Strategies to Avoid and Correct Injectable Filler Complications

Although a simple and usually benign procedure, filler injection can produce unwanted clinical or medical effects that may or may not be related to the experience and expertise of the injector.

By Joe Niamtu, III, DMD

No one can argue that injectable fillers have not risen to the forefront of minimally invasive cosmetic surgery procedures. They remain some of the most popular procedures for patients and cosmetic providers. Although very predictable, filler injection can be problematic for various reasons that may or may not be operator dependant. I think that every proficient injector, if answering honestly, would admit having to correct their own patients from time to time. They also (and usually more frequently) are called upon to correct untoward filler outcomes that were injected elsewhere. With more and more types of doctors and non-doctors injecting, learning curves continue to spawn unhappy patients that may need filler addition, filler reduction, or in some cases medical treatment.

The following cases are examples of patients presenting for correction due to filler complications.

Take-Home Tips. Even among skilled injectors, unwanted effects may develop, but solutions are available. Sometimes very simple solutions, such as massage, can remove a small collection of unwanted filler. Hyaluronidase can dissolve injected HA filler. The patient may subsequently look somewhat "over dissolved" or "pruned" due to the reduction of native hyaluronic acid in the skin, which is quickly repleted and hydrated. Some patients may experience individual physiologic and/or medical variants, regardless of the expertise of the injector. Informed consents should include questions regarding unusual reactions to filler injection, including edema, or herpetic outbreak from oral trauma such as dental treatment, lip bite trauma, etc.

Case 1

A patient was injected with 1ml of hyaluronic acid filler into the upper and lower lip at a spa. The patient returned to the spa a week later complaining of a palpable "small pea"-sized hard swelling and was placed on antibiotics. The swelling failed to resolve and the patient presented to the author's office 20 days post-injection with a distinctly visible and palpable mass in the area of the injection. Presuming the nodule was a deposit of unmassaged filler, it was punctured with an 18 gauge needle and the hyaluronic acid filler was expressed, thus alleviating the condition (Fig. 1).

Comment. Sometimes very simple solutions are available to remove a small collection of unwanted filler. Smaller (and sometimes larger nodules) frequently respond to simple massage by the injector or instructed patient.

Case 2

A 33-year-old female presented to the office 48 hours after having tear trough injection with a hyaluronic acid filler. She was instructed to apply

Fig. 1. 1A shows areas of nodules from a patient injected by another office. 1B shows the filler evacuated after puncture with an 18 gauge needle.

Fig. 2. 2A shows the patient five days after tear trough injection. 2B shows the patient 48 hours after injection of 75mg of hyaluronidase to the region of filler deposition.

moist heat and wait several days for the swelling to decrease and return for re-evaluation. She was seen five days later (Fig. 2A) and was unhappy with the aesthetics and requested the filler be dissolved. One milliliter of hyaluronidase 150mg/ml (Amphastar.com) was drawn up in a syringe and diluted with 1ml of 2% lidocaine. This produced 2ml total, which yielded 75mg of hyaluronidase per ml (Fig. 3). One milliliter (75 mg) was injected into the right and left periorbital regions at the level of the periosteum and more superficially in the sub orbicularis oculi plane. The areas were then massaged and the patient asked to return 48 hours later for follow up. At that appointment, all traces of the injected filler were gone bilaterally and the patient was happy with her once again baseline appearance (Fig. 2B).

Comment: It is not uncommon for a patient to look somewhat "over dissolved" or "pruned" due to the reduction of native hyaluronic acid in the skin, which is quickly repleted and hydrated. This is explained to all patients before hyaluronic acid injection.

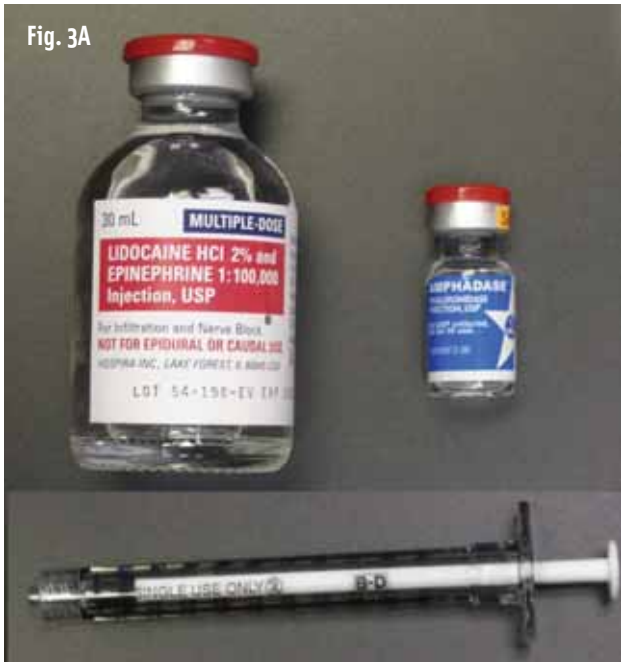


Fig. 3. 3A shows the materials to mix hyaluronidase (1ml of epinephrine, 1ml of hyaluronidase 150mg/ml). 3B shows the mixture injected in the area of filler deposition with a 32 gauge needle. Although epinephrine or saline is sometimes used to dilute the hyaluronidase, it can also be injected at full strength.

