Operative Dictations in Plastic and Reconstructive Surgery

Tuan Anh Tran
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Jamal J. Hoballah
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I would like to dedicate my efforts to all of my mentors at the University of Miami and UC Davis for training and inspiring me. My parents, Thong Tran and Dung Cao, and brother, Tu Tran for their sacrifices and steadfast support.

Tuan Anh Tran

I would like to dedicate my efforts to my parents, Nergish and Jal Panthaki for their love, support and encouragement. I try to instill the same values they taught me into my children and hope to live up to their example.

Zubin J. Panthaki

To Dr. Wehby A. Shuaib for his caring guidance and mentorship.

Jamal J. Hoballah

To my wife who has always been there for me. I appreciate everything she is and continues to be.

Seth R. Thaller

Foreword

A significant responsibility of plastic surgery educators is to teach and share their experience in the operating room. Achieving the maximum benefit for residents and young plastic surgeons should be a planned approach. Preoperative preparation by residents provides a significant foundation for the development of the clinical and technical skills necessary to becoming an independent plastic surgeon. This book can serve to lay the groundwork for an exceptional instructive opportunity by providing the road maps for the upcoming surgical procedure and provide a venue for self-directed learning and a dress rehearsal so the resident is enabled to enter the operating room better equipped to concentrate on enthusiastically participating in the actual surgical procedure. This book will also provide the framework for plastic surgery trainees and those early in their career on a template for documentation of their surgery. To accomplish this task, the authors have included the most commonly performed plastic, aesthetic, and reconstructive procedures. Consistent with the foundations of our specialty, the authors do not plan to institute a homogeneous methodology and interfere with what makes plastic surgery so satisfying: innovation and the constant motivation for perfection.

Miami, FL, USA — Thomas J. Baker

Preface

The goal of our book is to function as an educational resource especially for residents in training, fellows, and those just entering or early in their plastic surgery practice. It can also serve as a study guide to prepare for upcoming operative procedures or as an essential aspect for specialty examinations. We have attempted to include a majority of the most commonly performed plastic surgery operative procedures. This encompasses the extensive variety of cosmetic, hand, and basic reconstructive surgical procedures and techniques. We have also included the most currently emerging and innovative procedures that are becoming more commonplace in our specialty: migraine surgery, lymphedema, transgender reassignment, urogenital aesthetic surgery, and robotics. In addition, operative dictations encompass such fundamental procedures encountered in craniofacial, oculoplastic, burn, breast, upper extremity, facial aesthetics, body contouring, and reconstructive microsurgery. Completion of this book has allowed us to renew many old friends and colleagues who collaborated with us from a variety of specialties, including otolaryngology, ophthalmology, dermatology, oral and maxillofacial surgery, and orthopedics. In addition, to enhance the experience for our readers, we have reached across the globe and secured the expertise of authors from Europe, Middle East, and Asia. The editors extend our heartfelt gratitude to each of our colleagues who assisted in making this a unique resource by sharing their knowledge with our readers.

Miami, FL — Seth R. Thaller
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Part IV Craniofacial

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Part I

Aesthetics

Closed Rhinoplasty

1

Donald Wood-Smith, John N. Curran, and Wrood Kassira

Introduction

Closed or endonasal rhinoplasty has been practiced since the dawn of the modern rhinoplasty era, see Roe's description in 1887 [1]. In recent years there has been a growing enthusiasm for both teaching and practice of the open approach to rhinoplasty; this technique is both easier to teach and for the student to learn; however, there are small but significant prices to pay for this choice. The most significant is the presence of an external scar on the columella, which proponents of the technique claim to be near invisible but which a significant population of patients find unsightly. Also, despite the clear visibility of both cartilage and bone in the open technique, there is frequent irregularity of contour and of symmetry, especially in inexperienced hands.

The authors prefer the closed technique for its precision, rapid recovery, and lack of external scarring. We also find the technique sympathetic to the frequent frustrations of the less experienced surgeon attempting the technique. For that reason we teach it to our fellows as a "beginner's" technique until sufficient experience has been gained to graduate to the more technically demanding open procedure.

Indications [2–5]

Functional

Nasal airway pathology
- Septal deviation
- Septal perforation
- Internal nasal valve collapse
- External nasal valve collapse
- Turbinate hypertrophy

Aesthetic

Nasal deformity:
- Radix abnormality (too high; too low)
- Dorsal abnormality (hump; excessive width; asymmetry; twist; "pollybeak" deformity; saddle nose deformity)
- Tip abnormality (boxy; trapezoidal; amorphous; bifid; bulbous; twisted; ptotic; rotated)

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Alar base and columella abnormality (shape; width; asymmetry; nostril size; columella deformity)
Projection abnormality (under; over)
Alar rim deformity (asymmetry; notching)

Essential Steps

Patient Preparation

History and physical examination are thoroughly performed and documented with an emphasis on clotting status, and inquiry with respect to the use of any medications which may affect clotting function. We recommend a 2-week period of abstinence from such standard medications such as Aspirin. We also recommend avoidance of nonprescription medications such as Bromelain, Ginkgo, and Vitamin E in addition to Garlic and any other products which may inhibit platelet function [6].

