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Techniques in Cosmetic Surgery

Lifting of the Upper Lip: Personal Technique

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The authors illustrate a personal technique for lifting of the upper lip with augmentation of the lower lip. With this procedure, a shortening of the "prolabium," an increase of the vermilion, and a natural, nicer mouth are obtained, with the possibility of increasing the volume of the lower lip simultaneously. The operation is carried out as outpatient surgery using local anesthesia, with intravenous sedation if requested. Incisions are made bilaterally beginning at the alar fold of the nose; they then enter the nostrils and rise medially on the skin below the lower margin of the medial crura of the alar cartilage. In this way, the columella is safe, and there are no scars. Then, the two pieces of excess skin and a small, whole strip of orbicular muscle can be cut away, just under the nose. If the goal is to better extrude the vermilion, the skin as far as the Cupid's bow also has to be undermined; if the goal is to shorten the prolabium, a slightly wider amount of orbicular muscle can be removed. The muscle is suspended to the base of the nose with interrupted stitches (absorbable 4-0 suture), the subcutaneous tissue is sutured, and finally the skin is closed with a running suture. The removed muscle is a good graft for increasing the size of the lower lip. (*Plast. Reconstr. Surg.* 113: 1828, 2004.)

In an attractive mouth, the "prolabium" of the upper lip is short, the "philtrum" and the Cupid's bow are prominent and well designed, the partially closed mouth reveals the frontal teeth of the upper dental arch while hiding the lower teeth, the lower lip is slightly fuller than the upper lip, and the vermilion is more developed in the central part of the lips. The inversion of these ratios is sometimes related to aging—the upper lip increases in length and simultaneously decreases in volume, and the lower lip becomes thinner and reveals the bottom teeth—but often, this is a constitutional situation, so that even young people have this type of problem. With this personal technique, the lip lifting is performed without interrupting the "columellar" skin and the procedure is useful even for augmenting the lower lip, which always has to be larger than the upper lip.

Technique

This lip procedure is carried out under local anesthesia with a regional block of the infraorbital nerve, and intravenous sedation, depending on patient request, can be added. The regional block (4% articaine with 1:200,000 epinephrine) eliminates the sensitivity of the entire area and local anesthesia (0.5% mepivacaine with 1:100,000 epinephrine) produces the needed vasoconstriction both in the skin and in the muscular area that will be excised. In the inferior lip, we use only local anesthesia, considering the nerve-block anesthesia of the mandibular nerve exaggerated for this procedure.

The incision begins at the alar fold of the nose, enters the nostril, and rises medially on the lower margin of the medial crura of the alar cartilage. A separate incision begins at the other alar fold, enters the nostril, and rises medially, like the first one.

The excess skin of the prolabium is eliminated in two separate pieces, as previously marked (Fig. 1, *above, left*), and the skin of the columellar area is safe and completely undermined until reaching the tip of the nose, as can be clearly seen (Fig. 1, *above, right*). In Figure 1, *above, left*, the position and the shape of the muscular sampling can be seen. The amount of skin and/or muscle that is removed varies, de-

