Cheek Lift Through Subciliary Incision: Is it the Best Solution for Midface Rejuvenation?

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ABSTRACT

Aging alters the subcutaneous fullness in the malar prominence leading to its loss together with progressive buccal hollowing resulting in a less healthy facial proportion including midfacial ptotic cheeks. Modern trends have evolved to enhance periorbital and midface rejuvenation. Sixteen patients presented with blepharochalasis in the period from Aug 2012 till Aug 2014. Eleven of them were females with only 5 males. All patients were offered midface lift through the lower blepharoplasty incision. Post-operative bruising occurred in 4 cases. Palpable knot was recorded in 3 cases. All cases were satisfied with the esthetic outcome, specially the neutralization of nasolabial fold and re-orientation of the cheek pad of fat in its anatomical youthful position. The results were sustained in the follow-up period between 1-2.5 years.
Key words: *Cheek lift, Midface rejuvenation*

INTRODUCTION

In the midface, age-related loss of subcutaneous fullness in the malar prominence and progressive buccal hollowing result in a less healthy facial proportion. Depletion of the infraorbital subcutaneous tissue accentuates the effect of intrinsic tone in the orbicularis oculi muscle on the overlying skin, giving rise to "crow's feet" rhytids. Volume loss in the infraorbital area also leads to the emergence of formerly concealed infraorbital fat pads ("palpebral bags") and accentuation of the tear-trough depression, running obliquely from the lateral nose at the level of the medial canthus down to the anterior malar cheek below the middle of the eyelid. [1]. Ptotic cheek fat descends to create the nasolabial fold, leaving behind a cheek concavity that is accentuated by depletion of malar fullness (Figure 1)[2,3]. It is a current opinion that descending tissues are the primary cause of aging changes in the midface; however, there are areas in which deflation may play a role (Figure 2). Descent of the orbicularis oculi and midfacial tissues in the aging midface can be corrected with finger repositioning of the lower lid and cheek. After this procedure, however, most patients retain some indentation in the orbital rim area, which may be caused by the deflation of fatty tissue [3].

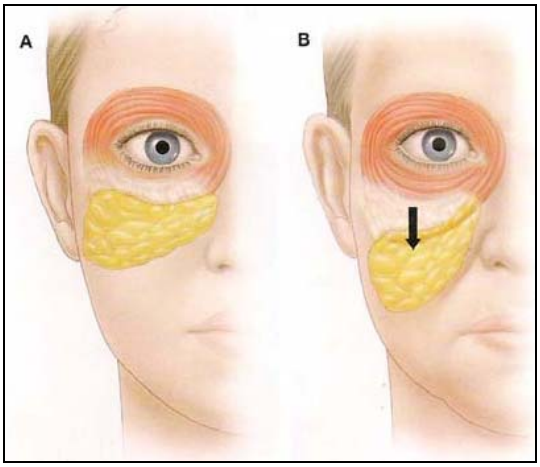

Figure 1: (A) The normal position of the inferior arc of the orbicularis oculi muscle as it joins with the malar fat pad, caused by interdigitization with the superficial musculoaponeurotic system (SMAS). (B) Ptosis of the orbicularis muscle caused by the release of ligamentous attachments and the oblique midfacial descent of the malar fat[3].

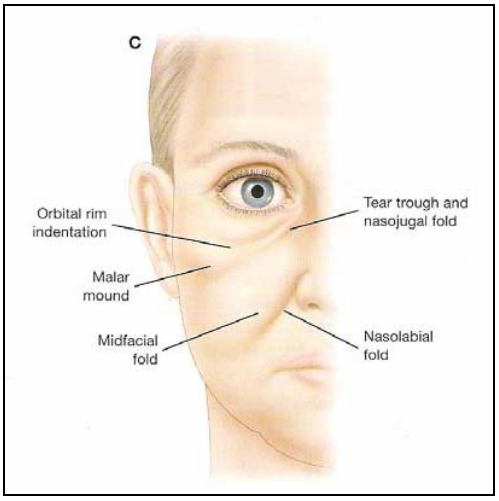

Figure 2: The surface anatomy, showing the characteristic indentations and folds in the midface area that occur with age [3].

The following classification system has been created to categorize the different degrees of aging seen in the anterior orbital region of the eyelids. This system divides patients into four types, based on their preoperative evaluations (Figure 3); Type 1: Aging changes are confined to the lower eyelid, Type 2: Minimal descent of the lid and cheek junction; may include early tear trough deformity, Type 3: Aging below the orbital rim with development of nasolabial folds, and Type 4: Midfacial aging changes exhibiting more pronounced midfacial folds with possible malar mounds [4]. By this classification, Type 1 includes patients who have the fewest aging changes and would therefore benefit from blepharoplasties. Type 2 patients have early signs of midfacial aging and may be suitable candidates for supraperiosteal or limited subperiosteal midface lift techniques. Type 3 patients have more advanced aging below the orbital rim, with descent of the malar fat pad. Patients in the Type 4 group have the most advanced signs of midfacial aging, including malar bags and the descent of the malar fat pad; these individuals are good candidates for a subperiosteal midface lift[5]. This study aims at shedding lights on the new trends & techniques in management of patients requesting midface lift that can improve the results & optimize the aesthetic outcome in order to reach the maximum patient satisfaction.