Preoperative Photographic Record

The preoperative record should include the following views: full face, (smiling and unsmiling), "worm's eye" view, oblique and true lateral views from left and right. Use of software packages such as Photoshop (Adobe Systems Incorporated) can be helpful for enhancement of images to illustrate proposed changes and to finalize a surgical plan with the patient. Such records should be taken to the operating room for reference intraoperatively as required.

Antibiotic Prophylaxis [7–9]

Although post-rhinoplasty infection is rare, there is weak evidence to support the use of antibiotic prophylaxis. A single perioperative dose is used with satisfactory results by many of our colleagues.

Skin Prep

Standard Povidone Iodine solutions can be used for cleansing of the head and neck region.

Alcohol-based solutions should not be used on mucous membranes.

Draping

Standard sterile draping of the head and neck region.

Anesthesia [10]

Anesthesia may be "straight local," "monitored local with intravenous sedation" administered either by the surgeon or preferably by the anesthesiologist, or for the very apprehensive patient or one with medically indicated needs, endotracheal general anesthesia may be utilized but does have the penalty of increased risk of bruising. Our preferred method is to operate in patient under "monitored anesthesia care."

In all instances topical anesthesia including a vasoconstrictor is used prior to preparation of the patient. Our preference is for 4 mL of 4 % cocaine mixed with an equal volume of 1:1000 Epinephrine, applied intranasally with a DeVilbiss, or similar atomizer. Oxymetazoline 0.05 % can be used as an alternative.

This is followed by application of the same solution with three pledgets for each side along the intranasal course of the external nasal valve and towards the region of the sphenopalatine ganglion.

Injection of local anesthesia solution is delayed until immediately prior to beginning surgery. Our preference is for the use of 1 % Lidocaine with 1:100,000 Epinephrine. This timing assures peak vasoconstriction during the surgery.

Our routine is as follows:

1. Blocking the infraorbital nerve by percutaneous or intraoral injection with 2.0–2.5 mL of 1 % Lidocaine with 1:100,000 Epinephrine.
2. Blocking the anterior superior dental nerve by percutaneous or intraoral injection of 0.5 mL of 1 % Lidocaine with 1:100,000 Epinephrine.
3. Blocking the external and internal nasal branches of the anterior ethmoidal nerve by

intranasal injection in a deep subcutaneous plane along the nasal dorsum with 4.0 mL of 1 % Lidocaine with 1:100,000 Epinephrine.

4. Injection of the lateral osteotomy sites is delayed until immediately prior to the osteotomies are performed.

Incisions [2]

For closed rhinoplasty incisions are nearly always intercartilaginous or transcartilaginous.

Marginal incisions may be employed less frequently.

These are usually combined with a partial or complete transfixion incision.

Access to the bony and cartilaginous septum can also be provided via a Killian incision at least 5 mm cephalad from the caudal border of the cartilaginous septum.

Maneuvers [2, 5, 11–13]

1. Augmentation
   (a) Injectables
      (i) Hyaluronic acid products
2. Autograft
   (a) Septal, rib, or conchal cartilage graft
   (b) Superficial temporal fascia
   (c) Bone graft
3. Allograft
   (a) Plastic
   (b) Silicone
   (c) Polydioxanone
   (d) High-density porous polyethylene
   (e) Polytetrafluoroethylene
4. Homograft
   (a) Cadaveric cartilage
   (b) Acellular dermal matrices
5. Xenograft
   (a) Bovine cartilage graft
6. Dorsal Hump Reduction
   (a) Rasping
   (b) Osteotome
7. Osteotomies
   (a) Use osteotome with mallet or saw
   (b) Lateral osteotomies are the main element although medial and intermediate are possible
   (c) Lateral osteotomies are via a percutaneous approach or internal via piriform aperture
   (d) Osteotomies can be low-to-low or low-to-high
   (e) Osteotomies can also be continuous or perforated
8. Tip Refinement
   (a) Volume reduction
      (i) Cephalic reduction/trim/resection of lateral crus of lower lateral cartilage
      (ii) Soft tissue debulking
   (b) Cartilage reorientation
      (i) Dome and tip defining suture techniques
   (c) Augmentation
      (i) Columellar strut grafts
      (ii) Shield grafts
      (ii) Cap grafts
9. Nasal Base Adjustment
   (a) Excision at nostril sill
   (b) Alar wedge excision
   (c) Turbinate Reduction
      (i) Resection
      (ii) In-fracture
      (iii) Radio-frequency ablation

Closure, Taping, and Splinting [13, 14]

Closing the mucosa can prevent adverse scar formation (which could have unpredictable effects on the aesthetic outcome), prolonged healing, uncomfortable crusting, and inconvenient bleeding of the mucosa. On the other hand, closing the mucosa can allow collection of blood resulting in hematoma formation. When incisions are closed 5-0 or 6-0 fast absorbing sutures should be used on the nasal mucosa. We do not routinely suture the mucosal incisions.

