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Original Article

Endoscopic, "Scarless" Composite Flap Face and Neck Lift

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Abstract

Deep-plane or composite flap facelift techniques allow deep structural rejuvenation of the face by release of retaining ligaments in the subsuperficial musculoaponeurotic system (sub-SMAS) plane with elevation and fixation of the SMAS/platysma/skin flap as a single, "en bloc" unit. This means that in the cases with mild to moderate skin laxity, the preauricular incision serves the purpose of access only. The author therefore developed an endoscopic-assisted, en bloc composite flap face and neck lift without a preauricular incision. The technique uses the prezygomatic and premasseteric (facial) and subplatysmal (neck) spaces as ideal optical cavities for endoscopic dissection and ligament release. Verticalization of fixation vectors and modified concho-mastoid traction sutures are used to minimize preauricular skin redundancy. The surgical procedure is described in detail. Clinical experience in 41 consecutive cases and comparison to other techniques with respect to relevant anatomy are also presented. This endoscopic en bloc composite flap facelift technique consistently and safely produced results comparable to conventional, "open" composite flap facelifts done by the same surgeon on similar candidates during a prior period.

Keywords
- deep plane
- composite flap
- facelift
- endoscopic facelift

Gravitational facial aging occurs along the path of least resistance, which is the loose, areolar subsuperficial musculoaponeurotic system (sub-SMAS)/platysma glide plane. Extended deep-plane and composite flap (unilamellar SMAS release) facelift techniques allow anatomic reversal of this process by releasing the ligaments between the prezygomatic, premasseteric, and subplatysmal subdivisions of this space. In this way, these techniques reposition and fixate deeper structural tissues without manipulation and vectoring of the skin as a separate layer. In the cases where skin excess is mild to moderate, this means that the preauricular incision serves only the purpose of access. With access and composite flap fixation done endoscopically through hair-bearing incisions, the preauricular scar—a major stigma of facelift surgery—can be eliminated. The author has done this over 41 consecutive cases with results comparable to traditional, "open" composite flap lifting done during a period prior to the performance of the endoscopic technique.

Unilamellar SMAS Release Techniques' Advantages

Modern composite flap facelifting has evolved over what is now a half century. In 1974, Skoog introduced the concept of rejuvenating the face by lifting the deeper fascial layers, elevating what he termed the "buccal fascia" in continuity with the neck.[1] Mitz and Peyronie subsequently named that fascial layer the SMAS, or "superficial musculo-aponeurotic system."[2] Hamra borrowed Skoog's technique, but abandoned

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the subplatysmal dissection in the neck in favor of extensive subcutaneous undermining. Hamra eventually added the orbicularis oculi muscle (OOM) to his flap and termed it the "composite facelift," with the OOM and zygomaticus muscles elevated and suspended under "extraordinary tension" to the periosteum via a transcutaneous lower blepharoplasty approach.[3,4] Owsley[5] and Stuzin et al[6] subsequently advocated a two-layer extended SMAS dissection that moves the skin and SMAS in separate directions. From the late 1990s up to the present, the efforts of the American Board of Plastic Surgery (ABPS) certified facelift surgeons working in the sub-SMAS plane have largely followed this "bilamellar" tradition, influenced by the widespread teaching of Sundine and Connell[7] and Marten,[8] rather than composite flap techniques like Hamra's.

It was largely the facial plastic surgery (American Board of Facial Plastic and Reconstructive Surgery [ABFPRS]) community that maintained interest in composite flap techniques from the late 1990s to today.[9] Their "deep-plane" dissection remained superficial to the OOM but deep to the SMAS below the inferior border of that muscle, and did not incorporate Hamra's transblepharoplasty manipulation of the OOM and/or zygomaticus muscles due to its high rate of lower eyelid complications like orbicularis oculi weakness and ectropion. Like Hamra's, their sub-SMAS dissection ended at the border of the mandible and the neck was widely undermined only in the subcutaneous plane. The extended deep-plane facelift as reported by Jacono and Parikh in 2011[10] incorporated a return to Skoog's subplatysmal neck dissection but maintained a midface dissection superficial to the OOM.

In 2015, a technique was reported combining the subplatysmal neck dissection with a sub-SMAS *and suborbicularis oculi* en bloc "total composite flap," while also detailing reasons for selecting this operation over a bilamellar technique based upon current studies of SMAS anatomy.[11] Midfacial elevation was found to be superior using the composite flap technique. This is due to the fact that the SMAS attenuates, in thickness and measured strength, in the area of the zygomaticus major muscle and hence cannot independently transfer any lifting effect on the malar fat pad.[12–15] Full release of all sub-SMAS retaining ligaments repositions the SMAS/platysma/skin composite flap while leaving the muscles of facial expression in their natural state, resulting in an authentic, refreshed appearance and durable rejuvenation.

Others have reported similar benefits from unilamellar SMAS release surgery,[16,17] bringing a large academic contingent into alignment with lay observers in noting the dramatic results these approaches can yield.

The Scar: A Facelift Stigma

Despite all these innovations, for many potential patients the preauricular incision remains one of the most objectionable stigmata of a facelift. In the plastic surgeon's parlance, the word "facelift" is any procedure that involves incising in front of the ear, while the lay population conjures any number of radical and unacceptable images when they hear that word. Without a doubt almost any surgeon reading this article who has performed facelift has heard a patient recoil with fear upon hearing it. "A 'facelift'??" they exclaim. "I don't need a facelift! Isn't that where they pull off your whole face (or ear) and put it back on?" This has led plastic surgeons to invent a plethora of alternative names to describe the operation to patients. Behind the linguistics, though, it is in no small part the preauricular incision—*and not any other portion of the face and neck lift incision complex*—that gives birth to the public's horrifying yet totally unfounded aversion to facelift surgery.

But the preauricular scar is not just a public relations problem: it is a surgical shortcoming. Patients tolerate unacceptable facelift scars because they cannot see them easily. It is difficult to see one's own preauricular area in a mirror directly, and when it is attempted by looking obliquely, scar contour irregularities are hidden for two reasons: (1) the proximal skin protrudes to cover them and (2) the contralateral eye is shielded by the radix, impairing depth perception of three-dimensional defects. One group that does not miss these imperfections, though, is the group of patients' friends who may or may not say anything to the patient as they whisper among themselves that their friend has had a facelift. The visible scar is the ultimate "telltale."

This demands that the next generation of facial rejuvenation surgeons seek to avoid this scar when possible by employing endoscopic—and therefore, by its strict surgical definition, minimally invasive—procedures.

Other Endoscopic Facelift Techniques

Endoscopic facelift techniques are typically limited to the midface/cheek area and have primarily been done in the subperiosteal plane, since that plane lies safely deep to the facial nerves.[18] But these subperiosteal techniques have disadvantages that account for their lack of widespread acceptance. First, their approach is "extra-anatomic" in that it is not the periosteum that became ptotic but the SMAS/platysma as it slid along the natural glide plane described earlier. Second, elevating and repositioning periosteum along the zygomatic arch simultaneously repositions the origin of the zygomatic muscle complex, rendering the smile less natural. Finally, as mentioned, the technique only applies, by anatomic limitation, to the midface area.

