

MICROFOCUSED MICRO-PULSED ULTRASOUND FOR FACIAL SLIMMING

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ABSTRACT

The search for aesthetic treatments has grown considerably over the years, with emphasis on the interest in facial weight loss. The objective of this study was to report a clinical case using Micropulsed Microfocused Ultrasound technology (Ultraformer MPT®) as a non-invasive resource for facial weight loss. Patient K.N.T, female, 40 years old, attended the Orofacial Harmonization Specialization Clinic of the Brazilian Dental Association (ABO) with the main complaint of dissatisfaction with the shape of her face. The protocol defined for applying the Ultraformer MPT® included 280 shots in the lower third of the face, distributed in 140 shots on each side (right and left), using 4.5mm and 3.0mm tips, divided between normal and MP mode (Micro-Pulsed Mode). The patient did not report any sensitivity or pain during the treatment and was advised to maintain her normal activities after the procedure. A follow-up was carried out 60 and 120 days after treatment and, throughout this period, a reduction in total facial volume of 24.12mL was evidenced, through quantitative analyzes using the Vectra H2® software.

UNITERMS: Microfocused Ultrasound. Facial Slimming. Rejuvenation

1.INTRODUCTION

Facial aesthetics significantly influence interpersonal and professional relationships, thereby impacting individuals' self-esteem and confidence. In recent years, there has been a marked increase in the demand for aesthetic procedures, with a notable number of patients specifically seeking facial slimming (CHAVES; MIOT, 2021). This surge can be attributed to the increasing desire to maintain a youthful, well-defined appearance, which is often associated with personal and professional success.

The process of skin aging entails transformations across all layers of the face, including subcutaneous tissue, muscles, and bone structure. These changes involve a reduction in connective tissue, decreased collagen synthesis, increased sagging, and alterations in subcutaneous fat tissue (DE LUCCA; SANTOS, 2023). Such transformations can lead to a diminished definition of facial contours, contributing to an appearance perceived as older and less aesthetically pleasing.

Historically, surgical interventions such as bichectomy—removal of the buccal fat pad—have been frequently employed for facelift and facial fat removal (MOURA et al., 2018). Bichectomy is particularly noted for its role in enhancing facial contour definition by excising Bichat's ball, a localized adipose tissue in the jugal mucosa, which can impart a rounded appearance to the face. However, this procedure carries significant risks, including potential injury to the parotid gland and facial nerve branches, particularly the buccal branch, located inferior to the parotid duct, which may compromise facial expressions (HERNANDEZ et al., 2021).

The pursuit of non-invasive approaches has intensified due to their advantages in recovery time and post-procedural care (SHOME et al., 2019). Non-invasive techniques, such as microfocused ultrasound (MFU), present an appealing alternative, offering satisfactory cosmetic results without the surgical risks. MFU technology is distinguished by its capability to deliver focal energy in the form of heat to subcutaneous tissues, including the superficial muscular aponeurotic system (SMAS), without causing damage to the skin. This modality can achieve temperatures exceeding 60°C, facilitating the formation of coagulation points and tissue contraction, thereby stimulating neocollagenesis (FABI, 2015; AGUIAR et al., 2023).

Microfocused ultrasound (MFU) is a non-invasive technology that has demonstrated excellent results due to its ability to concentrate energy as heat (Shome et al., 2019). Ultrasound beams effectively target subcutaneous tissues, such as the SMAS, while preserving skin integrity. These beams can generate temperatures above 60°C, promoting coagulation points and inducing tissue contraction, which in turn stimulates neocollagenesis (Fabi, 2015; AGUIAR et al., 2023).

Over the past two decades, the field of facial aesthetics has experienced significant advancements in techniques and technologies available for treatment. Microfocused

ultrasound emerges as a modern and effective modality that integrates advanced technology with a comprehensive understanding of skin aging and rejuvenation mechanisms. The application of MFU allows for targeted treatment of various skin layers, with the ability to adjust depth and intensity based on individual patient requirements.

Microfocused ultrasound facilitates improvements in skin firmness and facial contour, while also addressing the breakdown of subcutaneous fat cells. The effects of MFUs occur through the generation of heat, with energy levels ranging from 0.4 to 1.2 Joules/mm² and focal depths between 1.5 and 4.5 mm (FABI, 2015). This technique permits precise targeting of distinct skin layers, enabling adjustments in treatment depth and intensity according to each patient's specific needs.

We have observed that the use of MFU for facial slimming presents significant advantages over traditional methods. The absence of visible scarring, a reduced risk of complications, and a rapid recovery period are aspects highly valued by patients. Furthermore, the natural and gradual results achieved through MFU contribute to high patient satisfaction, with many reporting significant enhancements in facial contour definition and skin texture.

