ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25apr263

Surgical Facelift: An Overview

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Publication Date: 2025/06/02

Abstract: Surgical Facelift (Rhytidectomy) A surgical facelift, or rhytidectomy, is a facial rejuvenation procedure aimed at reversing visible signs of aging in the face and neck. This technique addresses the loss of skin elasticity, deepening of facial folds, descent of soft tissues, and the accumulation of subcutaneous fat, which collectively contribute to an aged appearance. The procedure focuses on restoring youthful facial contours by repositioning and tightening the skin, subcutaneous tissues, and underlying musculature.

Keywords: *Rhytidectomy/Lifting / Rhytidoplasty / Rejuvenation / Aging / SMAS.*

How to cite: Dr. Kedar Kawsankar; Dr. Uma Mahindra; Dr. Deepak Motwani; (2025) Surgical Facelift: An Overview. *International Journal of Innovative Science and Research Technology* 10(4), 4381-4384. https://doi.org/10.38124/ijisrt/25apr263

I. INTRODUCTION

The influence of fashionable society on perceptions of youth is evident when examining newspapers, magazines, or television programs that celebrate young, attractive individuals while side-lining older, wrinkled ones. Generally, younger people tend to view those with aged appearances as unappealing, undesirable, and vulnerable. In the early 20th century, surgeons in Europe and America began to enhance cosmetic techniques by incorporating extensive skin undermining and fat removal. [1-3]

In 1976, Mitz and Peyronie identified the superficial muscular and fascial system (SMAS) as a crucial fascial layer located between the salivary gland and cheek regions, surrounding the facial muscles. Recognizing that this fascial layer operates as a cohesive unit transformed the approach to facelift surgery. Today, we reposition the SMAS and leverage its strength to ensure minimal tension on the skin closure, thereby maximizing the longevity of the facelift. [4- 6] Aesthetic rhytidectomy employs surgical and medical techniques to enhance and restore facial appearance, primarily focusing on reducing wrinkles and skin folds. [7-9]

➢ *Anatomical Consideration*

Understanding the classic five-layer structure of superficial soft tissues over the facial skeleton is essential to appreciate the relationship of the SMAS, a concept that is well documented in the literature. [10-12]

- Layer 1: Skin
- Layer 2: hypodermic tissue, as well as the fibrous retinacular body covering
- Layer 3: Frontalis (upper face), SMAS (mid-face), facial muscle (lower face and neck)
- Layer 4: Along with these 3 outer layers unite to form a composite anatomical unit, that is fastened in areas through ligaments within the sub- SMAS.

Layer 5: Investment layer of deep facia on the muscles of mastication or the periosteum membrane, where the skeleton might not be hide by these muscles. The surgical literature outlines variations in the five-layer soft tissue composition of the face and cheek, particularly around the orbit and oral regions, where these tissues extend beyond skeletal apertures to form the eyelids, central cheek, and lips, with key anatomical features such as the masseteric ligaments defining the boundary between the lateral and anterior cheeks, while the SMAS acts as a continuous fibrous structure connecting facial muscles to the dermis. [13-15]

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II. SURGICAL TECHNIQUE

➢ *Incision Design*

The procedure begins with the careful placement of incisions, which are typically initiated in the temporal hairline and extend inferiorly along natural creases anterior to the ear, around the earlobe, and continue posteriorly into the occipital scalp. This design allows for adequate exposure of the facial and neck tissues while facilitating optimal scar concealment. The precise placement and length of the incision depend on the degree of correction required and the specific technique employed. [16-18]

➢ *SMAS Manipulation*

The **superficial musculoaponeurotic system (SMAS)** is a fibromuscular layer that plays a pivotal role in facial expression and structure. Manipulation of the SMAS is critical for achieving durable results. Techniques may include SMAS plication (folding and suturing), imbrication (overlapping and suturing), or full elevation and repositioning (deep plane technique). These manoeuvres elevate the midface, redefine the jawline, and provide structural support to the overlying skin. [19-22]

➢ *Skin Redraping*

Once the underlying tissues have been repositioned, the overlying skin is redraped in a superior and posterior direction. The skin is lifted without excessive tension to avoid distortion of facial features and to minimize the risk of wound complications. The excess skin is then meticulously trimmed and the incisions are closed with fine sutures or skin adhesives to promote optimal healing and minimize scarring. [23-25]

➢ *Neck Rejuvenation*

In many cases, neck aging is concurrently addressed. **Platysma-plasty** involves the anterior and/or lateral tightening of the platysma muscle, correction of vertical platysmal banding, and in some cases, submental liposuction or direct excision of preplatysmal fat. These steps help restore a youthful cervico-mental angle and improve neck contour. [26-28]

➢ *Closure and Recovery*

Closure is performed in layers to ensure proper alignment and tension distribution across the incision lines. Postoperative care includes head elevation, cold compresses, and the administration of analgesics and antibiotics. The recovery period spans approximately 2 to 4 weeks, during which most swelling and bruising resolve, though final results may take several months to fully manifest. [29-31]