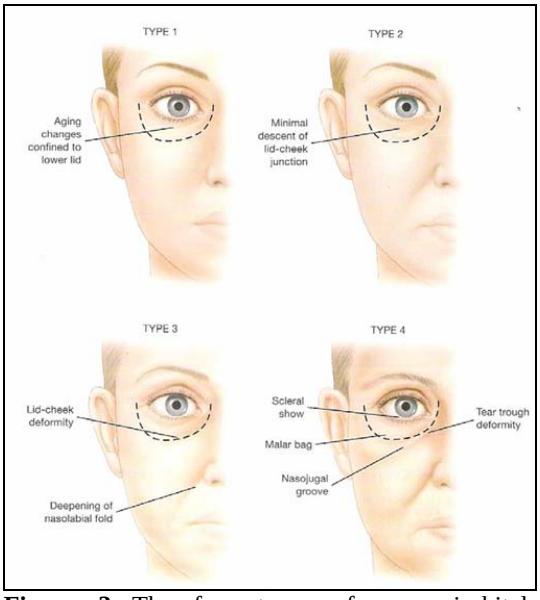

Figure 3 The four types of eye-periorbital changes [4].

PATIENTS AND METHODS

This prospective study was conducted from January 2013 to June 2014 at Kasr Alainy hospitals, Cairo University. It included sixteen patients requesting cheek lift.

All patients underwent preoperative evaluation in the form of history taking, thorough physical examination, routine laboratory investigations, photographic evaluation and documentation. Patients on anti-coagulation/antiplatelet therapy were instructed to stop it 2 weeks prior to operation. All patients had informed consent about the procedure, the risks and the possible complications. All patients were offered midface lift through the lower blepharoplasty incision.

On the day of the surgery, the patient was marked in the sitting position using a waterproof skin marker. The incision line is drawn 2mm below the eyelashes, medially it stops short of the inferior punctum and laterally the incision extent is limited to just at or slightly beyond the lateral canthus directed downwards along the crow's feet.

All patients were done with the patient in supine position using either hypotensive general anesthesia or local anesthesia with sedation. The first step entails injection of local anesthesia (lidocaine 1% + adrenaline 1:200000) in both lower lids. Subcliary incision was done 2 mm

from the lid margin to stop before the punctum. Exposure of the lower pads of fat through the orbital septum and excision / redraping of the fat pads as the standard blepharoplasty procedure according to the patient condition as planned pre-operatively. Then dissection of the cheek flap in the supra-periosteal plane lateral to the infra-orbital foramen was done to preserve the infra-orbital nerve and vessels. Suspension of the cheek pad of fat with 3/0 prolene interrupted stitches in the temporal fascia through the lateral end of the subciliary incision. Finally closure of the wound in layers with 5/0 monocryl and the skin with 6/0 Prolene was done. Steri-strip taping to further reduce tension on the healing lower lid is applied.

Post-operative care was extremely meticulous. Bed rest with the head elevated at least 45 degrees. Compresses using ice cold saline or ice packs for 15 minutes per hour in the first 48 hours. A combination antibiotic/steroid eye drops are used 2-3 times daily for 7 days combined with oral antibiotic and anti-inflammatory. Sutures were removed on the seventh postoperative day.

Follow-up visits were instructed starting 48 hours after surgery, then 10 days later and every 2 months for 2 years. The outcome was assessed by preoperative photographs, and after postoperative 1, 4, and 6 weeks as well as with patient's satisfaction. All 16 patients were surveyed postoperatively for the perception of the improvement in the aesthetic outcome and were graded as follows: 1) Unsatisfied, 2) Neutral, 3) Satisfied, 4) Moderately satisfied and 5) Very satisfied.

RESULTS

Sixteen patients presented with blepharochalasis. Eleven (69%) of them were females with the age range 52- 69 year old, while males were 5 (31%) with age range 57-73 year old.

Most of the patients had more than one complaint; however the main complaint of the patients was drooping of the mid face with sad look accompanying lid puffiness. Midface lift through the lower blepharoplasty incision was done for all (100%) patients (Figure 4, 5 & 6). Operative time ranged between 50 – 60 minutes with a mean of 55 minutes.

