

Endoscopic Forehead Lipoma Excision: Techniques for Success and Pitfalls to Avoid



Jillian Krebs, MD; Ashley Catanzarite, MD; Anas Eid, MD

Department of Otolaryngology, College of Medicine, The University of Tennessee Health Science Center



Introduction

Endoscopic resection of forehead lipomas is the preferred method for minimizing visible scars. The advent and availability of the required instrumentation allows for easier accessibility of these techniques for otolaryngologists.

Key factors for success include identifying patient-specific considerations pre-operatively, identifying the correct plane of dissection, and ensuring proper retraction. This facilitates efficient removal of lipomas and provides wide forehead access, while protecting neurovasculature.

In this poster, we outline our technique for endoscopic resection, emphasizing a smooth and nearly bloodless procedure while avoiding common pitfalls.

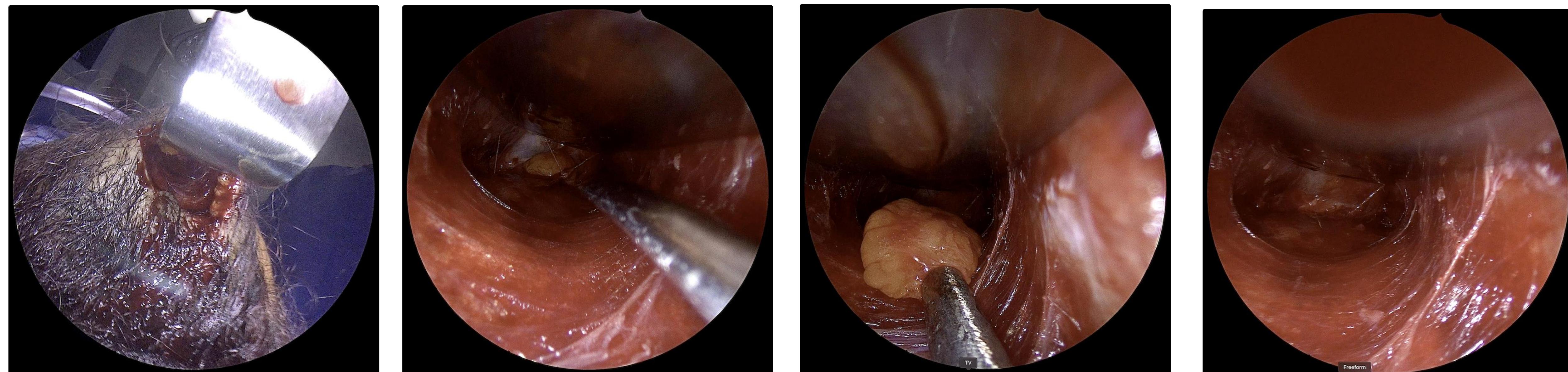


Figure 1 (above): Series of images demonstrating suspension, lipoma identification, lipoma removal, and the resulting cavity. This exemplifies the appropriate plane and how this results in a near bloodless procedure, maintaining good visualization.

Methods and Materials

The procedure begins prior to anesthesia with assessment of the patient's hairline. The pretrichial approach suits patients with full hairlines without baldness or recession. Alternative approaches like the transbrow or temporal pretrichial are considered for recessed hairlines – these approaches are more challenging for medial lesions.

