



Nuances of Facelifting for the Male Patient

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Abstract

Purpose of Review Cosmetic procedures, namely rhytidectomy and neck lifting, have become increasingly popular among male patients. However, there are nuances to preoperative evaluation and surgical techniques unique to males that must be considered in order to achieve optimal results. It is critical to not only evaluate the patient properly and master the techniques of these procedures, but to also decrease complications.

Recent Findings Male patients require special attention to facial hair growth patterns, temporal sideburns, and beard growth color and density when determining the type of rhytidectomy incision to perform. Incisions along and into the postauricular hairline require a beveling technique to avoid transection of hair follicles, especially with short hair. Hematoma and seroma are complications which are more frequent with male patients that can be reduced with preoperative planning and postoperative management.

Summary This review provides the knowledge to properly evaluate male patients for facial rejuvenation, to understand the nuances in rhytidectomy incisions and techniques for males, and to be aware of the complications and management of male facelifting.

Keywords Facelift · Rhytidectomy · Male rhytidectomy · Male facelift · Neck lift · Male neck lift

Introduction

Rhytidectomy which focuses on resuspending ptotic soft tissues of the lower third of the face and neck is an important part of facial rejuvenation surgery. Original techniques for rhytidectomy included excision of excess skin, but without performing undermining or resuspending deeper tissues. [1] However, by the 1970s, Skoog described an advancement flap using the superficial musculoaponeurotic system (SMAS) to resuspend the deeper soft tissues with a rotation-advancement flap for improved imbrication and cosmetic results. [2] This represented a paradigm shift in

rhytidectomy techniques. Hamra and colleagues developed the deep plane and composite rhytidectomy in the 1990s to address midface ptosis and deep nasolabial folds. [3, 4] Multiple variations of the aforementioned techniques have been described in the literature, including the extended deep plane SMAS rhytidectomy with platysmaplasty which is the preferred technique of the senior author (SWP). [5•]

Facial aesthetic surgery has become more accepted by the general public with a broader exposure due to social media and therefore rates of both male and female rhytidectomy has increased. In a survey conducted by American Society of Plastic Surgeons, there were 123,685 rhytidectomies performed in 2019 and over 10% were males. [6] The increase in volume in male rhytidectomy can also be attributed to the desire to look more youthful in the dynamic job market, increased priorities on health, and the choice to postpone retirement. [7]

Male rhytidectomy presents numerous challenges that can be unique compared to female rhytidectomy. The surgeon must pay special attention to thicker skin, facial hair patterns, length and quality of temporal hair sideburn, heavier brows, central face atrophy, descent of jowl fat pad, cervical

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fascial laxity with platysma banding, low hyoid position, prominent laryngeal cartilage, and increased risk for hematoma formation. [7, 8••].

Treatment Goals and Patient Selection

The initial patient consultation generally occurs face-to-face in the clinic with an overall assessment of patient aesthetic goals as well as health, facial features, and symmetry. The anatomical features that are critical to analyze for male rhytidectomy patients include neck skin redundancy, lipoptosis, platysmal banding, jowl formation, and midface ptosis and hollowing. Males typically complain of jowling and a “turkey wattle” neck. Due to thicker neck skin, increased vascularity due to facial hair, and more fibrous tissue dissection this can create more time and work for the surgeon.

Absolute contraindications for rhytidectomy are mostly related to factors that would compromise wound healing, major weight fluctuations, or psychological barriers that do not make a patient a good candidate.

Preoperative Considerations

Once the patient’s facial rejuvenation desires are known and the examination is complete, final surgical planning begins. Digital photographs are obtained in full face frontal, bilateral oblique, and bilateral lateral views taken in

a Frankfort horizontal line. Preoperative photographs are then reviewed with patient and digital imaging simulation is performed to give the patients a projection of the expected and realistic cosmetic outcomes from surgery. Imaging can be an important medium to demonstrate to the patient movement of the sideburn and facial hair. Additionally, imaging can demonstrate limitations of surgery, such as minimum improvement of melolabial folds and grooves. Below are critical aspects in male patients to examine and discuss with the patient.

