jected to the described procedure with the natural shape and configuration of their ears (Fig. 1).

The place of incision is difficult to see because it is hidden on the posterior side of the ear, in the sulcus formed by the helical fossa. After surgery, none of our patients had the prominence of the upper part of the ear as a complication.

We place the incision high at the level of retroauricular projection of the fossa helicis so that it is more difficult to notice. In our opinion, excessive retroauricular skin excision should be avoided; otherwise, it will make the auricle tense and the incision visible. We thin out the cartilage by trimming it to make it more compliant, and remove all sharp margins, deepening and modeling the triangular fossa so that the auricle assumes its normal and natural-appearing configuration.

Using this technique, we can very easily shape the cartilage, bringing it into the natural configuration. The prominence of the ear is efficiently resolved by a Y-shaped incision in the region of the new antihelix and the anterior and posterior crura, and subsequent shaping and modeling of the configuration of the cartilage by trimming.

DOI: 10.1097/PRS.0b013e31828278e0

Milan D. Jovanović, M.D., Ph.D.

Miodrag M. Colić, M.D., Ph.D.

Lukas Rasulić, M.D., Ph.D.

Department of Plastic and Reconstructive Surgery
University of Belgrade School of Medicine, and
Institute for Burns, Plastic, and Reconstructive Surgery
Clinical Center of Serbia
Belgrade, Serbia

Correspondence to Dr. Jovanovic
Belgrade University
Faculty of Medicine
Institute for Burns, Plastic, and Reconstructive Surgery
Clinical Centre of Serbia
Zvecanska 9
11000 Belgrade, Serbia
aes.surg@eunet.rs

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

PATIENT CONSENT

Parents or guardians provided written consent for use of the patient's images.

REFERENCES

1. Wolfe SA. Timing of otoplasty for prominent ears. *Plast Reconstr Surg.* 2006;117:680; author reply 680–681.
2. Mustarde JC. The correction of prominent ears by using simple mattress sutures. *Br J Plast Surg.* 1963;16:170–178.
3. Stenstrom SJ. A "natural" technique for correction of congenitally prominent ears. *Plast Reconstr Surg.* 1963;32:509–518.
4. Janz BA, Cole P, Hollier LH Jr, Stal S. Treatment of prominent and constricted ear anomalies. *Plast Reconstr Surg.* 2009;124:27e–37e.
5. Lentz AK, Plikaitis CM, Bauer BS. Understanding the unfavorable result after otoplasty: An integrated approach to correction. *Plast Reconstr Surg.* 2011;128:536–544.

Ultherapy Shrinks Nasal Skin after Rhinoplasty following Failure of Conservative Measures

Sir:

It can take months—and sometimes years—for nasal-tip edema to resolve after rhinoplasty, which can be challenging for patients and surgeons. Although various conventional modalities have been used to counteract edema, they are not successful for all skin types or in all situations.

With the advent of the Ultherapy Ulthera System (Ulthera, Inc., Mesa, Ariz.), the capability now exists to safely and reliably manipulate the contour of the skin to permit the skin to conform optimally to the underlying cartilaginous framework. Thus, the cartilage and skin can work in tandem to create a more ideal nasal-tip configuration.

During the past 18 months, the author has used Ultherapy to control edema and shape the nasal skin after rhinoplasty in 21 patients (19 women and two men, aged 22 to 66 years). Participants were required to have nasal skin types that typically are not amenable to conforming to underlying anatomical structures and thus would preclude an optimal result. The patients had previously undergone conservative attempts to reduce postoperative edema, which were not successful. All patients had been informed that Ultherapy is not a "proven" or U.S. Food and Drug Administration–approved modality for enhancing or expediting the results of rhinoplasty, but that it is U.S. Food and Drug Administration approved for facial skin tightening and brow elevation.

Ultherapy creates microthermal injury in the dermis and subdermis at depths of 1.5, 3, and 4.5 mm. Healing of these lesions, at the consistently spaced locations, leads to skin contraction, remodeling of scar tissue (revisional rhinoplasty), and, when desired, a degree of thermally induced subcutaneous fat loss.

