Aesth. Plast. Surg. 17:291–295, 1993

Aesthetic Plastic Surgery

Direct Upper-Lip Lifting: A Safe Procedure

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Abstract. Thin lips and an aging lower third of the face are increasingly the focus for surgical improvement. Thin and tightly pursed lips imply a certain resignation or even bitterness, especially in older women. Excessive application of lipstick to enhance the shape and color of thin lips was a solution but a poor camouflage. The desire for well-defined and full lips, as seen today on many models and actresses, is the motivation behind the increasing demand of women with relatively normal looking lips to turn to cosmetic surgery. They often present the surgeon with photographs of the shape and fullness of lips they desire to achieve. In this article the author recommends the use of the direct upper-lip lifting method as a more effective and successful approach to enhancing the shape of the upper lip. For plumping the lower and upper lip, the author recommends using autologous collagen augmentation.

Key words: Direct upper lip lifting—Lip plumping—Autologous collagen augmentation

Patient Selection

Because the perioral region is, after the periocular structures, the most important site of facial expression, it is important that the problem of scarring and complications be explained thoroughly to candidates for perioral region correction. Problem patients should be excluded from treatment. Selection of the appropriate treatment and the careful selection of the patient, particularly where surgery is involved, should bring the surgeon closer to a completely satisfying patient.

