COMMENTARY

Using Cheek Implants to Improve Midface Aging

With experience, each implant takes 10-15 minutes from incision to suture

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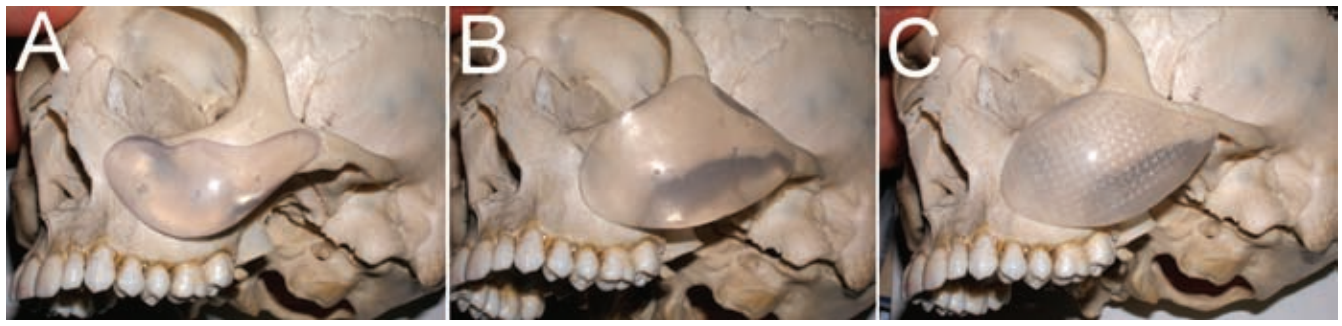

FIGURE 1

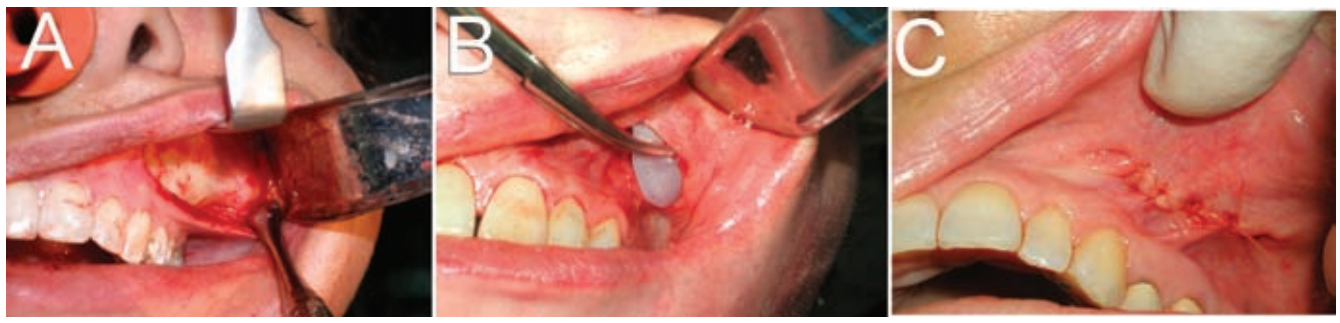

FIGURE 2

Over the past century, one of the main problems with cosmetic surgery has been that patients were made to look tighter but not younger. Cosmetic-oriented dermatologists were among the most influential forces leading to the contemporary view that volume restoration is integral to facial rejuvenation. Not only did they develop tumescent anesthesia, but they also pioneered many of the techniques of fat transfer and injectable fillers. Collectively, this has led to a more refined sense of how to make patients look younger.

The midface is one of the most overlooked areas in cosmetic surgery. It is common for patients to have comprehensive facial rejuvenation, including brow lifts and blepharoplasty procedures, as well as facelifts and submental rejuvenation. Unfortunately, many practitioners will completely neglect the midfacial region.

FACIAL AGING

Young people look young largely because they lack actinic damage and the resulting elastosis, and because they have adequate and well positioned fat. As a society, we are so used to fat being evil that we sometimes forget how important it is in the healthy person, especially with respect to aesthetics. Almost all youthful facial tissues have some fat, including the temples, cheeks, chin, lips, and the face in general. The youthful face is oval and has well defined malar fat pads that sit high face. As we age, the malar fat pads descend because of gravity and tissue laxity. What once were the cheeks have become the jowls, and the face takes on a square appearance. Besides the loss of youthful form, the lack of malar and submalar volume produces a gaunt appearance and impacts the surrounding structures such as the lower eyelids, nasolabial folds, and cheeks. Older people look hollow, and younger patients look full. It is amazing that, in some patients, simply augmenting the midface will make huge changes as a sole rejuvenative procedure. When coupled with other cosmetic procedures, the results can be exponential.

