Restoring a Pleasant Facial Expression With Minimally Invasive Techniques

A pleasant facial expression is a social and workplace asset that can be adversely affected by the aging process. Downturned corners of the mouth, vertical lip rhytids, hollows under the supraorbital rim, midface recession, and lateral cheek hollowing contribute to a sad, tired, grumpy, or disapproving look. Here the author provides guidance and techniques for enhancing facial expression. (Aesthetic Surg J 2004;24:574-579.)

The value that a cheerful expression adds to the perception of facial attractiveness is clear. The aging process can contribute to a negative look, causing a sad, tired, grumpy, or disapproving appearance that does not at all reflect an individual’s true personality or feelings. Many people seek cosmetic improvements during times of transition in their lives. A divorce, job loss, death of a spouse or parent, or children leaving home can trigger a need to “market” oneself. As plastic surgeons, we usually concern ourselves with physical defects and may not always recognize the more subtle emotional impact of aging changes. However, a cheerful or pleasant look is an indisputable social and business asset. Careful evaluation can identify those features that send a negative message. A combination of traditional and minimally invasive techniques can contribute to an upbeat countenance.

Assessment

For patients who have an angry, sad, or tired expression, you can use a 3-step process to target those features that contribute to the negative expression:

1. **Listen.** Elicit and carefully listen to the patient’s reason for seeking a cosmetic surgery evaluation. In response to the question, “What is bringing you here?” a patient may confide that people say he or she looks sad, tired, or angry.

2. **Look.** Once you can clearly identify the negative emotion conveyed by the patient’s appearance, look for the features contributing to that impression. Glabellar frown lines appear as a stern expression; transverse forehead lines convey a sense of worry. Drooping upper eyelids and dark under-eye circles are the usual cause of the sad and tired look. An extreme hollow under the supraorbital rim can give the appearance of chronic illness and wasting. Downturned corners of the mouth and vertical lip rhytids give the mouth a pursed, disapproving look. A bony forehead with flattened brows and temporal hollows creates the wasted look of old age. Generally, a broad upper half of the face creates the appearance of an uplifted, positive look. With age, temporal hollowing, midface recession, and lateral cheek hollowing may cause a face that used to be wide to become vertically long and thin, creating a pinched appearance. Dull, blotchy skin adds to the impression of older age, as does hyperpigmentation and sun damage.

3. **Communicate.** Review your findings with your patient. By modifying these features on a morphing-type computer program, you can demonstrate the value of softening harsh and hollow features. Most women strongly agree that by making their faces softer and rounder, and filling in hollows, they will appear younger and friendlier. By changing facial contour, a forbidding or downcast countenance can be transformed into one that is appealing, youthful, and approachable. Men who appear stern can benefit from this approach and achieve a more open and relaxed appearance. After identifying those features that impart a negative appearance and discussing the variety of surgical and nonsurgical procedures available, you can generate an operative plan. Many patients have limited funds, so prioritizing those procedures that yield the most visible improvement is an important step. At the time of evaluation, use a facial
diagram to highlight the areas that need correction. Review these areas with the patient to make sure that your goals and the patient’s are the same.

**Brow, Periorbital, and Upper Midface Region**

**Evaluation**

Lambros et al. note that a flat, laterally hollow infrabrow region gives the appearance of advanced age. Injecting autologous fat or Restylane (Q-Med, Uppsala, Sweden) in this area rounds out and lifts the brow, frequently contributing more to a youthful brow appearance than a brow lift alone. If a patient has had aggressive removal of periorbital fat with a previous upper lid procedure or has an overly hollow supraorbit, fat grafting just below the supraorbital rim along the periosteal margin can soften the cadaveric appearance imparted by this feature. In many patients, the dark circles at the infraorbital rim extend all the way to the frontozygomatic suture; it is important to correct this so that the entire shadow is filled. A hollow temporal fossa is another sign of advancing age; soft tissue augmentation in this region can broaden the upper third of the face, creating a more youthful and uplifted look.

**Technique**

The techniques that I use most frequently in the periorbital region are a traditional upper lid blepharoplasty combined with fat grafting to the forehead, brow, temporal, infraorbital, and upper lateral cheek regions followed by erbium laser resurfacing. If the patient has some lower lid puffiness due to prominent fat pads, I use the fat pads to fill the hollows along the infraorbital rim by following Hamra’s tear trough technique. If the patient has dark circles but no excess periorbital fat, a combination of fat grafting and laser resurfacing can achieve better results than a traditional lower lid blepharoplasty. The success of periorbital fat grafting is highly technique dependent, and it may result in a lumpy postoperative appearance. If the patient has thin skin and high expectations, a good approach is to inject small increments of fat along the periosteal level of the infraorbital rim into a small incision located along the lateral one third of the lower eyelid. A blunt release of tethered tissue along with minimal laser resurfacing of the lower eyelid can create a successful outcome in patients who pose a challenge. Coleman occasionally uses a smoothing technique along the lower orbital rim to flatten out injected fat. Depending on the degree of the negative vector, additional fat may be injected in the lateral orbital region, malar prominence, and lower lateral cheek to fill the long, narrowing face.

