International Journal of Medical & Clinical Imaging
IJMCI, 1(1): 10-11
www.scitcentral.com

Original Medical Image: Open Access

Clival Chordoma Surgically Seeded in the Nasal Septum Following a Biopsy

Montserrat A Lara-Velazquez MD[1], Sara Ganaha MD[1], Jang W Yoon MD, MS[1], Clarence B Watridge MD[1], William Bolger MD[2], and Ronald Reimer MD[1*]

*[*1]Department of Neurosurgery, Mayo Clinic Florida, USA*

[2]Department of Otorhinolaryngology, Mayo Clinic Florida, USA

Received February12, 2017; Accepted February 16, 2017; Published February 26, 2017

Keywords: MeSH list: Clival Chordoma, Surgical pathway seeding, Nasal chordoma.

This is a 42-year old male patient who suffered from complications of tumor seeding as a result of biopsy of a clival chordoma. The patient was previously biopsied for this lesion via a sublabial transnasal route at an outside hospital. Although initially pituitary tumor was suspected, the pathology was consistent with chordoma, and the patient underwent fractionated radiotherapy of 6400 cGy in 32 fractions. When he presented to Mayo Clinic in Florida, he had a complete left sixth cranial nerve palsy with decreased facial hair and low testosterone levels.

Pre-operative axial and sagittal T1-weighted MRI of the brain with contrast showed a heterogeneously enhancing mass that appeared to originate from the superior half of clivus, with rostral and dorsal invasion of the sellar region and cavernous sinus bilaterally **(Figure 1A)**. The brainstem was compressed at the level of the pons caudally, and the optic chiasm and pituitary infundibulum were displaced upward. The lesion extended rostrally along the nasal septum, occluding parts of the nasal cavity.

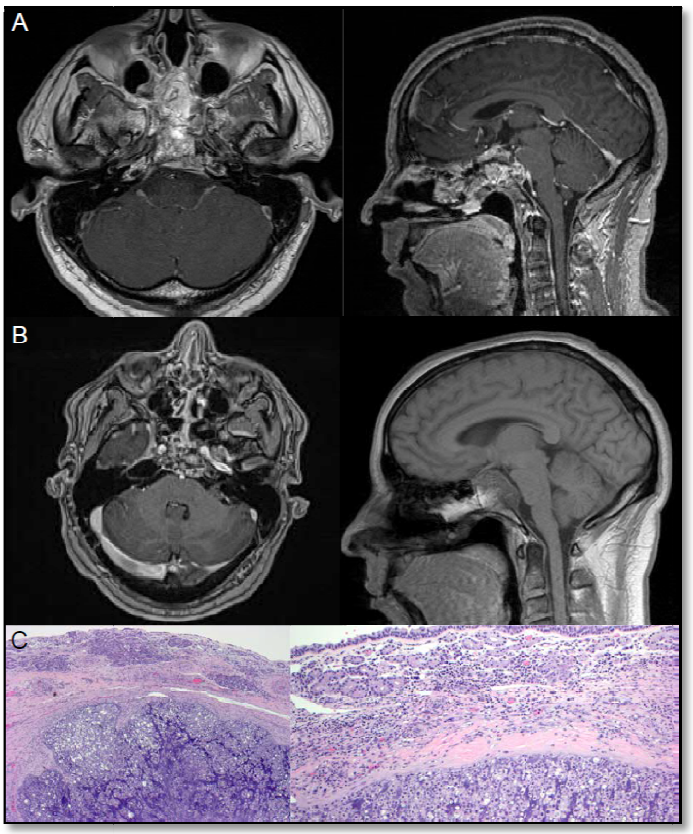

Figure 1. Clival Chordoma Surgically Seeded in the Nasal Septum Secondary to Biopsy

MRI findings were suggestive of chordoma, Therefore, the patient underwent an image-guided transnasal debulking of the clival chordoma and resection of the nasal septum mass. The Stealth system was employed for image guidance to minimize operative risk. The CUSA (Cavitron Ultrasonic Aspirator) was used to facilitate tumor debulking, and the brainstem was decompressed. Due to prior surgery and radiotherapy, the tumor was found to be tenacious, with excess scar tissue. Residual adherent tumor was left due to the risk of basilar artery injury. There was no intraoperative evidence of CSF leakage.

Post-procedural axial T1-weighted MRI with gadolinium, and sagittal T1-weighted MRI without gadolinium confirmed generous debulking of the tumor (**Figure 1B**). The pathology of the nasal septal mass was consistent with chordoma (**Figure 1C**). After one-month follow-up, the patient was neurologically stable with persistent left CN VI palsy.

In conclusion, chordomas are slow growing, yet aggressive and life-threatening tumors. Outcomes for chordoma patients vary widely, and are highly dependent on the course of treatment received and the individual tumor's behavior. Clival chordoma can be fibrous and adherent to surrounding structures. Therefore tumor removal must be done cautiously to avoid damage to surrounding critical vascular and neural structures, and to preserve neurological function. Modern treatment approaches can significantly prolong patient survival, and proton beam therapy is widely used as an adjuvant treatment. Neurosurgeons must be aware of the serious complication of chordoma seeding along the biopsy pathway in clival chordoma. (1-3)

Corresponding author: Reimer Ronald, MD. Department of Neurosurgery, Mayo Clinic Florida. 2nd Floor East Cannaday Building, 4500 San Pablo Road .Jacksonville, FL. 32224. Email: Reimer.Ronald@mayo.edu. Phone: 904-953-6591.

Citation: Lara-Velazquez M A, Ganaha S, Yoon J W, Watridge C B, Bolger W, et al. (2017) Clival Chordoma Surgically Seeded in the Nasal Septum Following Biopsy. Int J Med Clin Imaging, 1(1): 10-11.

REFERENCES

1. Gupta D, Rathore PK, Chauhan A, Khurana N. Unusual Presentation of Chordoma in Nose. Indian J Otolaryngol Head Neck Surg. 2016;68(3):380-3.
2. Iloreta AM, Nyquist GG, Friedel M, Farrell C, Rosen MR, Evans JJ. Surgical pathway seeding of clivo-cervical chordomas. J Neurol Surg Rep. 2014;75(2):e246-50.
3. Krengli M, Poletti A, Ferrara E, Fossati P. Tumour seeding in the surgical pathway after resection of skull base chordoma. Rep Pract Oncol Radiother. 2016;21(4):407-11.