Facial Hair Pattern

Firstly, it is important to determine if the male patient wears a beard or not when deciding on a preauricular versus post-tragal rhytidectomy incision. A preauricular incision is indicated if the patient has less than 2 cm between the tragus and the posterior edge of the beard so as to not bring hair-bearing skin onto the tragus. A post-tragal incision is indicated if the patient has more than 2 cm distance between the tragus and the posterior edge of the beard, has low density facial hair, or does not mind shaving the tragus if necessary. Additionally, with movement of the posterior neck skin, the patient should be informed that he will need to shave posterior to the lobule. This is an important point to discuss with the male patient preoperatively. Differences in these incision patterns, postauricular, and occipital hair-line incision markings are demonstrated in Fig. 1.

Fig. 1 Male rhytidectomy incision markings. **A)** Preauricular marking in natural preauricular crease. **B)** Post-tragal incision. **C)** Post-tragal incision on bald male with shortened anterior incision at helical root and shortened posterior incision. **D)** Postauricular incision



Temple Side Burn

The length and quality of the temporal hair sideburn should be evaluated. The anterior horizontal rhytidectomy incision typically is no higher than the upper helical insertion. If the patient has a long sideburn going past the helical root, a beveled incision will be performed through the sideburn, which effectively will shorten the length when skin is repositioned. If the patient has a short sideburn, then they are encouraged to allow it to grow 1–2 cm. If the patient is completely bald, then both the anterior and posterior incisions are intentionally made shorter. This can also be demonstrated in Fig. 1.

Skeletal Anatomy and Deep Neck Compartment

There are anatomical restrictions that male patients should be aware of in order to have realistic expectations for their outcome. A low hyoid position portends to difficulty in creating a sharp cervicomental angle and the patient should be counseled on this. Moreover, the patient should be analyzed for skeletal anatomy including midface flattening, microgenia, retrognathia, prejowl sulcus, and weak mandibular definition. In this case, malar/submalar, chin, prejowl, and mandibular implants may be indicated to create a more defined midface and jawline with the rhytidectomy. Similarly, ptotic submandibular glands can be misinterpreted as persistent lipoptosis of the neck. Though some surgeons advocate for partial resection of submandibular glands for cosmetic benefit, the senior author (SWP) does not employ this technique in his practice and the patient should be counseled on this.

If the patient is satisfied with the aesthetic expectations and is a rhytidectomy candidate, then final surgical planning is discussed. Medical history and medications are reviewed. Anticoagulants or blood-thinning supplements should be discontinued 1 week prior to surgery and 1 week after if cleared by the patient's primary physician. Tobacco and nicotine cessation should occur 2 weeks prior and at least 2 weeks postoperatively. Routine laboratory work and appropriate cardiac evaluations are ordered. Prescriptions for antibiotics, analgesics, antiemetics, anxiolytics, and sleep aids are prescribed. Verbal and written pre and postoperative instructions are given to the patients and consent forms are signed. [5•, 8••].

Surgical Technique

Markings

In the preoperative holding area, the markings are made with surgical pen for rhytidectomy and any additional procedures. The preauricular marking starts in the temporal tuft above

the zygomatic root then drawn to the superior helical insertion. The marking then follows a post-tragal course unless a preauricular incision is planned. If a preauricular incision is planned, the incision is gently curved in the preauricular area into a preexisting crease. The incision should not be entirely straight, rather a distance away from the incisura and in front of the tragus. One must leave a portion of non-hair bearing skin when moving the hair bearing skin posteriorly and superiorly. The marking then continues around the ear lobule leaving at least a 2–3 mm cuff of non-hair bearing skin as to not bring hair-bearing skin directly adjacent to the lobule. The marking is continued posteriorly above the postauricular sulcus on the posterior surface of the concha. As the marking reaches the level at which the superior helix would touch the postauricular hairline, the incision is directed posteriorly with a gentle curve along and into the hairline. Lastly, a 3-cm marking is made in the submental crease for the submentoplasty.

Anesthesia

Rhytidectomy patients are placed under general anesthesia and intubated. The face and neck incision markings are infiltrated with 1% lidocaine with 1:50,000 epinephrine. The areas of undermining are also infiltrated with a combination of 1% lidocaine with 1:100,000 epinephrine with 1 ml of tranexamic acid.