Postoperative taping with thin adhesive strips is a key maneuver in preventing and controlling postoperative swelling and edema.

Internal nasal packing is controversial. It was originally believed to help with healing, prevent adhesion formation, and prevent hematoma formation. Some believe however that packing can cause other complications such as septal perforation or problems with discomfort or patient distress on removal. We do not pack routinely.

Placement of a nasal splint is also open to interpretation. Plaster of Paris, thermoplastic, or metallic splints can be placed to protect the nose from external trauma and allow unhindered bony healing after osteotomies.

Postoperative Orders

Ice compresses to the eyes for the first 12–24 h. Apply ice for 15 min intervals with at least 30 min between applications.

Bed rest with bathroom privileges for the first 12–24 h.

Elevation of the head of the bed to 30° for the first week after surgery.

Humidification of the patient's bedroom during sleep times increases comfort and nasal breathing ability.

Nasal toilet is absolutely forbidden for 2 weeks after surgery.

Speaking should be kept to a minimum for 72 h after surgery.

Diet should be soft for 72 h after surgery.

Interestingly, fresh pineapple appears to be useful in reducing edema and ecchymosis and is recommended in our practice two or three times per day for the first 2 weeks after surgery.

No dental brushing or other oral hygiene should be practiced for 1 week to reduce mobilization of the nasal tip, columella, and upper lip.

Analgesia medication should be limited to Acetaminophen with 30 mg Codeine taken at regular intervals. The patient should be counseled to switch to Acetaminophen without Codeine as soon as tolerated.

Antibiotics can be prescribed in accordance with guidelines if the surgeon chooses to do so or if there is an indication.

Oral steroids and any form of nasal spray should be avoided.

Exercise should be restricted to easy walking for the first 2–3 weeks.

Direct sun exposure should be avoided for 2–3 weeks.

Operative Dictation

Diagnosis: Cosmetic nasal deformity
Procedure: Closed rhinoplasty
Anesthesia: MAC/local
Complications: none

Indication

This is a __ year old woman who is dissatisfied with the appearance of her nose and desires surgical improvement. After extensive discussion with the patient, the risks, benefits, and alternatives are reviewed and the patient consents for rhinoplasty to address the nasal dorsum and tip. She understands the risks, although not limited to, bleeding, infection, scarring, hematoma, poor cosmesis, asymmetry, pain, numbness, injury to adjacent structures, unsatisfactory result, need for additional surgery, anesthetic complications, airway changes, among other risks.

Procedure in detail: The patient was placed supine on the operating room table. Patient received sedation anesthesia. Time-out was taken. Four milliliter of 4 % cocaine mixed with an equal volume of 1:1000 Epinephrine was applied intranasally followed by soaked pledgets intranasally. The face was prepped with Betadine and draped in the standard surgical sterile fashion. The patient received IV Ancef. Then using a 25 gauge needle, 1 % Lidocaine with 1:100,000 Epinephrine was infiltrated intranasally and intraorally to block the infraorbital, superior dental, and anterior ethmoidal nerves. Using a 15 blade, an intercartilaginous incision was made

bilaterally combined with a transfixion incision. Using an osteotome, composite reduction of the cartilaginous and bony dorsum was performed. Further refinement was performed with a rasp to correct the dorsal hump. Lateral osteotomies were then performed in a low to high fashion via an internal approach via the piriform apertures. Cephalic trim was also performed. Taping with steri-strips was performed along the dorsum and tip. No complications were noted. Patient was extubated successfully (if general anesthesia was used) and taken to post-anesthesia care unit in satisfactory condition.

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Cosmetic Open Rhinoplasty

2

William Lao, Hamid Abdollahi, and Nicolas Tabbal

Indications

1. Large dorsum hump
2. Bulbous tip
3. Lack of tip support
4. Wide nasal base or mid vault

Essential Steps

Preoperative Markings

1. Mark a flat V-shaped incision at the base of the columella in the natural skin crease

Intraoperative Details

1. Place the patient in supine position with the head in a doughnut. The superior edge of the head should reside at or slightly off the superior edge of the table. Raise the upper half of the table and lower the head rest in order to extend the neck and gain easy access inside the nose.
2. General anesthesia with LMA.
3. Place 4 % cocaine-soaked packing strips at the floor of the nasal cavity. Infiltrate the dorsum, bases of bony pyramid, and columellar skin flap with local anesthetic with epinephrine (Mixture: 20 mL 2 % lidocaine + 0.2 mL 1:1000 epinephrine) in a 5 cc syringe and a long 27-gauge needle. A total of 4 mL are generally injected.
4. Skin/Subcutaneous nasal flap elevated in the supra-perichondrial plane up to mid vault, dorsal flap dissected with a Joseph elevator.
5. Dorsum hump reduction with a 7–8 mm pull rasp.
6. Excess septum and bilateral upper lateral cartilages trimmed with Fomon scissors under direct vision.
7. Cephalic trim of superior edge of lower lateral cartilage.
8. Septal cartilage harvest for columellar strut to be placed between the medial crura.
9. Lateral osteotomy and infracture.
10. Hemi-transdomal suture.
11. Single interdomal suture.
12. Skin closure with 6-0 nylon and 5-0 chromic.
13. Mastisol (Eloquest healthcare, Ferndale Michigan), brown paper tape, and Aquaplast splint applied.