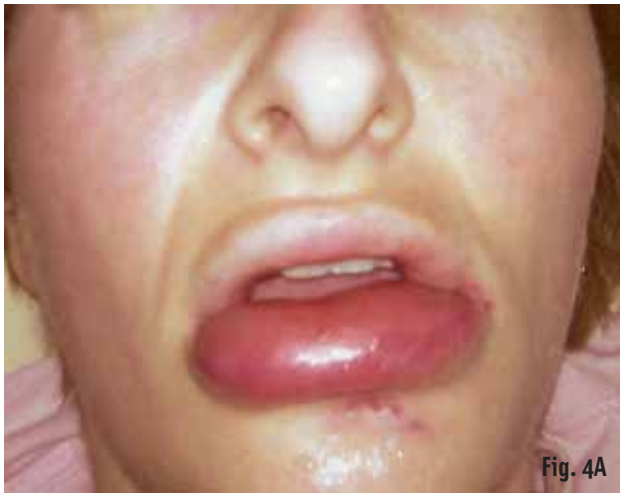
In this particular case the patient regretted having any filler injected and desired full reversal, hence the larger dose of hyaluronidase. If she desired a reduction and still wished to maintain some filler volume I would have used a much smaller dose of approximately 15mg of hyaluronidase in hopes of reduction as opposed to reversal. My clinical experience is that hyaluronidase is unpredictable in terms of dose to amount dissolved, and unless total reversal is desired, it is better to err on the side of the lower dosages. I also tell patients before I inject hyaluronidase that I cannot guarantee that it won't dissolve all the filler. It is not uncommon that they are already unhappy with the previous injector, and I don't want them to be unhappy with me.

Case 3

This 38-year-old female presented after having 2ml of hyaluronic acid filler injected into the lower lip and mentolabial fold 24 hours earlier, which was her first experience with filler. She had severe and disfiguring localized swelling and was extremely unhappy and scared (Fig. 4A). Medical work-up and history were negative for any allergies or previous episodic severe reactional swelling or abdominal pain after procedures. Although the patient had never experienced angioedema, nor had a family history, it could not be ruled out as a possibility. Angioedema is rapid edema of the dermis, subcutaneous tissue, mucosa and submucosal tissues. The term angioneurotic oedema was used for this condition in the belief that there was nervous system involvement, but this is no longer thought to be the case. Whether this presentation was angioedema in nature or not, the patient was placed on Prednisone 60mg each day for five days without a taper. She was also instructed to apply moist heat to the lips. She presented three days later, and her swelling was almost totally resolved (Fig. 4B).

Case 4

This 48-year-old female presented to the author's office for filler injection of the nasolabial fold. This was her first experience with filler injection. The injection procedure proceeded normally with a



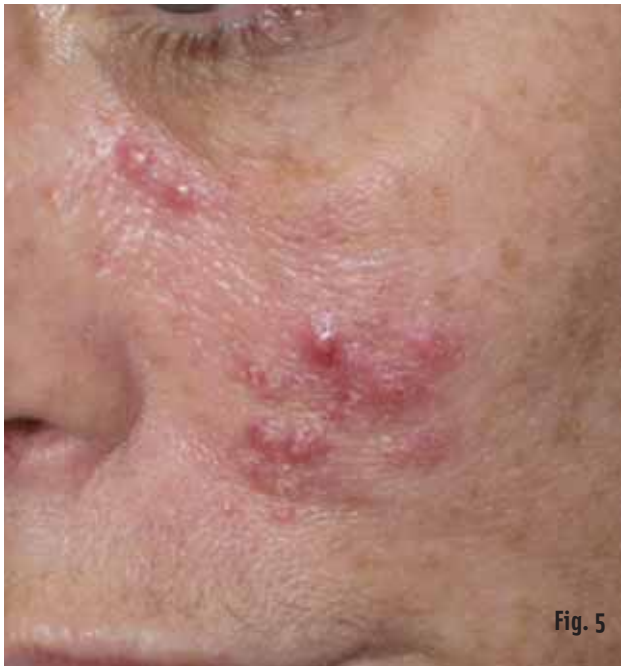


Fig. 4. This patient is shown (cell phone photos) 72 hours after hyaluronic acid injection to the lower lip and mentolabial region (4A). She is shown 72 hours after systemic steroids and heat (4B).

Fig. 5. Unilateral herpetic outbreak following injection of filler.

pleasing clinical result. The patient presented three hours later with a unilateral herpetic outbreak (Fig. 5). Although she answered "no" on her health history to having previous or frequent cold sore/herpetic outbreaks, when questioned post-injection she admitted to previous outbreaks.

The patient was treated with a zoster dose of antiviral medication and the lesions spontaneously resolved over the next week with no negative cosmetic effect.

Comment: Cases 3 and 4 underline the individual physiologic and/or medical variants that some patients may experience, regardless of the expertise of the injector. Informed consents should include questions regarding unusual reactions to filler injection, including edema, or herpetic outbreak from oral trauma such as dental treatment, lip bite trauma, etc.

Conclusion

Although a simple and usually benign procedure, filler injection can produce unwanted clinical or medical effects that may or may not be related to the experience and expertise of the injector. Proper medical history and informed consent may help prevent or treat some of these complications, whereas other complications may require removal, addition, or other manipulation of the filler and local anatomy. ■

Dr. Niamtu has no relevant conflicts of interest.

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