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# Combination of Treatments in Nonsurgical Facelift Performance to Conduce a Case of Severe Photoaging

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## Abstract

**Introduction:** Combination of techniques enables access to different depths in skin improving performance in nonsurgical face lift.

**Objective:** To determine the effectiveness of the combination: intraoral 2940 nm erbium, followed by microneedled radiofrequency and microfocused ultrasound in severe photoaging.

**Materials and methods:** Split-face study assessing combination combination of Intraoral Erbium: Yag Laser (IEL) 2940 nm pro-collagen, Microfocused Ultrasound and Microneedled Radiofrequency (Total Lift). Improvement was evaluated through photographic record.

**Results:** After forty days of one laser treatment, significant improvement of photoaging from baseline was observed. The laser side showed, through the photographic record, great improvement in skin laxity, skin texture and wrinkles.

**Conclusion:** The combination of techniques (Total Lift) is a promising new technology in the treatment of photoaging in patients with contraindications or do not want to perform surgery.

elasticity of the skin, development of wrinkles and loss of facial contour [3-5]. The increased of longevity and also social requirements have raised the interest in minimally invasive aesthetic treatments, with lower downtime and risk of complications [1]. A new technological and therapeutic modality combination of techniques (Total Lift) enables access to different depths in skin improving performance in nonsurgical face lift.

## Material and Methods

Split-face prospective study in which only the right side was treated at first. A sixty nine years old woman, phototype three was treated in the right side of her face with Intraoral Erbium: Yag Laser (IEL) 2940nm pro-collagen, smooth pulse, 250 milliseconds, 2.5 Joules energy, interval between pulses of 100 milliseconds, about hundred and twenty shots in malar. That was followed by Microfocused Ultrasound (MU) in the following parameters, 2 Joules energy, spacing of 1.5 millimeters, line of 25 millimeters, about two hundred fifty shots in malar. Finally, it was applied a topic anesthetic (lidocaina 4%) for the Microneedled Radiofrequency (Eletroderm®) in the following parameters, 40 Joules energy, 2 millimeters penetration, 180 milliseconds pulse duration. All these technologies belong to platform Solon (LMG lasers-Guaxupe-Brazil). Improvement was evaluated through photographic record in a Canon PowerShot SX20IS camera. After 40 days, it was made a photographic record of the improvement and then, the other side was treated.

**Keywords** Nonsurgical; Facelift; Photoaging

## Introduction

Skin aging is a dynamic multifactorial process [1,2]. Several changes occur simultaneously in different compartments of the face such as decreased collagen, muscle atrophy, redistribution of fat compartments and bone remodeling [3,4]. These changes culminate in the reduction of the thickness and

## Results

The photography register showed a remarkable improvement in cutaneous tightening and the malar repositioning attenuated the nasolabial fold. In addition, there was a reduction on the upper lip ptosis and an improvement of skin texture. The patient was very pleased.

## Discussion

The public concern about facial wrinkles and also loss of elasticity due to age has been increasing. In response to this demand, various treatments have been used [6]. However, noninvasive procedures are preferred. Recently, Total Lift by Solon© was introduced as a new treatment for facial rejuvenation.

Microfocused Ultrasound (MU) is a noninvasive technology used for correction of moderate tissue laxity [7-9]. By delivering short duration pulses of transcutaneous ultrasound energy, a thermal coagulative damage is produced called thermal injury zone (TIZ) from deep dermis to the superficial musculoaponeurotic system (SMAS) [7,8,10].

The transducer is able to selectively target the SMAS, that is a continuous fibroelastic network placed between skin and underlying muscles of facial expression whose mechanical properties lead to greater holding forces [10].

This treatment can increase reticular dermal collagen and cause gradual tightening of the skin through collagen contraction with a single session without any damage epidermis and adjacent issue [7,11].

Suh et al. reported clinical and histopatologic changes after single MU treatment with a significant improvement in nasolabial fold and jow line appearance, and suggested that MU was a safe, effective and noninvasive procedure that can be used to tighten the facial skin [10-13].

The innovative technique used in the IEL procedure can guarantee not only the efficacy, but also safety. Once the procedure cannot damage the tissues in depth, in a non-ablative form. This characteristic makes the erbium laser an ideal candidate for the thermal treatment of the oral cavity. The remodeling of collagen is due the temporary skinkage when exposed to an appropriate temperature. This new tissue has an improvement of the elasticity [1,14].

Radiofrequency (RF) is an electromagnetic radiation unionized. The technology of bipolar fractionated RF allows the current to pass between skin and electrodes in a controlled way. It generates a fractionated heating in deep dermis, stimulating dermal remodeling, collagen contraction and fibroblast stimulation with little epidermal damage [15-17].

The microneedled radiofrequency (MRF) is a variation of fractional RF that delivery electrical current in selective way to the deep dermis. In addition, this technology allows the combination of techniques in one, so that there is a greater stimulus to the skin remodeling [17].

Adverse events include transient mild erythema, edema and rare instances of post inflammatory hyperpigmentation [10-12].

In the study, the authors observed the clinical improvement after one single session of Total Lift in a sixty nine years old patient with severe photoaging who desired facial lifting without surgery. In addition, a remarkable finding was that the

procedure not only resulted in facial lifting, but also improvement of deep wrinkles and skin tone.

## Conclusion

The combination of techniques (Total Lift) is a promising new technology for the treatment of photoaging in patients with contraindication or do not want to perform surgery.

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