

Superficial Vascular Anomaly of the Glabella Mimicking a Cutaneous Cyst

Emily K. Haque, MD; Ethan Nguyen, MD

PRACTICE POINTS

- Vascular anomalies should be included in the differential diagnosis of soft cutaneous nodules, as management differs from cysts or lipomas.
- Preoperative evaluation for a cutaneous cyst excision on the head and neck should include ruling out findings of a vascular lesion through history, physical examination, and consideration of color Doppler ultrasonography in unclear cases.
- Surgical technique should involve sequential superficial incisions, descending at 1 to 2 mm per cut, until the suspected capsule is identified to minimize the risk for inadvertent injury to a cyst mimicker such as a vascular anomaly.

To the Editor:

Cutaneous cysts commonly are treated by dermatologists and typically are diagnosed clinically, followed by intraoperative or histologic confirmation; however, cyst mimickers can be misdiagnosed due to similar appearance and limited diagnostic guidelines.¹ Vascular anomalies (VAs) of the face such as a facial aneurysm are rare.² Preoperative assessment of findings suggestive of vascular etiology vs other common cutaneous tumors such as an epidermal inclusion cyst (EIC) and lipoma can help guide dermatologic management. We present a case of a VA of the glabella manifesting as a flesh-colored nodule

that clinically mimicked a cyst and discuss the subsequent surgical management.

A 61-year-old man with a history of benign prostatic hyperplasia was evaluated at our dermatology clinic for an enlarging forehead mass of 1 year's duration. Physical examination yielded a soft, flesh-colored, 2.5-cm nodule located superficially in the midline glabellar region without pulsation or palpable thrill. The differential diagnosis at the time included lipoma or EIC.

Excision of the lesion was performed utilizing superficial incisions with a descending depth of 1-mm increments to safely reach the target, identify the type of tumor, and prevent rupture of the suspected EIC. After the third incision to the level of the dermis, nonpulsatile bleeding was more than expected for a cyst. Digital pressure was applied, and the area was explored with blunt dissection to identify the source of bleeding. A fusiform, thin-walled aneurysm was identified in the dermal plane with additional tributaries coursing deep into the subcutaneous plane. The visualized tributaries were ligated with 3-0 polyglactin, figure-of-eight sutures resulting in hemostasis. The wound was closed with 5-0 nylon simple interrupted sutures. The patient was closely followed postoperatively for 1 week (Figure) and was referred for head imaging to evaluate for a possible associated intracranial aneurysm. Based on the thin vessel wall and continuous nonpulsatile hemorrhage, this VA was most consistent with venous aneurysm.

AVA can be encountered unexpectedly during dermatologic surgery. An aneurysm is a type of VA and is defined

Dr. Haque is from the Department of Dermatology, University of Maryland School of Medicine, Baltimore. Dr. Nguyen is from RainCross Dermatology, Riverside, California, and the School of Medicine, University of California, Riverside.

The authors report no conflict of interest.

Correspondence: Emily K. Haque, MD, 419 W Redwood St, Ste 235, Baltimore, MD 21201 (Emily.K.Haque@gmail.com).

doi:10.12788/cutis.0940



A and B, Anterior and lateral views of the wound from the removal of a vascular anomaly of the glabella at 1-week postoperative follow-up.

as an abnormal dilatation of a blood vessel that can be arterial, venous, or an arteriovenous malformation. Most reported aneurysms of the head and neck are cirroid aneurysms or involve the superficial temporal artery.^{2,3} Reports of superficial venous aneurysms are rare.⁴ Preoperatively, cutaneous nodules can be evaluated for findings suggestive of a VA in the dermatologist's office through physical examination. Arterial aneurysms may reveal palpable pulsation and audible bruit, while a venous aneurysm may exhibit a blue color, a size reduction with compression, and variable size with Valsalva maneuver.

The gold standard diagnostic tool for most dermatologic conditions is histopathology; however, dermatologic ultrasonography can provide noninvasive, real-time, important diagnostic characteristics of cutaneous

pathologies as well as VA.⁵⁻⁷ Crisan et al⁶ outlined specific sonographic findings of lipomas, EICs, trichilemmal cysts, and other dermatologic conditions as well as the associated surgical pertinence. Ultrasonography of a venous aneurysm may show a heterogeneous, contiguous, echoic lesion with an adjacent superficial vein, which may be easily compressed by the probe.⁸ Advanced imaging such as computed tomography with contrast or magnetic resonance imaging may be performed, but these are more costly than ultrasonography. Additionally, point-of-care ultrasonography is becoming more popular and accessible for physicians to carry at bedside with portable tablet options available. Dermatologists may want to consider incorporating it into the outpatient setting to improve procedural planning.⁹

In conclusion, VAs should be included in the differential diagnosis of soft cutaneous nodules, as management differs from a cyst or lipoma. Dermatologists should use their clinical judgment preoperatively—including a comprehensive history, physical examination, and consideration of color Doppler ultrasonography to assess for findings of VA. We do not recommend intentional surgical exploration of cutaneous aneurysms in the ambulatory setting due to risk for hemorrhage. Furthermore, when clinical suspicion of EIC or lipoma is high, it still is preferable to descend the incision slowly at 1 to 2 mm per cut until the tumor is visualized.

REFERENCES

1. Ring CM, Kornreich DA, Lee JB. Clinical simulators of cysts. *J Am Acad Dermatol.* 2016;75:1255-1257.
2. Evans CC, Larson MJ, Eichhorn PJ, et al. Traumatic pseudoaneurysm of the superficial temporal artery: two cases and review of the literature. *J Am Acad Dermatol.* 2003;49(5 suppl):S286-S288.
3. Sofela A, Osunronbi T, Hettige S. Scalp cirroid aneurysms: case illustration and systematic review of literature. *Neurosurgery.* 2020;86:E98-E107.
4. McKesey J, Cohen PR. Spontaneous venous aneurysm: report of a non-traumatic superficial venous aneurysm on the distal arm. *Cureus.* 2018;10:E2641.
5. Wortsman X, Alfageme F, Roustan G, et al. Guidelines for performing dermatologic ultrasound examinations by the DERMUS Group. *J Ultrasound Med.* 2016;35:577-580.
6. Crisan D, Wortsman X, Alfageme F, et al. Ultrasonography in dermatologic surgery: revealing the unseen for improved surgical planning [published online May 26, 2022]. *J Dtsch Dermatol Ges.* doi:10.1111/ddg.14781
7. Corvino A, Catalano O, Corvino F, et al. Superficial temporal artery pseudoaneurysm: what is the role of ultrasound. *J Ultrasound.* 2016;19:197-201.
8. Lee HY, Lee W, Cho YK, et al. Superficial venous aneurysm: reports of 3 cases and literature review. *J Ultrasound Med.* 2006;25:771-776.
9. Hadian Y, Link D, Dahle SE, et al. Ultrasound as a diagnostic and interventional aid at point-of-care in dermatology clinic: a case report. *J Dermatolog Treat.* 2020;31:74-76.