While the subperiosteal midface lift has not gained wide acceptance as a useful solution to facial (or even isolated midfacial) aging, there have been other endoscopic facelift techniques described with very limited sub-SMAS dissections[19] and separate sub-SMAS dissections in the mid- and lateral/lower face.[20] The latter of these involves extending the subperiosteal endo-brow dissection into the supraperiosteal prezygomatic space. Therefore, while it does ultimately enter the "sub-SMAS" plane, its approach to the midface is deep to the frontal branch of the facial nerve, while the lateral portion of the SMAS elevation and/or fixation is done superficial to the frontal branch; both flaps are fixated with spanning sutures. The composite flap is therefore not "en bloc" since connecting the two dissections would transect the frontal branch. As will be described in detail below, the present technique approaches the prezygomatic space and lateral SMAS via a subcutaneous temporal/preauricular pocket, superficial to the frontal branch of the facial nerve, exactly as in a standard "open" composite flap technique (see ►**Fig. 9**). This allows the prezygomatic and premasseteric (facial) and subplatysmal (neck) dissections to be joined and the flap fixated en bloc, using more reliable imbricating rather than spanning sutures.

To date, there has not been a report of an endoscopically assisted en bloc, extended composite or deep-plane face and neck lift without a preauricular scar. The present technique is therefore a completely novel one.

Surgical Procedure

Please see ►**Figs. 1**–**5** for diagrams of incisions and flap anatomy, and ►**Figs. 6**–**13** for operative steps and accompanying endoscopic views as relevant.

The operation is performed under total intravenous anesthesia (with propofol and endotracheal intubation for mechanical airway protection). Markings are made in the upright position and include the zygomatic arch, Pitanguy's line, the zygomatic major muscle, the facial artery crossing the mandible, and the limits of subcutaneous and composite flap dissection. An endoscopic browlift is typically done prior to the face and neck lift portion. This order of procedures is important because fixation of the SMAS cuff places downward traction on the deep temporal fascia, which restricts lateral temporal and brow elevation. Conversely, lifting the brow first establishes a firmer and higher surface of fixation for the temporal SMAS cuff and a more harmonious upper and midface elevation.

The areas of dissection are infiltrated with 0.5% lidocaine with 1:200,000 epinephrine and 1 mg/ml tranexamic acid. A 2-cm anterior submental incision is usually made and deep neck contouring (subplatysmal fat, anterior belly of the digastric, and ptotic submandibular salivary gland reduction) along with platysmaplasty using 4–0 Mersilene sutures is done. The

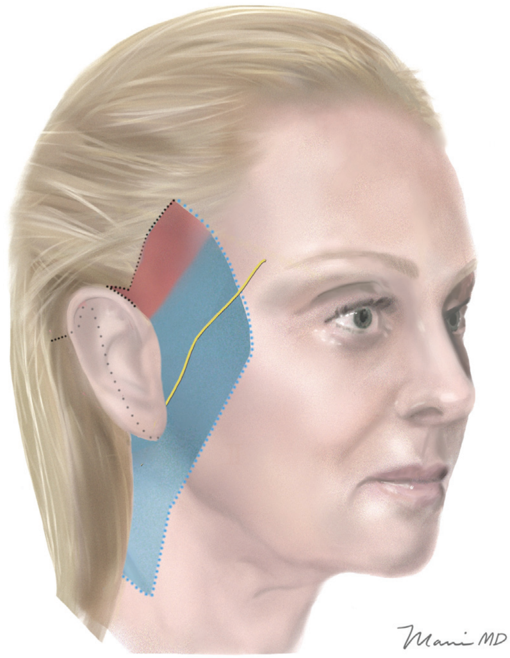

Fig. 2 Limits of skin dissection, initial undermining. *Blue area* = subcutaneous; *red area* = subtemporoparietal fascia (in hair-bearing portion, to preserve follicles).

postauricular incision (see ►**Fig. 1**) is then made and carried into the occipital hair, and a subcutaneous flap elevated from the mastoid area down to 8 cm below the earlobe and up to the point of the previously marked SMAS/platysma entry incision. The platysma is incised at the anterior border of the sternocleidomastoid and the subplatysmal space elevated using

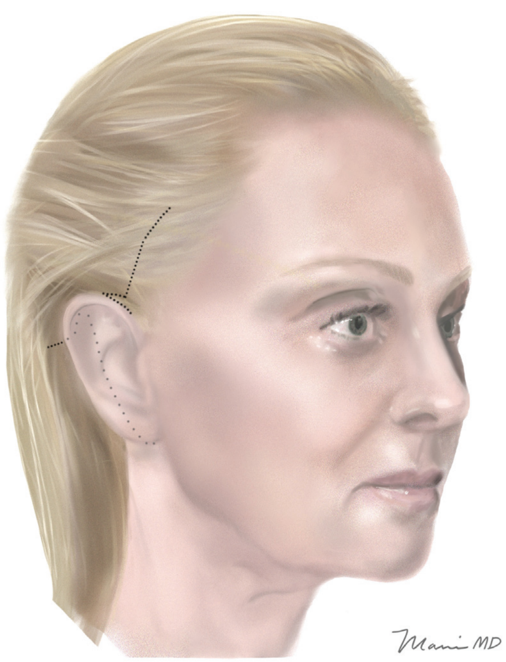

Fig. 1 Incisions in the temporal area and in the postauricular sulcus/occipital hair (*dotted lines*).

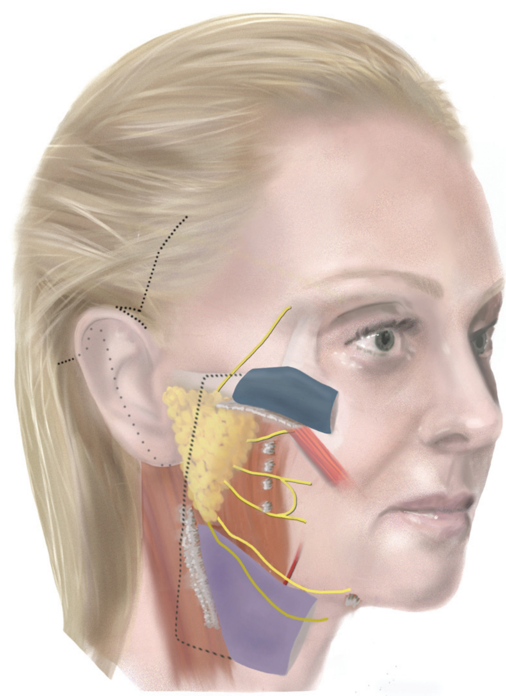

Fig. 3 superficial musculoaponeurotic system (SMAS)/composite flap entry point shown by *dotted lines* with relevant anatomy. *Blue* = prezygomatic space; *purple* = subplatysmal space; parotid gland and facial nerves are shown in *yellow*.

