# Dermal Filler Pearls: The Hyaluronic Acids

# 143

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Dermal fillers are an outstanding adjunct to botulinum toxin® and in many situations are superior to surgery. With the newer fillers, skin and allergy testing are not required and there is no risk of disease transmission. Both the patient and physician can immediately enjoy the postinjection rejuvenative effect. Our preferred hyaluronic acid dermal fillers are Belotero Balance®, Restylane®, Perlane®, and Juvederm®. Each of these has a very high safety profile and is easier to inject than Radiesse®. They are outstanding for lip enhancement, including the vermillion border, perioral rhytides, and for less severe glabellar and nasolabial folds or as a superficial fine-tuning for deeper filling, which is best performed with Radiesse®. The higher viscosity hyaluronic acids, however, are excellent for deep lip augmentation, nasolabial folds, and deep rhytid filling.

We have found good success treating nasojugal ("tear trough") deformities with thinner hyaluronic acids, which offers a nonsurgical option to cosmetic lower eyelid blepharoplasty (Fig. 143.1). However, overfilling or superficial placement is to be avoided to prevent the Tyndall "bluish-jelly" look under the eyelid skin. An advantage to hyaluronic acid filler for lower eyelid rejuvenation is that it can be reversed or modified to effect with diluted hyaluronidase. Belotero Balance®, a newer hyaluronic acid, is manufactured in a manner wherein the Tyndall effect is minimized or nearly eliminated making its use particularly appealing and has become an outstanding filler for the lower eyelids.

We recommend, when medically appropriate, patients avoid any blood-thinning agents for approximately 2 weeks prior to injections, and immediate massage of the hyaluronic acid agents is cautioned due to their heparin-like effect on the tissues. Patients require variable amounts of filler depending on the desired outcome and severity of the folds. Injections deep (supraperiosteally) or just below the orbicularis tend to cause less swelling and bruising below the eyes. The effects are potentiated by the concomitant application of botulinum toxin®. We generally use the provided needle and find that direct injection with withdrawal of the needle as well as the described "feathering" technique both work well. Topical anesthetic is helpful for lip injections and infraorbital and mental nerve blocks may be performed when needed with lidocaine plain. Premark the perioral rhytides prior to the nerve blocks to ensure optimal filling.

We have found that the hyaluronic acids in movement areas last longer when botulinum

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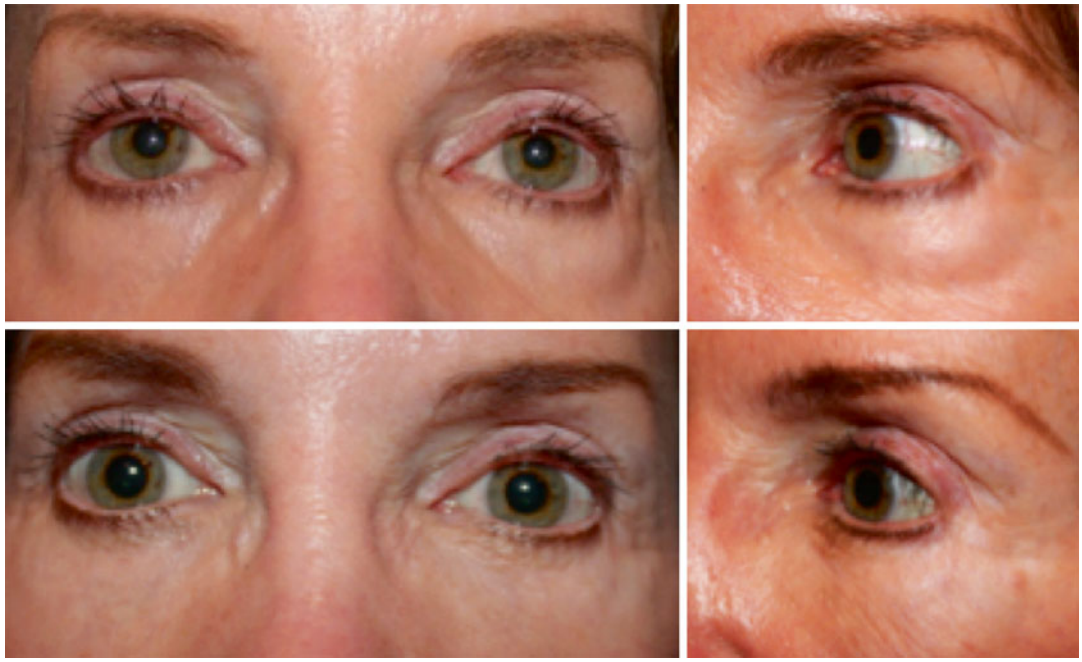

**Fig. 143.1** Pre and postinjection results following placement of Juvederm® Ultra Plus to the lower eyelids to rejuvenate the appearance by removing the double-convexity deformity and restoring a convex lower eyelid-cheek junction continuum

toxin® is also injected. We recommend patients avoid aggressively massaging any perceived irregularities, as this can worsen bruising and swelling and may inadvertently massage the filler out of position. We advise patients to ice the areas a few hours following injections to reduce swelling. Injection to areas of high dynamicity (the perioral rhytides) will last shorter than relatively adynamic areas, such as horizontal forehead rhytides or lower eyelid tear trough defects. Perlane and Juvederm Ultra Plus contain higher concentrations and reportedly last longer than the other hyaluronic formulations. Deep rhytides may further benefit by first performing subcision with a needle (e.g., 27 gauge) followed by placement of hyaluronic filler.

Injecting a small amount of hyaluronidase can easily reverse hyaluronic acid filler (Soparkar 2004). The injection of 20–150 units of hyaluronidase will remove hyaluronic acid fillers in the event of asymmetry, Tyndall effect, or overtreatment. Vision loss has been reported following cosmetic facial dermal filler injections, so patients need to be advised about this possible risk. For this reason, blunt-tipped cannulas with side ports have recently been advocated to reduce this small risk even further.

Vessel obstruction during dermal filler injections can be manifested by blanching of the skin, excessive pain, prominent dilation of regional vasculature (bulging veins), swelling of the local tissue, and vision obscurations or loss. If any of these signs are detected, immediate withdrawal of the syringe needle should be done. The urgent goal is to restore blood flow. Described techniques have included (1) applying heat, tapping the skin, and massaging the local area of involvement, (2) 2 % nitropaste to dilate local vessels, (3) expedient hyaluronidase injection to dissolve and breakdown hyaluronic acid filler material, and even (4) oral aspirin and local heparin injections.

## Reference

Soparkar CN, Patrinely JR, Tschen J. Ophthal Plast Reconstr Surg. 2004;20(4):317–8.