The average number of treatments per patient was 2.1. The average time between rhinoplasty and the initial Ultherapy treatment was 3.22 years. Four nasal-tip skin types are anatomically limiting with respect to achieving optimal postrhinoplasty aesthetic results: large skin sleeve, thick skin sleeve, scarred skin sleeve, and C-shaped curvature. However, Ultherapy proved successful for three of these skin types (Figs. 1 through 3.) All patients were pleased with their result, as measured by a posttreatment survey, and there were no treatment-related adverse effects. Follow-up is ongoing to assess the durability of results, and a full clinical report is planned.

In the author's experience, Ultherapy has been particularly useful for patients who would typically be considered poor candidates for rhinoplasty because of the quality or quantity of their skin. The success achieved in the present series has led the author to use Ultherapy routinely in his practice to reduce tip edema following rhinoplasty.

Fig. 1. Large skin sleeve. (*Left*) Preoperative view of a 19-year-old model with a large skin sleeve who underwent open rhinoplasty with suture techniques on March 3, 2000. (*Center*) A pre-Ultherapy photograph, taken 11.5 years postoperatively, shows only subtle improvement. In addition to elastic taping (performed routinely for at least 3 weeks), this patient received four steroid injections over 19 months postoperatively. Ultherapy was performed on November 22, 2011 (11.5 years postoperatively). (*Right*) A post-Ultherapy photograph, taken 3 months after treatment, shows substantial reduction of edema and improvement in contour.

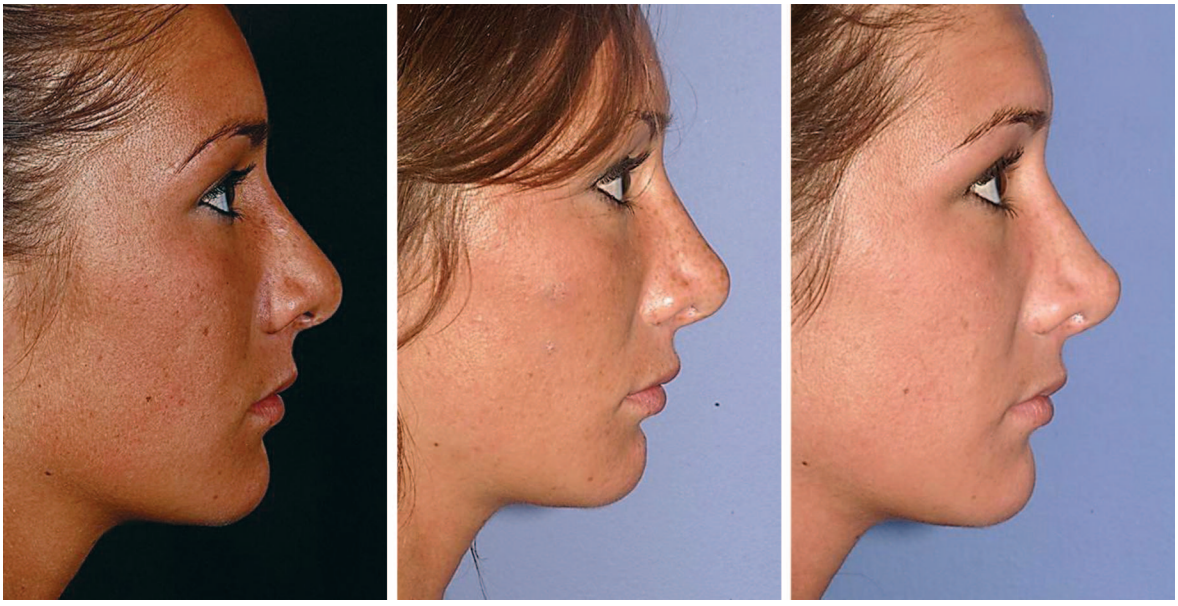

Fig. 2. Thick skin sleeve. (*Left*) Preoperative image of an 18-year-old woman who underwent secondary open rhinoplasty on August 4, 2008. The surgery included a "golf tee" graft for tip projection, definition, and control of a very thick skin sleeve. (*Center*) A pre-Ultherapy photograph, taken 3 years postoperatively, shows significant improvement but poor definition, and waxing and waning tip edema caused by poor skin contraction. Postoperatively, she received four steroid injections and two conventional external ultrasound treatments over 17 months. Ultherapy was performed twice between July 29, 2011, and January 4, 2012 (3 years postoperatively). (*Right*) A post-Ultherapy photograph, taken 4 months after treatment, shows marked improvement in definition.

