CHAPTER 15

Porcine Collagen: Evolence

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Evolence and Evolence Breeze (ColBar LifeScience Ltd.) are the latest products available in the evolution of collagen-derived fillers. Both Evolence and Evolence Breeze are produced from the same porcine collagen and are formulated at collagen concentrations of 35 mg/mL. The products differ in their rheologic properties, which are reflected in their viscosity and injectability properties. The viscosity of Evolence Breeze is approximately 60% of the viscosity of Evolence and is injectable through a 30-gauge needle. The force that is needed to inject Evolence Breeze from the syringe (extrusion force) through a 30-gauge needle at a flow rate of 1 mL/min is 10 N. Evolence exhibits a similar extrusion force as Evolence Breeze of about 10 N when tested on a 27-gauge needle.

During production, collagen from porcine tendons is broken down into collagen molecules. Next, the antigenic telopeptides are removed from the molecules, which are then purified. Following purification, the monomeric collagen is polymerized to create collagen fibers, which are then cross-linked using d-ribose in a proprietary technique known as Glymatrix Technology. ColBar LifeScience contends that by using a natural and nontoxic cross-linking agent (d-ribose), a higher degree of cross-linking can be achieved than is possible with the use of other agents (e.g., formalin and glutaraldehyde), which are limited by toxicity.

Evolence is indicated for the treatment of moderate to deep facial lines and wrinkles as well as for lip augmentation. Evolence Breeze is well suited to the treatment of fine lines and wrinkles and effacement of the nasojugal fold area (Figures 15.1 and 15.2). Current experience suggests aesthetic improvement for a period of up to twelve months following treatment, which, if validated by comparative clinical studies, is significantly longer than any previously available collagen-derived injectable filler. Furthermore, because porcine collagen is highly compatible with the human immune system, no allergy skin test is required prior to treatment.

TECHNIQUE

For those accustomed to using the hyaluronic acid family of fillers, some modifications in technique are necessary to

