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Enhancing the Submalar Space in Esthetic Facial Surgery

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Abstract: Facial rejuvenation surgeries are commonly performed to enhance ones look and lifestyle. Patients want a vibrant look with facial balance. Our techniques are designed to reverse the aging changes of facial fat atrophy and gravitational forces on our soft tissues. Much emphasis has been given to facial volume restoration using various face lifting techniques and fat fill augmentation with autologous fat harvested from another area of your body. Integrating fat compartments into a pre-operative plan is necessary for a successful outcome. Arranging the relocation of a patient's fat pads with facial tightening in different vectors is paramount to success in facial rejuvenation. The malar fat pad and the submalar space are areas where great beauty can be obtained following successful facial rejuvenation surgery. The submalar space is an area that is frequently omitted in the preoperative plan. The purpose of the paper is to show how important it is to accomplish submalar enhancement with a series of case reviews.

Introduction

Many authors have published their contributions to highlight the importance of positioning fat pads at the time of facial rejuvenation. Hamra [1, 2, 3] spent much of his life demonstrating his approach to facial rejuvenation. He clearly demonstrated the benefit of positioning the malar fat pad at the time of successful facial rejuvenation surgery. His composite facelift surgery gave excellent results, and highlighted mid face rejuvenation. Oranges [4], also showed the importance of facial contouring targeting specific areas of fat restoration in particular the midface. Pezeeshk [5] and Rohrich [6] presented their surgeries where facial compartments were filled at the time of facial rejuvenation surgery. Their integration of fat compartments also demonstrated excellent results. Binder [7] used a silastic implant to augment the submalar space. The implant is inserted intra orally. The medial part is fuller than the lateral part, and it is placed near the zygomatic maxillary junction, and below the zygomatic arch. This will lift and support the overlying fat pads and gives the patient more midface fullness. The tail of the implant can be shortened all depending on the length of the zygomatic arch. The results demonstrate fullness and youthfulness in both the malar and submalar space. The malar area is composed of the zygoma and the overlying fat pad. There is a prominence of bone on the zygoma that gives fullness in this area and contributes to midface vector. The zygoma articulates with the maxilla medially and with the zygomatic arch laterally. The submalar space lies below the zygomatic arch and extends medially to the junction of the zygoma and maxilla [see illustration Figure. 1]. The submalar space should be full, giving the patient a pleasant rounded cheekbone look, and is outlined in blue in [Figure 1].

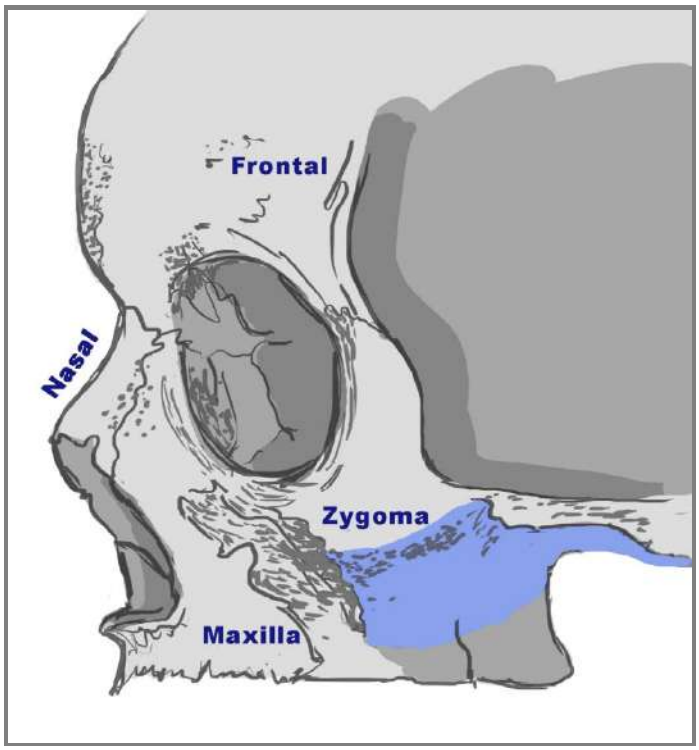

Figure 1: Underlying bone structure for the malar complex.

