locoregional flap reconstructions (12/12), and 62% (8/14) of patients with free-flap reconstructions. Algorithms regarding pre- and intraoperative decision-making are discussed, and complications between the techniques as well as long-term (mean follow-up 3 years) results are analyzed.

RESULTS: Complications, including tissue expander infection with need for removal or exchange, partial or full flap loss, were evaluated and occurred in 25% (3/12) of patients with locoregional and 36% (5/14) of patients receiving free-flap reconstructions. Secondary revision surgery was performed in 33% (4/12) of locoregional flaps and 93% (13/14) of free flaps.

CONCLUSIONS: Both locoregional as well as distant tissue transfers have their role in postburn head and neck reconstruction, whereas pre-expansion remains an invaluable tool. Paying attention to the presented principles and keeping the importance of aesthetic facial subunits in mind, range of motion, aesthetics, and patient satisfaction were improved long term in all our patients, while minimizing donor site morbidity.

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Immediate Reconstruction with Autologous Temporoparietal Fascia after Enucleation of Infected or Extruded Alloplastic Nasal Implants

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Simultaneous reconstruction after removal of nasal silicone implants were published as diced cartilage and autologous rib and ear auricular cartilage, and each had their shortcomings. Temporoparietal fascial grafts have been used for facial and nasal contouring, for vascularized tissue coverage, and augmentation the nose, lip. In order to treat nasal implant infection, the temporoparietal fascia graft may be considered for in time replacement of allografts.

From 2006 until 2008, the temporoparietal fascial graft was used in 20 referred patients with nasal allograft in a medical center. The female to male ratio is 17:3. The mean age is around 32.6 years old. All the patients refused disfigurement after removal the implants for at least three months. All the patients were followed up for five years. All patients recovered within one to two weeks. The nasal skin envelop was preserved or healed. There was neither graft exposure, nor recurred infection. The procedure is a useful method of eliminate inflammatory squeals. Most of all, the temporoparietal fascial graft employed, was able to bridge the 3-month gap for removal of the implant. The smooth nasal dorsum skin was regained with adequate nasal projection.

All patients were followed up in plastic surgery clinics without signs of recurrence.

There are no reports in the English literature of the use of temporoparietal fascial grafts to treat nasal implants infection.

The temporoparietal fascial graft is a simple and reliable method to provide thin, broad, pliable, easy neovascularized, adequate coverage, contour, and bulk on the cartilage dorsum of the nose, as well as an inconspicuous donor site. The tissue is soft in consistency and displays minimal resorption. Most important, more complicated disfiguring procedures such as a free flap may be avoided.

Revision of Patients with Severe Blepharoptosis and Poor Levator Function Post Tu Flap Procedure

Lung Chen Tu, MD, PhD

INTRODUCTION: Surgery is the most effective method of treatment for patients with severe blepharoptosis. Frontalis sling to the tarsal plate is a common method and relatively easier to perform on severe blepharoptosis since its first report by Hess in 1893. However, there are drawbacks for such operation. We had reported Tu flap procedure (transconjunctival, levator sheath sling and advanced levator aponeurosis) to treat severe blepharoptosis with poor levator function previously.1 The result was acceptable for the ptosis can be corrected and lagophthalmos is always resolved within 4 weeks post operation. Nevertheless, there were still some patients that need revision. This paper described the methods we use to solve this problem.

MATERIALS AND METHODS: Medical records were reviewed for 5 severe blepharoptosis patients with poor levator function (5 eyelids) receiving revision post Tu flap procedure at MacKay Memorial Hospital in Taipei between December 1, 2013 and July 30, 2015. Among the 5 patients, all the
levator aponeurosis and levator sheath were dissected again and advanced to the upper of the split-tarsal plate, while the orbicularis oculi muscle was left intact. Outcome measures include margin reflex distance-1, lid slit distance for ptosis correction, width of tarsal plate for excision and eyelid symmetry.

RESULTS: Complete or near complete correction of ptosis (degree of ptosis<1mm) was achieved in all the 5 eyelids in postoperative follow-up. The preoperative MRD1 ranged from -4 to 0 mm with the mean of -3 mm while the postoperative ranged from 2.5 mm and 3.6 mm with a mean of 3.2 mm. The width of tarsal plate to excise ranged from 1.5 mm to 2.0 mm with a mean of 3.52 mm. The preoperative lid slit distance ranged from 0mm to 6 mm with a mean of 3.52mm while the postoperative ranged from 8 mm to 10.1mm with the mean of 8.8 mm. The most common complication was lagophthalmos. Immediate postoperative lagophthalmos was transient in all cases and were recovered to normal within 4 weeks.

CONCLUSION: The Tu flap procedure and split-tarsal plate dissection provided significant improvement in patients with severe blepharoptosis and poor levator function with under correction. This method may also use in patients during operation in the first time. It would encourage faster postoperative recovery and overall clinical outcome.

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Minimal Invasive Techniques for Periorbital Rejuvenation

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BACKGROUND: The lower eyelid anatomy is very complex and variable. Many operative and non-operative interventions have been described and to improve the aesthetic properties of the lower eyelid and cheek region. In general, the more invasive the procedure, the higher the risks and complications. As our knowledge of orbital soft tissue and bony aging deepens, our focus in minimizing invasive surgical interventions has accelerated. Herein, we describe a series of minimally invasive techniques that can be customized to enhance outcomes of brow, lower eyelid and cheek rejuvenation.

METHODS: The lower eyelid is evaluated for lateral and medial canthal position, degree of scleral show, globe protrusion, inferior, lateral and superior orbital rim position relative to the anterior cornea and dorsal nasal height. The regional anatomy of the orbit is analyzed in the context of eyebrow position, the brow shape, the inclination of the forehead and the relative prominence of the zygomatic-orbital and maxillary bones. The deep and superficial fat compartments of the orbital region and lower eyelid are assessed. The degree and extent of tear trough deformity is noted. The degree of excess skin and the extent of textural and pigmentary changes of the skin surface are noted along with the tone of the lower eyelid.

RESULTS: Diagnosis of the presenting deformities associated with periorbital and eyelid aging led us to formulate 4 minimally invasive procedures that can be used alone or in combination with other eyelid procedures and during face and browlift:

1. **Superficial Cell Grafting and Deep Compartment Fat Injection.** A specially designed, disposable, off the shelf fat drawing and cell grafting kit is used. Fat is injected through 18-gauge needle incisions with a variety of small, disposable cannulae.

2. **Minimally invasive release of the orbitomalar ligament** is carried out through 3mm incisions after volume restoration if needed.

3. **Pinch blepharoplasty** and chemical peel or laser resurfacing is then performed if indicated for skin laxity and/or photodamage.

4. **Marionette browlift with shuttle needles**

Over a 6 years’ period, these procedures have been carried out in 120 patients having either lower eyelid surgery either alone or in combination with other procedures. Case examples will be presented for each of the 4 techniques and their limitations will be discussed.

CONCLUSIONS: Using a precise diagnostic workup, complex orbital and eyelid aging can be addressed using a simplified treatment algorithm which alters the current treatment philosophy of fat reduction and skin muscle flap dissection for lower eyelid surgery in many cases without compromising outstanding surgical outcomes.

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