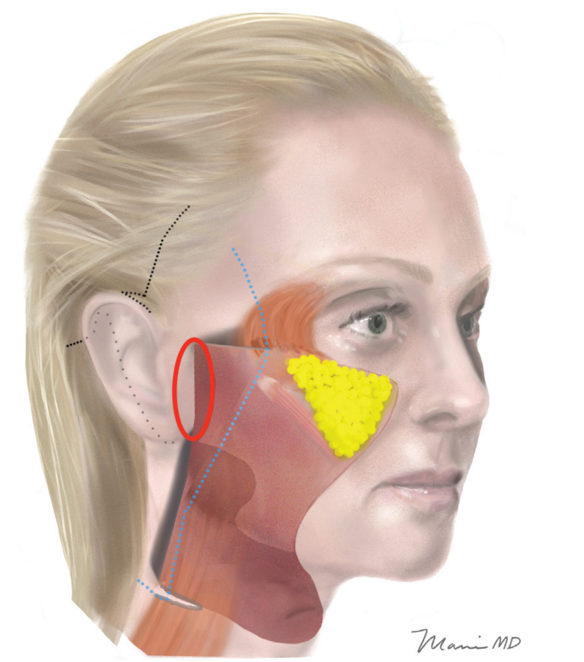

Fig. 4 Composite flap limits of dissection, shown in *red*. *Dotted blue line* = limit of skin undermining. The en bloc composite flap is shown extending from the top of the zygomatic arch superiorly to the nasolabial fold medially to a point 6 to 8 cm below the mandibular angle inferiorly. The orbicularis oculi muscle is shown and is included in the flap. The zygomaticus major muscle is shown deep to the dissection. The endoscopic-assisted portion of the dissection is shown in *lighter red*. The superficial musculoaponeurotic system (SMAS) entry point has been raised in the neck and above the zygomatic arch, but left intact laterally in the face (*area marked by red oval*) so that tension is preserved for endoscopic dissection. This cuff is released after the initial endoscopic dissection is done (see ►**Fig. 12**).

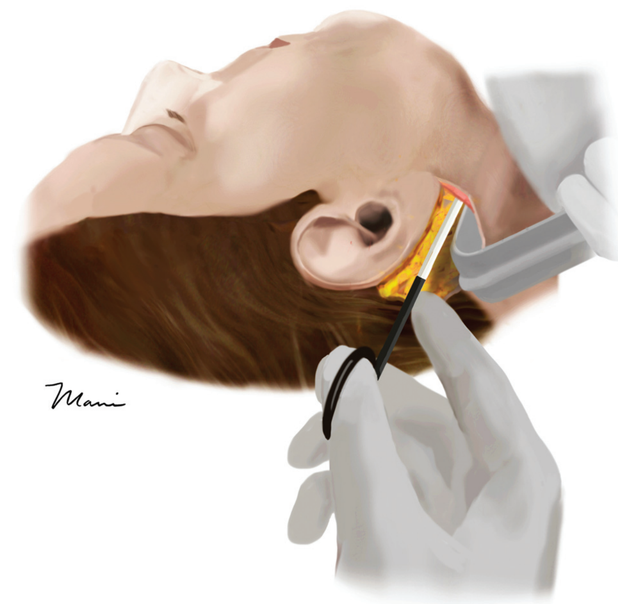

Fig. 6 Inferior (neck) dissection is begun via the postauricular/occipital hair-bearing incision. A subcutaneous flap is raised and the platysmal entry point is marked, incised, and dissected to the midline.

sharp dissection initially, then blunt dissection to the midline (see ►**Fig. 6**). Upper cervical facial nerve branches are preserved. The SMAS entry point just above the angle of the mandible is then incised and dissected away from the parotid capsule and masseteric fascia with a knife initially then Metzenbaum scissors and a Trepsat dissector. This dissection is done under direct vision using a lighted retractor, and extends up to the level of a line connecting the oral commissure and the earlobe (see ►**Fig. 7**); the more anterior portion of

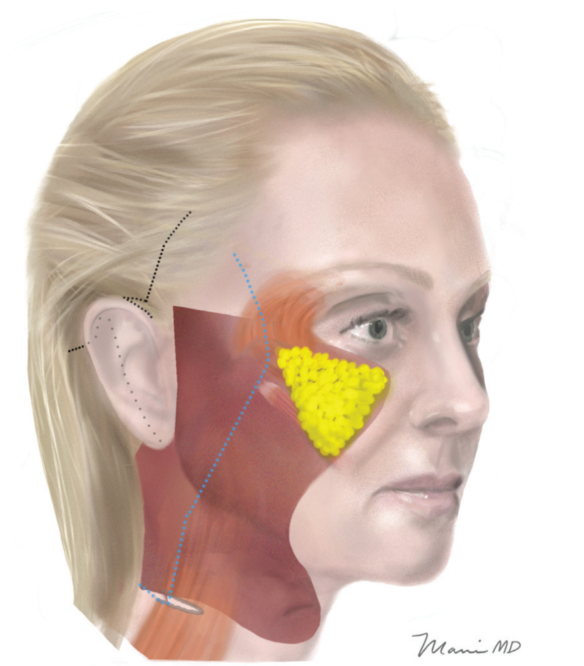

Fig. 5 Composite flap, shown in *red*, after fixation.

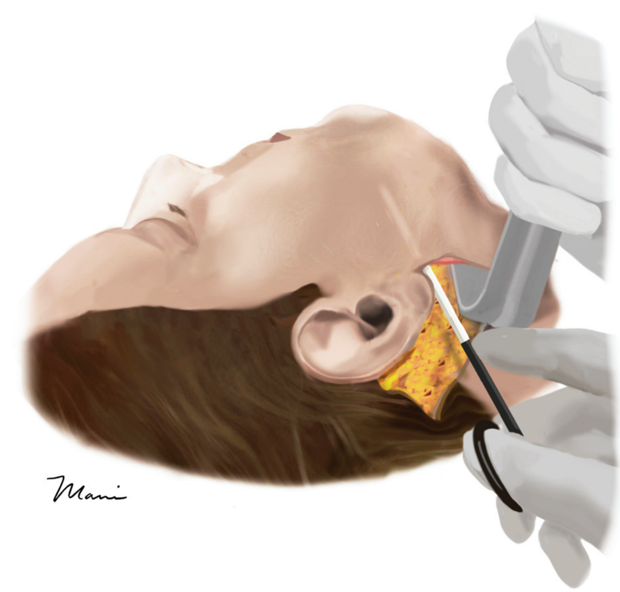

Fig. 7 Inferior (lower face) dissection is done via the postauricular/occipital incision. The earlobe is retracted cephalad and secured to the preauricular skin with a 3–0 silk retention suture to facilitate the dissection, which is done with a lighted retractor under direct vision.

