

Complete Platysma Muscle Suspension in Deep-Plane Face-Lift Surgery

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Summary: Deep-plane face-lift surgery is not new, having originally been described over 30 years ago; however, the technique has seen a recent surge in popularity. Although proponents emphasize its ability to deliver very natural results, critics often cite the possibility of additional risk of the procedure because of its technically challenging dissection in proximity to branches of the facial nerve and other critical structures. These risks are perhaps greatest when operating in what have historically been described as the “danger zones,” particularly when releasing the zygomatic retaining ligaments, when performing the medial deep plane dissection in the midface, and when extending the platysma flap over the angle of the mandible into the neck. The senior author (D.B.R.) has performed deep-plane face-lift surgery for over 20 years, training many novice surgeons to perform this procedure safely and incrementally. In this article, the authors illustrate surgical techniques to optimize safety when performing deep-plane dissections. A novel vertical midline platysmaplasty combined with extended release of the low cervical platysma provides rejuvenation of the neck that extends to the clavicles. (*Plast. Reconstr. Surg.* 155: 699e, 2025.)

Deep-plane face-lift surgery was originally described by Sam Hamra in 1990,¹ with modifications of the technique described by others, including extended dissection of the platysma flap into the neck.^{2,3} Although many have described variations of the procedure, most share a common entry point for superficial musculoaponeurotic system (SMAS)/platysma elevation, commonly described as a line from the lateral canthus to the mandibular angle, with extension of the lower portion of the facial flap, which is platysma, into the neck (extended deep plane surgery). The

role of midline platysmaplasty is controversial,⁴ having been described as negatively impacting the overall vertical lift of the neck, jawline, and midface in deep-plane face lifting.⁵ We believe that described platysmaplasties do limit vertical lifting while failing to address the entire neck, as they suspend midline platysma in a descended position. In this article, we demonstrate a face-lift technique that maximizes safety while rejuvenating the neck from menton to clavicle using a midline vertical platysmaplasty in conjunction with extended dissection of the lateral platysma extending up to 12 cm below the mandibular angle. This technique has been used in 450 face lifts over the past 3 years, yielding reproducible long-term results.

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PREOPERATIVE MARKINGS

The patient is marked in the preoperative holding area as shown. (See Video 1 [online], which demonstrates preoperative markings.) After induction of anesthesia, the patient is prepared widely with

