
Contour Threads Case Report Series

The Use of Barbed Suspension Sutures for the Minimally Invasive Open Thread Mid Face Lift Technique – (MIOT) Minimally Invasive Open Technique

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INTRODUCTION:

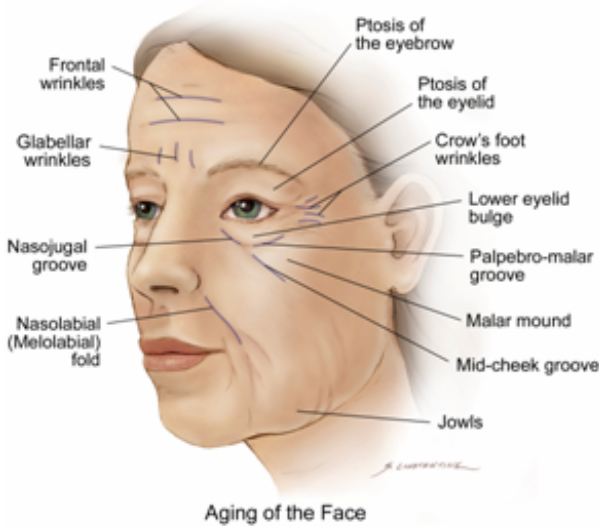
In the space between the full face lift with extensive undermining and the percutaneous thread lift, lays the **minimally invasive open lift**. This procedure has evolved for cosmetic patients who now require a quick recovery with a significant immediate result. The patient selection for this procedure includes those with lax skin requiring excision as well as muscle facial looseness, all signs of significant aging.

The technique can be performed under general anesthesia, IV sedation or even local anesthesia in the office setting, depending upon the degree of laxity in the patient. It also allows for a very important option of: 1) over-tightening the

underlying muscle facial complexes initially to compensate for postoperative facial lag and 2) adjusting the amount of tension on these underlying facial muscle complexes for up to 2-3 weeks postoperatively to allow for maximal facial enhancement and for optimal long term results.

There are five key points that one needs to consider when seeking rejuvenation of the midface. The first four were originally described by Hester® and include: 1) The gradual ptosis of the cheek skin below the inferior orbital rim with descent of the lax lower eyelid skin, (this creates a skeletonized appearance with hollowness around the infraorbital area); 2) Descent of the malar fat pads with loss of malar prominence in projection; 3) A prominence

and deepening of the tear trough area; 4) A marked enhancement of the nasolabial fold;. And 5) the fifth is an attenuation and loss of tension of the underlying SMAS in general. This should also be considered an essential part of facial aging.



These five key areas make up what has been called the Triangle of Youth (Illustration 1) and are responsible for a young looking facial appearance



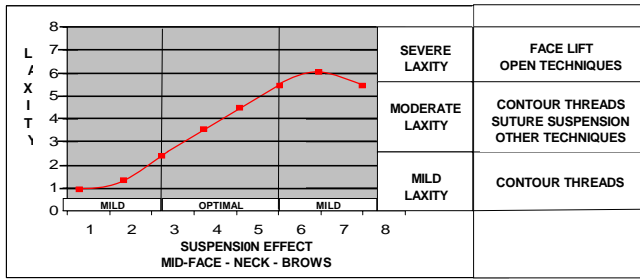
and contour.

In the past, a large number of midface approaches have been described that includes the subcutaneous mid-facelift, the SMOOG type rhytidectomy, the subcutaneous rhytidectomy with SMAS excision, the deep plane rhytidectomy and the composite rhytidectomy. A number of other less invasive techniques have been described as well which include the central facial approach to midface lift, as well as percutaneous techniques utilizing myriad types of sutures (i.e. Saski, Laferriere, Castellano and many others).