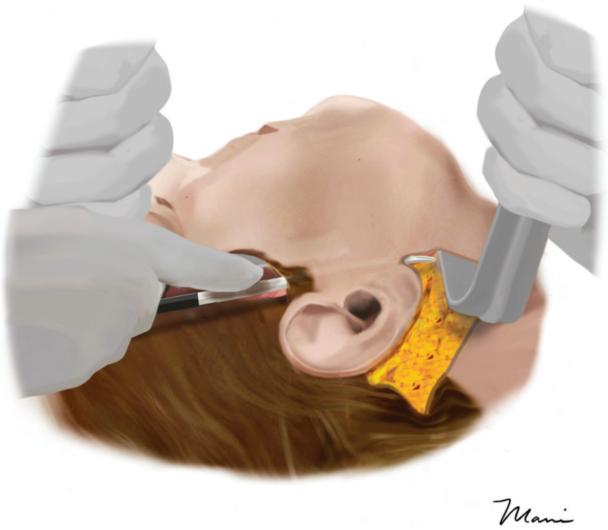

Fig. 8 After the temporal incision is made and the upper subcutaneous dissection is done (leaving a temporal patch under the hair-bearing area), the subcutaneous pocket is connected with the inferior one.

the dissection, including the area where the marginal mandibular nerve becomes more superficial, is left for later release under direct endoscopic vision from above (see ►**Fig. 4**). This lower face dissection is then connected to the subplatysmal neck dissection, leaving a mesentery as required over the area of the marginal mandibular branch of the facial nerve. The dissection will be completed up to the level of the facial artery under endoscopic guidance via the temporal approach since the marginal branch can often be identified with the endoscope.

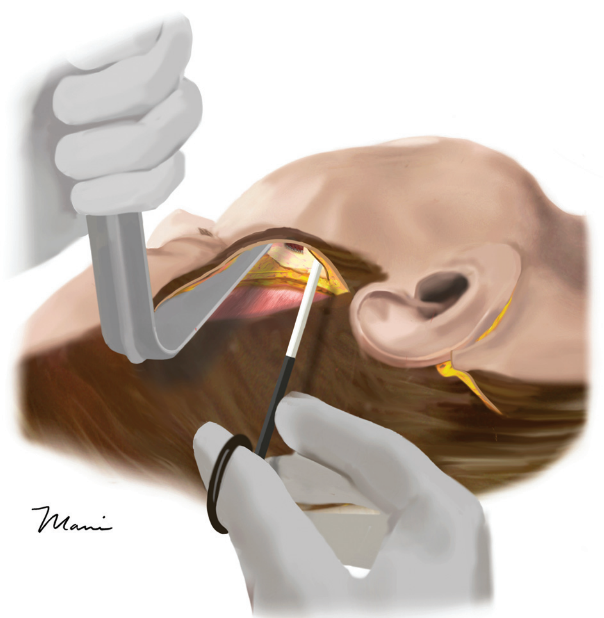

Fig. 9 The superior portion of the composite flap entry point is incised, the orbicularis oculi muscle is raised, the prezygomatic space is entered, and the origin of the zygomaticus major muscle is identified using a lighted retractor under direct vision.

The vertical temporal incision is made next, approximately 3 cm long and 2 cm posterior to the hairline. Above the helical root, a triangular anteriorly based skin flap is created to avoid a visible incision on any bare skin there (see ►**Fig. 1**). Dissection goes straight down to the superficial layer of the deep temporal fascia so that a layer of temporoparietal fascia is left deep to the hair follicles; then sharp dissection transitions back into the subcutaneous plane (see ►**Fig. 2**). The skin is elevated to the SMAS entry point and connected with the previously dissected subcutaneous pocket in the lower preauricular area (see ►**Fig. 8**). For this endoscopic approach, the SMAS entry point forms a right angle approximately 2 cm anterior to the helical root and just below the superior border of the zygomatic arch. The lateral line of this entry point is more posterior than the author's usual "open" composite flap entry point to avoid prolonged indentation of the skin, which occurs after fixation when a more medial SMAS entry is used (see Discussion below). The horizontal line at the SMAS entry point atop the zygomatic arch is incised, leaving the lateral border of the SMAS entry intact (see ►**Fig. 4**) so that an optical cavity can be created and dissection can be done under tension using the endoscopic retractor (Karl Storz). Dissection proceeds medially into the prezygomatic space under direct vision until the origin of the zygomaticus major muscle is found (see ►**Fig. 9**). The endoscope is then introduced and blunt dissection is carried medially over the origin of the zygomaticus minor muscle and into the medial cheek. Vertical scissor spreading combined with Trepsat dissection allows complete and safe release of all retaining ligaments. The zygomatic ligaments are completely released under endoscopic visualization and blunt dissection continues over the zygomaticus muscles, into the cheek and down to the nasolabial fold (see ►**Fig. 10**). Facial nerve branches including the recurrent branch between the buccal and zygomatic rami, and the branch innervating the zygomaticus major muscle are usually seen very clearly with the magnification power of the endoscope, giving a high degree of confidence that these branches are protected.

Blunt dissection then continues inferiorly into the premasseteric space, which separates easily. The dissection is connected with the sub-SMAS/platysmal dissection of the lower face. A needle is introduced in the area of the facial artery at the border of the mandible so that the marginal mandibular branch can be identified endoscopically and protected (see ►**Fig. 11**). The lateral border of the SMAS entry point is now released to connect with the SMAS cuff in the lower face and neck (see ►**Fig. 12**). The entire SMAS cuff is visible through the endoscope, extending from the area of the upper zygomatic arch to the base of the neck. At this point, the scissors can be introduced via the postauricular incision while the endoscope remains in the temporal sub-SMAS cavity to visualize the dissection (see ►**Fig. 13**). The sub-SMAS dissection is completed in this manner, with all retaining ligaments and fibrous attachments released up to the oral commissure. The en bloc SMAS–platysma–skin composite flap is now released (see ►**Fig. 4**).