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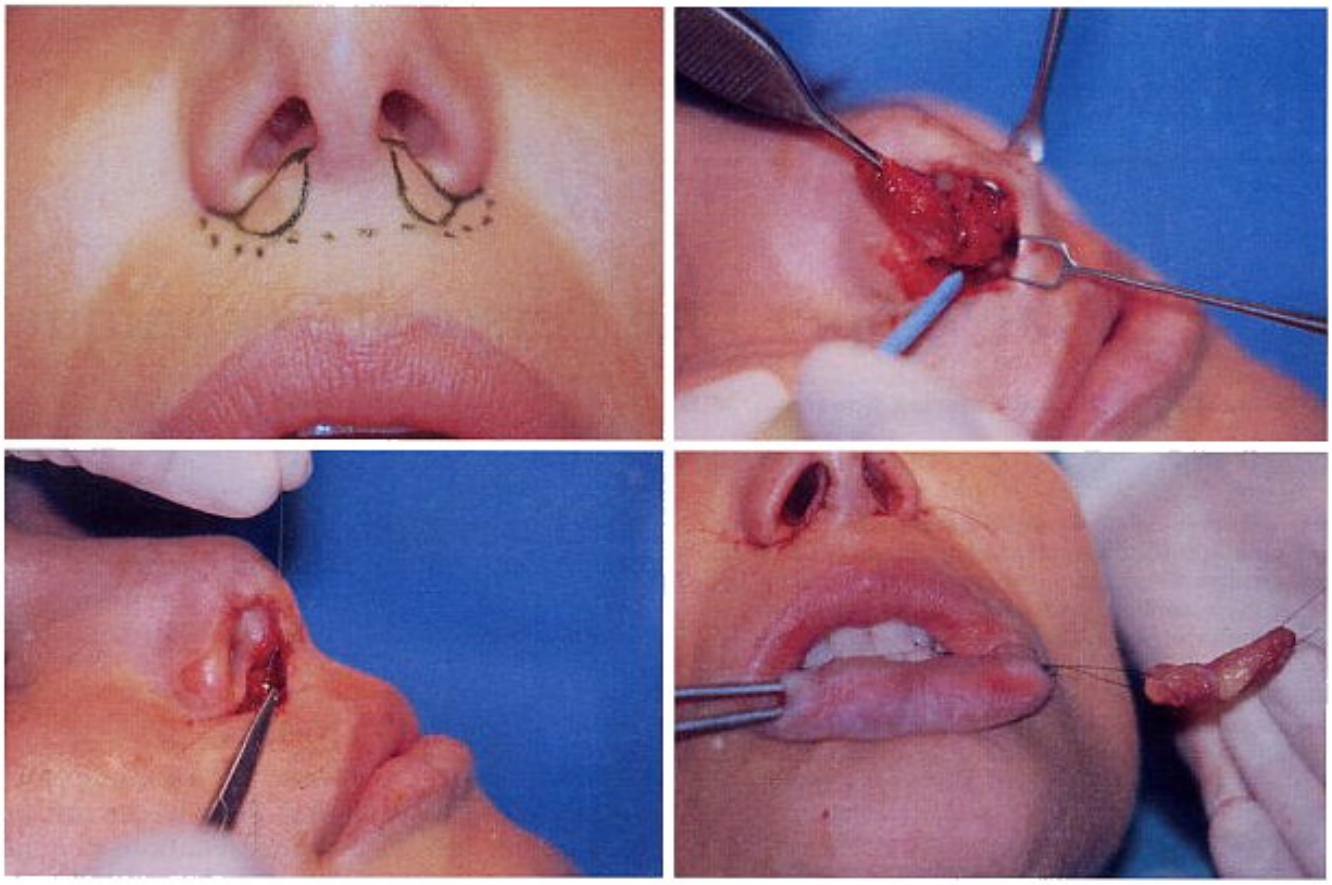

FIG. 1. (*Above, left*) The skin excision area. Drawn with points, the position and the shape of the muscular sampling that will be cut away can be seen. (*Above, right*) The columellar skin is completely undermined to the nasal tip. The undermining is closely subcutaneous. To limit bleeding, the muscle is cut away with the coagulator in a single piece. (*Below, left*) Interrupted stitches close the skin. Because the labial flap is longer than the nasal flap, the skin has to be redistributed well. (*Below, right*) Through two little incisions in the labial mucosa, a tunnel is undermined with a klemmer and the muscular graft is placed into the site.

pending on whether the shortening of the prolabium or the extrusion of the vermilion is preferred: if the goal is to obtain a better extrusion of the vermilion, a large amount of skin is removed, the skin of the columella and prolabium is undermined as far as the Cupid's bow without actually reaching it, a small cranial part of the orbicular muscle is removed (Fig. 1, *above, right*), and the superior edge of the orbicular muscle is suspended and sutured to the base of the nose with interrupted absorbable 5-0 stitches (Maxon; Sherwood-Davis & Geck, St. Louis, Mo.). Indeed, if the goal is to shorten the prolabium, once the excess skin has been excised, one proceeds to cut away a bit wider portion of orbicular muscle, without undermining the prolabium (but only the columellar area); afterward, one suspends the cranial margin of the muscle to the base of the nose-muscle suspension and then proceeds in closing with interrupted stitches (Fig. 1, *below, left*). Finally, a running suture using 4-0 or 5-0 absorbable material (Maxon) is performed to close the skin (Fig. 1, *below, right*).

It is very important to pay utmost attention to the suture, because the labial flap is longer than the nasal flap (Fig. 2, *above*), so that stitches taking the nasal flap perpendicular to the skin and the labial flap in parallel have to be placed. In this way, the length of the labial flap shortens and become as long as the nasal flap, and the columellar skin can be redistributed without cutting this area.

Great attention has to be given to the hemostasis, which has to be accurate. For this reason, we prefer cutting off the muscle piece with the coagulator, to limit bleeding.

Concerning the undermining of the upper lip, it has to be performed all over the prolabium, from the inferior edge of the excised skin straight through to the Cupid's arch, in this area just under the nose, plus the columellar area up to the nasal tip (Fig. 2, *below*). In men, a large amount of skin cannot be re-

moved because of the beard, which cannot be redistributed in the columellar area.

After suturing the superior lip, one proceeds with the preparation of the muscular graft to increase the volume of the lower lip. It is important that the orbicular muscle is removed in a single piece (Fig. 1, *above, right*) and that from the moment of removal it is kept in saline solution. Then, the graft is thinned at the ending sides to obtain an anatomical shape that is easy to insert.