Alternatively, many of the available temporary soft tissue fillers can be used for minor correction or periodic management of further aging. Erbium laser resurfacing may be added to correct nondynamic wrinkles, reduce sun damage, and improve superficial hyperpigmentation. In areas needing some skin shrinkage, use a dual pulse erbium, especially in the infraorbital and malar bag areas. Botox injections can greatly enhance the cheerfulness of the upper face by softening dynamic furrows, frown lines, and crow’s feet. If the patient needs minor correction only, you can inject Restylane along the deep infraorbital rim (0.1-0.2 mL), under the lateral brow, and in the malar prominence, as demonstrated by Carruthers. However, if the patient desires extreme correction of very deep infraorbital lines, place a small Gore-Tex implant (WL Gore & Associates, Elkton, MD) in the infraorbital region to permanently correct the sad and tired look. I use Gore-Tex because it is easy to modify with central flattening and lateral tapering so no lines are visible under the thin lower lid skin. You can place it about 3 mm above the infraorbital rim and suture it easily with 3-point fixation. Be careful to totally release the tethering at the lower orbital rim; otherwise the dark circles may still be present postoperatively (Figures 1, 2 and 3).

**Paranasal Region**

**Evaluation**

Paranasal and midface recession is a frequently overlooked sign of aging. While the infraorbital area is commonly treated, the paranasal area—especially the area just lateral to the middle one third of the nasal dorsum, and the triangular hollow just lateral to the nasal alae—is frequently missed. To evaluate this area, examine profile and oblique views for flattening around the nose and mouth. The upper nasolabial shadow and the long upper lip, which has inadequate projection and eversion in the profile view, are preoperative signs of aging that can be easily reversed with soft tissue augmentation.

**Technique**

For areas needing larger volume and deep layers of filling at the subcutaneous level, fat grafting can give the
appearance of soft, rounded volume. Fat grafting is used in the lateral brow, periorbital rim, paranasal hollow, malar region, and lower lateral face as well as in the lips, nasolabial folds, prejowl ditch, chin, and jawline. I use Restylane in the triangular hollows at the top of the nasolabial creases because fat grafting does not create the structurally firmer look that is necessary to correct this dermal depression (Figure 4).

**Figure 1.** A, Preoperative view of a 50-year-old woman who complains of appearing “sad and tired.” B, Postoperative view 2-and-a-half months after a modified lower lid blepharoplasty combining a tear trough correction with fat grafting and erbium laser resurfacing.

**Figure 2.** A, Preoperative view of a 77-year-old man. B, Postoperative view 2 months after periorbital and brow fat grafting, direct brow lift, and erbium resurfacing.
Lips and Perioral Region

Evaluation

The fullest part of many aging faces is the oblique roll of slack tissue just lateral to the nasolabial fold. As soft tissue atrophy and maxillary recession progress, the underlying frame of the mouth and central face caves in, causing the surrounding features to droop and fold like curtains. Correction of these problems can soften the grumpy, angry, or disapproving look conveyed by wrinkles, thin lips, and downturned corners of the mouth. The standard regimen of filling out thinning lips in about...
a 40/60 ratio, and correcting perioral wrinkles, is a good basic approach. Softening nasolabial folds and targeting marionette lines and the prejowl ditch can greatly contribute to creating a cheerful expression. The most difficult yet most effective way to improve a negative facial expression is to target the down turned lip corner (Figure 5).

**Technique**

In the perioral region, I find that fat grafting can add soft volume, but strong contour improvement is difficult to obtain with this technique alone.

As Coleman has repeatedly pointed out, fat grafting does not totally correct marionette lines or drooping oral commissures, although definite softening and shortening...
can be seen with this technique. By injecting fat perpendicularly to the marionette lines as well as parallel and obliquely across them, more correction can be achieved. However, fat is structurally too soft to create significant support to this most demanding, dynamic area. By combining Restylane with fat grafting, you can use a 2-layer deep and superficial approach to create a smile where a frown once existed.8

Usually, I inject at least 2 syringes of Restylane after administering a dental block with a small boost in the oral commissure. First, I inject the vermilion of the upper and lower lip centrally to create some projection and eversion and then fill the fine vertical wrinkles. I also inject the wet/dry mucosal line of the upper and lower lip to create more volume and eversion. I look at a large photograph of the patient as I proceed with injection. I use the photograph to remind myself of the prominent folds, hollows, and wrinkles that appear when the patient is in the sitting position because these may disappear when the patient is supine on the operating room table. It is best to correct the frown with the patient sitting up because 1 corner generally droops more than the other. Injecting from well lateral to the modiolus, I place Restylane deep and superficially along the lower lip corner, parallel to the axis of the lip. I then inject the lateral upper lip corner in a similar manner. I inject a significant amount of filler in a line extending well lateral to the corner of the mouth. Usually, at least 0.3 to 0.5 mL are necessary in each corner to achieve a visible correction. There is frequently a hollow, soft area in need of support located just inferior to the lateral lower lip, medial to the marionette line. Stiffening the dermis here lends support to the oral commissure. Fine tuning of the commissure elevation may require a second injection 4 to 6 months later (Figures 5 and 6).

Ancillary procedures

Many of the new noninvasive procedures9 can dramatically enhance outcomes in the quest for a cheerful appearance. Thermage radiofrequency skin tightening can help many patients achieve an improvement by targeting the forehead and brow, lateral malar region, and the soft, slack area just lateral to the oral commissure. Although the outcome with this technique is not always predictable, patients desiring improvement with little risk and no recovery time may achieve a visible improvement in appearance. Other modalities that round out the spectrum of minimal recovery options include Intense Pulsed Light10 for rosacea and dark pigmented spots, micro laser peels with Erbium laser, and facial vein ablation with an NdYag type laser.

Our well educated patient population is demanding much more of plastic surgeons than mere skin tightening. Competition for jobs, promotions, and life partners requires aging Americans to appear young, energetic, and positive. Patient satisfaction is greatly improved when procedures to enhance facial expression are performed, with or without extensive surgery for facial rejuvenation.

References


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