Ultherapy's mechanism of action appears to be absolute shrinkage of the skin sleeve,[1–3] renewal of the cutaneous structure including enhanced elasticity,[4] and the ability to remodel scar tissue. Ultherapy also has been used successfully to reduce the size of silicone-injected lips nonsurgically. A proposed mechanism of action is remodeling of the silicone bead capsule.[5]

Fig. 3. Scarred skin sleeve from multiple rhinoplasties. (*Left*) Preoperative view of a 31-year-old woman who underwent open tertiary rhinoplasty including alar baton and crushed tip grafts on December 17, 2008. (*Center*) A pre-Ultherapy photograph, taken 18 months postoperatively, shows improved contour but poor definition. In addition to elastic taping, this patient received three steroid injections over 6 months, two radiofrequency treatments, and seven conventional external ultrasound treatments. Ultherapy was performed three times between November 14, 2011, and January 30, 2012 (3 years postoperatively). (*Right*) A postprocedure photograph, taken 4 months after the final Ultherapy treatment, shows substantial improvement in definition.

In postrhinoplasty patients, Ultherapy appears to "shrink wrap" the skin over the underlying cartilaginous framework. With this modality, rhinoplastic surgeons are able to control another anatomical element—the skin—to allow optimal sculpting of the central feature of the human face.

DOI: 10.1097/PRS.0b013e3182827966

Andrew N. Kornstein, M.D.
Museum Mile Surgery Center
1050 Fifth Avenue
New York, N.Y. 10028
info@kornstein.com

DISCLOSURE

The author has no financial interest to declare in relation to the content of this article. No funding was received for the preparation of this article.

PATIENT CONSENT

Patients provided written consent for the use of their images.

REFERENCES

1. White WM, Makin R, Barthe P, Slayton M, Gliklich RE. Selective creation of thermal injury zones in the superficial musculoaponeurotic system using intense ultrasound therapy. *Arch Facial Plast Surg.* 2007;9:22–29.
2. Hinz B. Formation and function of the myofibroblast during tissue repair. *J Invest Dermatol.* 2007;127:526–537.
3. Mulvaney M, Harrington A. Cutaneous trauma and its treatment. In: James WD, ed. *Military Dermatology (Textbook of Military Medicine).* Fort Detrick, Md: Department of the Army, Office of the Surgeon General, Borden Institute; 1994:143–156.
4. Suh DH, Shin MK, Lee SJ, et al. Intense focused ultrasound tightening in Asian skin: Clinical and pathologic results. *Dermatol Surg.* 2011;37:1595–1602.
5. Kornstein AN. Ulthera for silicone lip correction. *Plast Reconstr Surg.* 2012;129:1014e–1015e.

Regenerative Surgery for the Definitive Repair of Chronic Ulcers: A Series of 34 Cases Treated with Platelet-Derived Growth Factors

Sir:

Regenerative surgery is based on the use of stem cells and/or platelet-derived growth factors, which induce stem cell migration to the damaged tissues, stimulating their proliferation and eventually resulting in tissue repair. Platelet gel is a hemocomponent containing numerous growth factors that are potentially useful for tissue repair.[1] Platelet gel is used in oral bone implants[2] and in combined soft- and bony-tissue reconstruction in facial plastic surgery[3]; in tendon and muscle repair[4]; and in the treatment of difficult wounds, ulcers, and injuries.[5,6]

Thirty-four patients, aged 25 to 88 years, with chronic nonhealing ulcers were treated consecutively with platelet gel. Patient characteristics are listed in Table 1. Standard procedures (e.g., skin grafts or flaps) had already been performed to treat the ulcers, but failed.

Platelet concentrate, cryoprecipitate, and thrombin were obtained from 450 ml of whole blood. Platelet gel was prepared by adding 1 cm^3 of thrombin and then 1 cm^3 of calcium gluconate for every 10 ml of platelet concentrate/cryoprecipitate solution. After proper wound bed preparation, platelet gel was layered on the lesion and covered by a patch loaded with platelet-derived growth factors.