Two small lateral incisions (3 mm length) in the labial mucosa of the lower lip are positioned symmetrically at a distance equal in length to the muscular graft and on the dental side of the muscular layer. A tunnel is undermined with a straight pince (Fig. 1, *below, right*), with the dimension suited to receive the graft.

This is passed through, from an incision to the other one, and positioned without fixation (Fig. 1, *below, right*). Two 5-0 absorbable stitches close the small incisions, and no postoperative dressing is positioned.

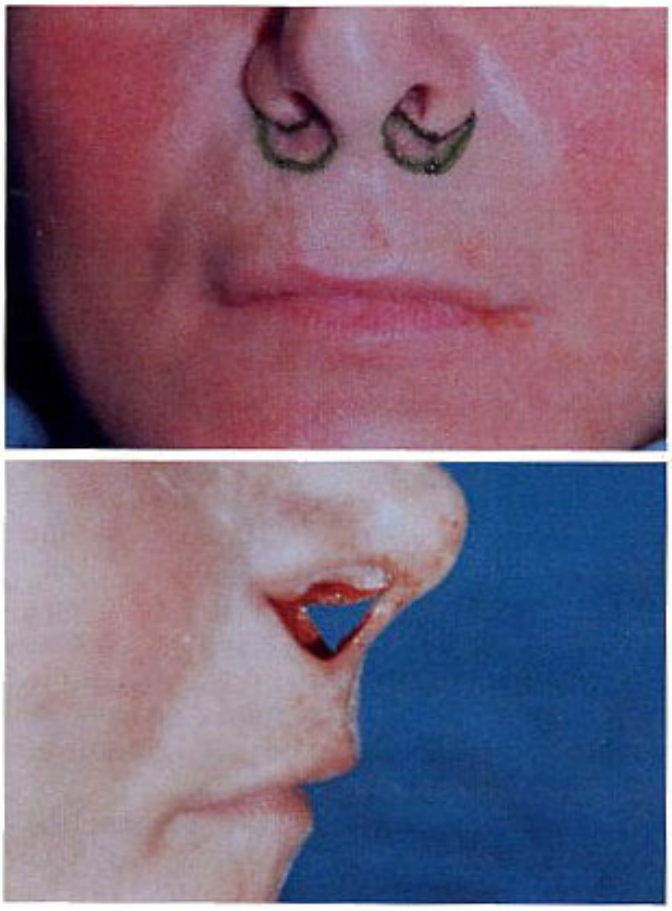

FIG. 2. The skin marks and the skin cut away. The columella is safe, and the labial flap is longer than the nasal flap.

RESULTS

The authors have used this technique in 60 cases (55 women and five men) since 1997, and the outcomes have been very satisfactory for both the surgeons and the patients. As the figures demonstrate, this procedure does not leave visible scars, but it changes the mouth area. It is important to obtain photographs with the lips open, because the relationships between the superior and the inferior lip and between the lips and teeth are clearly revealed.

After the procedure, we place only a small Steri-Strip (3M Health Care, St. Paul, Minn.) to cover the incision of the superior lip. If there has been skin undermining, we place a mild compressive bandage on the lip for 24 hours to limit the edema. The postoperative therapy includes an oral broad-spectrum antibiotic for 5 days and an oral anti-inflammatory agent. Removal of the sutures occurs on day 10, and stitches in the lower lip are eliminated spontaneously.

Convalescence involves only light edema, as a result of the absence of skin undermining (and moderate edema, with or without ecchymosis in the event of extroversion of the vermilion); nevertheless, it is important that sutures are not strained. Therefore, for 2 weeks, the patient has to avoid those daily situations (smiling or laughing, forced chewing, smoking) that might favor diastase of the wound and consequently infection. A case of infection of the surgical wound was verified and quickly reversed by targeted antibiotic therapy: the patient, heedless to the pharmacologic and behavior prescriptions, had immediately returned to work and an intense social life. On the third day, the patient came to the authors' office with a wound in diastase and covered in pus. After proper antibiotic therapy, the recovery was fulfilled in a second intent and the patient refused surgical correction of the scar.

For a few weeks, the motion of the upper lip is reduced because of the surgical trauma and it appears static; however, a complete recovery always occurs. A postoperative dysesthesia is normal also, and the period varies from a few weeks to a few months.

