

**BLEPHAROPLASTY FOR TREATING DERMATOCHALASIS,  
FACIAL REJUVENATION AND CLOSED MELOPEXIA (RUSSIAN  
THREADS CONTOUR) IN MIDDLE THIRD AND LOWER OF THE  
FACE.**

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**The autor do not have comercial interest.**

## **SUMMARY**

**blepharoplasty for treating dermatochalasis, facial rejuvenation and closed melopexia (russian threads contour) in middle third and lower of the face.**

**Manuel Ignacio Vejarano Restrepo, MD**

**OBJECTIVE:** Show the benefits of this surgical technique in the treatment of dermatochalasis and facial rejuvenation.

**MATERIALS AND METHODS:** Description of each surgical technique, starting with small incision blepharoplasty, plus some treatments for lower eyelid laxity. Description of new treatments for rejuvenation of the middle and lower third of the face such as the closed Melopexia Russian Threads by small incision.

**CONCLUSIONS:** Every time our patients seeking facial rejuvenation procedures less invasive, with good functional and aesthetic results. The combination of blepharoplasty and closed Melopexia is a safe and minimally invasive procedure, which produces excellent results for the treatment of dermatochalasis and rejuvenation of the middle and lower third of the face.

## **ABSTRACT**

### **Treatment of Dermatochalasis and Facial Lift with Blefaroplasty and Closed Melopexy (Contour Filaments)**

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**PURPOSE:** To describe the benefits of this surgical technique for dermatochalasis and facial lift.

**METHODS:** Description of the technique is provided. First, small incision blefaroplasty and eyelid laxity management. Second, description of new treatment modalities for facial lift in mid and inferior face is presented. These techniques include closed melopexy and “contour” filaments.

**CONCLUSIONS:** As cosmetic and oculoplastic surgeons we need to find minimal invasive procedures that provide excellent anatomical and functional outcome. Combination of blefaroplasty and closed melopexy is a safe and effective procedure, that offer excellent results for the treatment of dermatochalasis and facial lift.

# **Blepharoplasty for treating dermatochalasis, facial rejuvenation and closed melopexia (russian threads contour) in middle third and lower of the face.**

## **INTRODUCCIÓN**

Gregory L. Ruff, MD Plastic Surgeon at Duke University in 1990 and publishes discover using barbed monofilament suture to lift and tone the SMAS (superficial musculoaponeurotic system) and its use in facial rejuvenation, and demonstrates the intra and post surgical benefits of this type of minimally invasive procedures<sup>3</sup>.

Benjamin Schlechter, MD F.A.C.S. Plastic Surgeon at the University of Illinois, takes the idea of barbed sutures for use in face lift in the middle and lower third of the face and is performing the research to be approved by the FDA<sup>2</sup>.

Vincent C. Grampapa, MD. F.A.C.S. Plastic Surgeon New York University, NASA consultant, has 13 years of experience using Face Lift techniques for minimal incision and begins with the treatment of barbed sutures in neck<sup>1</sup>.

Claudio de Lorenzi, M.D. Plastic Surgeon at the University of Ontario, was President of the Association of Plastic Surgery in Canada, has released the benefits of barbed sutures and blepharoplasty, more use of lasers and facial peellings achieving excellent cosmetic results and shorter postoperative recovery<sup>6</sup>.

## **MATHERIALS AND MÉTHODS:**

### **DESCRIPTION OF SURGICAL TECHNIQUES**

#### **4 EYELIDS BLEPHAROPLASTY**

Pre surgically pictures are taking of the patient, start marking at upper and lower eyelids, a local anesthetic, we remove excess skin, we cauterize to have very clear anatomical planes, removed the nasal fat package, we form more deep the groove, layered closure, lower eyelids started the same way under local anesthesia dissected to find and remove fat packs number three (3) and remove excess skin. Then do retinacular suspension to give lower eyelid tension and give an appearance of almond eyes, layered closure.

#### **MELOPEXIA CLOSED**

Always for facial rejuvenation procedures we have to know the anatomy of the area to be treated and nerve and vascular structures that we must respect, so we take a short anatomical review, and we emphasize in dangerous areas that we know very well in preventing intraoperative and post operative complications.<sup>7</sup>.