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Postoperative Care

1. Control blood pressure, nausea/vomiting, and pain.
2. Cold compresses are used on bilateral eyes to decrease swelling and ecchymosis.
3. Keep head of bed elevated to decrease swelling.
4. Splint and nylon sutures are removed on POD #6.
5. Avoid nasal blowing for 3 weeks.
6. May travel 10 days after surgery.

Possible Complications

1. Contour irregularities
2. Septal hematoma
3. Internal/external valve collapse
4. Infection

Operative Dictation

Diagnosis: Cosmetic concern of the nose
Procedure: Primary rhinoplasty

Indication

This is a __ year-old female with a prominent dorsal hump and a bulbous tip. She has been teased about the look of her nose since elementary school and often feels embarrassed and is afraid to take pictures with others. The patient and her mother understand the risks, benefits, and alternatives including not operating, and wish to proceed. The incision placement is discussed and shown to the patient.

Description of the Procedure

The patient was placed supine on the operating room table. Her head was positioned at the superior edge of the table. The head of the table was slightly tilted upward. Proper time-out was carried out to reconfirm patient's identity, site of procedure, and all personnel involved in the surgery. A V-shaped incision was marked at the base of the columella in the natural skin crease. Lidocaine with epinephrine was then infiltrated into the dorsum, bases of sidewalls, columella, and also tip of the nose. The face then was prepped and draped under the usual sterile fashion. An incision was made along the marking at the base of the columella. Then, a vertical incision was carried bilaterally along the posterior skin edges of the columella. Tip scissors were then used to dissect the skin/subcutaneous columella flap off the underlying medial crura of the lower lateral cartilage in the supra-perichondrium plane. A double prong skin hook was used to aid in dissection of the skin flap off the lower lateral cartilages. The columellar incisions were then slowly extended hugging the inferior border of the lower lateral cartilages, making sure not to violate the soft triangles. A Joseph elevator was used to complete the dorsal dissection subperichondrially and sub-periosteally to the radix while creating enough space for rasping. An 8 mm pull rasp was used to take down the bony dorsum. Under direct vision, an 11 blade was used to score longitudinally the dorsal septum at the site of the intended resection. Right-angled Fomon scissors were then used to complete the resection en bloc. Cephalic trim was performed on each side of the cephalic edge of lateral crura of the lower lateral cartilages under direct vision with a 15 blade and dissected off its underlying soft tissue with tip scissors.

At this time nasal packing was removed and local anesthetic with epinephrine was used to infiltrate each side of nasal septum. With retraction, two medial crura were separated with tip scissors. Caudal septal angle was palpated digitally to locate its edge. Mucoperichondrium and mucoperiosteum were dissected off each side of the septum as needed. Septal cartilage graft was harvested en bloc using a combination of 15 blade and a swivel knife. Then septal sutures were placed using 4-0 plain gut on a Keith needle to close the dead space. A small soft tissue pocket in the anterior aspect between the medial crura of the lower lateral cartilages was created using tip scissors spreading in a vertical direction. A longitudinal

piece of cartilage was cut from the septal graft then placed in this pocket as a strut. Then with the fixation of a 27-gauge hypodermal needle, 4-0 plain gut sutures were used to secure the strut to bilateral medial crura in a horizontal mattress fashion. Three sutures were placed in such fashion. Packing was again replaced back into the floors of the nostrils. A stab incision was made with a 3 mm straight osteotome lateral to piriform aperture inside the nostril. Through this incision, a low-to-high lateral osteotomy was made and curved up to the level of medial canthus. With digital pressure infracture of both nasal bones was done. The stab incisions were closed with single interrupted 4-0 chromic sutures.

A 6-0 PDS was used to place a hemi-transdomal suture on the superior edge of each lower lateral cartilage to define the dome. Then a simple 6-0 PDS interrupted interdomal suture was placed to bring two domes together. The resected piece of lower lateral cartilages was morselized using a cartilage crushing box and placed as an onlay tip/infralobule graft to further increase tip projection. The columella base incision then was closed with 6-0 interrupted nylon and 5-0 chromic was used to close the lateral columella incisions. The dorsum of the nose then was dressed with Mastisol, brown paper tape, and an Aquaplast splint.

The patient tolerated the procedure well and was transferred to recovery room in excellent condition. All needle, instrument, and sponge counts were correct at the end of procedure.