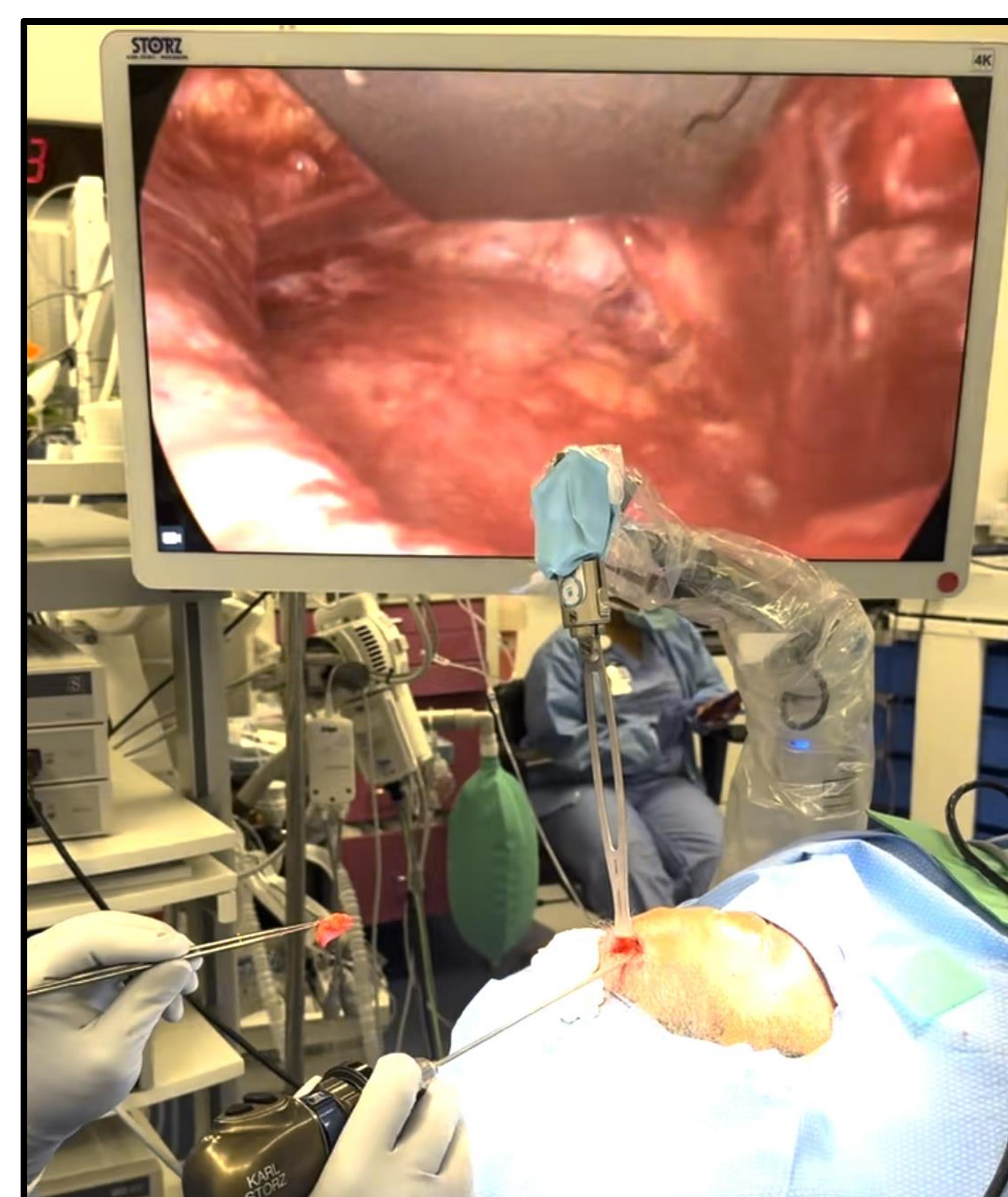
Vasoconstrictive agents are injected around the lesion and within the tunnel area. Incisions are made, with dissection extending into the subgaleal plane. A long toe-in retractor supports the flap and creates space for endoscopic instrumentation. Fixed retractors or robotic arms can be used to maintain retraction to allow for bimanual work if additional support is not available, as exemplified in Figure 1.

Forehead lipomas are typically associated with frontalis diastasis and are easily identified. Once located, the lesion is then dissected with a Freer elevator or suction, then removed. A multilayer closure is completed.

Results

In our patient series, removal of forehead lipomas was achieved through a near bloodless procedure that also minimized visible scarring. Otolaryngologists efficiently perform these due to their unique endoscopic skills.

Good injection with vasoconstrictive agents and optimal retraction within the plane allows for excellent visualization with the endoscope and reduces the need for frequent wiping. Major neurovascular structures are protected within the raised flap. The procedure is completed within standard surgical timeframes, and results in a more cosmetically appealing outcome.



Conclusions

Endoscopic excision of forehead lipomas using an endoscopic approach within the subgaleal plane is a nearly bloodless procedure and safeguards neurovasculature.

Our technique, utilizing proper retractors and maintaining dissection within the subgaleal plane dissection, ensures a smooth endoscopic removal with minimal cosmetic impact.

Figure 2 (left): Example of a suspension operating set up for endoscopic removal of a forehead lipoma.

Contact

Jillian Krebs, MD – PGY3
Department of Otolaryngology
University of Tennessee Health Science Center
910 Madison Ave, Ste 430, Memphis TN, 38163
jkrebs4@uthsc.edu

References

1. Meningaud JP, Pitak-Arnop P, Rigolet A, Bertrand JC. Endoscopic excision of forehead lipomas. *Int J Oral Maxillofac Surg*. 2006 Oct;35(10):951-3. doi: 10.1016/j.ijom.2006.03.019. Epub 2006 Jul 7. PMID: 16829039.
2. Funayama E, Minakawa H, Oyama A. Forehead lipoma resection via a small remote incision using a surgical raspator. *J Am Acad Dermatol*. 2007 Mar;56(3):458-9. doi: 10.1016/j.jaad.2006.11.018. PMID: 17317487.
3. Kokoska MS, Brannah GH, Hamilton MM, Thomas JR. Endoscopic excision of a forehead mass. *Arch Otolaryngol Head Neck Surg*. 1997 Aug;123(8):815-7. doi: 10.1001/archotol.1997.01900080047004. PMID: 9260545.
4. Li H TG, Tan BK, Liang FC. Endoscopic resection of forehead lipoma: A subperiosteal single-portal approach. *Indian J Plast Surg*. 2008 Jul;41(2):141-4. doi: 10.4103/0970-0358.39665. PMID: 18753253; PMCID: PMC2740511.
5. Sadick H, Huber M, Perkins SW, Waters HH, Hamilton GS 3rd, O'Reilly AG, Gassner HG. Endoscopic forehead approach for minimally invasive benign tumor excisions. *JAMA Facial Plast Surg*. 2014 Sep-Oct;16(5):352-8. doi: 10.1001/jamafacial.2014.269. PMID: 24945935.
6. Lin SD, Lee SS, Chang KP, Lin TM, Lu DK, Tsai CC. Endoscopic excision of benign tumors in the forehead and brow. *Ann Plast Surg*. 2001 Jan;46(1):1-4. doi: 10.1097/00000637-200101000-00001. PMID: 11192027.