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My practice is limited to cosmetic facial surgery, and I perform at least two facelifts a week. I would estimate that more than 50 percent of these patients have concomitant facial implants with their surgery. The percentage would be higher but many patients opt out due to under appreciation or lack of understanding of the beneficial effects of midface implants. Educating doctors to educate their patients is the challenge. If you study your patients closely, you will see that most patients older than 40 years have lost the submalar fullness they had a decade previously. Midface deficiency is one of those things that you fail to notice if you do not look for it (or know how to look for it), but once you figure it out, most adult patients who come through your office are midface deficient.

A plethora of techniques is available to augment the midface, including, but not limited to, injectable fillers, fat transfer, lifting procedures, and facial implants. Each technique has advantages and drawbacks, but if one closely examines the options, midface implants shine above all others.

Fillers and fat are resorbed and must be reinjected, and lifting procedures are subject to further ptosis. Midface implants sit on the bony skeleton and stay in place for ever. In the event of significant future aging, they can easily be changed for a different size or configuration.

Contemporary midface implants are made of surgical grade silicone rubber and are anatomically designed, meaning that they come in a vast array of sizes and configurations to precisely augment specific facial deficiencies. They are easy to place and are reversible, meaning that they can be easily removed or replaced if the patient is unhappy with the result. For the cosmetic surgeon who has not placed facial implants, the procedure may sound daunting, but in reality it is a simple procedure to learn, a safe surgery to perform, and the learning curve is acceptable. Taking a basic facial implant course and observing a few surgeries is usually adequate for

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the average doc to get started.

The basis of treating patients with facial implants is first to understand the process of midfacial aging (which most cosmetic dermatologists already have expertise in) and to understand which implant to use in which situation. The latter can be a confusing process as there are scores of implants on the market. I personally place several hundred facial implants a year and have streamlined the process in my practice to three midface implants that satisfy 99 percent of the augmentation situations.

submalar region. Most patients look younger (and better) when they smile for the fact that they are filling the submalar region. If you hold their cheek up with your finger and tell them to relax, the cheek falls back to the jowl and illustrates to the patient what a submalar implant would do. Figure 1A shows a submalar implant in approximate position. The bulk of the implant fills the submalar region with a tapering tail over the zygomatic area. Note that there is very little fill over the actual cheekbone (malar) area. Ninety percent of the midfacial implants I place are of the submalar configuration.

In addition to submalar hypoplasia, some patients also exhibit actual malar

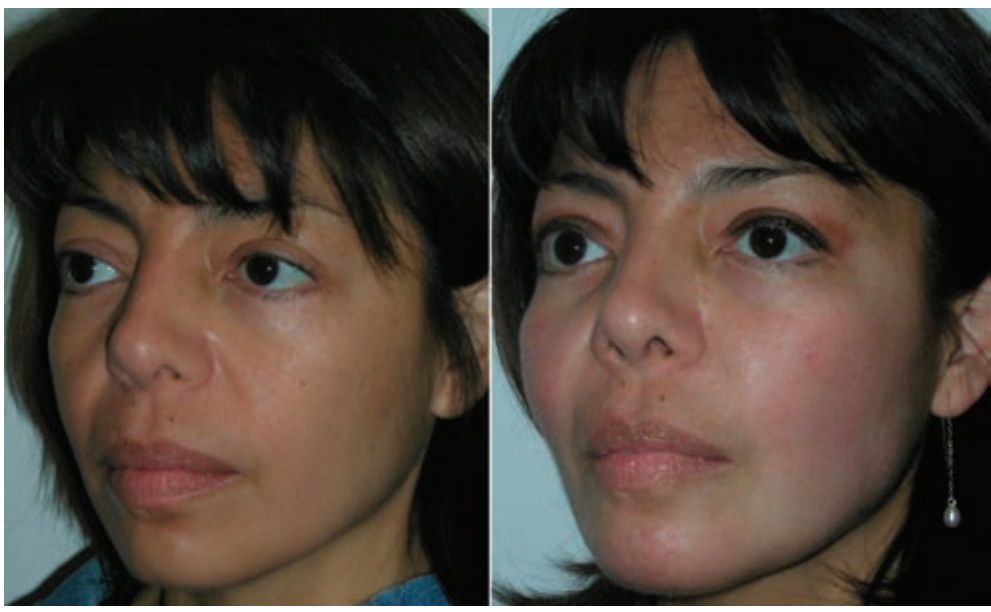

FIGURE 4

FIGURE 3

FIGURE 5

IMPLANT SELECTION

My cosmetic surgery practice is about 97 percent female, and by and large the most common area of midface hypoplasia and facial aging is the submalar region. Many people think about "high cheek bones" when they discuss midface implants. Although this is an option, that is not what the average patient needs. The submalar region stretches from under the anterior cheek bone to the level of the nostrils. This is where the malar fat pad changes shape and position and leaves a facial hollow. Many patients with submalar hypoplasia actually have adequate cheek bone volume and basically need the submalar hollow area plumped. To illustrate this to a patient, hand them a mirror and ask them to smile. This elevates the ptotic tissues and fills the

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FIGURE 6

deficiency where they could benefit from both submalar and malar augmentation. This is generally a smaller percentage of patients, but is an obvious finding if the surgeon pays close attention. Patients who require both submalar and malar fill benefit from the Combined Submalar Implant. The configuration of the implant has bulk in the anterior and the lateral cheek for this purpose. Figure 1B shows an example of the Combined Submalar Implant and its approximate position.