In Figure 3, *below*, the elevation of the prolabium with a nice effect of extroversion of the vermilion and good augmentation of the inferior lip can be seen in a 35-year-old woman. Although the patient before the operation did not show the superior teeth (showing instead the inferior

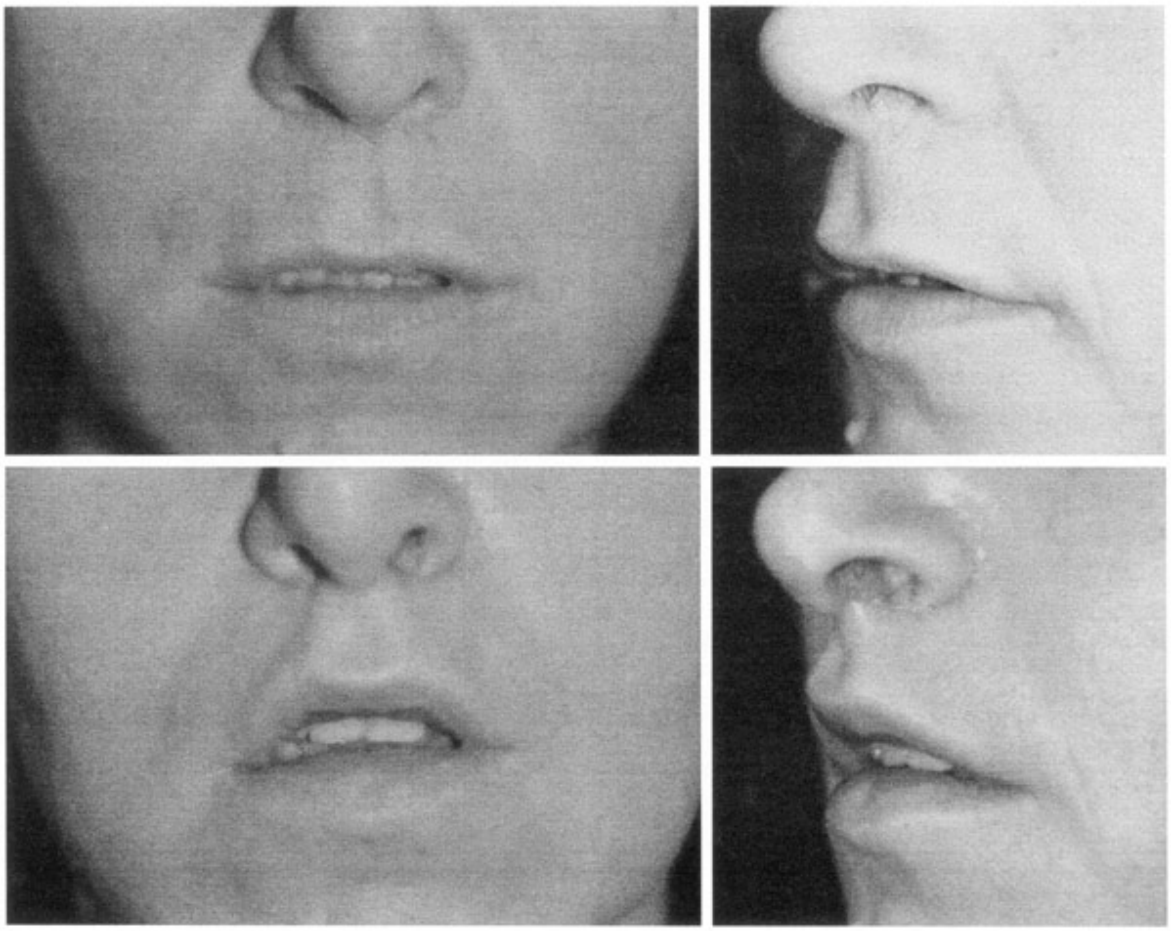

FIG. 3. (*Above*) Preoperative view. The same patient as in Figure 2. In this 35-year-old woman, the upper teeth cannot be seen, although her inferior teeth can be seen; her lips are thin. (*Below*) Postoperative view, 1 month later. Through wide undermining of the skin of the prolabium and excision of a small piece of orbicular muscle that we placed in the inferior lip, we obtained good extroversion of the vermilion and shortening of the prolabium. In the profile view, the scar entering the nostril can be seen.

ones), after the operation, the situation was the opposite and her mouth was nicer.

The skin scars on the external side of the nasal ala usually remain hidden in the fold, even though we should keep well in mind that this area is at risk of hypertrophic or invaginated scarring. To avoid that, it is useful to not cut too laterally in the nasal fold, because the amount of skin that can be taken away is only the amount just under the nostrils; thus, it is pointless to extend the cut too laterally (Figs. 4 through 6, *below*).

Concerning the muscular graft, the goal is to increase lip volume and, in some cases, to hide the teeth of the inferior dental arch. This can be better observed in the frontal view of the photographs (Figs. 5 and 6, *below, left*). It has a good chance of staying well over time (Figs. 4 through 6).

