

DOI: 10.21767/1989-5216.1000161

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

**Salomao A<sup>1\*</sup>, Gasques L<sup>2</sup>, Nascimento M<sup>2</sup>, Coelho AP<sup>2</sup> and Pereira CP<sup>3</sup>**<sup>1</sup>Dermatology Service, University Federal of Sao Paulo, Sao Paulo, Sao Paulo, Brazil, University of Mogi das Cruzes, Mogi das Cruzes, Sao Paulo, Brazil<sup>2</sup>Dermatology Service, Clinical Hospital of Sao Paulo University, Sao Paulo, Sao Paulo, Brazil<sup>3</sup>Private Clinic, Salvador, Bahia, Brazil

**\*Corresponding author:** Salomao A, Member of Brazilian Dermatologic Society and Doctor Degree in Dermatology. Dermatology Service, University Federal of Sao Paulo, Sao Paulo, Sao Paulo, Brazil, University of Mogi das Cruzes, Mogi das Cruzes, Sao Paulo, Brazil, Tel: 551123618923; E-mail: dr.abdo@usp.br

**Received date:** Aug 02, 2016; **Accepted date:** Aug 25, 2016; **Published date:** Aug 31, 2016

**Copyright:** © 2016 Salomao A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Citation:** Salomao A, Gasques L, Nascimento M, et al. Combination of Treatments in Nonsurgical Facelift Performance to Conduce a Case of Severe Photoaging. Arch Med. 2016, 8:4

## 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<sup>®</sup>) 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.

## References

1. El-Domyati M, El-Ammawi TS, Medhat W, Moawad O, Mahoney MG, et al. (2012) Multiple minimally invasive Erbium: Yttrium Aluminum Garnet laser mini-peels for skin rejuvenation: an objective assessment. *J Cosmet Dermatol* 11: 122-130.
2. Montagner S, Costa A (2009) Molecular basis of photoaging. *An Bras Dermatol* 84: 263-269.
3. Alessio R, Rzany B, Eve L, Grangier Y, Herranz P, et al. (2014) European expert recommendations on the use of injectable poly-L-lactic acid for facial rejuvenation. *J Drugs Dermatol* 13: 1057-1066.
4. Callaghan TM, Wilhelm KP (2008) A review of ageing and an examination of clinical methods in the assessment of ageing skin. Part 2: Clinical perspectives and clinical methods in the evaluation of ageing skin. *Int J Cosmet Sci* 30: 323-332.
5. Callaghan TM, Wilhelm KP (2008) A review of ageing and an examination of clinical methods in the assessment of ageing skin. Part I: Cellular and molecular perspectives of skin ageing. *Int J Cosmet Sci* 30: 313-322.
6. Lambros V (2008) Models of facial aging and implications for treatment. *Clin Plast Surg* 35: 319-327.
7. Friedmann DP, Fabi SG, Goldman MP (2014) Combination of intense pulsed light, Sculptra, and Ultherapy for treatment of the aging face. *J Cosmet Dermatol* 13: 109-118.
8. Alam M, White LE, Martin N, Witherspoon J, Yoo S, et al. (2010) Ultrasound tightening of facial and neck skin: a rater-blinded prospective cohort study. *J Am Acad Dermatol* 62: 262-269.
9. Suh DH, Shin MK, Lee SJ, Rho JH, Lee MH, et al. (2011) Intense focused ultrasound tightening in Asian skin: clinical and pathologic results. *Dermatol Surg* 37: 1595-1602.
10. White WM, Makin IRS, Barthe PG (2007) Selective creation of thermal injury zones in the superficial musculoaponeurotic system using intense ultrasound therapy: a new target for noninvasive facial rejuvenation. *Arch Facial Plast Surg* 9: 22-29.
11. Park H, Kim E, Kim J, Ro Y, Ko J (2015) High-Intensity Focused Ultrasound for the Treatment of Wrinkles and Skin Laxity in Seven Different Facial Areas. *Ann Dermatol* 27: 688-693.
12. Lee HS, Jang WS, Cha YJ, Choi YH, Tak Y, et al. (2012) Multiple pass ultrasound tightening of skin laxity of the lower face and neck. *Dermatol Surg* 38: 20-27.
13. Vizintin Z, Rivera M, Fistonc I (2012) Novel minimally invasive VSP Er: YAG laser treatments in gynecology. *J Laser Health Acad* 1: 46-58.
14. Gambacciani M, Levancini M, Cervigni M (2015) Vaginal erbium laser: the second-generation thermotherapy for the genitourinary syndrome of menopause. *Climacteric* 18: 757-763.

15. Gozali MV, Zhou B (2015) Effective treatments of atrophic acne scars. *J Clin Aesthet Dermatol* 8: 33-40.
16. Rongsaard N, Rummaneethorn P (2014) Comparison of a fractional bipolar radiofrequency device and a fractional erbium-doped glass, 550 nm device for the treatment of atrophic acne scars: a randomized split-face clinical study. *Dermatol Surg* 40: 14-21.
17. Simmons BJ, Griffith RD, Falto-Aizpurua LA, Nouri K (2014) Use of radiofrequency in cosmetic dermatology: focus on nonablative treatment of acne scars. *Clin Cosmet Investig Dermatol* 7: 335-339.