Procedural Approach

The submentoplasty is initiated by making the submental skin incision with a #15 Bard Parker blade in the direction of the hair follicles. A short flap is then elevated with Metzenbaum scissors just beneath the skin between the preplatysmal fat layer and subcutaneous layer. Next, a 3-mm liposuction cannula is used to make radial tunnels throughout the anterior neck within the subcutaneous plane in the submental area, across the mandibular margin into the jowl region, and down to the anterior border of the sternocleidomastoid muscle (SCM). Centrally, this technique is done across the cervicomental angle to the area of the thyroid cartilage. After initial tunnels are created, 1 atm of suction is applied into the same cannula to remove excess fat. A larger 5–6 mm liposuction cannula may be used for adequate contouring. Bimanual palpation is then performed to determine symmetry and leave a layer of subcutaneous fat to give supple skin contour. Particular attention needs to be paid to avoid overzealous liposuction which can lead to dimpling in the jowl region or dermal injury causing subdermal scarring and banding.

Direct subcutaneous elevation is then performed to elevate the skin from the platysma muscle. This is performed in a wide fashion extending to the anterior border of the

SCM and past the cervicomental angle with Metzenbaum scissors. The surgeon can then visualize the lipoptosis above and beneath the central platysma muscle as well as observe the redundancy and laxity of the anterior platysma bands.

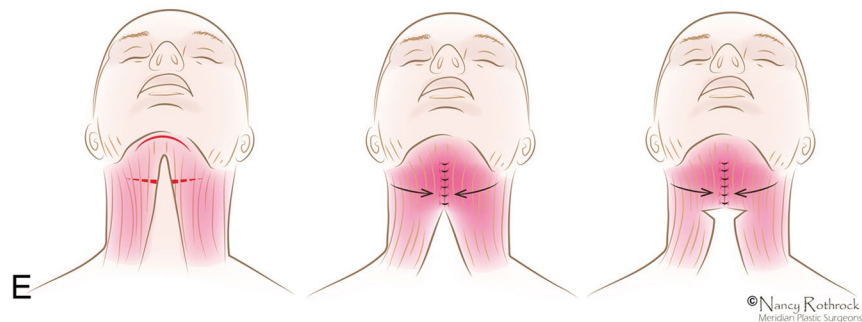
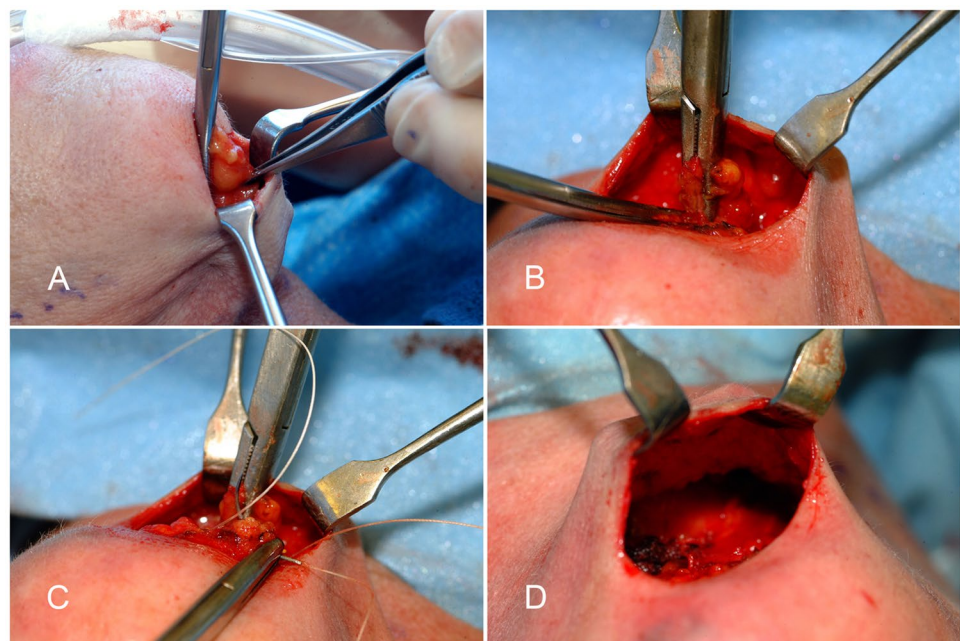
Next, using a curved Kelly clamp, the excess loose pre and subplatysmal fat and platysmal bands are clamped in the midline down to the level of the hyoid bone. The clamped redundancy is then cauterized, cut, and sutured with a 3–0 Vicryl® & supplemented with 3–0 Mersilene® (Ethicon, Somerville, NJ, USA) in male patients. After a firm muscular corset is created, a small wedge of platysma is excised near the hyoid bilaterally for a sharper cervicomental angle. This is demonstrated in Fig. 2. The incision is left open until the end of the operation after tightening the facelift skin flaps in a superior-posterior direction.