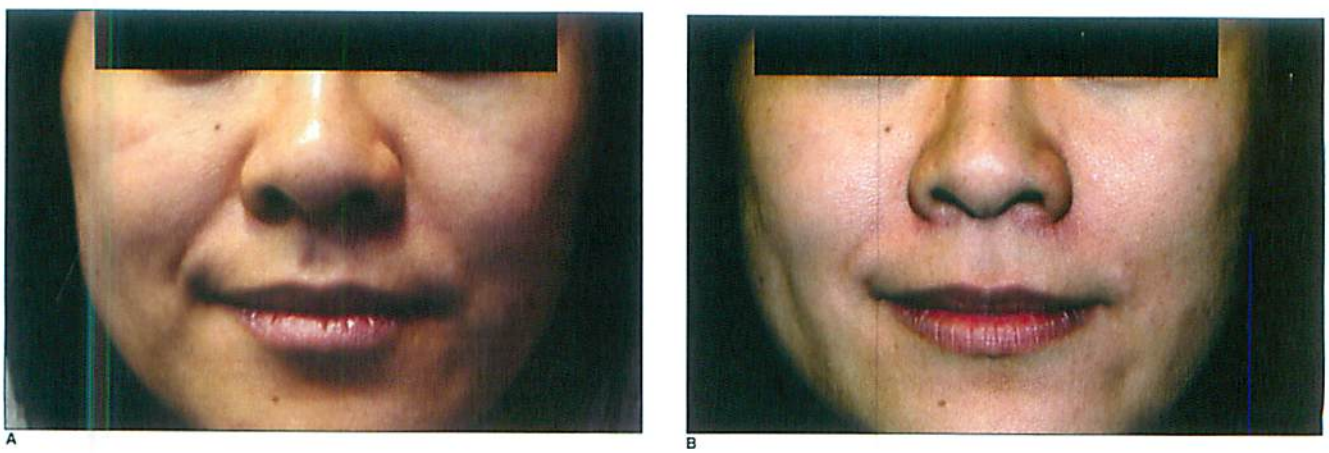

FIGURE 15.1: Evolence for nasojugal folds: A, *before;* B, *after treatment.*

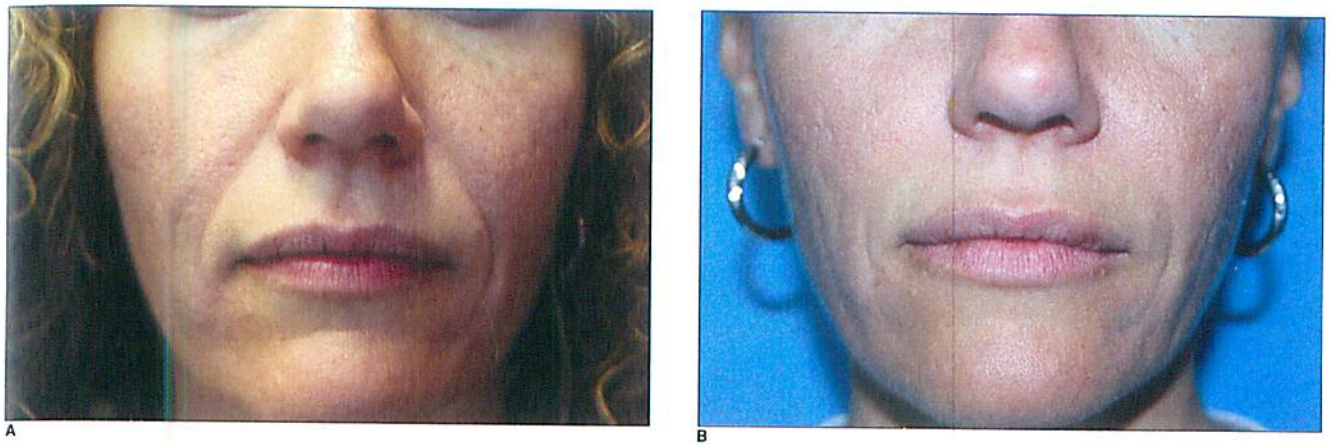

FIGURE 15.2: Evolence for nasojugal folds: A, before; B, after treatment.

achieve optimal results with Evolence and Evolence Breeze. Both fillers are supplied in 1-mL ergonomic syringes with a rotating finger support to allow viewing of the syringe calibration at all times. Prior to connecting the needle to the syringe, the product present in the terminal lumen should be expressed and discarded to reduce the risk of needle plugging. Evolence is injected using a 27-gauge needle, and Evolence Breeze is injected through either a 27-gauge or 30-gauge needle. Evolence is placed in the mid- to deep dermis and Evolence Breeze in the mid-dermis. The flow characteristics are less consistent than when using hyaluronic acid, and variations in the amount of force applied to the plunger are necessary. Needle plugging may occur, albeit much less commonly than when the product was initially introduced. If this occurs, do not attempt to force the issue and simply change the needle. We recommend regional blocks of the infraorbital and mentalis nerves using 1% lidocaine without epinephrine prior to treatment. A 27-gauge, 1¼ inch needle on a 3-cc syringe is ideal for this purpose. Icing the area prior to treatment will also reduce the risk of bruising. It is very important to massage the product immediately after placement to mold and smooth the contour. This is critical to achieve optimal results, and we recommend using either a gloved finger or a clean cotton-tipped applicator. No overcorrection is required. Posttreatment edema is minimal.

Thus far, results have been favorable and patient satisfaction high. Some patients have commented on the palpability of the product, particularly in the oral commissural area; however, with appropriate pretreatment education, this has not been a problem. We have yet to use either product in a patient with a documented allergy to bovine collagen and would recommend proceeding very carefully in such a case.

SUGGESTED READING

Baumann L, Kaufman J, Saghari S. Collagen fillers. *Dermatol. Ther.* 2006;19:134–40.

Eppley BL, Dadvand B. Injectable soft-tissue fillers: clinical overview. *Plast. Reconstr. Surg.* 2006;118:98e–106e.