Prior to fixation, two maneuvers are required. First, excess fixed SMAS in the infralobular area is excised and a pocket is made anterior to the mastoid by elevating the parotid fascia

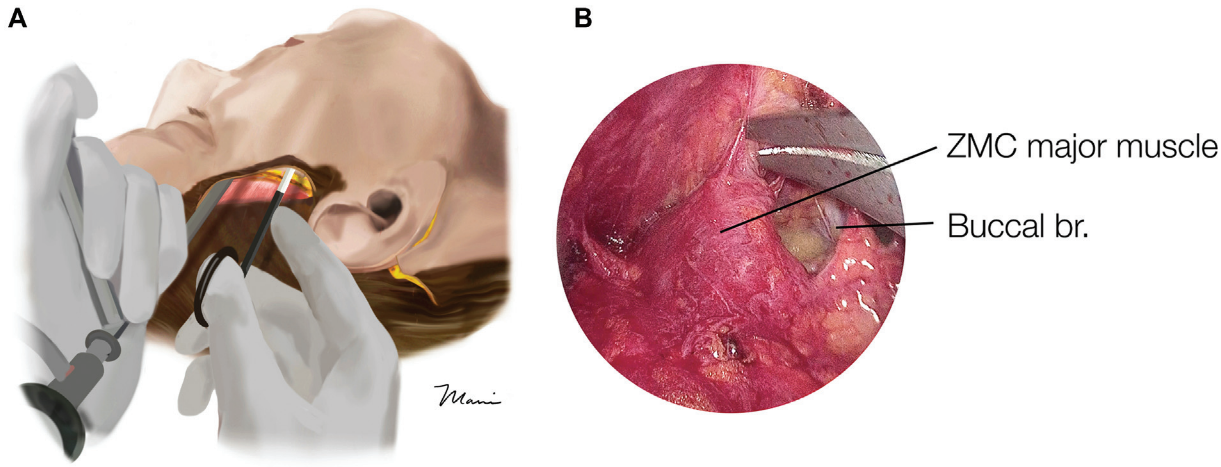

Fig. 10 (**A**) The endoscope is inserted and blunt dissection is carried medially over the origin of the zygomaticus (ZMC) major and minor muscles and down to the nasolabial fold. (**B**) Facial nerve branches, including the zygomatic branch to the ZMC major and buccal branches, are clearly identified with the endoscope and preserved as seen in the inset.

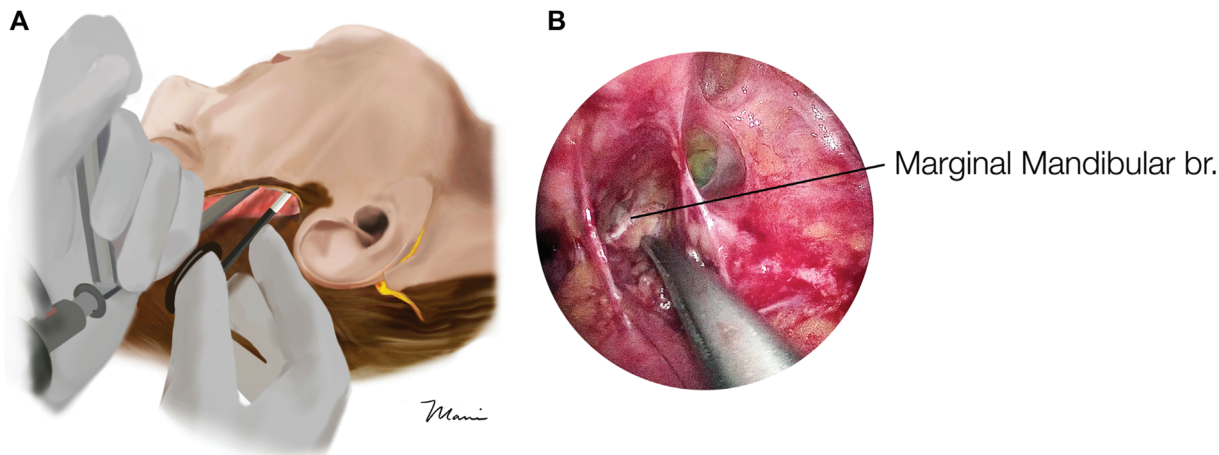

Fig. 11 (**A**) The endoscopic dissection continues down into the premasseteric spaces, connecting with the inferior dissection and extending anteriorly along the jawline for maximal release of jowling. (**B**) The superficial portion of the marginal mandibular branch is identified by placing a needle in the area of the facial vein crossing the mandible and protected as seen in the inset.

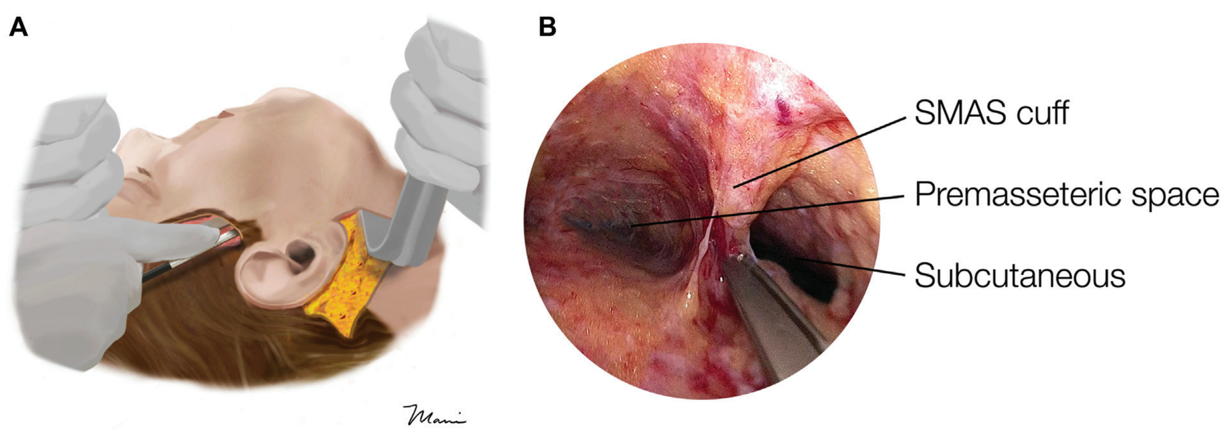

Fig. 12 (**A**) The lateral superficial musculoaponeurotic system (SMAS) cuff is released under endoscopic visualization, while a retractor elevates the inferior flap for tension. (**B**) The lateral SMAS cuff as seen endoscopically.