PRESENT TRENDS

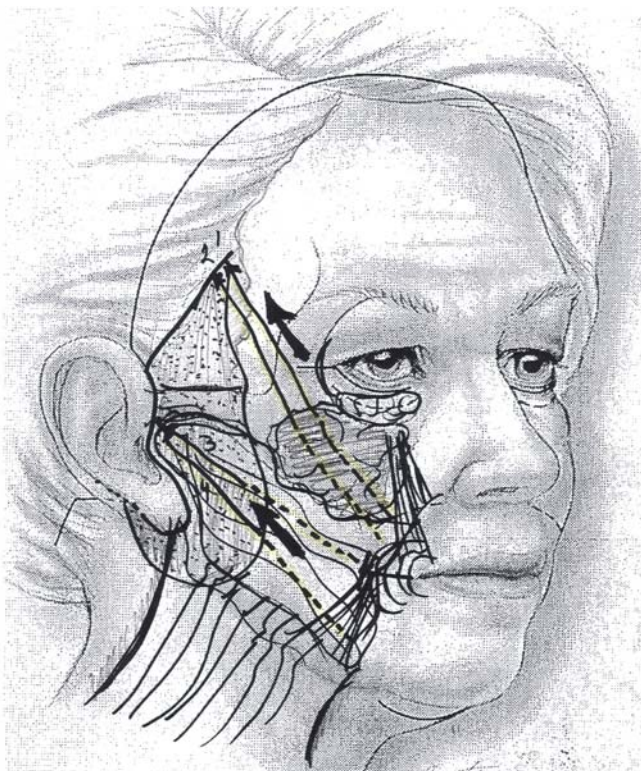
The present trend today is for a minimally invasive technique as possible to satisfy the present trend of patient's demands for a quick office based procedure, allowing for a rapid recovery. The technique described below can be performed in the office or in the OR setting with or without anesthesia and utilizes the new evolutionary advancement of suspension sutures with barbs, (contour threads)™.

PATIENT SELECTION: (Figure 1 – see graph of patient selection)



The ideal patient with this procedure are patients with minimal to moderate skin laxity, mainly in the nasolabial and lower 1/3 of the midface, and who require some skin excision for optimal results. These are also the same group of patients who demand and seek a rapid recovery with a relatively minimally invasive procedure.

PROCEDURE:



After initially marking the patient as described in Figure 1, and with infiltration of local anesthesia .5%

Lidocaine and Epinephrine 1:200,000 along the incision site and proposed area of skin dissection, as well as contour thread placement, the incision is made in the temporal preauricular and posterior auricular area as shown in the illustration Figure 2.



Skin flaps can be undermined in the temporal orbital area with blunt fingertip dissection and with subsequent little sharp dissection with a facelift

scissors to the mid-zygomatic arch only. Here dissection is stopped. Completing the dissection to only this point helps to dramatically limit the potential damage of facial nerves, which become much more superficial at this point and as well limit post-op swelling and ecchymosis.

At this time under direct vision, the Contour Threads™ are placed from underneath the skin flap into the deeper muscular and facial plane.



The present technique focuses on improving five key anatomical areas in order to maximally restore the “triangle of youth” and result in a more youthful appearance in general. Each anatomical area of these five key points mentioned previously, is

corrected with the placement of the specific thread for a specific purpose.



SUTURE PLACEMENT AND FUNCTION:

The placement of the first contour thread focuses on improving the lateral ptosis of the cheek below the inferior orbital rim, attenuation of the lower eyelid skin, as well as correction of the tear trough deformity. This helps restore the intraorbital rim hollowness, which is a key sign of facial aging within the Triangle of Youth area. Thread #2 restores the descent of the malar pad and improves the superior portion of the nasolabial fold. Thread #3 corrects the descent of the corner of the mouth and improves the lower ½ of the nasolabial fold and helps define the inframalar area. Thread #4 focuses

on the descent of the labial mandibular area, the labial mandibular fold (marionette lines). Keeping the corrective function of each of these threads in mind, a significant improvement can be made in the immediate appearance of the patient, without undermining of these areas. Undermining has been required with other techniques previously mentioned. Focus can be maintained on the specific anatomic areas that are in need of correction in each patient, therefore selectively enhancing each individual's anatomical/aging defects. (See Figure 3)

Utilizing all four sutures with this technique helps tighten the fifth anatomical area en “Bloque” that is attenuation of the SMAS fibers in general.

