



Advanced Fractional Radiofrequency for The Rejuvenation Of Face, Neck And Décolleté

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ABSTRACT

Introduction:

Recently great attention has been paid to the rejuvenation of the face, neck and décolleté of women with advanced radial fractional radiofrequency. We aimed to clinically evaluate the results obtained with this treatment method.

Methods:

We treated 10 women aged 42 to 62, suffering from skin aging. After carrying out the hydration and sebometry skin tests in each patient, collecting the medical history and taking photographs of the face and décolleté in the standard projections, a questionnaire was submitted to each patient. Finally, we have submitted the patients to 1 session of application of radiofrequency energy, by an Italian device named “Thuzzle®” (GMV, Rome, Italy).

Results:

The obtained results show a high effectiveness in improving the texture and tone of skin, decreasing micro wrinkles and spot reduction.

Conclusion:

Advanced radial fractional radiofrequency treatment method shows promising results. Further studies are required to confirm the findings.

KEYWORDS: fractional radiofrequency, radial fractional, medical aesthetics, micro ablation, non invasive surgery

INTRODUCTION

In the last recent years, requests for aesthetic medicine services have increased in combating aging process. Great attention is given to the rejuvenation of the face and, in women, of neck and décolleté. There are many techniques that can be used for facial rejuvenation: treatments performed by Plasma Exeresis (Plexr, GMV, Rome, Italy), botulinum toxin, bio-stimulation and bio-restructuring methods with injection preparations, threads and fillers. However, these techniques have certain degree of invasiveness and complications

Recently, a novel device has been introduced based on a new technology in the radiofrequency energy application called “Thuzzle (R). It is equipped with radial fractional radiofrequency hand pieces and the manufacturer provides resurfacing and skin aging as indications for use of this device.

The purpose of this work is to clinically evaluate the results obtained with the use of this equipment. A written informed consent was obtained from all patients.

MATERIAL AND METHODS

Ten women, aged 45 to 62 years, were enrolled in this study. All women were affected by skin aging in the face and décolleté. Pre-treatment assessment of skin included hydration and sebometry test, with D-Squame TM and Sebutape TM adhesive patches (Difa Cooper, Spain). The medical history of each patient was collected. Photographs were taken of each patient before and after the treatment, in the standard projections. A questionnaire was also submitted to each patient, before and after the treatment, to evaluate the perception of the appearance of the face and décolleté before and after the treatment. Each patient was submitted to 1 session of application of radiofrequency energy, by an Italian device named “Thuzzle®” (GMV, Rome, Italy). This device, having a precise radial diffusion of the signal, is extremely uniform in its action on the skin and does not unbalance the effect on one side as other fractional RF device in the market. Furthermore, a precise impedance of the

output increases the precision and the efficacy of the treatment. Each session was performed using specific handpieces for radial fractional radiofrequency, with 40 or 64 pins, depending on the areas to be treated. The handpieces were used "flat", the 40-pin one, smaller, in the perilabial, and "marionette" areas; the larger one, with 64 pins, for all other areas of the face and décolleté.

RESULTS

We observed an improvement of the texture and the tone of the skin, attenuation of micro wrinkles, periocular wrinkles and prolabium wrinkles, and spots reduction. The general appearance of the face and décolleté therefore appeared more youthful. Immediately after each session, the areas of the treated skin showed redness and the presence of mild burns, the same size as the pins of the handpieces. Afterwards small crusts formed, which spontaneously fell in about 12 days. The skin of the treated areas then appeared more toned, smoother and more uniform. The result was still appreciable after about two months from the first session.

All patients experienced a high degree of satisfaction.

DISCUSSION

Skin aging and rejuvenation interventions demands are constantly on rise¹. Attention is being paid to all those methods, capable of "erasing" the signs of aging in this area. The application of radiofrequency energy to treat skin aging is based on internal thermogenesis induced by applied energy, and it is conventionally considered a non-ablative procedure as suggested by¹. As a consequence of such increase in internal temperature, vasodilation and increasing microcirculation occurs, new collagen formation, and contraction of existing collagen fibers^{2,3,4}. The radial fractional radiofrequency, instead, can be considered ablative by some authors⁵ who suggest that it induces coagulation of dermal tissue in columns having the same diameter of the pins of the handpiece, but tissue's parts between the pins remain intact. Thus, new collagen production occurs, and the treated areas heal faster and skin tightening of the treated areas develops^{5,6}.

After a single session of treatment, we noticed an intense redness of the skin on the treated areas changing into brown spots coinciding with the shape of the handpiece.. Therefore, to ensure homogeneity of the treatment, it is very important to position the handpiece flat on the surface of the skin and not to leave spaces between each area treated. The redness spontaneously disappears in few hours. The brown spots quickly become crusts, falling on their own in 5-12 days. Immediately after a session, the treated areas could be covered with a high coverage foundation, hypoallergenic, and formulated without potentially irritating and sensitizing ingredients. After about two months, object can be achieved but if not considered satisfactory, the procedure could be repeated.