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Extended SMAS Rhytidectomy

3

Ari S. Hoschander and James M. Stuzin

Indications

1. Facial aging
2. Deep nasolabial folds
3. Jowl prominence
4. Oblique cervical contour
5. Facial fat descent
6. Radial expansion of the facial fat away from the skeleton
7. Desire for a more youthful appearance

Possible Complications

1. Facial nerve injury
2. Scarring
3. Asymmetry
4. Tragus or lobule malposition

Essential Steps

Preoperative Markings

1. Mark a line from within the scalp of the temporal region extending inferiorly, toward the superior–anterior aspect of the helix, then anterior to the helix, curving posteriorly toward the tragus, then posterior to the tragus and anteriorly again into the crease that separates the ear from the cheek, then inferiorly toward and around the lobule. This line is then carried superiorly in the conchal-mastoid groove. This line is then curved posteroinferiorly into the occipital hair-bearing scalp.
2. Another line can be drawn from the lateral canthus toward the body of the mandible, paralleling the anterior border of the masseter. This line will serve as the medial aspect of the subcutaneous dissection.

Intraoperative Details

1. Supine position
2. IV sedation
3. Local infiltration
4. Subcutaneous dissection
5. Superficial musculoaponeurotic system (SMAS) flap elevation

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6. SMAS repositioning in a vertical direction
7. Neck contouring with platysmal plication and back-cuts
8. Excision of excess skin
9. Repositioning of skin in a horizontal plane
10. Hemostasis
11. Drains
12. Closure

Postoperative Care

1. Admit the patient to the observation unit for 24 h if there are confounding medical comorbidities.
2. Control systolic blood pressure < 120 and diastolic blood pressure < 85.
3. See the patient on a daily basis for drain care, wound evaluation, and assessment of skin integrity.

Operative Dictation

Diagnosis: Facial aging and aging of jaw line and neck.

Procedure: Extended Superficial Musculo-Aponeurosis System (SMAS) Rhytidectomy

Indication

This is a ___ year-old female with facial aging, volume deflation, radial expansion, deepened nasolabial folds, and prominent jowls who desires a more youthful look. Patient understands the benefits, risks, and alternatives associated with the procedure, and wishes to proceed.

Description of the Procedure

After positive identification of the patient in the holding area, the patient was marked in the sitting position. She was taken to the operating room and placed upon the operating table in supine position. The patient received preoperative antibiotics. Sequential compression devices were placed on bilateral lower extremities. Intravenous sedation was provided by the anesthesia team. Arms were abducted and properly padded to arm boards to less than 90°. Foley catheter was placed under sterile conditions. A Bair hugger warming blanket was also placed. The bed was turned 180°, and the face and neck were prepped and draped in the standard surgical sterile fashion with Betadine prep. Ophthalmic lubricant was placed within the eyes. A sterile head drape was placed around the head and final time-out was taken and confirmed by the anesthesiology staff, nursing staff, and surgical staff. At this point, attention was turned to the right face using tumescent solution consisting of 250 mL of saline, 20 mL of 1% lidocaine plain, and 1 ampule of epinephrine. This was infiltrated with a 21-gauge needle to the right cheek and postauricular area taking care not to inject intravascularly along the cheek and postauricular area. Once the tumescent had taken effect for hemostasis, a #15 scalpel was used to make an incision just anterior to the hair line, above the ear and follow the natural crease down to the anterior superior helix. This was then continued as an intra-tragal incision followed around ear lobe and into the postauricular area. Elevation proceeded using a #15 scalpel for approximately 3 cm in the subcutaneous plane. This was followed by using facelift scissors to elevate the skin flap under direct vision, in the subcutaneous plane, preserving the underlying SMAS. This was done carefully and meticulously with the use of transillumination, which helped to delineate the interface between the subcutaneous fat and the SMAS. Extreme care was taken so as not to disrupt the SMAS during this dissection. Minor bleeding points were controlled by bipolar electrocautery. Next, the dissection in the temporal region was performed by first identifying the parietal branch of the superficial temporal artery and ligating this branch at its takeoff. The temporal dissection was then performed in the plane just superficial to the deep temporal fascia. The skin flap dissection in

the cheek region then proceeded to the level of the inferior lateral orbicularis oculi and on the lateral cheek, a few centimeters lateral to the nasolabial fold.

Dissection then proceeded along the lateral platysma, lateral neck, and in the postauricular area. In this region, care was taken not to injure the great auricular nerve which lies superficial to the sternocleidomastoid muscle at its mid-belly. Hemostasis was achieved with bipolar electrocautery.

Next attention was turned to the SMAS elevation. This began by first marking a horizontal line 1 cm caudal to the zygomatic arch. The horizontal line was continued medially past the point where the zygomatic arch met the body of the zygoma. The malar extent of this incision was angled superiorly toward the lateral canthus and then turns 90° toward the superior aspect of the nasolabial fold. A vertical line was drawn at the lateral-most aspect of the SMAS that paralleled the skin incision. The vertical line was continued to a point 5 cm below the border of the mandible. Next, the plane deep to the SMAS was infiltrated with a solution of 0.5% Lidocaine with Epinephrine. SMAS elevation began by first incising the pre-drawn lines with a #10 scalpel and dissecting beneath the SMAS with both sharp and electrocautery dissection. This dissection was carried medially until the zygomaticus major was identified. Care was taken to remain superficial to the parotid capsule. A facelift scissors was then inserted into the plane between the malar fat pad and the elevators of the lip. Blunt dissection was used in this location directed toward the nasal ala. This dissection was farther medial than the skin flap dissection. After ensuring hemostasis, the SMAS was then redraped superiorly with a vertical trajectory. The excess SMAS that now overlapped the earlobe was incised allowing the lower portion of SMAS to redrape postero-vertically behind the ear. Excess SMAS that now overlapped the zygomatic arch was folded under itself to augment the malar region. This was now sutured in place with multiple 3-0 Vicryl sutures in figure-of-eight fashion. The remaining lower portion of SMAS was secured posterior to the ear in a similar fashion. This allowed for correction of the jowl and improvement in the jaw line for rejuvenation. Attention then was turned to the left side of the face where the same incision and dissection was performed.