#### **Facial Danger Zone 2**

Facial Danger Zone 2 includes the area where the temporal branch of the facial nerve runs beneath the temporoparietal fascia SMAS, having emerged from the bottom of the parotid gland to the level of the zygomatic arch on its way to innervate the frontalis muscle in the forehead. The temporal branch injury resulting in paralysis of the frontalis muscle. Typically, the function of the orbicularis oculi remains intact because of the temporal branch lesion because this muscle is supplied dual innervations in the form of a second rib that comes from zygomatic lower branches. Clinically, the involved side of the face is paralyzed, with brow ptosis, asymmetry of the eyebrows, and a lack of symmetry in the expression of the face. (Fig. 1).



Figure 1. Injury facial dangerous zone 2

**Anatomical location.** Facial Danger Zone 2 is located by drawing a line from a point 0.5 cm below the trago to a point 2 cm above the lateral eyebrow. A second line is drawn along the zygomatic arch to the lateral orbital rim. A third line down from the point on the eyebrow through the end of the eyebrow to the zygomatic arch. These three lines define a triangle (Figs. 2 and 3) in which the temporal branch of the facial nerve rests beneath the surface of the temporoparietal fascia and are more likely to be injured.

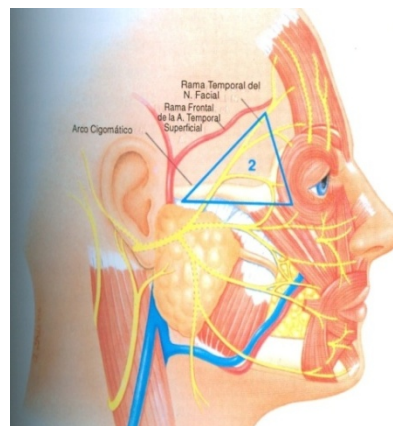
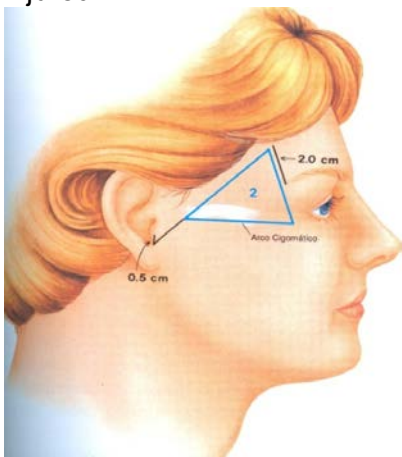


Figure 2. Location Danger Zone 2 Figure 3. Anatomy Danger Zone 2

**Surgical Dissection.** The temporal nerve branch easily emerges below the parotid gland and is under the surface of the temporoparietal fascia, the dissection can be performed so deep temporoparietal fascia wisely or in the subcutaneous plane but not on this layer immediately under the temporoparietal fascia.

This level is achieved by dissecting the subtemporoparietal SMAS fascia from the scalp, zygomatic and dissecting supra-SMAS layer subcutaneously on the cheek from the ramus up to the cheekbone. The point at which these two planes are, revealed the

mesotemporalis SMAS layer in which the temporal branch of the facial nerve lies and this branch can sometimes be seen just below the frontal branch of the superficial temporal artery. Exposure and identification of mesotemporalis help to prevent injuries of this nerve.

In subperiosteal rhytidectomy or other procedures in which the tissues are elevated binding to the zygomatic arch, the superficial layer of the deep temporal fascia can be incised to enter the superficial temporal fat pad in this space, and less dissection may proceed and above with less chance of damaging the front branch.

#### **Facial Danger Zone 4**

Facial Danger Zone 4 includes the zygomatic and buccal branches of the facial nerve, which are superficial and rest on the fat pad of Bichat. Damage to these nerves can result in paralysis of the zygomatic major and minor muscles and levator common wing of the nose and upper lip, causing the collapse of the upper lip and oral commissure on the affected side. The fall of the upper lip on the affected side creates considerable asymmetry during rest. The deformity is more apparent, however, when the patient smiles. The opposite action of the zygomatic muscles more and less than on the opposite side to pull the mouth to the normal side creates a distorted appearance (Fig. 4).

Fortunately, zygomatic and buccal branches are interconnected freely, so paralysis is usually permanent, although some patients which have a permanent, involuntary twitching or contraction of the affected muscle after partial nerve injury. However, permanent paralysis of these muscles can occur, and when this happens, the deformity is severe and difficult to correct.