The nonsurgical methods for plumping lips are as follows:

(1) bovine collagen injections
(2) autologous collagen augmentation
(3) medical-grade liquid silicone injections

These materials are used on lips that have enough contour but are "empty" and "languid." These conditions are mainly found in older women. I prefer the use of autologous collagen augmentation since the material used is of natural origin and has minimal risk.

Operative Technique for Autologous Collagen Augmentation

It is preferable to perform extraction of fat tissue from the lower part of the abdomen. The harvested fat mass is almost devoid of fibrous tissue. For fat harvesting, I use a plastic 20-cc syringe, filling approximately three fourths of it with fat mass. The remaining space is for the aspiration of sterile saline solution which is used to repeatedly wash the fat mass. This is done by filling the syringe with the liquid and placing it vertically with the opening pointing down. The solid fractions of the fibrous adipose tissue separate distinctively from the liquid fragments in 20–30 s and are eliminated. Repeated washing is necessary to totally eliminate the blood fractions. The number of washings is determined by the quality of the adipose tissue initially collected.

To extract autologous collagen from the purified fat mass the syringe is now maintained in a vertical position with the opening pointing up. This position

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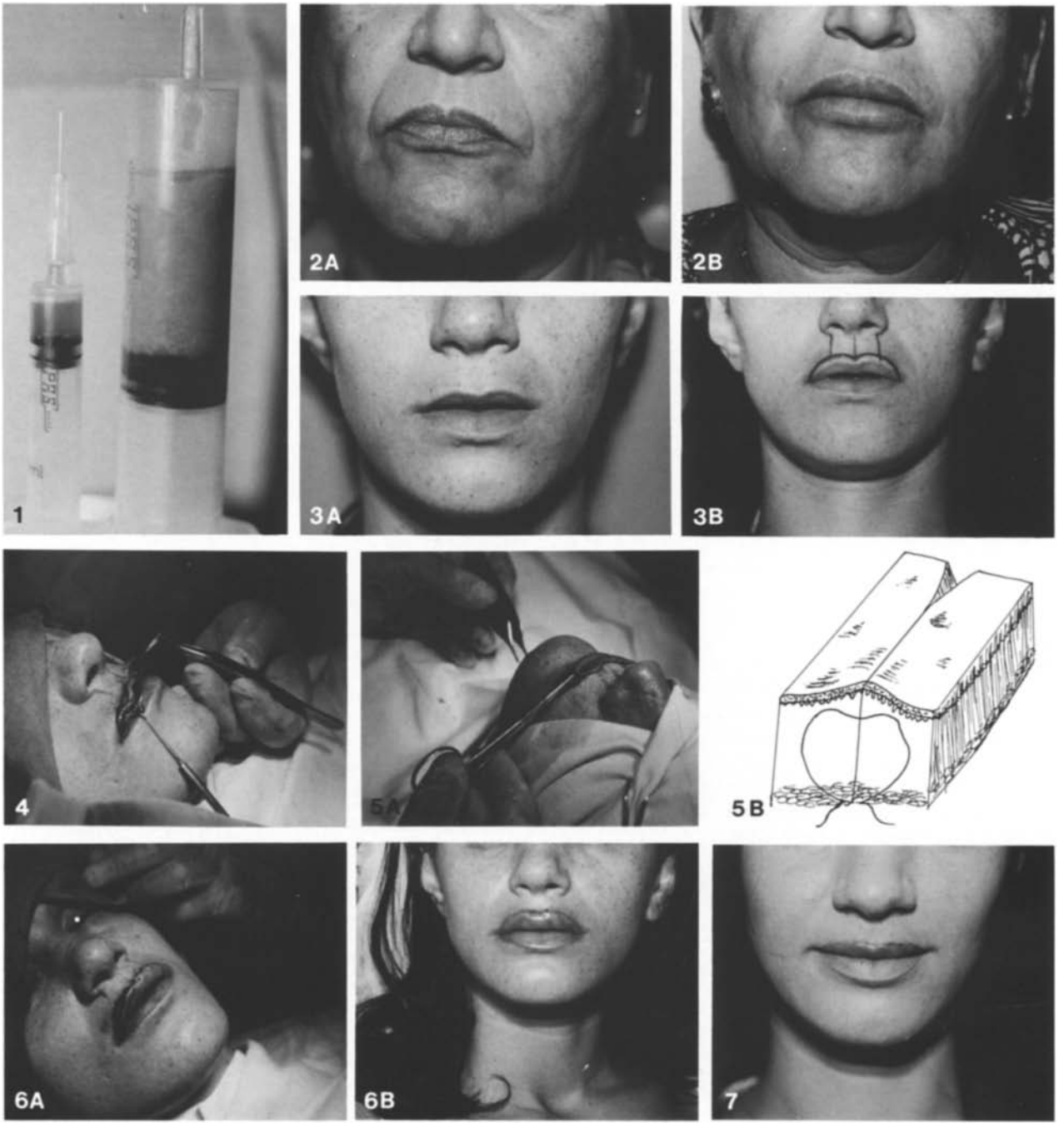