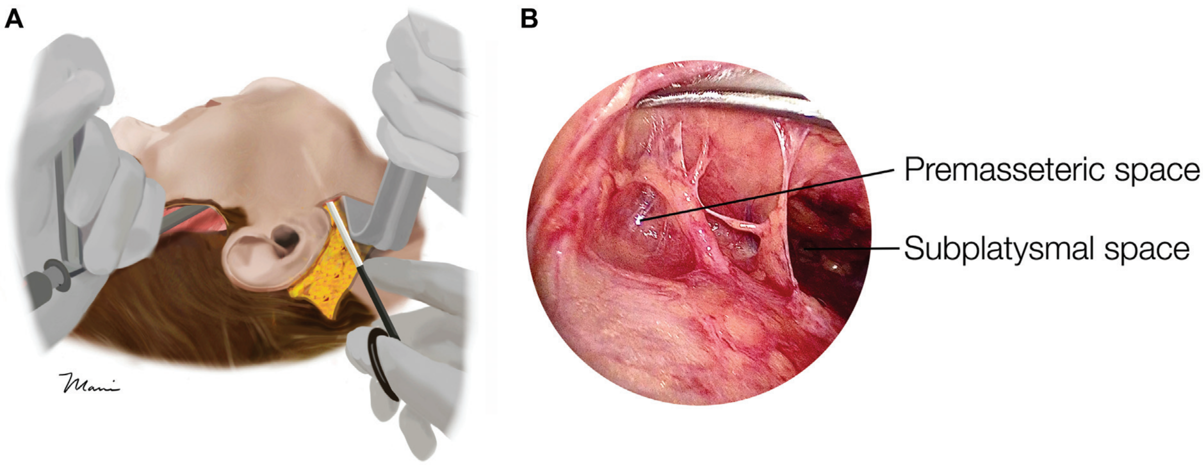

Fig. 13 (**A**) The final release of all retaining ligaments up to the level of the oral commissure and nasolabial fold is completed under direct endoscopic visualization from above by inserting the scissors through the inferior incision. (**B**) The scissors are inserted via the postauricular incision and visualized through the endoscope inserted through the temporal incision.

(“mastoid crevasse” technique).[21] Furnas sutures of 2–0 Ethibond are placed between the concha and the mastoid periosteum. This serves the purpose of stabilizing the ear against the downward traction that otherwise distorts ear position and compromises jawline SMAS/platysma elevation (an issue also with open, and particularly secondary, facelifts). Moreover, retracting the ear posteriorly and superiorly using these Furnas sutures helps minimize pleats of skin in front of the ear resulting from elevation of the SMAS cuff. Effectively, superoposterior ear elevation with Furnas sutures takes the place of preauricular skin removal; the ear returns to a normal position within a few weeks at most.

Fixation of the flap begins at the mastoid area after determining the ideal vectors. This is done by grasping the SMAS cuff at its most superior and inferior extent with Kocher clamps and distracting it upward and laterally while observing the face (see ►**Fig. 14**). Horizontal mattress sutures of 3–0 Ethibond are placed, with the first one placed into the mastoid “crevasse.” Several more are placed into the platysmal cuff in a superolateral direction as appropriate for optimal neck aesthetics. Once sutures are placed as far superiorly as can be visualized directly in the prelobular area, fixation continues via the temporal incision. Again, horizontal mattress 3–0 Ethibond sutures are used and fixation is done to the deep temporal fascia first. A vertical vector is employed as much as possible by extending the subcutaneous pocket as close to the lateral canthus as necessary to accommodate more medial points of fixation. Ethibond sutures are placed as far down as possible to secure the lateral SMAS cuff to the fixed preauricular SMAS. This limit is typically near the helical root. After this is done, a running 4–0 Ethibond is placed, with the first bite secured via the postauricular incision; then the needle end of the suture is brought up through the temporal incision and run from inferior to superior while visualizing from the cephalad approach (see ►**Fig. 5**).

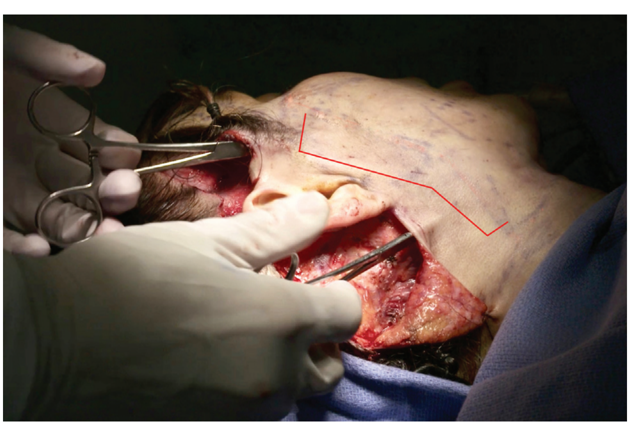

Fig. 14 The appropriate vectors of fixation are determined by grasping the superficial musculoaponeurotic system (SMAS) cuff with Kocher clamps and distracting the completely mobilized composite flap superolaterally. *Red line* = SMAS cuff.

A hemostatic net using 4–0 nylon is placed in the temporal and postauricular areas of subcutaneous undermining. A subplatysmal drain is placed in the cases where partial submandibular gland resection is done and brought out above the left occipital hairline. The hair-bearing (temporal and occipital) and postauricular incisions are closed with inverted dermal 4–0 Monocryl sutures followed by a running 5–0 Prolene suture.

Discussion

Results

The author’s experience in 41 cases shows en bloc composite flap face and neck lift technique to be a safe, effective, and durable one for patients with mild to moderate skin excess. Longevity of results is comparable to traditional “open” composite flap facelifts as performed by the author prior to the development of the endoscopic en bloc technique. Complication rates were minimal and similar between the two techniques. There were no hematomas; there was one temporary right upper cervical branch (depressor labii inferioris) weakness that resolved within 3 months. Thirty-seven of 41 patients were very pleased with their results from the initial procedure and the remaining 4 had issues that, once addressed, left them very satisfied. Two patients, who were among the first 15 in the series, required conversion to open composite flap lifting after 1 year. One of these had visibly poor skin elasticity despite young age (39 years), and the other had notably heavy facial tissues. Both of these factors were subsequently taken as relative contraindications for the procedure and no conversions to an open procedure were necessary after that point. Among the remaining 39 patients, 2 patients had symmetric lateral cheek depressions that were correctable with fat transfer under local anesthesia, which gave them a result that they were pleased with. This depression deformity is a mild version of a “smile block,” a known sequelae of deep-plane or composite flap lifting with three possible causes: (1) the cheek SMAS fixation is too medial; (2) the OOM is partially denervated; or (3) the zygomaticus major muscle is injured. There were no slow blink reflexes in any of the patients, and no zygomaticus major muscle injuries occurred (something that is eminently noticeable particularly under endoscopic visualization). This left only (1) an SMAS fixation that was too medial as the explanation. Knowing this, a lateral shift in the design of the lateral border, and the fixation, of SMAS cuff (as noted above in the technique description) was made. The problem was not seen in any of the patients after this shift in technique.

Management of Skin Redundancy

One consequence of the endoscopic composite flap technique is that, in some cases, a “pleat” remains in the preauricular skin for several days up to 3 or 4 weeks. This issue is more likely in patients mentioned above whose midfacial aging has taken a more medial vector, and who might require a more lateral vector of fixation. With experience in selecting patients and the dissection of a larger and higher subcutaneous temporal pocket to accommodate a more vertical vector of fixation, this issue has been minimized. However, this possibility is always disclosed to the patients preoperatively and other patients’ lateral photographs in the postoperative course are shown during consultation.