Consequently, MFU can be regarded as a promising alternative treatment for facial fat reduction in patients seeking a less invasive cosmetic procedure. The efficacy of MFU, combined with its favorable safety profile and the benefits of a short recovery time, renders this technology an attractive option for facial harmonization. Nonetheless, further studies are essential to establish standardized treatment protocols and assess potential long-term adverse effects.

The growing demand for non-invasive aesthetic procedures is fueled by a society increasingly preoccupied with appearance and seeking practical, effective solutions to enhance self-esteem. Technologies like microfocused ultrasound, which provide rapid results without surgical intervention, align with this trend, offering significant benefits while minimizing risks. Ongoing innovation in this domain is crucial to meeting patient expectations and advancing the understanding of the mechanisms involved in facial rejuvenation and slimming treatments.

The scientific literature underscores the necessity for further studies exploring the applicability and efficacy of MFU across different clinical contexts. Future research should prioritize optimizing treatment parameters, evaluating long-term outcomes, and comparing MFU with other therapeutic modalities. Only through rigorous and ongoing investigation can microfocused ultrasound be consolidated as an essential tool in the clinical practice of facial harmonization.

Additionally, the integration of advanced imaging technologies, such as three-dimensional stereophotogrammetry, has transformed the assessments of aesthetic

outcomes. These tools enable more precise and objective analyses of treatments, facilitating the quantification of facial changes and providing comprehensive documentation of improvements achieved. This not only enhances clinical practice but also significantly contributes to scientific research, allowing for more reliable before-and-after comparisons and a deeper understanding of treatment effects over time.

In summary, microfocused ultrasound represents a substantial advancement in facial harmonization, providing a safe and effective alternative to traditional invasive procedures. Its capacity to enhance skin firmness, refine facial contours, and diminish subcutaneous fat, without the associated risks and recovery times of surgery, positions it as a valuable tool in contemporary clinical practice. Ongoing research and technological advancements are critical to maximizing the benefits of this approach and ensuring optimal outcomes for patients.

2. GENERAL OBJECTIVE

The primary objective of this study was to present the results of a clinical case utilizing the new Microfocused Micropulsed Ultrasound (Ultraformer MPT®) as a non-invasive resource for facial slimming and volumetric fat reduction in the lower third of the face, conducted during the Specialization course in Orofacial Harmonization of the Brazilian Association of Dentistry (*Associação Brasileira de Odontologia - ABO*) under the guidance of Prof. Marcelo Januzzi. This study aims at contributing to the body of knowledge surrounding orofacial harmonization techniques, demonstrating the efficacy and safety of Microfocused Micropulsed Ultrasound as a viable alternative to traditional invasive methods.

The study also encompasses the following specific objectives:

Evaluate Efficacy: To measure the efficacy of Microfocused Micropulsed Ultrasound in the reduction of facial fat volume through quantitative and qualitative methods, employing three-dimensional scanning technology (Vectra H2®) to observe changes in facial contour before and after the procedure, as well as to quantify volumetric changes in the treated areas.

Safety Analysis of the Technology: To investigate potential adverse effects and complications associated with the procedure, ensuring the technique's safety for clinical application. This includes monitoring the patient throughout the treatment and follow-up period to identify any adverse events.

Comparison with Traditional Methods: To compare results obtained with Microfocused Micropulsed Ultrasound against traditional facial slimming methods, such as bichectomy, highlighting the advantages and limitations of each approach. This comparison aims at providing an overview of the options available for facial

harmonization.

Development of Treatment Protocols: To contribute to the formulation of standardized clinical protocols for the use of Microfocused Micropulsed Ultrasound in facial slimming procedures. This objective encompasses the definition of treatment parameters, including ultrasound intensity and depth, as well as the frequency and duration of sessions.

Explore Long-term Potential: To investigate the long-term effects of Microfocused Micropulsed Ultrasound treatment, including the durability of results and the necessity for maintenance treatments. This aspect is vital for understanding the longevity of the aesthetic benefits provided by the procedure.

Promote Education and Training: To furnish detailed and practical information regarding the Microfocused Micropulsed Ultrasound technique to healthcare professionals, thereby facilitating knowledge dissemination and adequate training for the safe and effective execution of the procedure.

The study is conducted with scientific rigor, incorporating patient authorization and thorough monitoring, alongside the application of advanced technology for result measurement and comparison with existing literature. Through this approach, the intention is not only to validate the efficacy and safety of Microfocused Micropulsed Ultrasound but also to expand understanding of its applications in facial harmonization, providing a robust foundation for future research and clinical practice.

