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REFERENCES

1. Chosidow O. Scabies and pediculosis. Lancet 2000;355:819-826.
2. Hicks MI, Elston DM. Scabies. Dermatol Ther 2009;22: 279-292.
3. Peterson CM, Eichenfield LF. Scabies. Pediatr Ann 1996;25: 97-100.
4. Bhattacharjee P, Glusac EJ. Langerhans cell hyperplasia in scabies: a mimic of Langerhans cell histiocytosis. J Cutan Pathol 2007;34:716-720.
5. Favara BE, Jaffe R. The histopathology of Langerhans cell histiocytosis. Br J Cancer Suppl 1994;23:S17-S23.

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Novel Treatment Using Intradermal Radiofrequency and Hyaluronic Acid Filler to Correct Marionette Lines

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Dear Editor:

Aging results in anatomical changes to the face. The main change observed in the lower third of the face is ptosis of the labial commissure, which results in a triangular depressed area at the corner of the mouth, increased mentolabial sulcus, the formation of marionette lines, decreased the concavity between the jaw and neck, and noticeable platysma banding[1]. Cosmetic rejuvenation to correct marionette lines has evolved. Over the past five years, intradermal radiofrequency (RF) has become a common modality for reducing cutaneous sagging and wrinkling. A recent study[2] demonstrates combination therapy with hyaluronic acid (HA) filler and intradermal RF results in greater and longer improvement of the nasolabial folds than HA monotherapy. Therefore, we tested intradermal RF and HA filler combination therapy with the aim of increasing volume and correcting marionette lines.

A 40-year-old woman unhappy with her marionette lines sought therapy (Fig. 1A). She had never received filler injection or laser resurfacing. The first step of therapy involved intradermal RF treatments using new device (INNOfill; Pacific Pharma, Korea) at 18 W (level 7, 1 MHz, 5 passes) with an insulation-coated 27-gauge needle electrode. The needle electrode was inserted along the marionette lines using a fanning technique. After delivering the RF energy, HA filler (Juvederm; Allergan, Irvine, CA, USA) was injected by linear threading. Slight bleeding occurred at the insertion site, but this was resolved within several hours. The treatment was successful, and she was very satisfied with the cosmetic outcome (Fig. 1B).

New bipolar RF device is used in combination with HA

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Fig. 1. (A) Before treatment. (B) Marked improvement 3 months after intradermal radiofrequency treatment prior to hyaluronic acid filler injection.

filler injection. This combination therapy is expected to produce a potentially long-lasting effect of the filler. This device delivers RF via an intradermal needle that specifically creates tunnel-like coagulation canals that will hold and support the injected HA filler. In addition, on the basis of the well-known effects on fibroblast proliferation caused by RF, RF energy induces new collagen formation[3]. Several cases and studies corroborate the notion that treatment with RF devices is a safe and efficient solution for the treatment of wrinkles[2] and scars[4]. The real innovation potential lies in the possibility of using this device in combination with other well-known methods in the cosmetic medicine, which has clear potential for improving the efficiency of several techniques. This approach provides a filling/lifting/smoothing effect, thus reducing the effects of aging.

The major limitation of this case is that treatment was applied to the whole face; the results would be stronger if half the face was treated with RF alone or filler alone for comparison. In order to evaluate the efficacy of intradermal RF with HA filler combination therapy for correcting marionette lines, comparison with monotherapy with RF or HA filler is necessary.

To our knowledge, this is the first case in which HA filler was combined with RF treatment to correct marionette lines. Indeed, large randomized controlled studies are necessary to confirm the results. In addition, further studies in different clinical settings are required to confirm the validity of this device in the aesthetic dermatological field.

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REFERENCES

1. Weinkle S. Injection techniques for revolumization of the perioral region with hyaluronic acid. J Drugs Dermatol 2010;9:367-371.
2. Choi SY, Lee YH, Kim H, Koh HJ, Park SY, Park WS, et al. A combination trial of intradermal radiofrequency and hyaluronic acid filler for the treatment of nasolabial fold wrinkles: a pilot study. J Cosmet Laser Ther 2014;16:37-42.
3. Hantash BM, Ubeid AA, Chang H, Kafi R, Renton B. Bipolar fractional radiofrequency treatment induces neoelastogenesis and neocollagenesis. Lasers Surg Med 2009;41:1-9.
4. Oh IY, Ko EJ, Kim H, Koh HJ, Park WS, Mun SK, et al. Facial scar treated with an intradermal radiofrequency device. J Cosmet Laser Ther 2014;16:151-152.