



The Modified Hemi-Lothrop Procedure: A Variation of the Endoscopic Endonasal Approach for Resection of a Supraorbital Psammomatoid Ossifying Fibroma

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Introduction

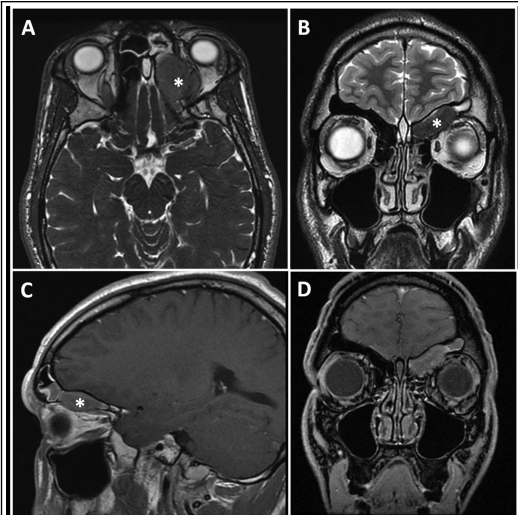
Tumors in the supraorbital region are most commonly accessed through transcranial approaches, including fronto-orbital, orbitozygomatic, and eyebrow supraorbital keyhole approaches. Purely endoscopic endonasal approaches (EEAs) are more challenging to perform because of limitations in access and visualization for lateral extension beyond the midline corridor. The endoscopic modified hemi-Lothrop procedure, a variation of an extended EEA, allows for binostril access and visualization of the lateral supraorbital region while preserving the contralateral frontal sinus drainage pathway. Angled endoscopy and curved instrumentation are critical for success.

Methods

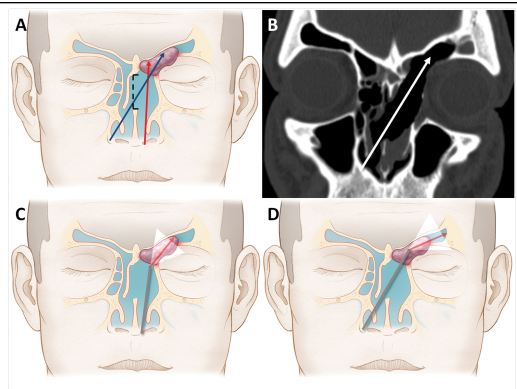
The operative technique and nuances are illustrated in a rare case of a supraorbital juvenile psammomatoid ossifying fibroma (JPOF) causing symptomatic orbital compression.

Results:

Patient presented with progressive headaches and intermittent blurry vision in the left eye due to orbital compression from an expansile supraorbital JPOF. A gross-total resection was achieved with orbital decompression using an endoscopic modified hemi-Lothrop procedure. The key components of the approach consisted of an endoscopic Draf IIB (left frontal sinusotomy) ipsilateral to the tumor, and a superior septectomy for binostril bimanual instrumentation. Excellent visualization, access, and tumor removal of the supraorbital region was achieved with angled endoscopy and instrumentation from the contralateral nasal cavity and through the septectomy window ("cross-court" trajectory).



Preoperative MRI (A: axial T2; B: coronal T2; C: sagittal T1 post-gadolinium; D: coronal T1 post-gadolinium)



A: Illustration demonstrating the endoscopic modified hemi-Lothrop procedure. Draf IIB is performed (red arrow). An anterior superior septectomy is performed (black bracket) and the left supraorbital tumor is accessed via the contralateral nasal cavity (blue arrow). B: Post-op CT scan. C: Limited view of the lateral supraorbital region from ipsilateral nostril. D: Contralateral nasal cavity provides excellent visualization and access of the tumor in the lateral supraorbital region. (© 2011 Chris Gralapp, reprinted with permission)

Conclusions

The modified hemi-Lothrop procedure with angled endoscopy is a safe and effective alternative route to traditional transcranial approaches to access the supraorbital region. To our knowledge, this is the first case of a supraorbital JPOF that was successfully resected via a purely EEA.

Learning Objectives

By the conclusion of this session, participants should be able to:

1. Discuss the nuances of the modified hemi-Lothrop procedure.
2. Understand in what cases the modified hemi-Lothrop procedure provides an advantage.
3. Describe the clinical nature of a supraorbital juvenile psammomatoid ossifying fibroma.

References

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- 3.Friedel ME, Li S, Langer PD, Liu JK, Eloy JA. Modified hemi-Lothrop procedure for supraorbital ethmoid lesion