Complications/Sequelae of Neck Rejuvenation

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KEYWORDS

• Neck lift • Cervicofacial rhytidectomy • Complications

KEY POINTS

- Expanding hematoma may result in skin flap necrosis and/or airway compromise; therefore, immediate evacuation followed by control of hemostasis is recommended.
- Hematoma or seroma may result in induration; induration may resolve spontaneously, may require conservative treatment with injection of steroid and massage, or may result in skin contour irregularities that may benefit from revision surgery.
- The most commonly injured nerve is the great auricular nerve, and the most commonly injured motor nerve is the marginal mandibular branch of the facial nerve.
- Although infection following neck lift surgery is rare, the rate of methicillin-resistant *Staphylococcus aureus* infection is on the rise and should be considered in the differential diagnosis of infection following neck lift surgery.
- Persistent platysmal bands are treated with either botulinum toxin, submentoplasty, or corset platysmaplasty.

INTRODUCTION

Neck lift surgery performed in isolation or in conjunction with a facelift provides a more youthful cervicomental angle. Complications related to neck lift surgery vary from contour irregularities that may improve with time or conservative measures, to contour irregularities that persist and may benefit from delayed surgical intervention, to expanding hematomas that require immediate surgical intervention. This article reviews complications of neck lift surgery and their etiologies, methods to minimize the incidence of these complications, and management.

HEMATOMA

The rate of hematoma in neck lift is approximately 3% and does not increase with use of a deep plane procedure.[1] Risk factors include hypertension, male gender, use of certain medications/supplements/herbal/homeopathic medications, including aspirin, nonsteroidal anti-inflammatory medications, fish oil, gingko biloba, and melatonin, to name a few.[2] In an effort to minimize this risk, proper perioperative management of hypertension is essential, as well as avoidance of medications/supplements/homeopathic medications that may increase bleeding. In patients with a history of easy bruising, preoperative evaluation of coagulation studies may reveal an underlying coagulopathy; thalassemia should be suspected as a potential issue in patients of Mediterranean descent and history of easy bruising. A meta-analysis demonstrated no statistically significant benefit from the use of tissue sealants in face-lift surgery; however, tissue sealants may be useful for patients at high risk for hematoma formation.[3] A prospective randomized controlled trial demonstrated no influence on postoperative hematoma by the use of drains in cervicofacial rhytidectomy; however, this study did show a significant reduction in bruising with the use

Disclosures: None.
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Facial Plast Surg Clin N Am 22 (2014) 317–320
http://dx.doi.org/10.1016/j.fsc.2014.01.007
1064-7406/14/$ – see front matter

of drains, which may be useful in patients at high risk for hematoma following surgery.[4] A retrospective study found the use of drains during the first 24 hours after cervicofacial rhytidectomy significantly decreases the rate of seroma formation, and, to a lesser extent, hematoma formation.[5] If an expanding hematoma is encountered in the postoperative period, immediate evacuation of the hematoma and exploration of the operative site for hemostasis control are essential due to the potential for airway compromise and skin flap necrosis. If a small, nonexpanding hematoma develops in the postoperative period, needle aspiration and compression dressing, followed by close observation and further needle aspiration as needed may be sufficient; a postoperative seroma may be managed similarly. If the hematoma is organized, and, as such, not amenable to needle aspiration, then one may consider partial opening of incision site, suctioning of organized hematoma, closure of incision site, and placement of a compression dressing.

INDURATION

A seroma or small hematoma may result in induration. If induration occurs, it may be treated with massage and/or injection of triamcinolone 10 mg/mL approximately 4 weeks after surgery. Triamcinolone injection may cause subdermal atrophy and/or skin hyperpigmentation; placement of the injection deep into the subcutaneous plane and diluting the steroid may minimize these risks. Usually, these conservative measures and the passage of time allow for resolution of the induration and address the induration without producing a long-term skin contour irregularity. If a skin contour irregularity persists 6 to 12 months after the original surgery, it is reasonable to consider a surgery that would involve a wide undermining of skin to provide a second chance for improved skin contraction.

SKIN CONTOUR IRREGULARITIES

Skin contour irregularities after neck lift surgery have several possible etiologies. Overzealous liposuction of fat superficial to the platysma muscle may result in skin contour irregularities. If the contour irregularity is only a concavity, then 1 possible solution is injection of filler, such as hyaluronic acid, or fat grafting into the concavity. Occasionally, this overzealous liposuctioning may lead to adherence of denuded dermis directly onto the platysma muscle, leading to contour irregularities. In such instances, undermining of skin off of the platysma muscle and redraping offer some improvement, and fat grafting may provide additional improvement. During liposuction of fat superficial to the platysma muscle, consider using small cannulas, turning the hole of the cannula away from the dermis, and performing judicious rather than excessive liposuction.

Skin contour irregularities at the postauricular region may be related to insufficient undermining of skin, which may be seen in short scar procedures. Rohrich and colleagues[6] named this irregularity a “subauricular band” and described it as a lateral neck band with skin contour irregularities along the posterior aspect of the sternocleidomastoid muscle. Proper undermining of skin will help prevent this complication. If this complication occurs, then release of this band with complete undermining of the involved and surrounding areas will minimize the irregularity.

NERVE INJURY

The great auricular nerve is the most commonly injured nerve during cervicofacial rhytidectomy. Meticulous, precise dissection in the region inferior to McKinney point, where the great auricular nerve is more superficial and, as such, more susceptible to potential injury, will minimize this risk. In addition to ear numbness, transection of the great auricular nerve may lead to formation of a neuroma; if a neuroma develops and presents as a painful superficial mass, then surgical excision of the neuroma is warranted.[7] The marginal mandibular branch of the facial nerve is the most commonly injured motor nerve and results in weakness of the ipsilateral hemi-lower lip due to denervation of the depressor anguli oris, depressor labii inferioris, and mentalis muscles. In most cases, it is a traction injury that is not permanent, and function eventually returns to normal within weeks or a few months. Injury to the cervical branch of the facial nerve may result in the clinical presentation of pseudoparalysis of the marginal mandibular nerve; the cervical branch of the facial nerve injury can be distinguished from marginal mandibular nerve injury by the fact that the patient will be able to evert the lower lip because of a functioning mentalis muscle.[8]

INFECTION

Infection following cervicofacial rhytidectomy is not common, with a reported incidence of 0.6%; however, methicillin-resistant *S aureus* (MRSA) infections are on the rise.[9] It behooves the facial plastic surgeon to review the patient’s past medical and surgical histories to identify potential risk factors for either community-acquired or health