Related to this is the issue of ear angle rotation. As a result of the modified concho-mastoid (Furnas) sutures, the ear can remain rotated (counterclockwise on the left, clockwise on the right) for several weeks postoperatively. However, it then returns to a normal position. This ultimate situation is much preferable to one where the ear descends downward and medially during healing as often occurs with open techniques where (1) the ear is not fixated with Furnas sutures and (2) the SMAS cuff is sutured to the preauricular fascia, which, “fixed” though it is, still exerts traction on the ear to which it is ultimately attached. Not only does this ear deformity stand out as a stigma of a facelift, but it also reflects a significant loss of any correction of the lower face and jawline laxity caused by fixation to a relatively mobile structure. The modified Furnas sutures solve both problems, stabilizing the ear and bolstering lower face and jawline correction by effectively translating SMAS/platysma fixation to the immobile mastoid periosteum.

Patient Selection

Patient selection is key in choosing the endoscopic technique. In general, as noted earlier, patients with mild or moderate skin laxity are good candidates. Of course, ideal patients for the endoscopic composite flap approach tend to lie in the younger age group. Younger patients with gravitational “rectangularization” of the deep tissues form the core category of ideal candidates; patients as young as 28 years, who typically have lost significant (20–30 lb) weight and still have youthful skin elasticity, and patients in late 30s to mid-40s are nearly unequivocally considered as endoscopic candidates.

Some older patients with mild facial ptosis and pronounced neck laxity have been treated quite successfully with the endoscopic technique. In these cases, the temporal endoscopic incision and composite flap elevation is still done, at the very least for “tailoring” of the mid and lower SMAS to avoid redundancy in the lower face. Even in these cases, the entire midfacial dissection is done to achieve an even correction of all areas of the face and neck. Some patients and ethnic groups age in a way that fits them into the endoscopic category. Asian patients can be candidates even into the late 60s, still having optimal results as depicted in ►**Fig. 18**.

The author makes the decision about whether an endoscopic procedure will be successful by facial palpation during preoperative consultation. The soft tissues are manually elevated with the patient looking in a mirror until an optimal correction of gravitational aging is simulated, noting how much excess skin is present in the preauricular fold created by this maneuver. The skin is then held in place, while the examining surgeon then elevates the ear in a superolateral direction to estimate the degree to which Furnas sutures will be able to flatten this preauricular fold. If the fold disappears or nearly disappears, the endoscopic procedure is planned. In all of the cases done so far, the decision to perform the endoscopic procedure has been successfully performed surgically: in other words, none have been converted to an open procedure during surgery. Patients are told that this is unlikely but possible and are consented accordingly.

Comparison to Other Techniques

The comparison to the other evolving technique of endoscopic composite flap lifting, where the sub-SMAS midface is approached as a continuation of the lateral orbital endoscopic browlift dissection, is an important one. As mentioned earlier, this “endo-brow” midface approach necessitates a separate lateral and lower face flap since connecting the two would transect the frontal branch, which runs between them. In theory, the flaps could be connected and fixated superficially to the frontal branch after dissection, but that would be equivalent to the technique presented here.

The advantages of endoscopically elevating a single, en bloc composite SMAS/platysma flap as opposed to multiple separate flaps are many. First, the present “en bloc” flap generates the same harmonious and even smooth rejuvenation as a traditional deep-plane or composite flap facelift, while a technique that involves multiple entry points into the SMAS/platysma will be less likely to replicate this proven effect. Second, the integrity of the entire face/neck composite flap is better preserved when it is raised as an en bloc unit and not separated by facial regions. This in turn will likely better protect the longevity of the result. Third, the technique should be easier to learn and replicate, since the

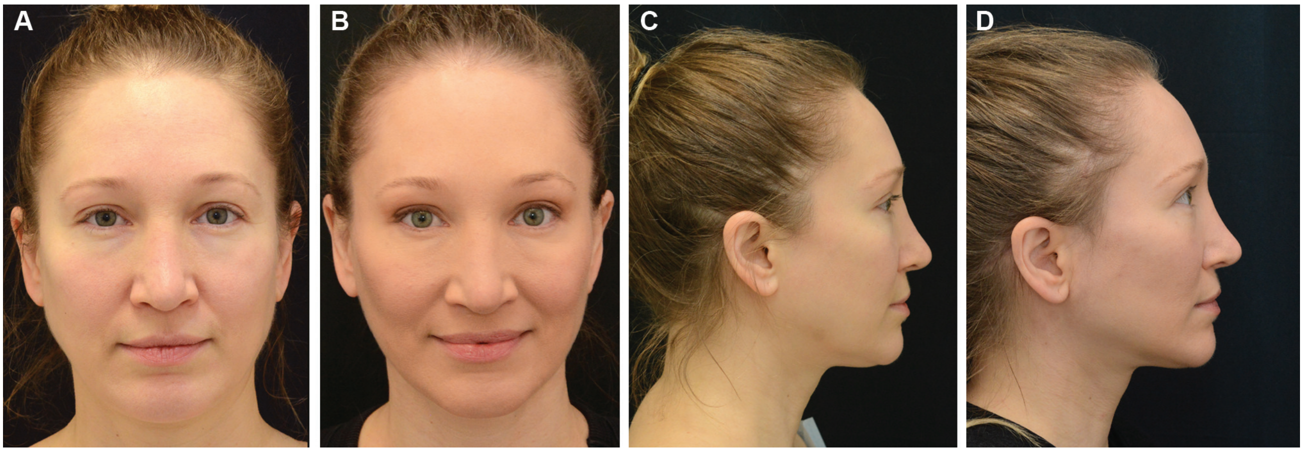

Fig. 15 A patient shown (**A**) before and (**B**) 2.5 years after endoscopic, scarless composite flap face and neck lift. A platysmaplasty with digastric and moderate salivary gland reduction and full-face nanofat transfer (as a skin treatment only) were also performed. An endoscopic browlift had been performed on this patient by the author 4 years prior to this before photograph. Anteroposterior view. The patient shown (**C**) before and (**D**) 2.5 years after endoscopic, scarless composite flap face and neck lift. A platysmaplasty with digastric and moderate salivary gland reduction and full-face nanofat transfer (as a skin treatment only) were also performed. An endoscopic browlift had been performed on this patient by the author 4 years prior to this before photograph. Right lateral view.