Fig. 1. Autologous collagen collected in the 2.5-cc syringe ready for injection

Fig. 2(A). Before, **(B)** after treatment of lower and upper lips with autologous collagen augmentation

Fig. 3(A). Preoperative view of 21-year-old patient with thin upper lip. **(B)** Accurate marking of the incision areas

Fig. 4. Deepithelialization of the area in between the actual and future vermilion sites

Fig. 5(A). Suturing of the area with buried vertical mattress sutures using 5/0 dexon. **(B)** Buried vertical mattress suture

Fig. 6(A). Superficial suturing with 6/0 dermalon. **(B)** Forty-eight hours postoperative

Fig. 7. Patient six months after direct upper-lip lifting. Note the slightly visible scar

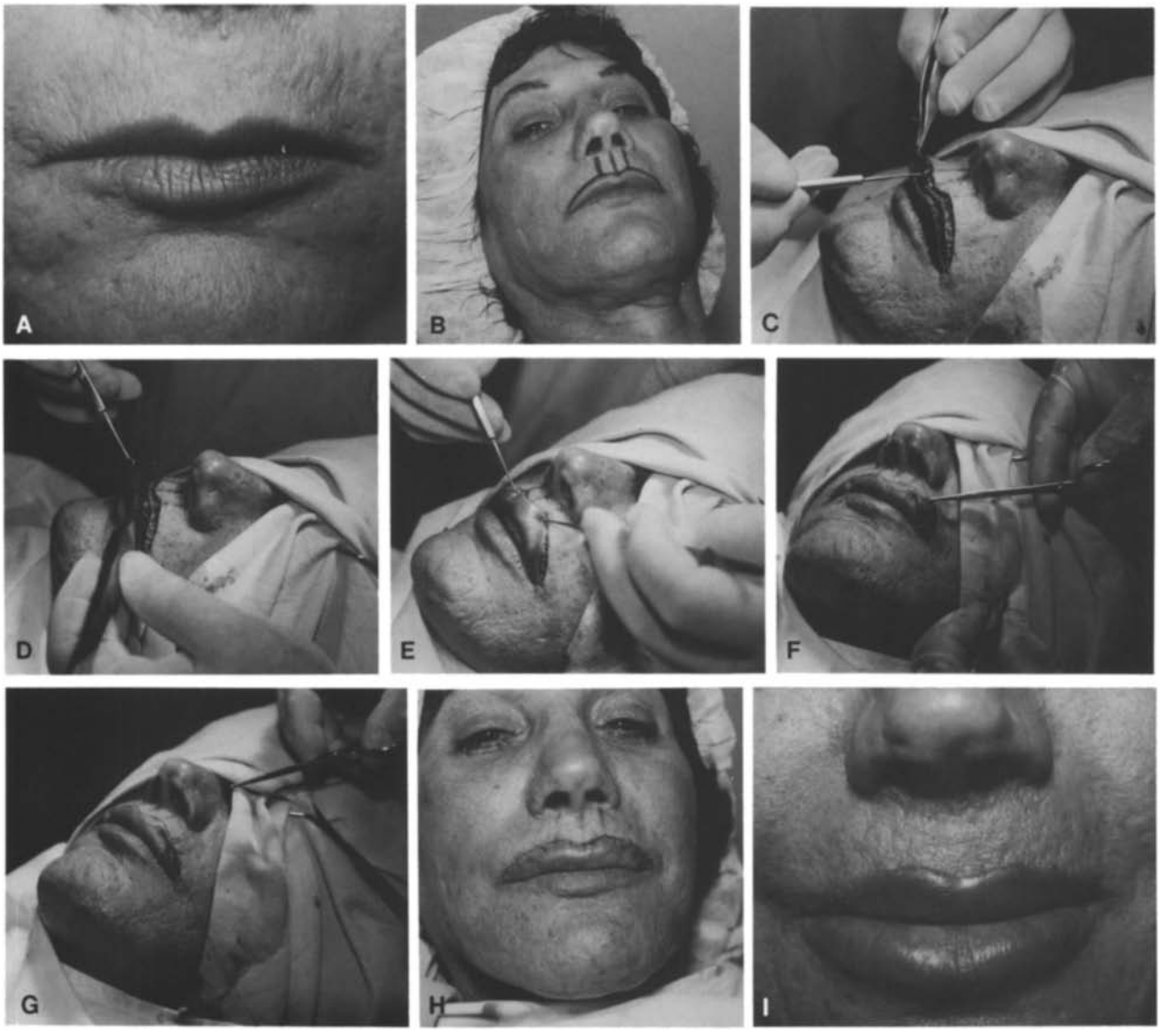

Fig. 8(A) Preoperative view of 45-year-old patient with thin upper lip and "empty" lower lip. **(B)** Accurate marking of the incision area. **(C)** Deepithelialization procedure. **(D, E)** Advancement of the vermilion to its new site. **(F)** Buried vertical mattress suture of 5/0 dexon. **(G)** External interrupted suture of 6/0 dermalon. **(H)** Patient immediately after surgery. **(I)** Six months after surgery. Note the "invisible" scar as well as the creation of natural vermilion line curve as a result of the deepithelialized area. Lower-lip plumping was performed with autologous collagen

is maintained for several minutes to allow the fat mass to divide itself from the principal liquid which is found on the top part. The obtained autologous collagen is then collected into a sterile 2.5-cc syringe using a two-end needle. It is then injected subcutaneously using a 30G½ needle (Fig. 1).

The procedure of extraction, filtration, and separation is done without any external contact, making the process completely closed and therefore sterile. There is no reason to believe that autologous human collagen is inferior to bovine collagen. It has significant and obvious advantages over commercial collagen since there is no fear of autoimmune diseases or allergic reactions to it. This technique is relatively new and thus its long-term results are not yet known, but the short-term results are promising (Fig. 2A,B).

Operative Augmentation Cheiloplasty

The surgical approach to correct thin lips is generally appropriate for middle-aged and young patients whose lips need to be enlarged. The known surgical techniques are