Finally, some patients actually have very adequate submalar anatomy but only require lateral malar fill. These patients are the ones who need or desire "high cheekbones." The malar shell implant is designed specifically for this purpose. This implant is placed higher and more laterally and only augments the lateral cheek. Figure 1C shows a malar shell implant and its approximate position. Although many other implant configurations exist, these three are the work horses of my practice.

SURGICAL IMPLANT PLACEMENT

The surgeon must be familiar with the midface anatomy, which is relatively simple compared with other areas in the face. The implants are always placed in the subperiosteal plane. The only significant anatomic structure in this area is the infraorbital nerve, which exits at the foramen about 5-8 mm inferior to the inferior orbital rim in the papillary midline. In reality, the dissection does not need to encroach on the nerve as all the implants are designed to be placed inferior or lateral to that area. Occasionally, the nerve is visualized during dissection and is easily protected. The surgical procedure is as follows.

I inject 5 cc of 2% lidocaine with 1:100,000 epinephrine in the subperiosteal plane across the submalar and malar regions. This is done percutaneously through the cheek. I inject another 2-3 cc of the same local anesthetic intraorally in the gingival sulcus above the canine tooth.

Next, I make a 10-15 mm incision just below the sulcus above the canine tooth through mucousa, muscle and periosteum. There are no significant anatomic structures in this area and the incision can be made directly to bone. At this point, I use a periosteal elevator to raise the periosteum off of the anterior maxilla to a level beneath the infraorbital nerve. The dissection is then directed obliquely to tunnel out over the lateral malar area and slightly over the zygomatic arch, depending on the implant used (Figure 2A). The submalar implant requires the smallest dissection, and the combined submalar and malar shell implants require a larger pocket. The dissection pocket is made to be only slightly larger than the actual implant to prevent shifting. Once the subperiosteal pocket is made, an implant sizer can be tried in to choose the proper size. This is more common for the novice surgeon; choosing the correct size

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Figure 3: A 47-year-old female before and after mini facelift, blepharoplasty and placement of medium submalar implants.
Figure 4: A 40-year-old female before and after placement of malar shell implants.
Figure 5: A 64-year-old female before and after facelift, blepharoplasty, laser resurfacing and placement of combined submalar implants.
Figure 6: A 46-year-old female before and after laser resurfacing and placement of medium submalar implants.

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comes with experience. The pocket is then irrigated with an antibiotic solution and the implant is placed in the pocket (figure 2B). It is imperative to place the implant passively so the flexible margins do not get folded over. The implants are designed to fit in the specific area and usually "self seat" in the proper position. If the implant is too mobile (usually from over dissecting the pocket) they can be secured with a suture or a single fixation screw. After the implant is placed, the upper lip is pulled and the cheeks are compressed to see if the implant squeezes out of the pocket. If it does, the pocket is enlarged so the implant is not expressed when the surrounding tissues are mobilized. The incision is then closed in a single layer with 4-0 chromic suture. With experience, each cheek implant takes 10-15 minutes from incision to suture.

Postoperatively, the patients are asked not to excessively animate for 48 hours and to stay on a soft diet. This region is prone to significant postoperative swelling in some patients; ice and tapering steroids can be of benefit. The patient is also warned that their smile and pucker will be somewhat reduced for about 10 days while the muscles heal. The average recovery period is about one week. Temporary paresthesia is not uncommon and returns over several weeks. Any implant is subject to hematoma or infection. Meticulous hemostasis and antibiotic coverage with a cephalosporin for one week is recommended. Midfacial augmentations with various implants are shown in figures 3 through 6.

COMPLICATIONS

Like any implant, the possibility of over correction or under correction is a possibility. Initially, some patients may feel that the augmentation is too dramatic, but they should wait a full three months before removing or changing the implants. Placing a larger or smaller implant is a relatively easy procedure, as the original implant becomes encapsulated and the revision surgery is less invasive than the primary implant placement.

Hematoma from bleeding is possible but rare; adequate hemostasis will prevent excessive bleeding. Finally, infection is a possibility, but fortunately quite rare. Small infections may be treated by antibiotics and antibiotic irrigation. More significant infections require explantation.

CONCLUSION

Midface implants are an effective way to improve midfacial aging in any patient. The variety of available shapes and sizes along with the ability to reverse the procedure make cheek augmentation with implants an attractive and effective procedure for any surgeon that treats the aging face.

Dr. Niamtu practices in Richmond, Va., and limits his practice to cosmetic facial surgery. He is board-certified in oral and maxillofacial surgery and is a Fellow of the American Academy of Cosmetic Surgery and the American Society of Lasers in Medicine and Surgery. He can be reached at niamtu@niamtu.com.