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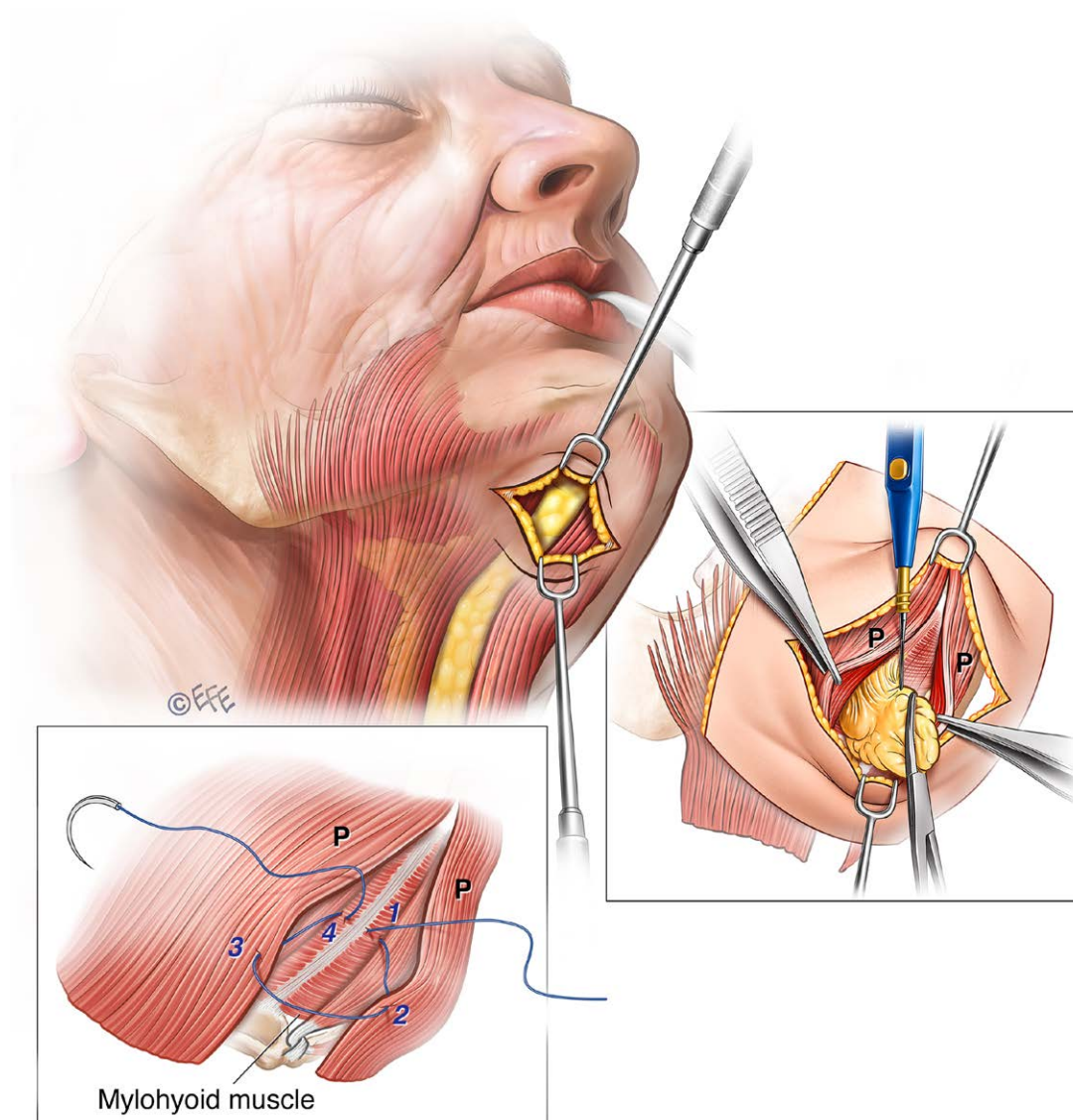


Fig. 1. Midline vertical platysmaplasty. (Above) Skin flaps are elevated in the subcutaneous plane to the cricoid cartilage inferiorly and the borders of the sternocleidomastoid laterally. (Below, right) Platysma flaps (*P*) are elevated, with a central strip of subplatysmal fat with or without some platysma muscle removed to approximately 2 cm below the hyoid. (Below, left) The platysmal flaps are secured to the underlying mylohyoid muscle with approximately 2 cm of vertical advancement of the platysma to address platysmal descent. The final suture is a 5-point stitch that includes the periosteum of the menton to prevent platysma descent. Illustrations used with permission of Levent Efe, MD, CMI.

betadine, and 85 cc of local anesthesia is prepared: this mixture consists of 50 cc of 0.5% lidocaine, 30 cc of 0.25% bupivacaine, and 0.4 cc of fresh epinephrine, making the concentration of epinephrine just under 1:200,000. Then, 30 cc is injected subcutaneously in the midline of the neck, with the remainder saved for injection into the face (25 cc each side).

MIDLINE VERTICAL PLATYSMAPLASTY

A midline vertical platysmaplasty is performed in 100% of patients, with a transverse submental

incision marked a few millimeters anterior to the submental crease. (See Video 2 [online], which demonstrates midline vertical platysmaplasty.) Liposuction may be performed in the subcutaneous plane for those with excess adiposity. Subcutaneous dissection proceeds to the level of the cricoid and laterally just anterior to the border of the sternocleidomastoid (Fig. 1, above). The platysma is elevated near the menton, and a strip is sharply excised to 1 to 2 cm below the hyoid (Fig. 1, below, right). Platysma flaps are then raised using electrocautery. Subplatysmal fat and anterior