DISCUSSION

Because of the absence of an external incision that would allow the excess of skin between the philtrum and the columella to be eliminated, this skin is therefore undermined below the medial crura to be then well distributed in this area. We have never had problems with hanging columella, because the skin is redistributed in the columellar and prolabium areas with the special stitches described above (see Technique section), so that in the columellar area the skin adheres perfectly in its new position. It is important to notice that the undermining is performed just under the skin, which is elastic. There are no problems with excessive nasal tip projection either, because the greatest amount of skin is readapted just in the prolabium area, and because there is no modification of the alar cartilages of the nose.

With this technique, modification of the columellar shape is not necessary, because the septum cartilage does not have to be cut; however, if preferred, this surgical method can be used even to change the columellar shape or the nasolabial angle simultaneously (Fig. 7).

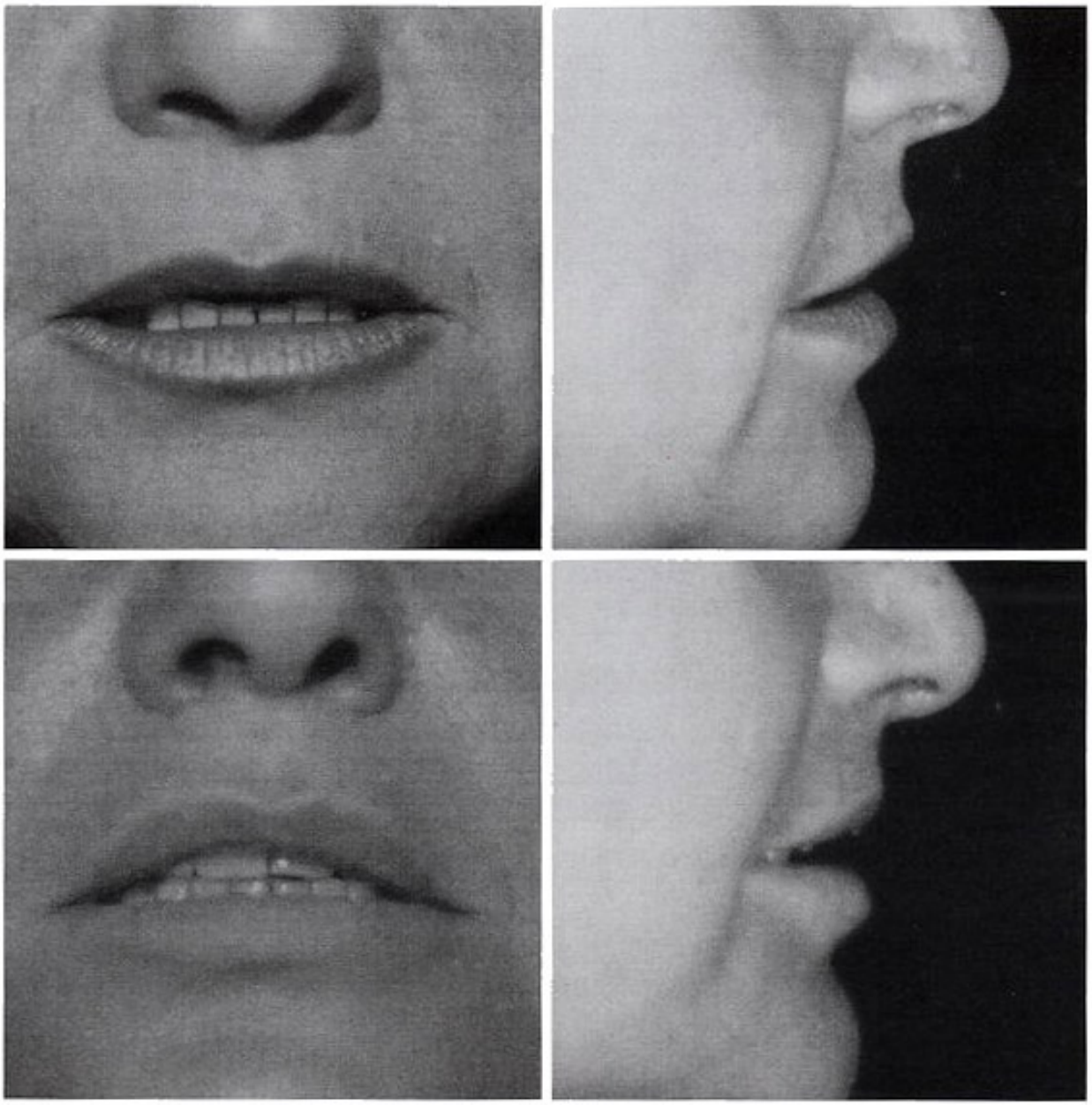

FIG. 4. (*Above*) Preoperative views. In this 51-year-old woman, an ugly way to show teeth can be seen. (*Below*) Postoperative views, 6 months later. We shortened the prolabium, and the inferior lip was augmented with the small muscular graft.

