

Forehead Recontouring Using Calcium Hydroxylapatite

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Perhaps because it is technically more challenging than in other facial areas, volume reconstitution of the forehead (recontouring) is not frequently discussed in clinical literature reporting successes in recontouring the face.¹ Instead, nonsurgical forehead rejuvenation is mainly limited to wrinkle filling and neurotoxin chemical denervation of the frontalis muscle. Caution is warranted in the prolonged use of neurotoxins, because excessive and persistent chemical denervation of the frontalis muscle can lead to brow ptosis, muscle atrophy, and potential skeletization of this region.^{2,3}

Repetitive contractions of forehead depressor muscles, gravity, loss of elastic fibers, and volume loss contribute to brow descent.⁴ Consequently, eyebrow repositioning constitutes one of the hallmarks of facial rejuvenation. Although volume replenishment of the forehead should complement brow elevation, such replenishment is not routinely performed. This report presents a simple technique that consistently delivers forehead recontouring with calcium hydroxylapatite (CaHA; Radiesse filler, Merz Aesthetics, Inc., San Mateo, CA).

Materials and Technique

Adjustment of Rheological Properties of the Filler

To obtain the necessary filler “spreadability” and decrease lymphatic drainage compression, CaHA was mixed with 1.0 mL of diluent (0.5 mL of saline solution with preservative and 0.5 mL of plain 1%

lidocaine) per 1.5-mL syringe of CaHA. A 3-mL syringe and a Luer lock-to-Luer lock connector were used for the mixing, in a technique previously described.⁵

Treatment

The anatomical target for injection was the area of suprabrow concavity, bounded inferiorly by the frontal bone supraciliary ridge and superiorly by the frontal eminence (~3 cm from the supraciliary arches).⁶ Laterally, the target space extends into the temporal compartment below the temporal-cheek fat (Figure 1).⁷

Medially, suprapariosteal injections remained lateral to the projected location of the supraorbital nerve, slightly more than 1 cm from the supraorbital notch or foramen. Injections medial to the projected location of the supraorbital nerve were performed at the subcutaneous level. The filler blend was placed at the suprapariosteal level behind the galeal fat pad (Figure 2).⁸

Before injection, the forehead area to be treated was cleansed with an antiseptic solution.

The CaHA–diluent mix was introduced into the target space through a 27-gauge, 1.25 needle. A threading bolus was deposited just below the rim of the inferior frontal eminence. The amount of filler deposited was determined according to a visual end point: reconstitution of the suprabrow arch or desired brow lift. Total volumes for the forehead

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