After raising both skin and SMAS flaps in the cheek region, the neck was addressed with a small incision just posterior to the submental crease. Skin and subcutaneous fat was then dissected carefully off of the platysma with electrocautery. This plane was dissected to a point distal to the hyoid. Next, the platysma was plicated in the midline. After plication, the platysma was incised bilaterally in a horizontal plane at a point distal to the hyoid. This allowed the platysma to redrape more effectively. All surgical fields were irrigated. The flaps were noted to have good viability and the SMAS plication allowed for correction of the facial cosmetic deformity. Hemostasis was achieved with bipolar electrocautery. At this point, skin closure proceeded by pulling the skin flaps superolaterally. These were trimmed without tension on the closure and then properly inset with a series of 4-0 Vicryl and 6-0 nylon sutures with a combination of simple interrupted and running fashion. Of note, inferior to the earlobe, inset was performed with deep 3-0 Vicryl sutures securing the flap to the underlying mastoid fascia, and earlobe to prevent pulling down of the earlobe. Further sutures were placed in postauricular area in similar fashion. This was done bilaterally. Prior to closure, 10 French round Blake drains were placed underneath the skin flaps in the cheek and affixed to the postauricular area with 3-0 nylon sutures. Bilaterally the excess skin was trimmed, and the drains were placed in bulb suction. The face was assessed for symmetry. There was very good symmetry, shape, and form in the jaw, face, and neck. Incisions were cleansed and dried and bacitracin was placed along the incisions. The head was wrapped with a combination of dry gauze, cling, and ace wrap. The patient was awaken from anesthesia and brought to the recovery room in stable condition.

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Short Scar Face-Lift

4

William Lao, Hamid Abdollahi,
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Indications

1. Facial rejuvenation.
2. Desire to minimize bilateral facial jowlings, marionette lines, and diffuse skin laxity of the cheek and neck.
3. Reposition ptotic malar tissues.
4. Enhance jawline definition, soften platysmal bands, and remove excess fat in the neck.

Essential Steps

Preoperative Markings

1. Mark a 3–4 cm horizontal line caudal to the submental crease.
2. Mark a short scar face-lift incision: it begins with a sideburn cut to the root of helix along the preauricular (*or post-tragal*) crease downward in the natural skin crease to wrap around the lobule and stop at the first horizontal crease of the posterior ear (Seen in an ear bent position).

Intraoperative Details

1. Patient placed in supine position with the head in a doughnut. The hair is placed in a ponytail.
2. Spontaneous ventilation general anesthesia.
3. Infiltrate the entire neck and bilateral face with local anesthetic (100 mL 1% lidocaine + 200 mL Normal Saline + 1 mL 1:1000 epinephrine) with a 20 cm^3 syringe and a 20 gauge spinal needle.
4. Betadine-soaked cotton pledgets are placed in the ear after patient is prepped. Liposuction of the neck from the midline and diagonally from each ear incision is done as needed using multiple cannulas.
5. Excise redundant platysma along the medial borders and transect the muscle at the level of the cacoid carntage. Deep fat is melted with the ball tip cautery as indicated under direct vision. The medial borders of the platysma are plicated interrupted with 3-0 Mersilene.
6. Elevate bilateral skin/subcutaneous facial flaps, connecting inferior dissection with midline neck undermining.

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7. Inverted L-shaped SMAS and platysma plication are achieved with 3-0 PDO Quill (Surgical Specialties Corporation, Reading, Pennsylvania) suture.
8. Elevate, advance, and redrape skin flap under minimal tension and trim off excess.
9. Tisseel fibrin sealant (Baxter, Westlake Village, California) is used prior to closure, no drains placed. Antibiotic ointment is applied to all suture lines.
10. Head wrap dressing (three layers of open 4×8 gauzes) to provide compression over undermined areas of the face and neck and cover with a Surg-o-flex surginet (Dermapac, Shelton, Connecticut).

Postoperative Care

1. Control blood pressure, nausea/vomiting, and pain. Private duty nurses care for patients.
2. Patient is seen in 24 h to check the wound and remove the dressing. Cold compresses are used on the exposed area on the face to decrease swelling and ecchymosis.
3. Shower at 48 h with a gentle shampoo and minimal motion.
4. Remove permanent running sutures on POD# 7 in the office and staples on POD# 10.