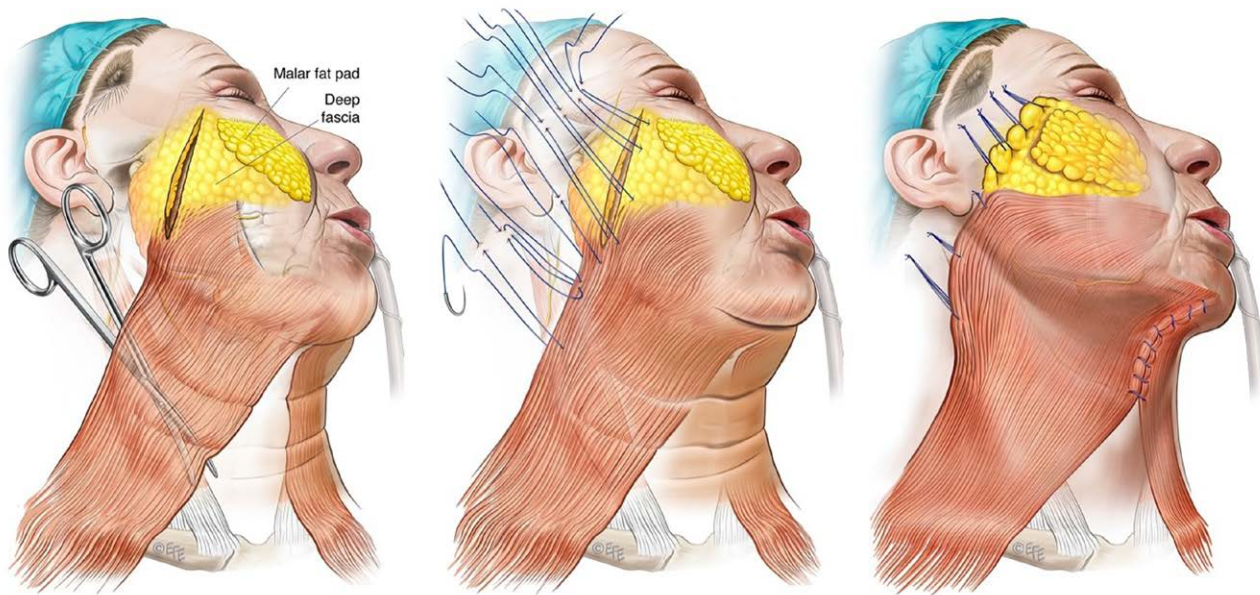


Fig. 2. Deep-plane face-lift dissection with complete platysma muscle suspension. (*Left*) The deep plane is entered at a line extending from the lateral canthus to 2 cm above the angle of the mandible. A combination of Bovie electrocautery and blunt dissection is used to extend the flap up to 12 cm below the angle of the mandible to address the low platysma. (*Center and right*) Spanning figure-of-8 Ethibond fixation sutures are used to secure the cervical platysma to the mastoid, and the facial platysma and SMAS are sutured to the parotid or temporal fascia. Illustrations used with permission of Levent Efe, MD, CMI.

digastric musculature are sculpted as needed. Near the menton, lateral dissection in the subplatysmal plane is limited to avoid compromising the marginal mandibular branch of the facial nerve. We do not ever remove submandibular glands in our practice, given the risk-to-benefit profile. Patients with any residual gland ptosis are offered neuromodulator injections to shrink the glands postoperatively if desired. A 4-point 3-0 Ethibond suture is then used to secure the flaps to the underlying mylohyoid fascia, advancing the platysma approximately 2 cm to vertically reposition descended platysma (midline vertical platysmaplasty) (Fig. 1, below, left). The final fixation suture begins with a deep bite of the periosteum at the menton before performing the platysma/mylohyoid suspension.

DEEP-PLANE MIDFACE DISSECTION

One side of the face is injected before performing the midline vertical platysmaplasty. The face-lift incisions are made with a No. 10 blade, and the flap is elevated in the subcutaneous plane with the assistance of a thimble hook to the deep-plane entry point. While an assistant provides countertraction, a No. 10 blade is used to cut through the platysma/SMAS until the shiny white surface of the parotidomasseteric fascia is encountered. (See Video 3 [online], which demonstrates deep-plane midface dissection.) The

deep plane is entered 2 cm superior to the angle of the mandible, and dissection is carried superiorly to the lateral malar eminence (Fig. 2). This is considered a safe entry point, as this entry point usually has dense parotid capsule underneath the platysma, facilitating identification of the appropriate plane. Blunt dissection is used to enter the premasseteric space, and blunt spreads superficial to the orbicularis oculi create a space superior to the zygomatic retaining ligaments, which are taken down sharply. Zygomatic branches of the facial nerve run more superficially in this region, so careful release of this ligament is performed superficially. The fibers of the zygomaticus major are visualized, and blunt spreads superficial to the muscle allows the dissection to proceed medially; this should be performed traveling from superior to inferior to prevent going deep to the zygomaticus major, where zygomatic and buccal branches of the facial nerve are at risk. The extent of medial dissection performed by the surgeon can be increased incrementally, with novice surgeons performing only 1 to 2 cm of medial dissection, and more experienced surgeons proceeding to the nasolabial fold and modiolus of the mouth.