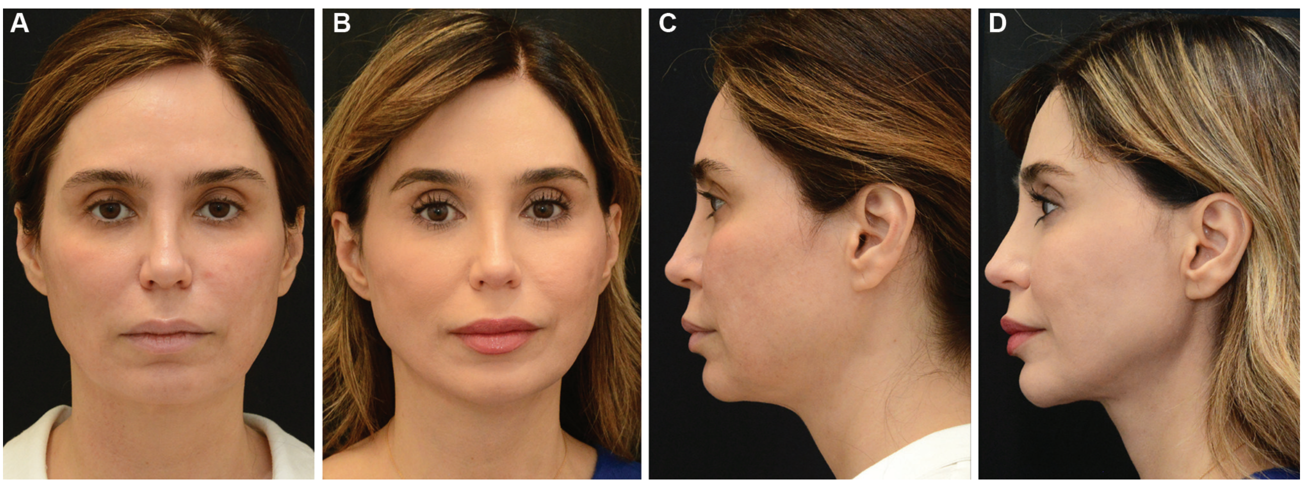

Fig. 16 A patient shown (**A**) before and (**B**) 2.5 years after endoscopic, scarless composite flap face and neck lift. An endoscopic browlift and platysmaplasty with digastric and moderate salivary gland reduction, as well as full-face nanofat transfer (as a skin treatment only), were also performed. Anteroposterior view. The patient shown (**C**) before and (**D**) 2.5 years after endoscopic, scarless composite flap face and neck lift. An endoscopic browlift and platysmaplasty with digastric and moderate salivary gland reduction, as well as full-face nanofat transfer (as a skin treatment only), were also performed. Left lateral view.

procedure duplicates an existing well-known one in the open deep-plane/composite lift other than the endoscopic assistance used to avoid a preauricular incision. Fourth, magnification of the endoscopic camera visualization means that facial nerve branch visualization and protection is, if anything, enhanced rather than compromised. Of note is the fact that the single (temporary) facial nerve weakness in this series of 41 was an upper cervical branch, which lay in an area dissected under direct vision—exactly as in the open procedure. This is a temporary complication that the author has had occur with approximately equal frequency using the traditional open technique.

Finally, there are potential advantages of the endoscopic technique aside from the avoidance of a preauricular scar. Midface structures are accessed from above rather than laterally as in the conventional "open" composite flap technique, and the fixation is therefore forced to be in a more vertical direction by this fact as well as the fact that a too-lateral pull on the SMAS cuff exacerbates the above-mentioned "pleat" of skin in the preauricular area. In most cases, a more vertical vector on the SMAS is preferred, so this might be considered a favorable consequence of the technique as long as the vector of lifting suits the face being operated on.

Conclusion

The preauricular scar is one of the stigmata of a facelift that discourages many patients from having the procedure. Endoscopic en bloc composite flap face and neck lift allows patients of younger age and/or minimal to moderate skin excess to have results comparable in appearance and duration to conventional, "open" composite flap facelift procedures.

Fig. 17 A patient shown (**A**) before and (**B**) 2.5 years after endoscopic, scarless composite flap face and neck lift. An endoscopic browlift and platysmaplasty with digastric reduction were also performed. Anteroposterior view. The patient shown (**C**) before and (**D**) 2.5 years after endoscopic, scarless composite flap face and neck lift. An endoscopic browlift and platysmaplasty with digastric reduction were also performed. Left lateral view.

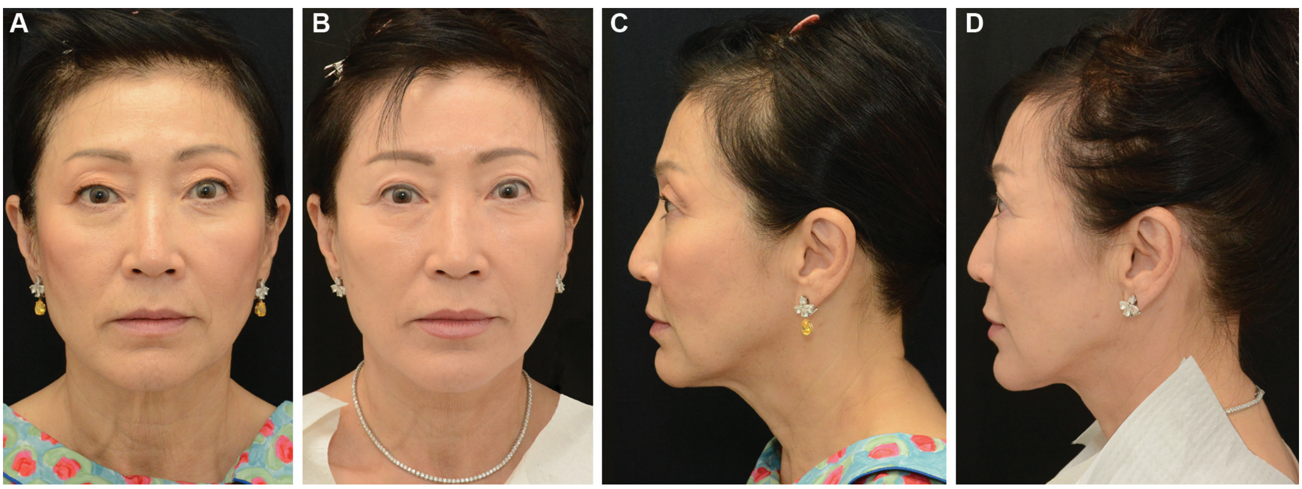

Fig. 18 A patient shown (**A**) before and (**B**) 2.5 years after endoscopic, scarless composite flap face and neck lift. An endoscopic browlift and platysmaplasty with digastric and moderate salivary gland reduction, as well as full-face nanofat transfer (as a skin treatment only), were also performed. Anteroposterior view. The patient shown (**C**) before and (**D**) 2.5 years after endoscopic, scarless composite flap face and neck lift. An endoscopic browlift and platysmaplasty with digastric and moderate salivary gland reduction, as well as full-face nanofat transfer (as a skin treatment only), were also performed. Left lateral view.

Patient Consent

Patients provided written informed consent for the use of their images.

Previous Presentations

International Society of Aesthetic Plastic Surgeons (ISAPS) World Congress, Vienna, Austria, September 2021; ISAPS World Congress, Istanbul, Turkey, August 2022; American Association of Facial Plastic and Reconstructive Surgery (AAFPRS) Rhinoplasty and Facial Rejuvenation Meeting, San Diego, California, United States, April 2023; and AAFPRS Annual Meeting, Las Vegas, Nevada, United States, October 2023.

Conflict of Interest

None declared.

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