Figure 4. Facial Injury Hazard Zone 4

**Anatomical location.** Facial Danger Zone 4 is located deep to the SMAS-platysma and the parotid fascia and may be at risk, only during rhytidectomy composite and extensive dissection sub.SMAS in the cheek . This space is triangular and predates the parotid gland than mandibular body, after zygomatic major muscle, and superficial masseter muscle and fat pad of Bichat.

Before the intervention, this area can be estimated by palpating the highest point of the malar eminence and the posterior border of the mandibular angle and placing a dot on each of these points bone and one on the corner of the mouth. A triangle is drawn connecting these three points and define a triangular space previously limited by the

zygomatic major muscle, inferiorly by the jaw, followed by the parotid gland (Figs. 5 and 6).

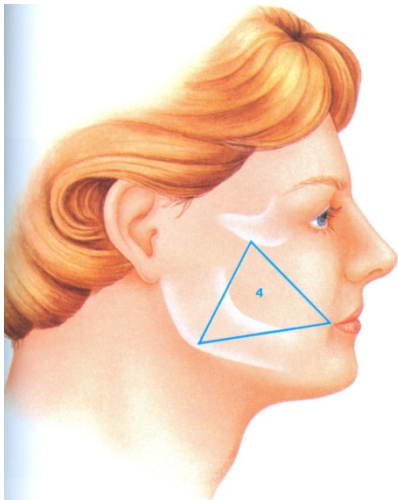


Figure 5. Location Danger Zone 4

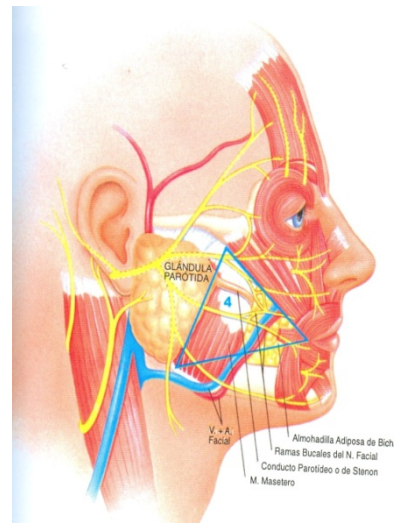


Figure 6. Anatomy Danger Zone 4

**Dissección Quirúrgica.** Damage zygomatic and buccal branches can occur only when the plane dissection is below the SMAS. So this type of damage can typically occur only in the more invasive procedures like facelift rhytidectomy techniques extended of sub-SMAS or composite. During typical subcutaneous dissection "lift" facial these nerve branches remain protected by the SMAS and are not exposed to injury..

Facelift procedures deeper into the sub-AMSS, may, however, be conducted with minimal risk of injury to the zygomatic and buccal branches. The SMAS and parotid facial merged layer is incised below the cheekbone and in front of the ear and is carefully dissected as a unit outside the parotid gland. In composite rhytidectomy the incision SMAS is anterior to the parotid and the branches of SMAS-platysma are elevated using the technique of vertical separation..

With any technique, as the dissection reaches the anterior border of the parotid gland, the scissors can be rotated in a smooth vertical movement of the extension to the SMAS carefully dissected away from the zygomatic and buccal nerve branches, the masseter muscle, parotid duct and the fat pad of Bichat. In the anterior segment of the facial dangerous area 4 side portion of the zygomatic major muscle is visible. The zygomatic branches are more superficial just before extend below the upper portion zygomaticus greater near its origin from the zygomatic arch, the injury is more likely to occur here. In many patients a small branch from the zygomatic branch it is extended over the zygomatic major muscle to innervate the lower portion of the orbicularis oculi.

This small branch is easily broken during dissection of the facial area Dangerous 4. However, the orbicularis oculi muscle also receives innervation of the temporal branch of the facial nerve, and complete paralysis of the orbicularis oculi is rare. Typically, a complete paralysis of the orbicularis only seen in patients with proximal lesions of the facial nerve trunk, such as those occurring after section of the trunk of the facial nerve in the facial canal during removal of an acoustic neuroma.

However, the facial Dangerous zone 4 can be safely addressed carefully dissected under direct vision. Blind dissection or sharp dissection careless and blind use of electrocautery should be avoided in this area Failure to follow these guidelines may result in paralysis of the upper lip, a potentially serious complication.