Rhytidectomy is initiated by incising the postauricular markings with a #15 Bard Parker blade from the lobule to the scalp. In the scalp, the incision is beveled towards the hair follicles to avoid injury. The subsequent flap elevation remains in the subcutaneous tissues deep to the follicles to avoid postoperative alopecia. The scalp skin is grasped with

non-penetrating towel clamps for traction and dissection is performed with a combination of scalpel and Kahn outward beveled facelift scissors just on top of the SCM fascia. Commonly in males, the tissue plane is more fibrous, therefore, larger scissors may need to be used to create more powerful dissection. The anterior incisions are made along the markings, again beveling the blade in the temporal hair tuft. Non-penetrating towel clamps are placed at the temporal portion of the flap for retraction while the preauricular area is elevated in the subcutaneous plane with a scalpel.

Using Kahn facelift scissors, the remaining posterior skin flap is elevated using an advancing and spreading motion to achieve flap elevation. Thin, intervening bridges of dermal connective tissue are sharply released with partially opened scissors. The surgeon's nondominant hand is holding countertraction with the towel clamps while the assistant holds forced traction with their hands on the cheek and neck skin. This flap is connected to previously undermined anterior neck skin flap, so that there is complete skin undermining from the anterior neck to the posterior neck. It is important to avoid hair follicles if possible in bearded patients.

Fig. 2 Submentoplasty. **A)** Using a curved Kelly clamp, the excess loose preplatysmal fat, subplatysmal fat, and platysmal bands are clamped in the midline down to the level of the hyoid bone. **B)** The clamped redundancy is then cauterized and cut. **C–D)** The anterior platysma edges are sutured with a 3–0 Vicryl® and supplemented with 3–0 Mersilene® and form a muscular corset. **E)** After a firm muscular corset is created, a small wedge of platysma is excised near the hyoid bilaterally for a sharper cervicomental angle as seen in this diagram



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The anterior skin flap is elevated in a similar manner as above medially over the cheek just short of the nasiolabial folds. The anterior, posterior, and neck skin flaps are all in continuity allowing complete visualization of the SMAS-platysma layer. The mandibular cutaneous ligaments are released at this time if needed. Using the zygomatic arch as a landmark, the SMAS is incised with a #15 Bard Parker blade in a semilunar fashion from beneath the lower border of the zygomatic arch to the anterior border of the SCM. The flap is then elevated with a combination of sharp and blunt dissection with Kahn facelift scissors anterior to the parotid gland. As dissection continues superficial to the masseter muscle fascia and zygomatic major muscle, the distal nerve branches are visualized. The masseteric cutaneous retaining ligaments are released. Complete hemostasis is required for safe dissection and care must be avoided to avoid branches of the nerve. The extent of sub-SMAS elevation is adequate when firm traction of the SMAS flap gives the desired amount of correction which varies by patient tissue integrity and SMAS stability. SMAS imbrication begins with a preauricular suspension in a superior-posterior vector. This is secured near the zygomatic root with a buried 0 Vicryl suture (Ethicon) and as needed support with 3–0 Mersilene® for male heavier skin. Once placed, the SMAS is partially divided inferiorly near the lobule for a secondary vector of suspension. The inferior portion is anchored posteriorly with another 0 Vicryl suture to the mastoid periosteum. This is demonstrated in Fig. 3. The only SMAS that incised is a strip near the preauricular region to avoid a bunched appearance once the skin is redraped. Next, additional 3–0 Monocryl (Ethicon) sutures are used to further support the SMAS flap anteriorly and posteriorly and smooth the edges. Now that the SMAS is secure, all the tension of the closure is in these deeper tissues so that the skin can be closed without strain on the wound edges.