Figure 4 : A 52 years old patient underwent upper and lower blepharoplasty and with the same incision mid face lift. A) before surgery & B) after surgery

Figure 5: A 48 years old female, came seeking redo of a previously d`one (by another surgeon) blepharoplasty. She was dissatisfied by the previous results. She also requested a midface lift. A) Before surgery & B) after surgery

Figure 6: A 39 years female underwent upper and lower blepharoplasty and with the same incision mid facelift and postoperative botox injection. A) Before surgery & B) after surgery

No major complications were encountered in this study. Delayed disappearance of subcutaneous peticheal hemorrhage was encountered in five (31%) cases. One (6.25%) case of inclusion dermoid was seen at the sites of the lower lid sutures one month after surgery and was excised under local anesthesia. Post-operative bruising occurred in 4 (25%) cases. Palpable knot was recorded in 3 (18.25%) cases and in one (6.25%) case it had to be removed under local anesthesia.

All 16 patients were surveyed postoperatively for the perception of the improvement in the aesthetic outcome and were graded as shown in Figure 5. All cases were satisfied with the esthetic outcome apart from one (6.25%) patient which was unhappy with the outcome and redo lower blepharoplasty was done to excise excess skin. This patient was subjected to multiple laser resurfacing sessions prior to surgery.

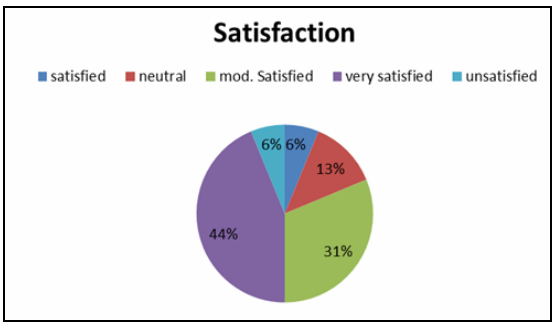

Figure 7: Pie chart showing the percentage of patient‘s satisfaction

DISCUSSION

In the pursuit of eternal youth, the public demand never seizes to press on cosmetic surgeons to develop different modalities to achieve this target. The face, being the most obvious part of the human body and where the effect of aging is most expressed, received the maximum attention [6].

Non-surgical modalities including filler and neurotoxins (botox) together with rejuvenating tools as Laser, dermabrasion, and peeling offer a guide and satisfactory solution[7,8]. Also minimally invasive procedures as suture suspension techniques, known as the thread lift, are very popular with patients. The promises of minimal anesthesia, less postoperative downtime, fewer serious risks, and lower cost compared with surgical procedures are very appealing to the lay person. However, they have the major disadvantage of being short lived and having to be repeated regularly for sustained results [9].

Surgery remains the cornerstone for long term improvement. Different techniques for face lifting evolved in recent years ranging from simple skin excision to complex skin/muscle excision passing through different musclofascial suspension techniques. As all these techniques tackle the face from the preauricular area, their effect on the midface, namely the naso-labial fold and cheek fat, is at the best incomplete. This is because the traction vector cannot lift these zones adequately[6].

When surgeons work on the lower eyelids, they make an incision below the lower eyelids, remove fat, and take a small amount of skin away from the corner of the eye. However, this causes a change in shape of the eye, making it appear rounded or pulled down on the sides. The cheek lift is a solution to that problem because it elevates the cheek tissue below the eye and anchors it up to prevent it from being pulled down while the lower lids are being done. The procedure is called the "Modern Mid-face/cheek lift" [10].

In this study, tackling the midface segment was done during lower blepharoplasty using a subciliary incision. The procedure can be done under local anesthesia with sedation. Dissection proceeded in the supra-periosteal plane lateral to the infra-orbital foramen to avoid damage to the nerve and loss of sensation to the cheek area. The flap is suspended to the lateral orbital wall exerting enough traction to flatten the nasolabial fold. Additional stitches are taken in the temporal fascia to reduce traction on the first stitches and avoid a Chinese look. Operative time was extended by a mean of 55 minutes.

Prolonged edema occurred in all cases than in a simple blepharoplasty but it was not a major concern. Bruising occurred in 4 cases and responded to topical creams. Palpable knot was recognized in 3 of the earlier cases after which the technique was shifted to an inverting stitch and covered by a subcutaneous layer.

Patients satisfaction was excellent in almost all cases with no incidence of slit like eye opening (Chinese look) contrary to the other techniques where the canthal position is altered and no scar

extension than the regular blepharoplasty. More appealing was the neutralization of nasolabial fold and re-orientation of the cheek pad of fat in its anatomical youthful position that aided the outcome much. One (6.25%) patient was unhappy with the outcome and redo lower blepharoplasty was done to excise excess skin. This patient was subjected to multiple laser resurfacing sessions prior to surgery that may have affected skin elasticity.

CONCLUSION

Finally, midface or cheek lift can be safely done through the subciliary incision with a satisfactory outcome offering a longterm results in the cheek position and nasolabial fold.

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