### **Closed Melopexia**

The Melopexia Closed, starts scoring two incisions to 5mm in the temporal region and mark the middle third and lower part of the face that we want to treat, a local anesthetic is applied, incisions are made with a scalpel and the needles of Russian threads are inserted, heading towards the middle and lower third of the face, by a midplane (in the middle of the malar fat), then the needles are removed and decide if there is excess skin in the temporal region make a small subcutaneous rhytidectomy in that region after we do a traction wires towards the bottom up and the excess thread will be removed.

These procedures may be supplemented with: gland removal Bichat (facial profiling), stuffed nasolabial folds and lips (autologous fat, Ac. Hyaluronic) Skin Rejuvenation (NuDerm-peellings) Botox, obtaining surprising results minimally invasive and very quick postoperative recovery.<sup>6</sup>

### **DISCUSSION**

Every time in our private practice we see that the needs of our patients and we have increased as oculoplastic (ophthalmic facial plastic surgery) we must be prepared to meet your needs such as:

1. A comprehensive management of facial rejuvenation as the sole procedure Blepharoplasty we fall short.
2. Local anesthesia procedures and shorter surgical times, outpatient, and low surgical risk, the use of Russian Contour Threads (barbed sutures) fill these expectations are inserted under local anesthesia, outpatient, low surgical risk and operative times have decreased to a 30% compared with conventional rhytidectomy also requires general anesthesia in most cases
3. The patient does not want to have scars on his face, Closed melopexia has this great advantage, the incisions are more lower than 5mm in the scalp that are virtually undetectable to the month of surgery. (Figure 7).



Figure 7. Melopexia closed Preoperative (left), postoperative (right)

4. Every time our patients are more active professionally and cannot withdraw from their work activities for a long time, one or two weeks maximum. The



closed Melopexia helps us offer an almost full recovery at the time, which will help the patient to decide to perform the procedure

5. Once the patient observes the aesthetic benefits of this technique seeks to further supplement and these techniques have the property of being able to complement surgery procedures such as filling of grooves and lips (Hialrónico A.C.) and skin rejuvenation (NuDerm-peelling) , decrease expression lines (botulinum toxin, etc.). (Figure 8).



Figure 8. Melopexia closed, filling grooves and lips, NuDerm. Preoperative left and postoperative right.

6. Another important point as surgeons, are the myths about Russian threads, we know that there are different types of Russian threads, designs, manufacturers, barbados uni (contour) and bidirectional (suitable clear), anchored to perostio (Contour), anchored to the subcutaneous tissue (aptsos clear), made in USA (contour), this is very important to keep in mind when we decided to use Russian threads, what will be the best for our patients and we as physicians are legally protected. Using Contour Threads as in this case we have the following benefits

- They are patented and is a technology that enables minimally invasive procedures getting a good lift and fixation in the tissue placed.
- These Russian Threads are the only FDA-approved for use as brow lift, middle and lower third of the face and neck.
- They are made of polypropylene, a material used for several years in humans and no allergic reactions.

7. There are internationally recognized medical associations (Facial Plastic Association) conducts conferences, courses, certifications to adequately perform all procedures relating to facial rejuvenation, we recommend starting with these procedures with extensive knowledge in anatomy of the face, dangerous areas, internationally certified and analyze products used in our patients.

8. We must remember that medicine and surgery evolves daily as medical associations and the needs of our patients. We must also evolve as oculoplastic entering new partnerships such as the internationally recognized Facial Plastic Surgeons, formed by general plastic surgeons, otolaryngologists, ophthalmologists and dermatologists. These associations have been created and evolved by "THE NEEDS OF OUR PATIENTS," as oculoplastic surgeons that we are, if we want to be at the forefront of technology and the needs of our patients we must evolve and embrace new areas so that way we will be trained and will be legally protected increasingly behind in the private practice market, because if we cannot solve all

our patients needs, they will find some other specialist who they can solve their problems.

9. In conclusion our patients increasingly seek integrated management for facial rejuvenation procedures less invasive and less outpatient surgical risks and can provide excellent functional and aesthetic results. Combining Melopexia Closed and Blepharoplasty is a safe and minimally invasive procedure that does meet the needs of our patients by offering an excellent treatment for aging dermatochalasis and middle and lower third of the face. (Figure 9).



Figure 9. Blepharoplasty, Melopexia Closed, extraction of NuDerm Bichot gland. Preoperative left and in the right side teh postoperative.

New studies and designs of barbed sutures are needed to improve more and more the beneficial offers by Melopexia Closed in combination with other surgical and nonsurgical procedures.

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