Oral Animation in the Decision for Chin Augmentation

Dan Mahler M.D.
Beer-Sheba, Israel

ABSTRACT / Oral animation, such as opening and closing the lips, smiling, or laughing, leads to muscular tension over the skin and the soft tissues of the chin. The "S"-like labiomental line presents a variable scope of curves, from a full curve, through "lazy-S," to a straight line. The different profiles of the chin thus achieved enable the plastic surgeon during preoperative planning to decide whether or not to perform chin augmentation in addition to the required rhinoplasty. Anatomical, functional, and clinical data are presented and discussed.

KEY WORDS / Chin augmentation—Oral animation—Curve of "Case"—Muscles of the lips—Muscles of the chin.

Introduction

There is no difficulty in assessing the indication for chin augmentation in extreme conditions of chin retrusion. Bird-face, microgenia, hypogenia, underdeveloped chin, and retarded chin are synonyms for the well-known condition in patients who need profile repair by chin augmentation.

Yet no precise decision can be made in a rather large group of patients who present "semi-retarded" chin, which on one observation may seem to be a normal chin, and on the second may seem to require augmentation. In this group, which according to the gaussian curve is the largest group, the factors which play a role in the final decision are usually not scientific or measurable. "Accurate description of the human face has presented a challenge to artists, scientists and mathematicians for centuries. Attempts to establish basic mathematical or statistical rules for facial esthetics have all proved inadequate, which is simply a reflection of the variability between individuals that is the rule and not the exception" (3). In spite of Gonzalez-
Ulloa’s pattern (1), the surgeon’s individual approach, temperament, and attitude to beauty; the openness or conservatism of the patient; and socio-environmental conditions play important roles in such a decision.

In “semi-retarded” chin, facial movements such as opening the lips (3), smiling, laughing, mimicking, tilting, or other animation can easily mislead the surgeon.

The manipulations presented suggest some clinical aid for the plastic surgeon who is hesitant as to whether or not to perform a chin augmentation.

**Anatomy and function**

The muscles around the mouth (Fig. 1) create various tensions over the lips and chin. The function of the musculus depressor labii inferiorus is to draw the lower lip downwards and a little laterally, as in the expression of irony (2).

The depressor anguli oris draws the angle of the mouth downwards and laterally, as in the expression of sadness (2), and the mentalis muscle lowers and protrudes the lower lip and at the same time wrinkles the skin of the chin (2); when it contracts, it raises the skin over this area (4).

As to the platysma, when all its fibers act maximally, it pulls the skin up from the clavicular region, increasing the diameter of the neck and relieving the pressure of a tight collar (2), and pulls the chin backwards. Vertical fibers of the orbicularis oris muscle extend downwards to the groove between the lower lip and the chin (4), as well as to the sides of the mouth (Fig. 2).