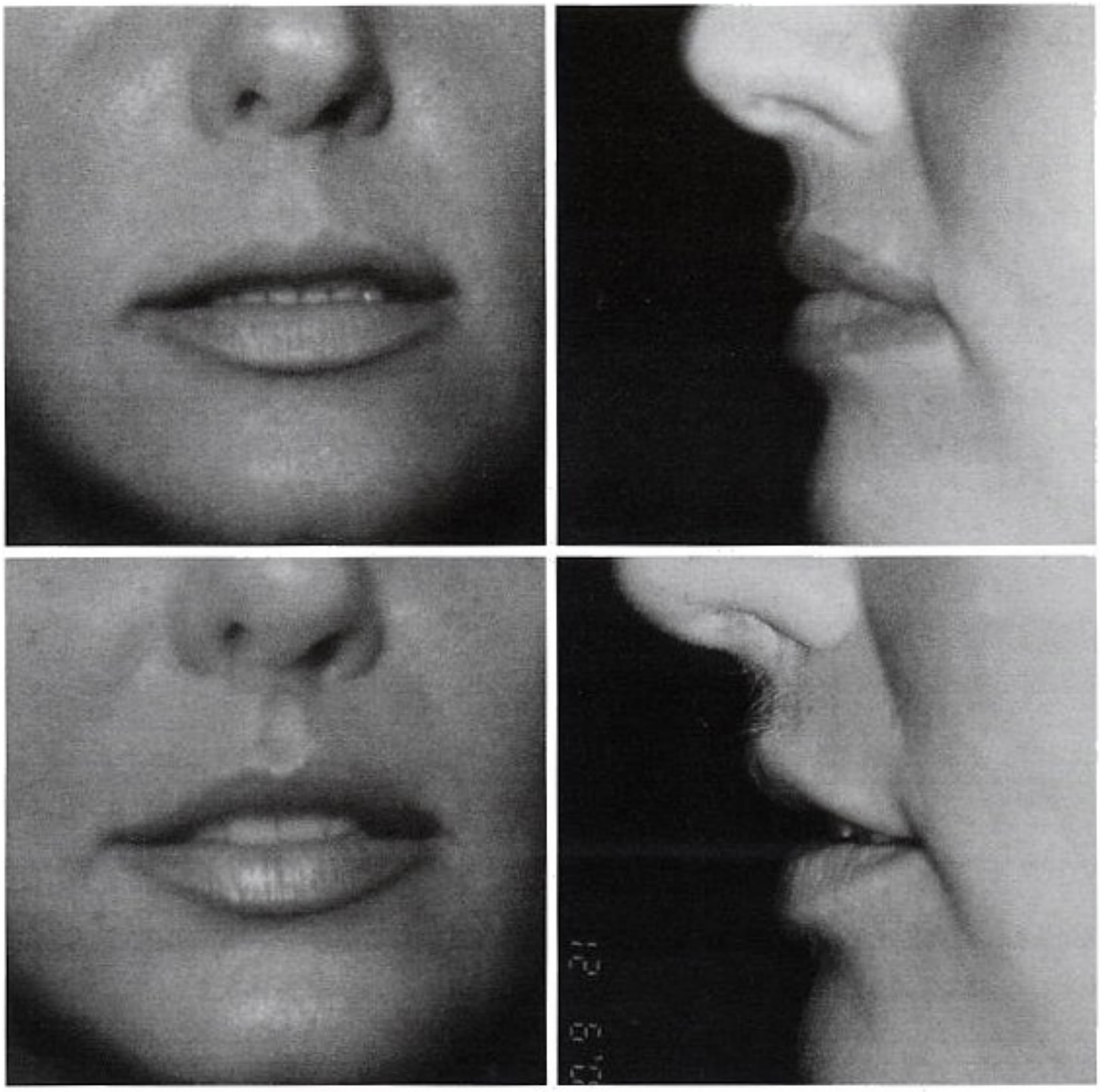

FIG. 5. (*Above*) Preoperative views. Photographs of a typical case of long prolabium in a young patient (38 years old). Note how she uses makeup on her lips beyond the Cupid's bow to make them appear larger. (*Below*) Postoperative views, 3 months after shortening of the prolabium and inserting a small muscular graft in the inferior lip. Note the nicer mouth and, in the profile view, the better extroversion of the prolabium.

Other techniques for rejuvenation of the lips involve skin resections along the vermilion or below the nostril caudal margins.[1–7] This type of operation is indicated in all of those cases, whether constitutional or iatrogenic or related to aging of the face, where the proportions of the upper and lower lip are altered.