Next, the posterior skin flap is elevated superiorly and posteriorly to align with the occipital hairline exactly and secured with suspension staples. The postauricular skin flap is then advanced superiorly and posteriorly and secured at the helical root with suspension staples. Care needs to be taken to not redirect the sideburn too posteriorly. Now that the anterior and posterior skin flap are aligned and anchored, the excess skin of the temporal tuft area is then excised and secured with suspension staples. This is also done with the hair-bearing posterior skin flap. The skin flap covering the ear is then cut and tailored to cradle the ear lobule and avoid a satyr ear deformity. The deep tissue of the ear lobule is closed with 4–0 monocryl (Ethicon) suture and then a few 5–0 Ethilon (Ethicon) sutures are placed to realign the skin. The anterior skin flap is then trimmed to mirror both the anterior lobule and helical insertion. Before complete closure, a 10-mm closed

suction drain is placed in a dependent position below the mandible and brought out through a separate stab incision behind the ear in the occipital scalp. Additionally, PhaseOne® Wound Cleanser (McKesson) consisting of hypochlorous acid is sprayed under the anterior and posterior skin flap.

Several 4–0 Monocryl (Ethicon) sutures are placed for deep dermal closure of the anterior and posterior skin flap. The tragal flap is trimmed of subcutaneous tissue to not appear too bulky or cause anterior displacement of the tragal cartilage. The non-hair bearing skin of the preauricular and postauricular skin flaps are then closed with 5–0 plain gut (Ethicon) suture in running, locking fashion. The procedure is then performed on the contralateral side in an identical manner. After both sides have been completed and closed, the submental incision is trimmed of redundant skin and similarly closed with 5–0 Ethilon (Ethicon) suture in males in a running, locking fashion.

The drains are then placed on closed bulb suction and secured with a silk suture. Antibiotic ointment is placed on a non-adherent dressing over the pre and postauricular incisions. The submental incision is dressed with adhesive and tan tape. Sterile gauze is placed over the undermined skin and submental area. A circumferential pad is then placed around the face and wrapped with Kerlix (Covidien, Mansfield, MA, USA). Care is taken not to apply excessive pressure to the undermined skin flaps.

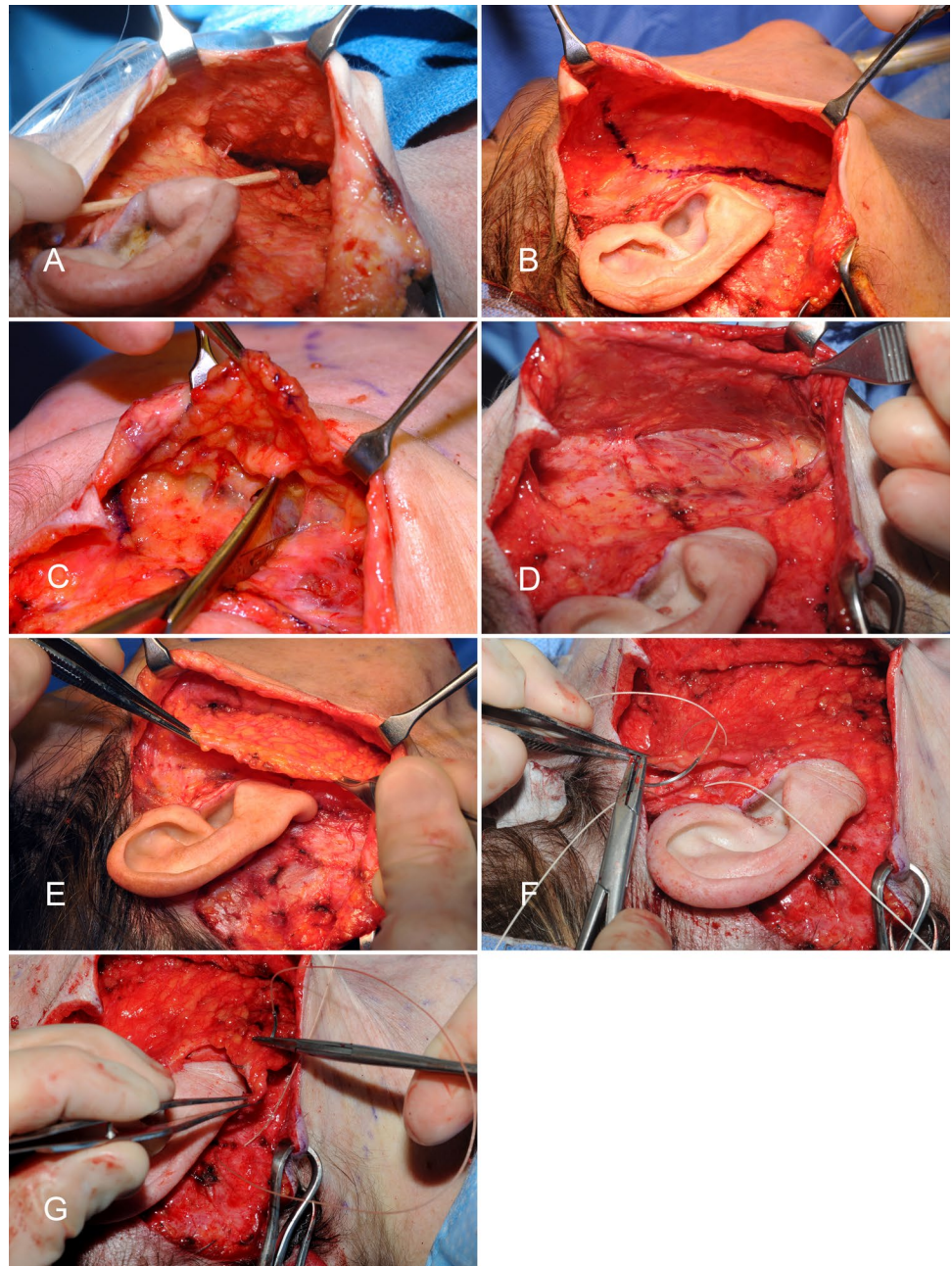
Preoperative and postoperative photos of male patients that underwent rhytidectomy with pretragal and post-tragal incisions can be seen in Figs. 4 and 5, respectively.