Materials and Methods

This paper presents a series of facial rejuvenation cases that highlight the previously discussed principles, and the importance of submalar fat enhancement. The malar prominence and a full submalar space are the hallmarks of a successful rejuvenation procedure for the midface. The top of the midface starts at the upper margin of the zygoma and extends inferiorly to the end of the nasolabial crease. There should be a full malar/submalar fat pad at the top. Going inferiorly, there should be a submalar flattening followed by the margin of the mandible. All these areas are integrated at the time of successful facial rejuvenation. Esthetic midface rejuvenation can be accomplished at the time of cervical facial liposuction, facelift surgery, or with autologous fat fill. Several patients were chosen to demonstrate the importance of submalar enhancement using these well known

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esthetic techniques.

Figure 1 shows the underlying bone structure for the malar complex. This bone structure is defined by the zygoma. It articulates medially with the maxilla and superiorly with the frontal bone. Laterally it articulates with the zygomatic process, which extends laterally to the temporal bone. The malar fat pad lies above the prominence of the zygoma and extends medially to the maxilla and laterally to the end of the zygomatic process. The submalar space is pictured in figure 1 with blue shading. This area should be well defined after facial esthetic surgery. It lies beneath the zygomatic arch an extends from the zygomatic/maxillary junction, and laterally the full length of the zygomatic arch.

Discussion

With the growing amount of facial esthetic procedures being performed, plastic surgeons must pay attention to the artistry of their craft. We all perform facelift surgeries, fat fills and liposuction with increasing number of patients and excellent results. The cases presented highlights the importance of enhancing the sometimes forgotten submalar space. This space is well defined in [Figure 1], and by the surgeries presented. A well planned facelift, fat augmentation and cervical facial liposuction can all accomplish the same beautiful submalar enhancement. A selective fat fill procedure gives the plastic surgeon direct access to the submalar space for autologous fat injection. The fat is easily aspirated and with less suction pressure than with machine aspiration for body contour. The fat is then washed with Ringers Lactate and then centrifuged to concentrate fat and stem cells. Once isolated the fat is easily injected into the malar and submalar space with a slight overfill. Only a small amount of fat is needed to achieve an excellent result.

The first patient [Figure 2] pictured underwent a facelift. This was performed under general anesthesia with a low SMA resection. At the same time, the preauricular SMA was also elevated in a vertical vector into the submalar space with additional plication sutures bilateral. The preoperative pictures show an elongated face with little definition to the malar and submalar fat pads. The postoperative pictures show a full malar and submalar space with an excellent result. With a well positioned and full malar and submalar space, facelift results are better.

Figure 2: Patient 1 Pre and Post Operation pictures 4 weeks Post operation.

The second patient [Figure 3] underwent an autologous fat fill with a syringe aspiration with a Toomey syringe. The fat was washed with Ringers Lactate, and then centrifuged to concentrate injectable fat with stem cells. 12 cc of fat was then injected intothe malar and submalar space bilateral. Notice the improved contour in the submalar space with anterior projection. The benefit of this procedure is the ease of the surgery and the exact placement of the centrifuged fat in to the malar and submalar space.

Figure 3: Patient 2 Pre and Post operation of pictures after 2 months.

The third patient [Figure 4] demonstrates a selective submalar augmentation with only 8cc of centrifuged autologous fat also using Toomey syringes. Notice the deficient submalar space in the preoperative photos in this patient. The malar fat pad was not injected. Observe the beautiful appearance of her malar and submalar space with anterior projection following the submalar augmentation. This selective submalar augmentation gave the patient a beautiful side profile.

Figure 4: Patient 3 Pre and Post Operation Pictures after 4 months.

The fourth patient [Figure 5] underwent a selective cervical facial liposuction under local anesthesia. The submental, jowl, submandibular and pre-parotid fat areas were removed with superficial technique under local anesthesia. The vertical limit of the liposuction was the inferior margin of her submalar fat. The medial margin was the nasolabial crease, and her liposuction was carried out inferiorly into the anterior triangle of the neck outlining the mandible margin. You can see the beautiful malar and submalar areas post op with a pleasant progression into the anterior triangle of the neck, enhancing the appearance of the midface.

Figure 5: Patient 4 Pre and Post Operation pictures after 4 months.

Conclusion

In conclusion, the author presents a series of four successful cases of submalar enhancement at the time of facial esthetic surgery. Each technology presented gives the patient a pleasing esthetic result including a facelift, selective fat fill or a chin/neck liposuction. A facelift will require the surgeon to elevate the SMA tissue in a vertical vector up into the malar/submalar fat pad. Selective injection of fat is the most direct and easy way to enhance a submalar space, and with only a small amount of centrifuged fat. The cervical facial liposuction can enhance the submalar space by removing the fat below it.

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