Depending on the undermining, two different effects can be obtained: the simple modification of proportion between prolabium and vermilion, or a shortening of the prolabium with the extroversion of the vermilion (for technical details, see Technique section).

This technique does not result in a scar on the columella, which always remains intact, and we obtain a lip that respects the anatomical shape and proportions, and therefore results in an extremely natural looking mouth. The fact that the majority of access is intranasal could allow the simultaneous modification of the nasolabial crease or of the nasal tip, if necessary, because the nasal septum or the alar cartilages can be easily accessed.

CONCLUSIONS

The absence of alloplastic grafts allows us to exclude problems related to these materials. Nevertheless, this type of surgical procedure

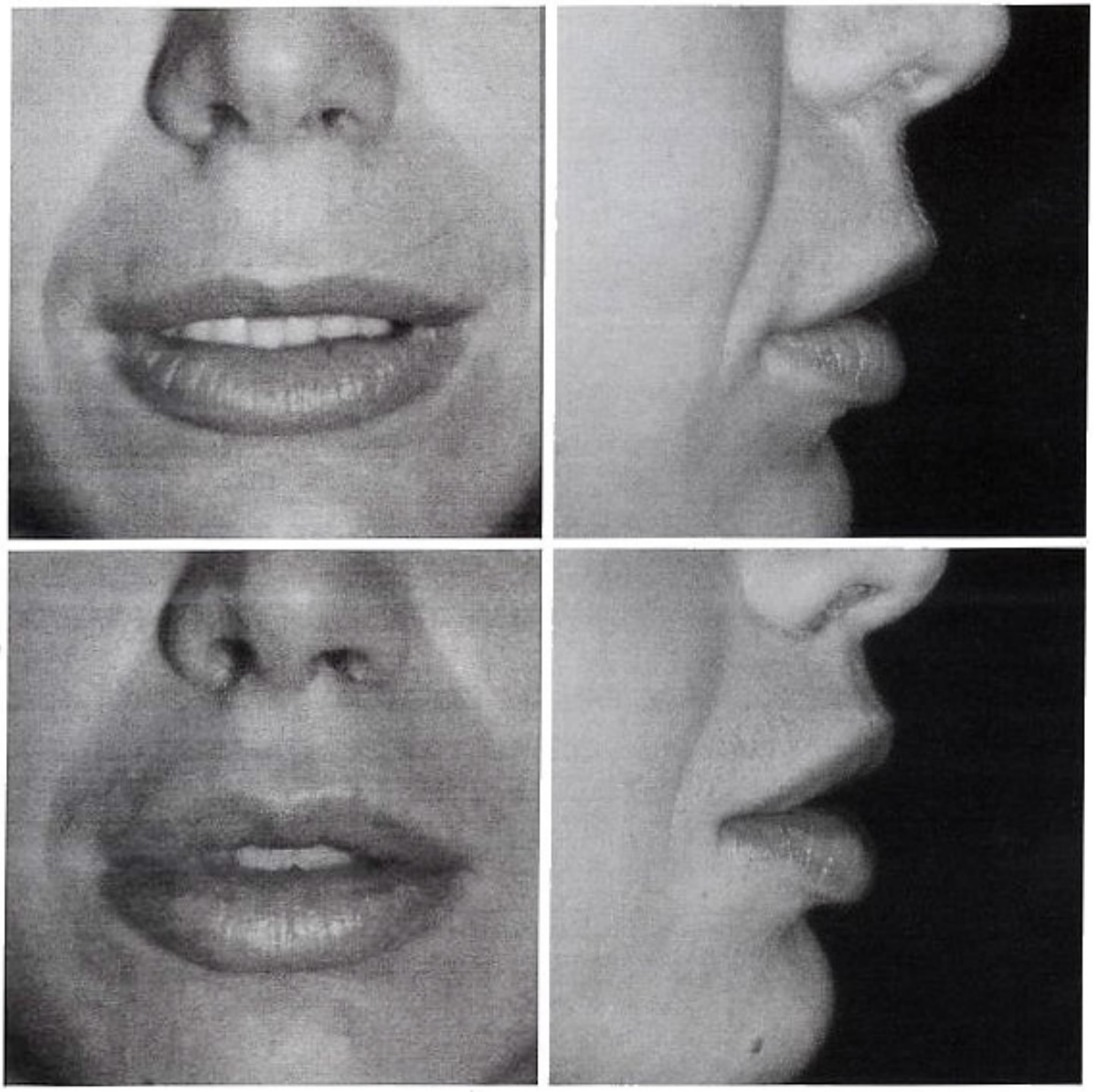

FIG. 6. (*Above*) Preoperative views. This patient (31 years old) had liquid silicone in her lips that had been injected by another surgeon. She came to us asking for larger lips, but her superior lip was very long and her superior teeth were completely hidden. (*Below*) Postoperative views, 8 months later. The prolabium was shortened and the vermilion was extroverted with the above-described technique. The inferior lip was augmented with a small muscular graft, just to balance the lips.