The results obtained consist in the improvement of the texture and the tone of the skin, attenuation of micro wrinkles, periocular wrinkles and prolabium wrinkles, and spots reduction. The general appearance of the face and décolleté therefore appears more youthful. The major limitation of our study is small number of patients enrolled and no comparison group, so it is hard to reach a definite conclusion.

CONCLUSIONS

The results obtained from this study show high effectiveness of the treatment with advanced fractional radio frequency. All patients showed an improvement of the facial and décolleté skin appearance, and a high degree of satisfaction. Further studies are warranted to confirm our observations.

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FIG. 1 Patient n°5 – Before, and after 2 months

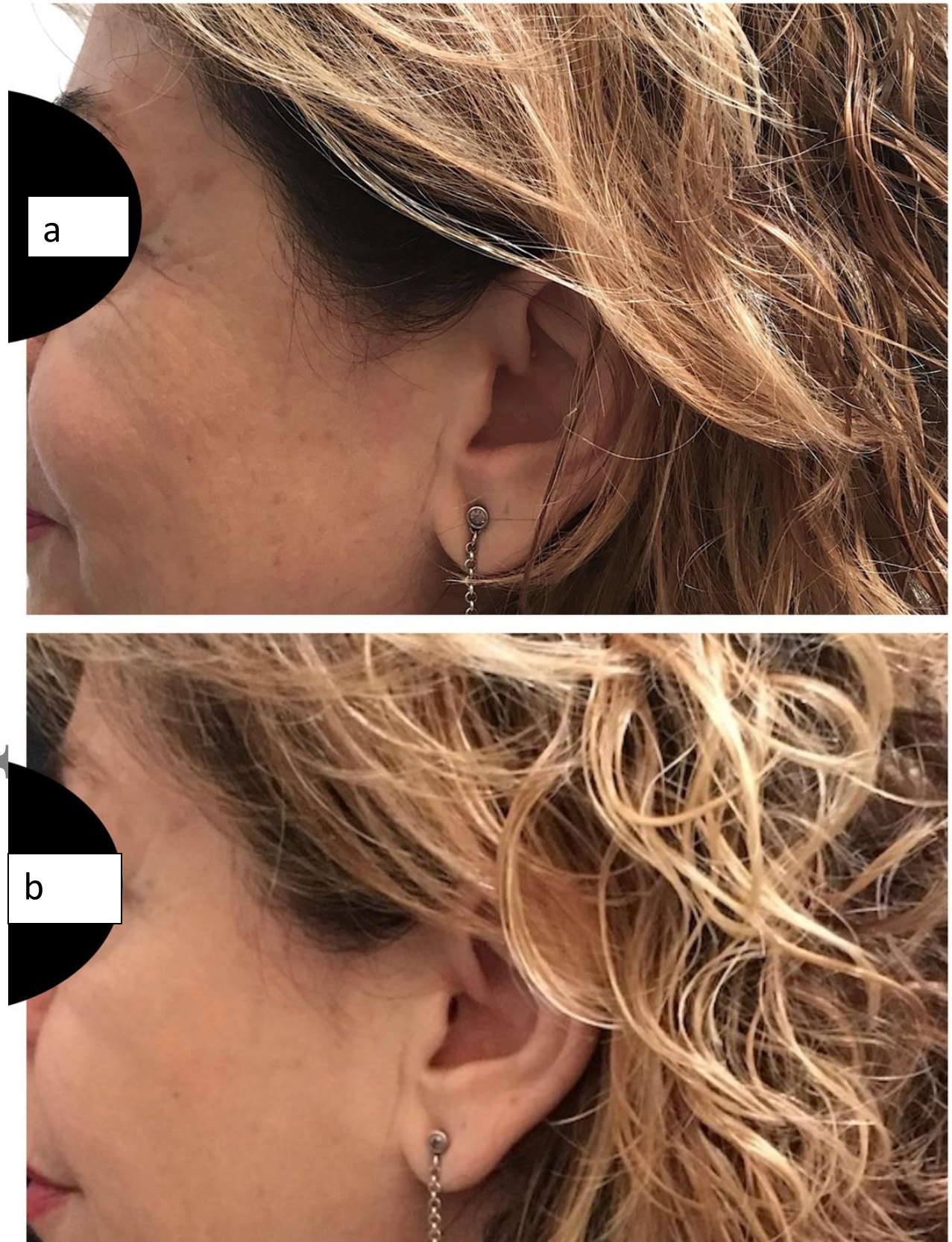


Fig. 2 a) before and b) after two months

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