Use of Fillers as Adjunct Therapy for the Treatment of Lower Face Hemifacial Spasm

Gary E. Borodic, M.D.

Harvard Medical School, Ophthalmology Massachusetts Eye and Ear Infirmary, Quincy, Massachusetts, U.S.A.

Abstract: The treatment of hemifacial spasm with periorbital injections of higher doses of botulinum toxin can create disfiguring and undesirable weakness in the lower face during active facial movements. The use of asymmetric hyaluronidate filler injections to the lower face provides a refinement allowing for a lowered neurotoxin dose. The filler creates a ballasting effect and involuntary facial movement. The conventional filler effect also further reduces asymmetric nasolabial folds and marionette lines. Fifteen of 18 patients with lower facial spasms found the filler toxin combination an improvement over neurotoxin alone.

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Materials and Methods

Eighteen patients with hemifacial spasm with an incomplete or excessive weakening response to upper face botulinum toxin were injected with 1 to 2 ml of hyaluronidate filler distributed over lower cheek, nasolabial fold, marionette region, and chin (Prevelle Silk-Mentor, Perlane-Labial fold, marionette region, and chin (Prevelle Silk-Mentor, Perlane-Medicis). Prevelle silk was generally given at 3 to 4 months intervals, whereas Perlane (a cross-linked hyaluronidate) was generally given at 6- to 8-month intervals because of longer duration of action. Each patient was previously treated with at least 8 cycles of botulinum (range 8–31) and maintained a stable total dosing between 15 and 30 units divided according to package insert standard injection locations (type A,Botox, Onabotulinum, Allergan). Both botulinum and filler injections were given in separate syringes and at the same visit at 3- to 4-month intervals. Informed consent was obtained for an asymmetric injection technique and procedure according to the principles of the Declaration of Helsinki. Each patient was interviewed after 3 weeks and prior to their next injections cycle for perception of face symmetry, degree of involuntary movement, and desire to maintain filler in the injection protocol (Fig. 2).

Results

Sixteen of the 18 noted an improvement with respect to lower face asymmetry using the filler-neurotoxin technique over botulinum toxin alone after 3 weeks. Of this responding group, 13 of 15 wished repeat injections with filler at the subsequent botulinum toxin injection. No complications from asymmetric filler injections were reported and no adverse interaction of these agents was noted. No patient believed the filler worsened the facial distortion. Of 15 responding patients, 12 adhered to the protocol for at least 3 subsequent injection sessions without complication and sustained subjective benefit.

Discussion

Synchronous contraction of the orbicularis and zygomaticus major and minor muscles results in simultaneous eyelid closure and elevation of the nasolabial fold, angle of the mouth, and the brow on the involved side. This involuntary movement causes disfigurements caused by increased depth and elevation of nasolabial fold, distortion of the lip on the involved side, occasional wrinkling of the marionette lines, and chin pitting.

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Fillers have been conventionally used for aesthetic purposes accomplishing effacement of nasolabial fold, chin augmentation, and lip augmentation by providing bulk and volume to these regions by symmetrical injection. By asymmetric injection, these agents can create an improvement in lower face symmetry by usual bulk filler effect. Additionally and unique to hemifacial spasm, slightly greater soft tissue mass-weight created by the filler can serve to have a ballasting effect stabilizing the involuntary lower face movement. Because unilateral neurogenic facial weakness is associated with the involved side, facial movement is particularly susceptible to the mass effect of the filler. Use of multiple filler syringes provides the ability to titrate the effect.

**CONCLUSION**

Based on this experience, use of fillers can be useful in managing residual lower face asymmetry after botulinum toxin.

Combining these agents was safe in this study group. Further analysis with larger sample sizes would enhance the evidence supporting combination therapy.

**REFERENCES**


**FIG. 2.** A, Patient with hemifacial spasm showing asymmetry in the lower facial region after a successful botulinum injection in the upper periocular region. Increased resting facial contracture associated with facial denervation contributes the asymmetry. B, Filler injection to the nasolabial region, marionette area, and chin effaces the facial asymmetry at rest and provides added tissue mass ballasting the effects from involuntary muscle spasms.