Postoperative Management

The patient is evaluated on postoperative day 1 when the dressings are removed and drains are likely removed if there has been less than 30 mL of output and no evidence of fluid collection under the skin. Wound care is performed and a mildly constrictive Kerlix (Covidien) wrap is placed around the neck for an additional 24 h. The patient can remove the wrap and take a shower on postoperative day 2. Light activity, head elevation, and cool compresses are recommended. On postoperative day 7, the patient returns to remove all sutures and staples except the Ethilon lobule sutures, which are removed on postoperative day 10.

The patient can resume normal activity at 3 weeks postoperatively and returns for follow up appointments at 1 week, 1 month, 3 months, 6 months, and 12 months. Commonly, the patient requires triamcinolone injections starting at 2–3 weeks for any subcutaneous ridges or thicknesses in the submental region or neck.

Fig. 3 Rhytidectomy. **A)** Skin flap elevation within subcutaneous fat. **B)** Marking the incision of the SMAS along the inferior border of the zygomatic arch in a semilunar fashion to the anterior SCM. **C)** Elevation in the flap in the sub-SMAS plane. **D–E)** Advancement of the undermined SMAS flap. **F)** Superior advancement and suspension of the SMAS flap to the posterior zygomatic periosteum. **G)** Splitting of the SMAS/platysma at the lobule with suspension of the posterior flap to the mastoid periosteum



Complications

Hematoma and Seroma

Hematoma is widely regarded as the most common complication in facelift surgery, especially in male patients. Male patients have a higher rate of hematoma formation reported at 8.7 to 13% [9, 10], which is thought to be due to the increased vascularity of bearded skin. Preoperative medical optimization is one of the most important factors in avoiding hematomas. This includes blood pressure control as well as cessation at least 1 week preoperatively and 1 week

postoperatively of nonsteroidal anti-inflammatory drugs, aspirin, other anticoagulant drugs, and certain vitamins/supplements. Other factors that should be recognized as higher risk including smoking history, alcohol use, uncontrolled hypertension, and blood clotting disorders. Additionally, the senior author (SWP) uses tranexamic acid in both the local anesthetic injections and systemically to decrease intraoperative bleeding.

If the patient develops a rapidly expanding hematoma postoperatively, this is considered a surgical emergency. The hematoma is evacuated as quickly as possible, irrigated, hemostasis obtained, and a closed suction drain placed. In

Fig. 4 Preoperative and postoperative photos of male facelift patients with pre-tragal incisions. **A)** Preoperative photo (left) and postoperative photo (right) of male patient after rhytidectomy with pre-tragal incision. **B)** Preoperative photo (left) and postoperative (right) of male patient after rhytidectomy with pre-tragal incision



the case of a slow-growing or venous hematoma that is self-contained, this can usually be evacuated with serial needle aspiration, irrigation, pressure dressing, continuation of antibiotics, and daily follow up until it resolves. Rarely, a penrose drain needs to be placed for 2–3 days with a pressure dressing. The short-term sequelae of an untreated hematoma

are flap necrosis, which can lead to scarring, fibrosis, and skin discoloration. [11].