EXTENDED DEEP-PLANE DISSECTION

The lateral neck skin flap is dissected, connecting the subcutaneous dissection in the



Fig. 3. Results of complete platysma muscle suspension with midline vertical platysmaplasty in deep-plane face-lift surgery. (Left) A 56-year-old patient is shown 6 months after her deep-plane face lift. (Right) A 68-year-old patient is shown 16 months after deep-plane face lift, endoscopic brow lift, upper and lower blepharoplasty, revision rhinoplasty, upper lip lift, and conservative fat transfer to the tear troughs. Both results demonstrate improved cervical contour down to the clavicle as a result of midline vertical platysmaplasty in conjunction with extended lateral platysma release and suspension.

lateral neck with the subcutaneous dissection performed through the submental incision. (See **Video 4 [online]**, which demonstrates lateral skin

flap dissection.) The Bovie electrocautery is set to 8, and the platysma flap is elevated inferiorly on “coagulate” while the assistant watches carefully

for lip twitches, indicative of proximity to the marginal mandibular or first cervical branch of the facial nerve. (See Video 5 [online], which demonstrates extended deep-plane dissection.) If twitches are observed, dissection stops at this point. The Bovie is kept at this low setting, as it is adequate to perform this dissection without generating excessive heat, allowing for twitches to be observed if the surgeon is in proximity to a branch of the facial nerve before causing thermal injury. Then, 5 to 12 cm of platysma is elevated off of its attachments to the anterior border of the sternocleidomastoid muscle, after which subplatysmal dissection of the muscle off of the deep cervical fascia becomes more facile. If cervical branches of the facial nerve are encountered during this dissection, blunt spreads are used to lift the muscle off of the cervical fascia without any traction on the nerve. At the conclusion of the platysma dissection, a single contiguous SMAS/platysma flap has been elevated in the face and neck. The face-lift scissors are used to dissect the SMAS/platysma off of the skin to create a 1- to 2-cm lip of SMAS/platysma for fixation. The degree of separation of the flap from the skin will depend on the degree of skin tethering observed by the surgeon. The vertical recruitment of low platysma eliminates the need for a lateral platysma myotomy, as the facial platysma is elevated without resistance.

PLATYSMA/SMAS FIXATION

Platysma mobilized by the midline platysmaplasty and extended lateral dissection is redraped vertically. Fixation proceeds from inferior to superior; two figure-of-8 sutures are placed in the neck from the platysma to the mastoid fascia (Fig. 2). (See Video 6 [online], which demonstrates platysma/SMAS fixation.) Platysma suspension proceeds superiorly at the angle of the mandible, and upward toward the final fixation suture just inferior to the lateral canthus, which is sutured to the temporal fascia. Any surgical knots that do not appear well buried are oversewn with 4-0 Monocryl to reduce palpability. We do not divide the platysma flap laterally, as this places cervical branches at risk without what we feel to be meaningful changes in the aesthetic result. As a final

step, the midline platysmaplasty is revisited, and a backcut is made, excising a triangle of platysma at the level of the hyoid bilaterally as needed to allow proper redraping of the muscle and smooth cervical contour.

CLOSING

The skin flaps are trimmed, and closure proceeds. (See Video 7 [online], which demonstrates the skin flap trim.) The Frasier tip suction is used to suction the neck to remove any blood at the conclusion of the case, and dressings are applied. (See Video 8 [online], which demonstrates the result on postoperative day 1.) In 450 operations, we have had 2 transient cervical branch neurapraxias that both resolved by postoperative week 6, and no injuries to frontal, zygomatic, buccal, or marginal mandibular branches of the facial nerve. Long-term results are shown in Figure 3.

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DISCLOSURE

The authors have no financial relationships or conflicts of interest to declare.

PATIENT CONSENT

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

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