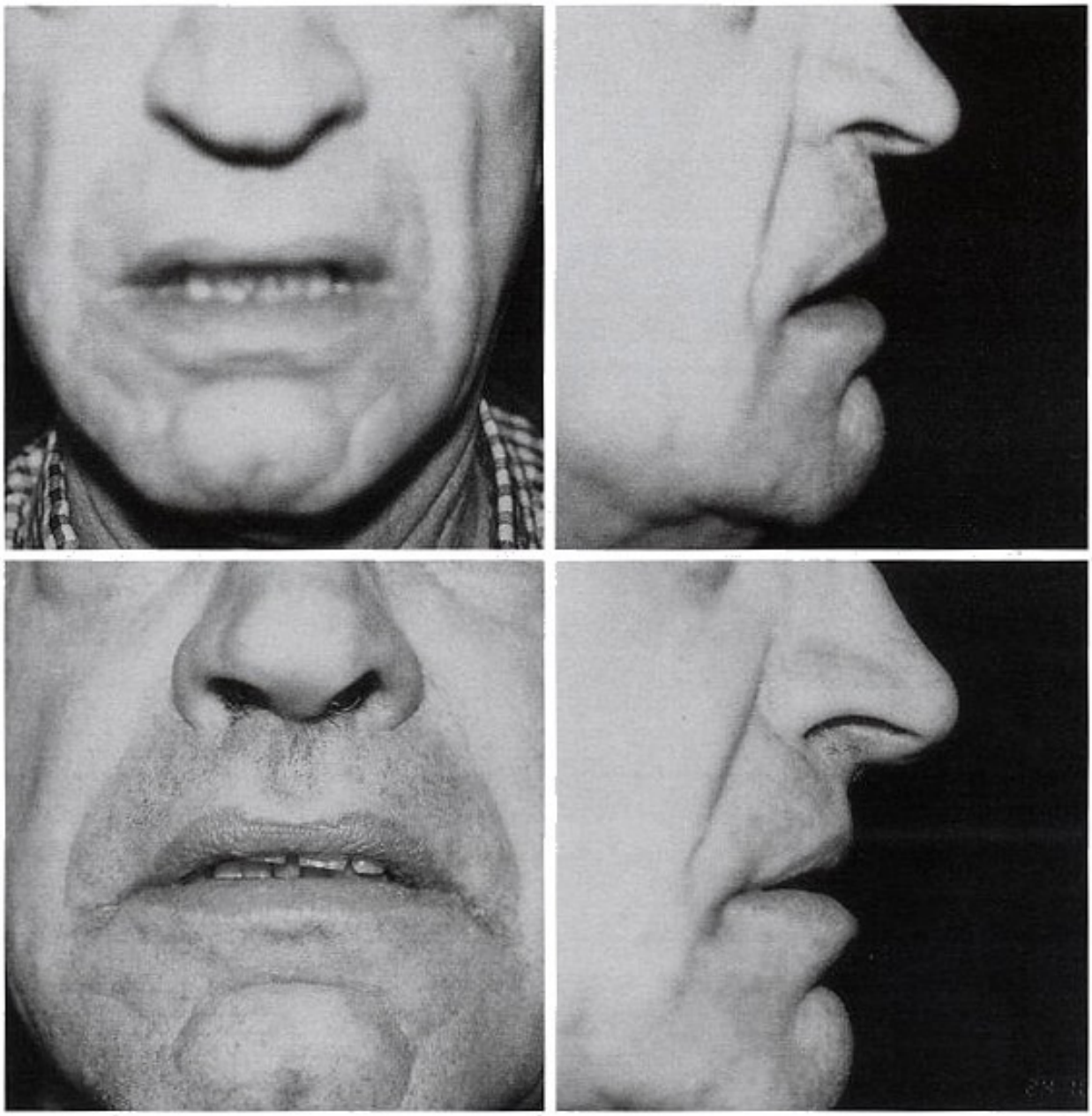

FIG. 7. (*Above*) Preoperative views of a 65-year-old man with a very long lip and a hanging nose, attributable to his age. The superior teeth are completely hidden, and the inferior teeth are visible. (*Below*) Postoperative views, 5 months later. In this case, we simultaneously performed a rhinoplasty through the same incisions as the lip lift, just to augment the nasolabial angle.

also suits those cases where the presence of silicone makes it impossible to inject other alloplastic materials in the lower lip, but where there is the necessity, however, to balance the upper and the lower lips (Fig. 6). This procedure can be performed even during face lifting as an ancillary procedure in face rejuvenation.

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