Upon completion of the placement of threads, the upper two threads (#1 & 2) are then sutured to the deep superficial temporal fascia along the base of the temporal incision and the lower two threads (#3 & 4) are sutured to the inferior border of the zygomatic arch immediately in front of the tragus incision and are fastened to the parotid fascia and

deep underlying investing SMAS fibers. Skin flaps are trimmed conservatively without any tension and then closed in the standard fashion in both the preauricular, temporal and posterior auricular areas.



DISCUSSION:

Unlike previous percutaneous thread lifts, this technique allows for complete visualization of the placement of the needle and its accompanying thread. Utilizing CT 200's™ Contour Threads™ allows for a placement of the same thread over and over again until it is in the exact position the operator feels is required to correct the patient's local anatomical defect. One can also utilize CT 400's with this procedure does require a knot to fixate the suture in the two key areas mentioned

previously, but this does require a perfect placement of the suture thread at the first attempt or another 400 thread will need to be utilized and therefore the potential use of multiple threads may be required if the initial attempt is not placed in its perfect position. Another technical note to consider is the firmness of the CT 200 needle. This allows for easier placement, especially when tipping the needle deeper to go into the deeper midface musculature areas. The CT 400 due to its more flexible nature tends to make this technical maneuver a little more difficult in the hands of a novice and expert as well.

This open thread lift approach allows for a dramatic decrease in surgical time, as well as a quicker recovery for the patient in general. Utilizing this technique with TisseI™ tissue glue or other tissue adhesives further decreases the amount of recovery time, as well as postoperative ecchymosis. The authors have utilized this technique with general anesthesia intra-operatively, while performing Suture Suspension Technique of the Neck, (see patient photos) as well as local anesthesia in the

office setting.



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This technique also allows for a customized approach to each patient, selectively enhancing or improving the areas where facial aging seems to be most prominent. Each suture can be utilized to directly focus on the patient's specific anatomical defects.

Finally, the potential problem that occurs in many patients with face-lifting in general, (i.e. postoperative loss of muscular facial skin tightness), can be minimized by over-tightening the four

sutures initially. This maneuver has been utilized over the past year in a number of minimally invasive open thread lift patients. This over-tightening technique therefore allows the patient to be adjusted in the immediate postoperative period for up to three weeks with small digital pressure over the barbed segment of the sutures. We also have found that this has allowed for an improvement in the final facial muscular complex position without any change in the tension of the overlying skin, therefore allowing this procedure to be adjustable to a certain degree based upon the patient's anatomy. See illustrations 1 through 5.

SUMMARY:

Utilizing the technique of barb suspension sutures for the Minimally Invasive Open Mid Facelift technique, whether completed in the OR setting or the office operating room setting, is a new approach to help meet the demands of the 21st century cosmetic surgical patient whose present needs consists of quick recovery and a minimally invasive procedure with a natural look. The ability to allow for adjustable tension in these selective areas,

further helps enhance the concept of individualized or a personalized surgical approach, which is also a trend of this "new generation of cosmetic patients."

This technique can also be utilized by itself or in conjunction with other ancillary procedures to enhance midface height, which include: 1) Fat grafting to the midface; 2) Subperiosteal elevation through an intraoral or transnasal approach to further release the face muscles and therefore augment midface height; and 3) The simultaneous injection of longterm fillers like Radiesse or a new generation of longterm fillers that will soon be available in the United States as well (Articol, Artifill, ****Note: list a number of the other longterm fillers****).

The described procedure above without a question fulfills the needs of the present cosmetic surgical generation and most likely will become a popular approach in the immediate future.

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