Possible Complications (portal)

1. Hematoma/seroma
2. Neuropraxia or permanent facial nerve injuries
3. Hyperesthesia/hypoesthesia
4. Skin sloughing/ischemia
5. Recurrent platysmal bands
6. Pigment changes
7. Infection
8. DVT/PE
9. Contour irregularities

Operative Dictation

Diagnosis: facial laxity

Procedure: short scar face-lift with submentalplasty

Indication

This is a _____ with jowling, nasolabial creases, and skin laxity of the face and neck who desires a more youthful appearance. He/she also presents with platysmal bands of the neck at rest. The patient understands the risks, benefits, and alternatives of the proposed procedure, and wishes to proceed. The incisions are discussed with and shown to the patient.

Description of the Procedure

The patient was brought to the operating room and placed in the supine position; preauricular and submental markings were reconfirmed. After the patient was intubated, local anesthetic solution with epinephrine was injected into the entire neck and bilateral face. The entire face and neck were then prepped and draped in the usual sterile fashion. The procedure started with the horizontal submental incision. A 2.4 mm Mercedes liposuction cannula was used to liposuction the anterior neck. One small incision around each lobule was made and further neck liposuction was carried out from the diagonal direction bilaterally. A 1.8 mm Mercedes cannula was used to liposuction jowls or any facial area. Final liposuction was done with a spatula cannula. A Thimble hook with assistant providing counter traction on the skin was used to develop a subcutaneous neck skin flap. The medial borders of the platysma were identified and excessive bands in the midline were removed en bloc with face-lift scissors. Midline subplatysmal fat was excised and melted with electrocautery as indicated. A wedge of platysma was excised at the level of the cacoid carntage on each side. Plication of the medial platysma edges was done using 3-0 Mersilene sutures. The first sutures at the top of the platysma incorporated the deep cervical fascia. Ball tip cautery was used to melt any fatty contour irregularities.

Attention was then directed to right side of the face. The incision was delineated and was made along the marked preauricular crease, around the lobule, and then ending at the first horizontal skin crease posteriorly. Skin/subcutaneous flap under-

mining was begun sharply and precisely under direct vision with the aid of fiber-optic retractors. Nasolabial fold was undermined to efface its deepened appearance as needed. Inferior undermining was connected with the skin flap raised from submental incision. The lateral platysma was elevated with a skin hook, and undermined. A 2–4 cm back cut was made. An inverted L-shaped plication of the SMAS–platysma was planned. A 3-0 Quill PDO barbed suture was anchored to the SMAS at the malar arch just anterior to the helical root. One arm of the barbed sutures proceeded anteriorly to provide horizontal plication (vertical lifting) of the cheek SMAS, while the other arm travelled inferiorly to plicate the lateral SMAS/platysmal edge to the mastoid fascia. This provided both vertical lift of the cheek SMAS and refined neck/jawline definition by anchoring the platysma laterally. Ball tip cautery was used to smooth any fatty irregularities in the face and neck areas. Hemostasis was again checked at this time. Irrigation with local anesthetic with epinephrine was done to the entire undermined surface. Final hemostasis was then obtained. The skin flap was pulled up under minimal tension and inset into place. The first anchoring stitch was placed at the junction of the horizontal sideburn incision and the vertical preauricular incision using one 3-0 plain gut interrupted suture. Then, a second 5-0 nylon interrupted suture was placed at the point just superior to tragus. Excess skin was trimmed both horizontally below the sideburn and vertically in front of the ear. Fibrin sealant was sprayed across the entire undermined area within 1 min and gentle pressure over the skin flap was held for 3 min. Care was taken to ensure no skin bunching resulted from the inset at the anterior edge of sideburn. Attention was also paid to ensure no skin excess around the visible lobule. Some pleating was expected, which settled out at the posterior ear surface. The skin was closed with staples at the posterior ear location. A running 5-0 nylon was used to close the anterior ear incision. In a similar fashion, the same procedure was then again performed on the left side of the face. The submental incision was inspected and hemostasis again obtained, fibrin sealant was sprayed. The submental incision then was closed with running subcuticular 5-0 Prolene with interrupted 5-0 running nylon over it. Antibiotic ointment was placed on top of all incision sites. The entire face then was dressed with three strips of 4 × 8 gauzes and a Surginet. No drains were used.

The patient tolerated the procedure well and was transferred to recovery room in excellent condition. All needle, instrument, and sponge counts were correct at the end of procedure.

Suggested Reading

Matarasso A. Introduction to the barbed sutures supplement: the expanding applications of barbed sutures. Aesthet Surg J. 2012;33(3S):7S–11.

Matarasso A. Managing the components of the aging neck. From liposuction to submentalplasty, to neck lift. Clin Plast Surg. 2014;41:85–98.

Matarasso A, Elkwood A, Rankin M, Elkowitz M. National plastic surgery survey: face lift techniques and complications. Plast Reconstr Surg. 2000;106(5):1185–94.

