BABAK AZIZZADEH
MARK R. MURPHY
CALVIN M. JOHNSON, JR.
WILLIAM NUMA

2 BONUS DVDS INSIDE!

Master Techniques in Rhinoplasty

ELSEVIER
SAUNDERS

CHAPTER SEVENTEEN

Mandibular Implants

William A. Kennedy III • Babak Azizzadeh • William J. Binder

Over the past two decades, great improvements have been made in the design of facial implants. Facial implants are able to enhance facial contour and provide permanent volumetric replacement. Facial implants can be used in many anatomic regions of the face, including the cheek, midface, nose, and mandible. Here we discuss the application of implants for the correction of profile imbalance as well as the rejuvenation of the lower third of the face. Mandibular augmentation is perhaps the simplest and most powerful aesthetic procedure available to the surgeon. Mentoplasty can create a stronger mandibular profile and improve the appearance of the nose by making it appear smaller and less imposing. In addition, augmentation of the prejowl sulcus and the mandibular angle can help enhance the effects of rhytidectomy by creating a sharper cervicofacial angle. Successful surgical results will be determined by the proper technique. The goals of mandibular augmentation are to reconstruct facial contour deformities or deficiencies with a high degree of predictability.

GENERAL CONSIDERATIONS

INDICATIONS FOR MANDIBULAR AUGMENTATION

The primary indications for mandibular augmentation include:

1. Stand-alone procedure for mandibular augmentation
2. Adjunctive procedure to rhinoplasty with an emphasis on profileplasty
3. Adjunctive procedure to rhytidectomy, which is often essential for patients with microgenia and/or prominent prejowl erosion

The key to mandibular augmentation lies in the restoration of anterior projection and/or expansion of lateral contour. In the aging process, the anterior mandible may develop flattening of the soft tissue button of the chin and form a deepening of the prejowl sulcus.

Augmentation of the bony mandible occurs over one of three zonal areas (Figure 17-1). The first zone is the central chin area, which extends from the mentum to mental foramen (Zone 1). The midlateral zone is defined by a line extending from the mental formen posteriorly to the oblique line of the horizontal body of the mandible (Zone 2). The third and last zone of the premandibular space ecompasses the posterior half of the horizontal body, including the angle of the mandible and the first 2 to 4 cm of the ascending ramus (Zone 3).

Augmenting a recessed central chin area is a key componenet of profileoplasty which can additionally improve the aesthetic outcome of rhinoplasty. The projection of the chin directly affects the illusory projection of the nose in an inverse relationship. The traditional chin implants, placed only within the central area (Zone 1) without lateral extension into the midlateral zones (Zone 2) often created suboptimal results (Figures 17-2 to 17-4). These early implants, unidimensionally designed and with a single vector, were often bulky and nonanatomic. This often resulted in a round chin protuberance, which can appear abnormal and unattractive. Similarly, a smaller implant, placed centrally had a greater tendency to shift or rotate than a larger more extended implant.

Most of these early problems were corrected with the design of the extended mandibular implants that occupied Zones 1 and 2. Placement of an implant that extends into at least two zones (central chin and midlateral) also results in a natural widening of the anterior jawline as well as an increased vertical dimension of the lower third of the face (Figure 17-5).

Augmentation of the posterior-lateral zone widens the jaw to produce a stronger posterior jawline contour. This can be achieved using a mandibular angle implant to augment the posterior lateral zone of the mandible (the posterior half of the horizontal body including the angle of the mandible and the first 2 cm to 4 cm of the ascending ramus).

Mentoplasty can also have a powerful impact in facial rejuvenation in addressing the structural elements of the jaw and neck. The prejowl and prejowl–chin implants can be used as stand-alone procedure or serve a complementary role to liposuction and rhytidectomy (Figures 17-6