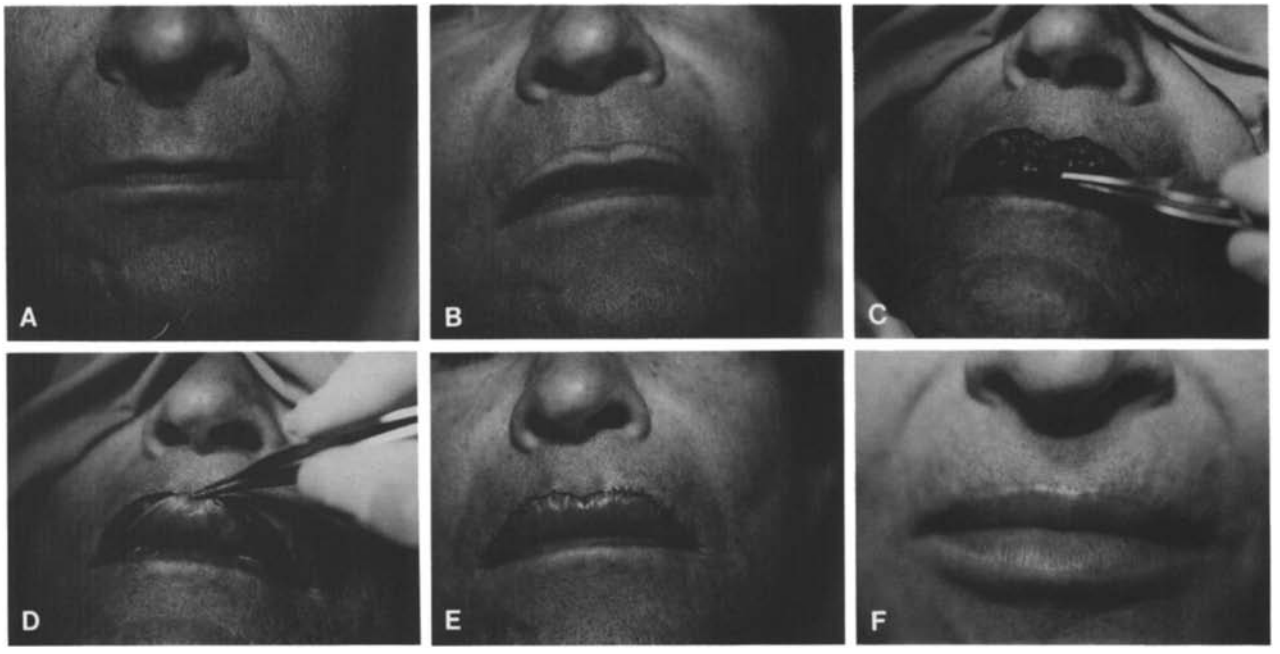

Fig. 9(A) Male patient with thin upper and lower lips. **(B)** Marking of the excision area. **(C)** Full-thickness skin excision of the marked area. **(D)** Advancement of the vermilion to its new site and fixation. **(E)** External sutures. **(F)** Plumping of the lower lip as the final stage using autologous collagen augmentation. Final results 12 months postoperative. Note the slightly visible scar on the upper lip and the creation of a natural vermilion line

(1) Direct lip lifting (Meyer and Kesselring)
(2) Indirect lip lifting
  (A) Buffalo horn-excision (Cordosa and Sperli)
  (B) Y–V plasty (Lassus)
  (C) Dermo fat graft (Faivre and Carissimo)
  (D) Extended indirect lip lifting (Gonzalez-Ulloa)

Although each technique has its advantages, I have found the augmentation cheiloplasty technique to yield the most effective results.

Operative Technique: Augmentation Cheiloplasty

The vermilion border is marked with a very fine pen (Fig. 3). Then the desired additional lip area is designed. The lip initially must be overcorrected in order to compensate for retractive forces. After making incisions along the actual and the desired vermilion, the area in between the incision is deepithelialized (Fig. 4). After undermining, the vermilion is moved to its new position where it is fixed with buried vertical mattress sutures of 5/0 dexon (Fig. 5). For external suturing, I use interrupted sutures of 6/0 dermalon. The superficial sutures are removed approximately 48 hours after the operation (Fig. 6). After removing the external sutures, Steri-strips are applied for three days.

Postoperative Care

During the first three to four hours after surgery ice compresses are applied. The patient is told to avoid certain foods such as hot food. Movement of the lips for the first few postoperative days is to be kept at a minimum (Figs. 7, 8).

Male Augmentation Cheiloplasty

For augmentation cheiloplasty on males, the technique is basically the same except that deepithelialization can not be done because of facial hair growth. Therefore, full-thickness skin excision is performed (Fig. 9).

Complications

The most common complication following direct lip lift is a noticeable linear scar at the vermilion, or small cutaneous hatchmarks. Although there usually becomes practically invisible with time, the use of

dermapigmentation as a permanent cosmetic concealer is very efficient. This procedure is usually done three to six months after surgery. Another common complication is the protrusion of the subcutaneous buried sutures. This is usually taken into consideration when closing the wound. It is advisable to keep buried sutures at a minimum. Postoperative suture protrusion is resolved when the sutures are absorbed. The scar band of deeper tissue that is initially tight improves with time. Asymmetry of the lip from inaccurate marking of the incision areas is prevented by careful preoperative measuring and marking.

Summary

Thin lips occur with aging but can also be present in young patients. However, today the current fashion for thicker, more voluptuous lips for women motivates some patients with relatively normal-looking lips to seek "plumper" or "fuller" lips, especially the upper lip. Various materials can be injected to plump the lip. Both autologous collagen and bovine collagen injections give good results, but they are temporary, diminishing as resorption takes place. Surgical techniques that deepithelialize the future upper-lip vermilion area are preferable since the results are permanent with good long-term improvement.

Acknowledgment. I wish to thank Irene Feig for her help in preparing this manuscript.

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