Temporary Infraorbital Nerve Sensory Disturbance Following Perioral Injection of a Soft Tissue Filler

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The use of soft tissue fillers has increased in the last 2 decades. Certain risks accompany the use of soft tissue fillers, including short-term or long-term complications that may be related to injection technique, anatomic location, patient characteristics, or the filler material itself. We present a rare case of facial numbness in the distribution of the infraorbital nerve following hyaluronic acid (HA) filler injections to correct downturned lateral lip corners.

Soft tissue augmentation with injectable fillers has dramatically increased over the last 20 years and remains one of the most popular treatment options for the aging face. Fillers frequently are used for correction of facial wrinkles, scars, and lipoatrophy.[1] As with all medical and surgical procedures, there also are risks and potential adverse effects associated with injectable fillers,[2] which often can be attributed to injection technique, anatomic location, patient characteristics (eg, aberrant anatomy, host immune response), or the filler material itself. Most short-term side effects are related to the procedure, while long-term effects usually are related to the filler material and/or a host reaction to the product.[3] Complications may be classified as early (0–14 days), late (15 days to 1 year), or delayed (>1 year). We present a case of facial numbness with distribution along the infraorbital nerve following injection of hyaluronic acid (HA) for treatment of downturned lateral lip corners.

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CASE REPORT

A 52-year-old woman presented for correction of downturned lateral lip corners. Four months prior to presentation, the patient received a 0.5-mL injection of HA for treatment of marionette lines without complication; she also had received HA injections in the lips as well as onabotulinumtoxinA injections for treatment of glabellar and periocular rhytides without any adverse reactions. The patient's medical history was remarkable for rosacea, which previously had been treated with a pulsed dye laser. Her current medications included sumatriptan succinate and tramadol, which she was taking as needed for migraines.

The patient had been treated with 1 mL of HA (Restylane-L, Medicis Aesthetics Inc) that was injected from the lateral oral commissures to the mandibular

margin using a retrograde linear threading and fanning technique (0.5 mL per side). At the same visit, she had received onabotulinumtoxinA (Botox Cosmetic, Allergan, Inc) injections into the depressor anguli oris muscle (3 U per side). She had noted a feeling of fullness at the right oral commissure and vigorously massaged the area with her index finger and thumb 4 to 5 times daily for the next week. One week later she began to feel numbness in the right upper cutaneous and mucosal lip as well as the gums and hard palate on the right side. She presented to our office 2 days later when the numbness extended to the right nasal ala, columella, medial right cheek, and right medial canthus to the mid lower eyelid. The patient noted improvement of her symptoms after 6 weeks and complete resolution at 10 weeks. Although treatment with hyaluronidase and steroid injections was considered, no intervention was attempted and she did not undergo any additional procedures during the 10-week period.

COMMENT

Hyaluronic acid injections to reduce the downturned appearance of the lateral lip corners has been shown to be well tolerated and effective in a small study of middle-aged women.[4] Hyaluronic acid combined with chemodenervation of the depressor anguli oris muscle with 2 to 3 U of onabotulinumtoxinA further enhances the upturning of the commissures. Risks associated with HA injections include infection, granuloma formation, herpes simplex virus reactivation, angioedema-type hypersensitivity, delayed hypersensitivity reactions, skin necrosis due to vascular compromise, injection-site reactions (eg, tenderness, swelling, pain, bruising, redness), contour irregularity due to a superficial injection technique, and blue-gray discoloration due to the Tyndall effect.[5] To our knowledge, sensory nerve disturbance distant from the injection site has not been previously reported.

In our patient, sensory loss distribution was associated with the infraorbital nerve, even though the product was periorally injected. Although there was a clear temporal relationship between the HA injections and the nerve disturbance, we cannot prove the exact causality of the reaction. The patient reported aggressive massaging of the injection area to reduce filler irregularity, which may have caused product migration and irritation of the nerve at the foramen; she did not report the irregularity to the physician. Perhaps intralesional steroid or hyaluronidase injections may have hastened symptom resolution. Although the filler contained lidocaine, the patient began to feel numbness 1 week after the injection.

CONCLUSION

When injecting soft tissue fillers, it is important for physicians to recognize that sensory disturbance away from the injection site is a potential risk of aggressive postprocedure massage of the filler material. Prior to undergoing treatment with fillers, patients should be informed of this risk and should be discouraged from aggressively massaging the injection area.

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