Viora's ReLift Solution

Non-invasive Facial Skin Tightening and Contouring Treatment as a Novel Approach for Anti-Gravity & Anti-Aging Solution

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ABSTRACT: Many of the facial indicators of aging reflect the combined effects of gravity, decreased tissue elasticity, rearrangement of subcutaneous volume and loss of soft tissue volume in certain areas and accumulation of fat in others. Thanks to the versatility of CORE™ technology and the availability of three different applicators, Viora's clinical team was able to develop a novel approach named ReLift, which targets both local fat accumulation and loose, sagging skin. A group of 20 women participated in a study testing this protocol. All participants showed improvement in the appearance of lax and redundant skin, with notable reduction in lower face volume. To summarize, the unique design of the CORE™ technology allows for effective RF-based aesthetic treatments.

Introduction

Facial aging reflects the cumulative effects of time on the skin. Many of the facial indicators of aging reflect the combined effects of gravity, decreased tissue elasticity, and rearrangement of subcutaneous volume [1]. The aging process of the skin can be divided into intrinsic and extrinsic (photo) aging [2]. Genetic, environmental or lifestyle factors can further accelerate the aging process of the skin [3]. The deterioration in skin elasticity with age is caused by a reduction in elastic fiber production (i.e. collagen and elastin) and extracellular matrix molecules, due to changes in fibroblasts' function. Collagen fibers also decline due to oxidation or glycation (non-enzymatic glycosylation) [4]. In addition, facial aging is related to loss of soft tissue volume in certain areas (periorbital, forehead, perioral sites, etc.) and accumulation of fat in others (submental, lateral nasolabial fold, jowls, chin, etc.). With age, the malar fat pad gradually slides down, increasing the prominence of the nasal fold [1]. Loss of masseteric ligament support facilitates descent of the facial fat to the mandibular border, leading to the appearance of droopy jowls [5] (**Fig. 1**). In the chin area, loss of lateral and inferior volume results in relative protrusion of the central chin (**Fig. 1**), while lateral mental atrophy results in ptosis of the lateral chin, creating the impression of chin widening when viewed from the front [6].

Figure 1. Target patient for the ReLift treatment protocol. The patient exhibits both local fat accumulation, sagging skin and wrinkles.

The certainty of aging has preoccupied humanity for more than 5,000 years. Noninvasive esthetic procedures are now popular worldwide, since they are effective, relatively painless and safe compared to invasive technologies [7]. Radiofrequency devices are non-light based devices that produce heating in target tissues and can effect changes in the dermis with primary neocollagenesis or sub-dermal fat volume reduction. The majority of existing systems target either deep dermal tissues or sub-dermal adipose tissue and/or fascia but do not have the ability to target both. Thus, they have limited functionality. A single system that could successfully target all these skin layers would be desirable. Thanks to the versatility of CORE™ technology and the availability of three different applicators (see Device Description part), Viora's clinical team was able to develop a novel approach, named ReLift, which targets both local fat accumulation and loose, sagging skin.

Material and methods

Device Description

Viora's bipolar RF-based device, utilizing exclusive CORE™ technology [8] that combines vacuum with multiple RF frequency channels. This unique CORE™ technology allows independent heating depth control by applying three distinct RF frequencies (0.8, 1.7 and 2.45 MHz), as well as a combination of all three frequencies in a single pulse. Additionally, the system enables four different levels of vacuum and RF energy intensities. It includes three treatment applicators; BC applicator for contouring large areas, FC applicator for contouring sensitive areas, and the ST applicator designated for skin tightening and lifting treatments.

Case Study Group

A group of twenty women, in the age range of 47-77 years participated in a study testing the combined protocol. All volunteers exhibited both local fat accumulation on the lower facial area and loose, sagging skin (sample in **Fig. 1**).

Treatment Regimen

The patients underwent a treatment course of three cycles consisting of two treatments with the FC applicator and one treatment with the ST applicator, for a total of nine sessions. The treatment intervals were set to one week. In each cycle, the first and second treatments were carried out using the FC applicator and the third treatment using the ST applicator. Each session with the FC applicator consisted of an 18-20 minute contouring treatment, according to the standard contouring protocol. The procedure was carried out over the lower face area (lower cheek area, jowl and chin), targeting the fat accumulation zones. The treatment session with the ST applicator consisted of a 20-30 minute skin tightening treatment, according to standard skin tightening protocol. Patients did not use any skin tightening products and did not diet or induce any weight fluctuations above 2 Kg during the entire study period.

Clinical Assessment

Clinical photographic assessment was recorded in three phases: (1) at baseline - prior to the first treatment (2) during the treatment course - after the fifth treatment session (3) and at the end of the treatment course - one week after the ninth treatment. Additionally, the treating practitioners were asked to record and immediately report any adverse or unexpected side effects.

Results

No adverse or unexpected side effects were reported during the treatment course. Patients' weight remained constant during the entire study period. All twenty participants showed dramatic improvement in the appearance of lax and redundant skin, with notable reduction in lower face volume. Figure 2 shows the significant improvement among one of the participants, a 65 year old patient.

Figure 2. A 65 year old female with local fat on the jowl and chin and sagging skin on the lower face and neck. Before (left) and after 9 treatment sessions (right). Results show a noticeable improvement in lax, sagging skin and reduction of fat volume.

Discussion

The unique design and selectability of multiple parameters of the CORE™ Technology set allows for effective radiofrequency aesthetic treatments. The versatility of the CORE™ technology allows the operator to adjust to specific client needs. This accuracy and flexibility in energy delivery enabled by CORE™ technology allows for a number of different, popular protocols. This includes ReFit, the successful protocol that treats loose skin after excessive weight loss.

Summary

The intrinsic aging process together with external factors, sunlight and gravitational forces results in changes in both gravity and location of facial subcutaneous fat and increased laxity of the skin. Noninvasive treatments are becoming increasingly popular in the esthetic field, as is the use of RF energy for anti-aging related therapies. Previous RF systems utilizing a single frequency would only target a single skin layer, deeming them a single application system. CORE™ technology allows targeted applications at multiple depths in the skin and subcutis. Combining bipolar RF treatments of different frequencies (with both FC and ST applicators) may deliver broader, more effective treatment by targeting multiple tissue target depths vertically aligned. The FC applicator targets the sub dermal fat deposits and the ST applicator targets the dermis.

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