➢ *Indications*

The ideal candidates for rhytidectomy are individuals with:

- Skin laxity in the mid and lower face
- Deep nasolabial and marionette folds
- Redundant skin and fat accumulation in the neck

Psychological readiness, medical fitness, and the absence of contraindications such as poorly controlled hypertension, coagulopathies, or a history of keloid formation are essential considerations. Patients must also have realistic expectations, understanding that while the procedure can rejuvenate appearance significantly, it does not prevent future aging or alter fundamental facial anatomy. [32-35]

III. OUTCOMES AND COMPLICATIONS

Surgical facelifts are associated with high rates of patient satisfaction and aesthetic improvement. Results can persist for 7 to 10 years, depending on individual factors such as skin type, lifestyle, and genetics. [36]

➢ *However, the Procedure is not without risks. Potential Complications include:*

- Hematoma: Occurs in 1–3% of cases, often within 24 hours postoperatively, and requires prompt evacuation to prevent skin compromise.
- Nerve injury: Most commonly transient neuropraxia of the facial nerve branches; permanent damage is rare but can result in functional and aesthetic deficits.
- Infection: Rare due to the vascularity of the facial region but can occur and requires antibiotic therapy.
- Poor wound healing: Often linked to tension on the skin or patient factors such as smoking.
- Skin necrosis: Particularly in smokers due to compromised microcirculation.
- Hypertrophic scarring or alopecia along the incision line, though techniques continue to evolve to mitigate these risks. [38-40]

➢ *Variations and Adjunctive Procedures*

There are several technical variations of the traditional facelift:

- The High SMAS Facelift
- Composite Facelift
- Mid Facelift
- Minimal Access Suspension Facelift (MACS)
- Minimal Incision Facelift
- Facial Thread-lift

➢ *The High SMAS Facelift:*

The "high SMAS" technique, developed in the early 1980s, builds upon Tord Skoog's methods, aiming to connect the skin and hypodermic mass to the SMAS for effective facial rejuvenation while ensuring adequate cheek mobilization without relying on dermal pull. Here, specialise in the surgical steps of location the hypodermic cheek mass with the high SMAS technique.

➢ *Composite facelift:*

Extends the deep plane technique by also lifting the orbicularis oculi and other facial muscles. It aims to address periorbital aging and achieve a harmonious facial rejuvenation.

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➢ *Minimal incision facelift:*

Involves smaller incisions and limited dissection, suitable for patients with mild to moderate facial aging. Recovery is typically shorter, though results may be less dramatic. This method eliminates the need for incisions in hair-bearing skin, proving highly effective in preventing hair loss and alterations in the temporal or bone hairlines. In addition to the stripped incision, a short skin flap is elevated, and a submentoplasty is performed. Despite utilizing this stripped incision and short flap technique, a complete SMAS flap can still be effectively elevated. The use of protein glue (Tisseel) eliminates the need for drains or dressings after surgery. With this technique, we have successfully achieved favorable aesthetic results while minimizing swelling, bruising, and complications such as hematomas.

➢ *Deep plane facelift:*

Dissects beneath the SMAS layer and lifts the skin and SMAS as a unit. This approach is particularly effective for midface rejuvenation and can yield more natural and longer-lasting results.

➢ *Facial Thread-lift:*

Non-surgical rejuvenation techniques, which involve volumetric enhancement through various interventions, including injections of different gels or fat, add a "third dimension" to facial rejuvenation. Nevertheless, improved outcomes are demonstrated and can be attained when procedures are conducted by innovative consultants. The use of fillers may lead to an accumulation of facial volume that results in unnatural contours, causing a noticeable shift in the center of gravity of the face towards its lower third. Ablative and non-ablative resurfacing techniques enhance the skin's surface; however, they do not sufficiently lift the underlying sagging tissues, which is essential for achieving a more youthful appearance. The application of threads in facelift procedures is not a novel concept. This technique involves inserting sutures into the skin of the face and neck to address sagging and lax tissues, thereby eliminating the need for large incisions and significantly shortening recovery time. [41-46] Adjunctive procedures are often performed concurrently to enhance the overall outcome. These include:

- **Blepharoplasty**: To correct periorbital aging
- **Brow lift**: To elevate drooping eyebrows and smooth the forehead
- **Autologous fat grafting**: To restore facial volume in areas of deflation
- **Laser skin resurfacing or chemical peels**: To improve skin texture and pigmentation [47]

IV. CONCLUSION

Rhytidectomy remains the cornerstone of facial rejuvenation surgery, offering comprehensive correction of age-related facial changes. Advances in surgical technique, anesthetic safety, and postoperative care have contributed to improved outcomes and reduced complication rates. Successful results depend on thorough patient assessment, individualized surgical planning, and the expertise of the operating surgeon. While nonsurgical techniques offer alternative approaches, the facelift continues to provide the most definitive and lasting aesthetic improvement for appropriately selected patients.

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