Seromas, or fluid collections beneath the skin, rarely merit a surgical emergency and should be managed with serial needle aspiration, irrigation, pressure dressing, continuation of antibiotics, and daily follow up until it resolves.

Fig. 5 Preoperative (left) and postoperative (right) photo of patient with post-tragal incision



Rarely, a penrose drain needs to be placed for 2–3 days with a pressure dressing.

Alopecia

It is not uncommon for the patient to experience temporary alopecia in the beard area, occipital scalp or temporal tuft at 4–6 weeks postoperatively. The patient should be reassured that temporary alopecia can occur, but that hair follicles will regenerate hair shafts and within 4–6 months all hair will grow back. Additionally, it is important to bevel the blade in the direction of the hair follicles so that hair can grow back through the scar in a trichophytic fashion.

Flap Necrosis

Flap necrosis can occur when there is infection, venous stasis, or inadequate vascular supply which is supplied by the subdermal plexus. The portions of the rhytidectomy skin flap that are most susceptible to necrosis are the tragus and postauricular skin as these are the most distal part of the flap. [8••] Patient factors that can lead to skin necrosis include tobacco use, vasculopathies, uncontrolled diabetes, and other medical conditions that portend to poor wound healing. Even with adequate tobacco use cessation, there is still a higher risk of flap necrosis in smokers versus non-smokers. [12] Surgical factors that can contribute to necrosis include too much tension on the skin during closure, focal

pressure on flap by the dressing, or damage to the subdermal plexus during the procedure if the skin is thinned too much.

Early signs of vascular compromise such as discoloration should be treated with topical nitroglycerin paste applied twice daily to the area of concern and continued antibiotics. If an eschar develops, we initially recommend wound care with hydrogen peroxide and antibiotic ointment until the epidermal crust falls off. However, very conservative debridement is warranted after a prolonged period of a crust in place. It is paramount to leave the dermis and allow the wound to heal by secondary intention. Generally, no additional scar revision is necessary, but it is very important to provide reassurance to the patient and see them on a regular basis.

Scarring

Careful incision planning is paramount to rhytidectomy so that strategically placed scars lie in natural creases anteriorly and are well hidden in the postauricular area and occipital hairline. The postauricular incision should be placed above the crease as this scar will descend into the crease overtime and avoid pulling the ear back. Additionally, there should be 2–3 mm of redundant skin at the lobule to allow support of the lobule, avoid satyr deformity, and not bring hair-bearing skin right beneath the ear. Hypertrophic scars can usually be avoided with meticulous, tensionless closure, but can be treated with intralesional triamcinolone injections. Scar revision is rarely indicated, but should not occur until at least 6 months postoperatively.

Facial Paralysis

Injury to the facial nerve can occur during rhytidectomy, but in experienced hands, this is a rare occurrence in 0.5 to 2.5% of patients. [13] Damage to the nerve is usually due to a traction injury which is temporary, however facial nerve branch transection can occur. Meticulous technique with knowledge of the anatomical planes often avoids these injuries. The most commonly injured branch of the facial nerve is the marginal mandibular, followed by the temporal and buccal, respectively. [14] However, if a nerve transection is observed, direct neuroorrhaphy should be performed at the time. If the paresis is noted postoperatively, patients should be reassured that this is very often temporary. Return of function can vary between a few weeks to several months. Some surgeons advocate for oral steroid use immediately postoperatively, but this does not generally change the course of facial nerve paralysis. [15]

Numbness

Numbness is an expected temporary sequela after rhytidectomy because during dissection of the skin flap the distal portions of the cutaneous sensory nerves are transected. As a result, the patient should expect postoperative numbness for 3 to 9 months with slow return. Patients should be counseled on this preoperatively that numbness will occur and shaving with an electric razor is preferred. Long term postoperative numbness, however, is considered a complication. This could result from transection of the greater auricular nerve or lesser occipital nerve. If nerve transection is seen during surgery, a direct neuroorrhaphy should be performed. Damage to these larger nerves can be avoided by maintaining skin flap dissection in the subcutaneous plane.

