

Case Report

Hyaluronic Acid Introduction Using Jet Volumetric Remodeling Technology for Décolleté Rejuvenation

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Introduction

Ultraviolet exposure and the intrinsic aging process cause photo-aging of the chest which appear as décolleté wrinkles. Photo-damaged chest skin is characterized by skin laxity, lines and wrinkles, hyperpigmentation, erythema, and tactile roughness. As a result of increasingly popular facial rejuvenation procedures, patients seek décolleté rejuvenation to ensure a seamless cosmetically appealing transition between these areas. The growing demand for décolleté rejuvenation procedures has promoted the development of methods such as injectable poly-L-lactic acid (PLLA), injectable hyaluronic acid, botulinum toxin, chemical peels, intense pulsed light (IPL), Q-switched lasers, nonablative fractionated lasers, and ablative fractionated.^{1,2} These procedures, however, still cannot

achieve immediate, short and long-term aesthetic results with minimal downtime.

This report describes the use of jet volumetric remodeling (JVR) technology for non-surgical décolleté rejuvenation. The needle-free system pneumatically accelerates a carrier fluid jet containing high-mass HA molecules into the tissue. The particles spread laterally within the dermis, and simulate fibroblasts to promote the formation of new collagen fibers by accelerating the wound-healing process as well as increasing skin thickness.^{3,4} This technology has developed into a novel therapeutic modality for dermal remodeling procedures involving neck wrinkles, keloids, and scars due to acne or herpes zoster.³⁻⁸

Case Report

A 66-year-old woman (Fitzpatrick skin type III) presented with a

desire to tighten the lax décolleté contour and improve the skin's appearance. JVR technology (EnerJet, PerfAction, Inc., Rehovot, Israel) was used to deliver cross-linked Hyaluronic Acid (SMS solution, Biopolymer, Germany).

Pre-treatment included cleaning the skin with 70% isopropyl alcohol. A lidocaine-based topical anesthetic cream was applied for 30 minutes prior to treatment. At each treatment session, the pneumatic injections were applied at in a "V" shape throughout the décolleté area. 75 injections were delivered at each treatment.

The patient underwent three treatments with an interval of one month between treatments. The procedure was well accepted by the patient, without any adverse events. Immediately following treatment, the skin showed focal elevations at the injection sites, which were fully resorbed within three hours.

Despite minor differences in positioning, there is visible improvement in wrinkles, skin laxity, moisture, and hyperpigmentation after treatment. The patient reported satisfaction of 3.5 on the GAIS (global aesthetic improvement scale).

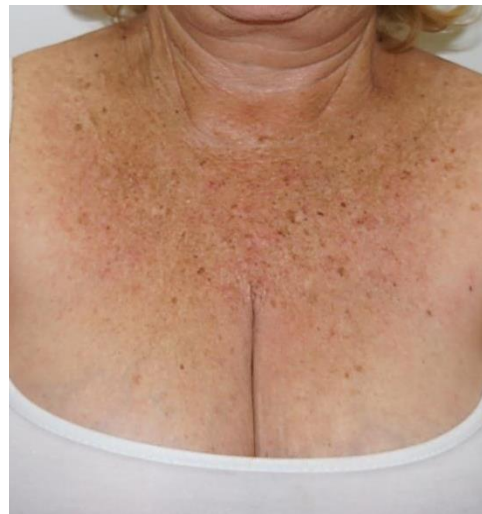


Figure 1. Patient before (left) and 6 months after (right) three EnerJet treatments

Discussion

Radiofrequency and laser devices are able to induce collagen remodeling and new collagen formation, due to thermal stimulation with a dermal

wound healing response. Dermal fillers, such as HA, also induce neocollagenesis. The EnerJet system combines the benefits of HA injections with those of mild dermal wound healing.

The needleless pneumatic delivery of the HA causes controlled dermal trauma and allows to treat extended areas of skin quickly and efficiently.⁴

Furthermore, this pneumatic injection technique may be superior to the heat-induced ones by the virtue of stimuli application to the subcutaneous tissues, including the SMAS and temporal fascia, inducing an optimal face lifting effect.

The EnerJet system is a unique, non-invasive method for décolleté

rejuvenation with minimal risk and downtime. The jet lateral dispersion of HA produces both instant dermal augmentation and specific wound-healing processes, which lead to long-term dermal thickening. Results are immediate, and last as long as 6 months post-treatment. Larger clinical studies are necessary to determine more accurate treatment parameters as well as the frequency and number of treatments required for optimal clinical results

References

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