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Coronal Brow Lift

5

Tuan Anh Tran and Seth R. Thaller

Indications

1. Desire to minimize the frown lines and prominent forehead creases to achieve a more youthful look
2. Reposition of brow ptosis, minimize forehead and glabellar rhytides
3. Reconstruction of significant facial paralysis involving brows and forehead

Possible Complications

1. Scalp numbness
2. Permanent and long scar associated with alopecia
3. Elevation of anterior hairline
4. Alopecia

Essential Steps

Preoperative Markings

1. Mark the anterior hairline, transverse furrows, glabellar frown lines, supratarsal crease, and nasal root rhytides with the patient in the upright position.
2. Identify and mark supraorbital nerves, and supratrochlear nerves.
3. Mark the coronal incision 5 cm behind the receding line or at the hairline with a sawtooth incision.

Intraoperative Details

1. Place in supine position.
2. General anesthesia or Monitored Anesthesia Care.
3. Neurosurgical Mayfield horseshoe head rest maybe used to support the head.

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4. Cleanse the hair, braid, and shave the hair to expose the proposed incisions.
5. Infiltrate the brow area with local anesthetic plus 1:100,000 Epinephrine.
6. Incise the skin and subcutaneous tissue down to pericranium.
7. Raise a subgaleal flap down to superior orbital rims.
8. Release galeal attachments along central and lateral orbital rims.
9. Release superolateral temporal fixation zone.
10. Identify and preserve supraorbital neurovascular bundles.
11. Resect frontalis, corrugator, depressor supercilii, and procerus muscles.
12. Reposition the flap superolaterally and excise a strip of scalp.
13. Fixate the flap under no tension.

Postoperative Care

1. Control blood pressure, and pain.
2. Patient is seen in 24 h to check the wound and change the dressing.
3. Patient can take down the dressing and shower at 48 h with a gentle shampoo and apply a wide hairband as directed by the doctor to cover the wound.
4. Remove permanent running sutures on POD# 7 in the office or staples at 10 days if used.

Operative Dictation

Diagnosis: brow ptosis with severe forehead wrinkles

Procedure: Coronal Brow Lift

Indication

This was a _____ with significant forehead wrinkles with associated brow ptosis, who desired a more youthful and pleasant look. Patient understood the benefits, risks, and alternatives associated with the procedure, and wished to proceed.

Description of the Procedure

After the informed consent was verified, the patient was taken to the operating room and placed in supine position. Time-out among operating room staffs was completed. Sequential compression devices were applied to bilateral lower extremities. Monitored Anesthesia Care was instituted. Preoperative antibiotics were given. Neurosurgical Mayfield horseshoe head rest was used to support the head. Hair was cleansed, and braided and shaved to expose the proposed incisions. Incision line, forehead, and brow area were infiltrated with 1 % lidocaine plus 1:100,000 epinephrine. The patient was prepped and draped in standard sterile surgical fashion.

Skin was incised in a sawtooth pattern through the subcutaneous tissue down to the pericranium using a beveled Number 15 scalpel. The incision was carried laterally to the root of both ears to facilitate scalp and flap mobilization. Running hemostatic stitch with 3-0 Prolene sutures were applied to the edge of the flap to achieve scalp hemostasis. Next, the flap was elevated and dissected in the subgaleal plane to a point 4 cm above the superior orbital rim. At this point, the plane was changed from subgaleal to subperiosteal. The periosteum was incised from one lateral aspect of one superior orbital ridge to the other. Periosteum was raised to just beyond the ridge and onto the nose just beyond the radix using periosteal elevator. The supraorbital neurovascular bundles were identified and preserved. Laterally, the temporal fixations at the temporal crests were bluntly dissected off and released using periosteal elevator. Once the flap was freely mobilized from temporal line to contralateral temporal line, attention was shifted back toward the midline frown muscles. Three to four thin strips of galea and a portion of the frontalis muscle were excised. Care was taken to avoid excessive resection of frontalis muscle to avoid unsightly depressions and postoperative deformities. Next, the glabellar frown lines were marked. The origins of the corrugator muscles from the superomedial orbital rim were identified. Approximately 2 cm of corrugator muscles were resected to prevent reattachment. The procerus

muscle was disrupted in the similar fashion as the corrugator to remove nasal root wrinkles. Care was taken to avoid over-resection of either the corrugator muscles or the procerus muscle to prevent contour irregularities. Hemostasis was meticulously achieved. The scalp was flipped back into its anatomic position. Using three clamps, the scalp edges are grasped and pulled in the superolateral direction. The brows were over-corrected over the desired brow position by 1–1.5 cm. The scalp edges were tailor tacked and the overlapping scalp edge was resected. The galea was closed with interrupted 3-0 Vicryl sutures. The skin edges were closed with running 4-0 Prolene with attention paid to everting the edges. The surgical wound was dressed with non-occlusive dressing and topical antibiotics were applied to wound edges to preclude dressing from sticking to the hair.

Suggested Reading

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Walrath JD, McCord CD. The open brow lift. Clin Plast Surg. 2013;40(1):117–24.