Infection

Infection is an uncommon complication of rhytidectomy due to the high vascularity of the face and neck. Additionally, the senior author (SWP) administers perioperative intravenous antibiotics before and during surgery as well as postoperative antibiotics. The preferred antibiotic is cephalexin 500 mg BID for 5 to 7 days. If the patient is having a complicated postoperative healing course with skin discoloration or sloughing, then levofloxacin is added or continued beyond the 7 days to avoid flap necrosis.

Conclusions

Rhytidectomy in male patients is becoming increasingly popular as there is less stigma regarding aesthetic surgery and patients want to obtain a more natural, refreshed

appearance. With male patients, proper patient selection is as important as preoperative counseling on achievable results. Rhytidectomy techniques remain similar in both male and female patients, but with various technical modifications, namely, incision planning, trichophytic incisions, and avoiding placing hair-bearing skin in unnatural locations. Additionally, there are complications such as hematoma that occur in males more than females, but these can often be mitigated with proper preoperative medical optimization as well as use of tranexamic acid and blood pressure control during surgery. Overall familiarity with surgical principles and facial and neck anatomy should avoid complications, ensure good outcomes, and result in patient satisfaction.

Declarations

Conflict of Interest The authors declare that they have no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

References

Papers of particular interest, published recently, have been highlighted as:

- Of importance
 - Of major importance
1. Rogers BO. The development of aesthetic plastic surgery: A history. *Aesth Plast Surg.* 1976;1:3–24.
 2. Skoog, TG. Plastic Surgery: The aging face. In: Skoog, TG, ed. *Plastic Surgery: New Methods and Refinements.* Philadelphia, PA: WB Saunders; 1974.
 3. Hamra ST. The deep-plane rhytidectomy. *Plast Reconstr Surg.* 1990;86(1):53–61; discussion 62–3.
 4. Hamra ST. Composite rhytidectomy. *Plast Reconstr Surg.* 1992;90(1):1–13.
 - 5.● Perkins SW, Waters HH. The extended SMAS approach to neck rejuvenation. *Facial Plast Surg Clin North Am.* 2014;22(2):253–68. **(This manuscript provides additional surgical detail and intraoperative photographs for the described facelift and anterior platysmaplasty for further clarification on technique.)**
 6. American Society of Plastic Surgeons. 2019 Plastic Surgery Statistics: Cosmetic Surgery in Males. <https://www.plasticsurgery.org/documents/News/Statistics/2019/cosmetic-procedures-men-2019.pdf>
 7. Rohrich RJ, Stuzin JM, Ramanadham S, Costa C, Dauwe PB. The Modern Male Rhytidectomy: Lessons Learned. *Plast Reconstr Surg.* 2017;139(2):295–307.
 - 8.●● Daraei PP, Marshall RV, Adams AS, Rousso DE. The Male Facelift. *Facial Plast Surg.* 2020;36(4):404–15. **(This is a comprehensive text on facial analysis, preoperative evaluation, surgical technique, post-operative care, and complication management for male rhytidectomy.)**

9. Grover R, Jones BM, Waterhouse N. The prevention of haematoma following rhytidectomy: A review of 1078 consecutive facelifts. *Br J Plast Surg*. 2001;54(6):481–6. <https://doi.org/10.1054/bjps.2001.3623>.
10. Moyer JS, Baker SR. Complications of rhytidectomy. *Facial Plast Surg Clin North Am*. 2005;13(3):469–78.
11. Rousso DE, Rutherford KD. Biplanar superficial musculoaponeurotic system imbrication rhytidectomy. *Facial Plast Surg*. 2014;30(4):380–93.
12. Riefkohl R, Wolfe JA, Cox EB, McCarty KS Jr. Association between cutaneous occlusive vascular disease, cigarette smoking, and skin slough after rhytidectomy. *Plast Reconstr Surg*. 1986;77(4):592–5.
13. Matarasso A, Elkwood A, Rankin M, Elkowitz M. National plastic surgery survey: Face lift techniques and complications. *Plast Reconstr Surg*. 2000;106(5):1185–95.
14. Baker DC. Complications of cervicofacial rhytidectomy. *Clin Plast Surg*. 1983;10(3):543–62.
15. Varadharajan K, Beegun I, Daly N. Use of steroids for facial nerve paralysis after parotidectomy: A systematic review. *World J Clin Cases*. 2015;3(2):180–5.

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