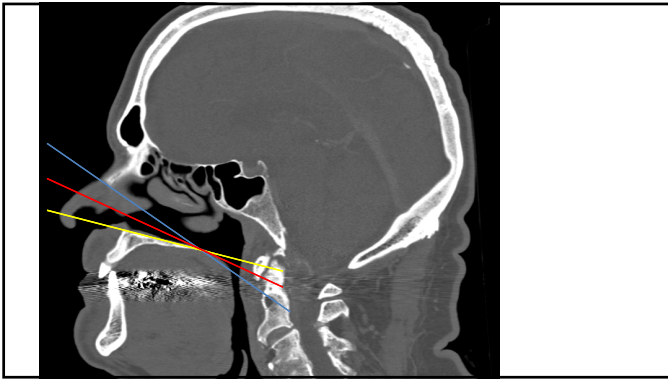
Neurological Exam

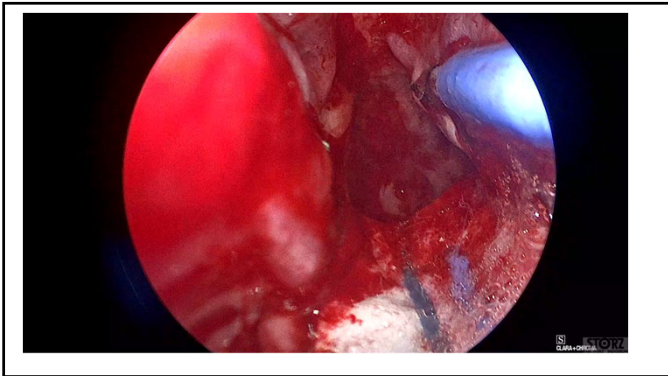
- Spasticity in Bilateral LL, Myelopathic Gait, Hoffmans
- Sensory loss in bilateral UL and LL

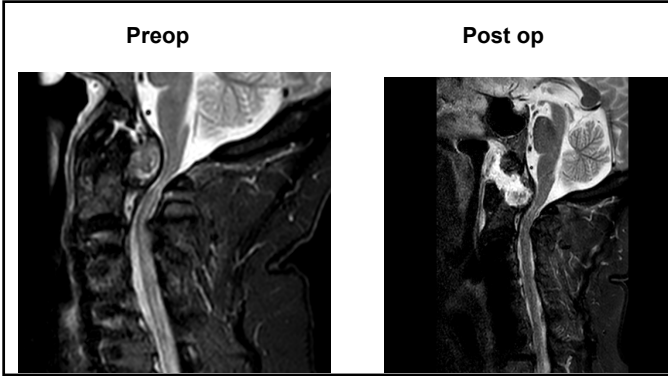
PMH/PSH
C3- C7 ACDF

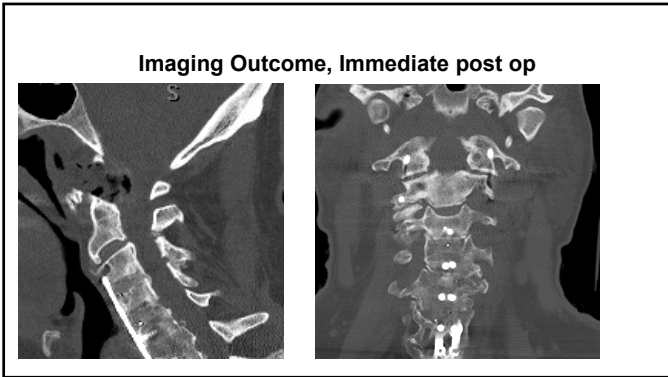
Pre op Neuro-Imaging

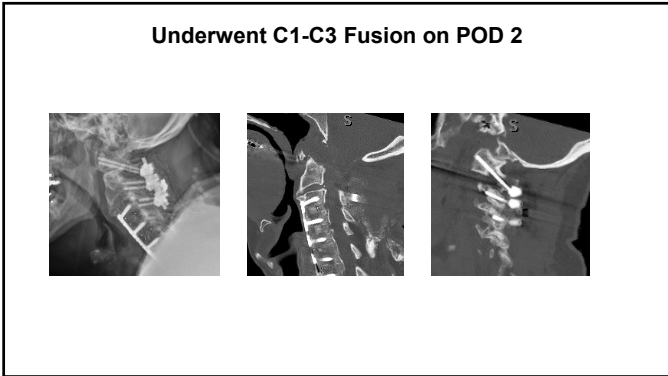












Conclusion

- Learning Curve was Steep for me in Posterior Fossa Surgeries
- Understanding 3D image preoperatively of tumors and neurovascular structures is critical
- No Margin for Error in these cases. Patient's impact on quality of life is profound
- Keep Pushing boundaries but only to make surgery safer!



Thank you

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