3. CASE REPORT

Prior to the clinical intervention, the patient was requested to sign the Informed Consent Form (ICF), ensuring her full understanding of the procedures to be performed, the potential risks and benefits involved, and her voluntary agreement to the intervention. The patient, K.N.T., a 40-year-old female with a normosystemic status, attended the Orofacial Harmonization Specialization Clinic at the ABO, presenting with a primary complaint of dissatisfaction with facial contour and describing her facial appearance as "round." A facial analysis revealed volumetric asymmetry and a lack of contour definition beneath the zygomatic arch.

The diagnosis indicated an excess of adipose tissue in the superficial and lateral compartments of the face. Considering the patient's preference for a non-invasive treatment, the application of Microfocused Micropulsed Ultrasound was indicated. The treatment plan involved the use of Ultraformer MPT® in the midfacial and submandibular regions.

Stereophotogrammetric evaluation was conducted utilizing Vectra H2® Canfield software

(MedSystems), and the treatment consisted of applying high-intensity Microfocused Micropulsed Ultrasound via Ultraformer MPT® (MedSystems) in the midface and submandibular regions, in one single session.

Scanning was performed with the Vectra H2® equipment (MedSystems) before and immediately after treatment, as well as 60 and 120 days after treatment, to monitor progress and quantify volume loss.

Before the procedure, the skin was cleaned and antiseptically cleansed, and the treatment areas were demarcated. Two vertical and two horizontal lines were drawn, establishing the untreated areas as a 1-cm safety margin in the pre-tragus region and lateral labial commissure as vertical lines and the zygomatic base and jaw line as horizontal lines on both sides. The lateral areas of the face were then divided into two columns (upper and lower) according to a standard design previously published by Montezuma et al. (2023) as the treatment area to receive the transducers (Figure 1).

Figure 1 – Marking for treatment with microfocused micropulsed ultrasound in the middle third of the face.



Source: Own archive

A gel layer was applied to the skin and transducer for ultrasound transmission. The transducers used were 4.5 mm and 3.0 mm, for the face and submandibular region, applied according to the technique recommended by Montezuma et al. (2023).

The protocol of 280 shots in the middle third of the face was distributed in the following order: 1. 4.5-mm transducer with 40 shots in normal mode and 30 shots in MP (Micro-Pulsed Mode), for a total of 70 shots per hemiface; 2. 3.0-mm transducer with 40 shots in normal mode and 30 shots in MP mode, for a total of 70 shots per hemiface. A total of 140 shots were taken for each side of the face.

The 4.5-mm transducer reaches the superficial muscular aponeurotic system (SMAS) layer, while the 3.0-mm transducer targets the deep dermis, improving tissue sagging.

The firing modes of the Ultraformer MPT® (MedSystems) microfocused ultrasound - normal and MP - differ in the concentration of points with which energy is delivered; with 417 coagulation points per firing in MP mode, we observed minimal pain sensation.

The transducer followed the marks, keeping 1 cm from the nasolabial fold, starting mesially in the superior rectangle. The shots were taken in the mesio-distal direction, with the aim of lifting the face. Each bounded large rectangle received 70 shots with the 4.5-mm transducer at 0.9 joules and 70 shots with the 3.0-mm transducer at 0.7 joules.

In the submandibular region, 140 shots were taken (70 with the 4.5-mm transducer at 0.8 Joule and 70 with the 3.0-mm transducer at 0.7 Joule), with continuous pressure, all with MP shots.

After treatment, the skin was cleaned, and the patient was instructed to resume daily care. There were no complaints of pain or immediate adverse effects.

4. RESULTS

Effectiveness Assessment

We used detailed quantitative and qualitative analyses to assess the effectiveness of the Ultraformer MPT® treatment. Three-dimensional facial scanning with Vectra H2® software was essential to document changes in facial contours.

After 60 days of treatment, we observed a volume reduction of 5.06 mL in the right hemiface and 7.17 mL in the left hemiface, as shown in the stereophotogrammetric images (Figures 2 to 4). This initial result shows a positive response to treatment, with a significant reduction in fat volume in the treated areas.

Figure 2 - Comparative images of the initial appearance with the result at 60 days after treatment, showing a small reduction and still a slight asymmetry in the volume of the middle third and a “much improved” (sic) appearance.



Source: Own archive

Figure 3 - Volumetric decrease in shades from orange to yellow on the right side.



Figure 4 - Volumetric decrease in shades from orange to yellow on the left side.



Source: Own archive

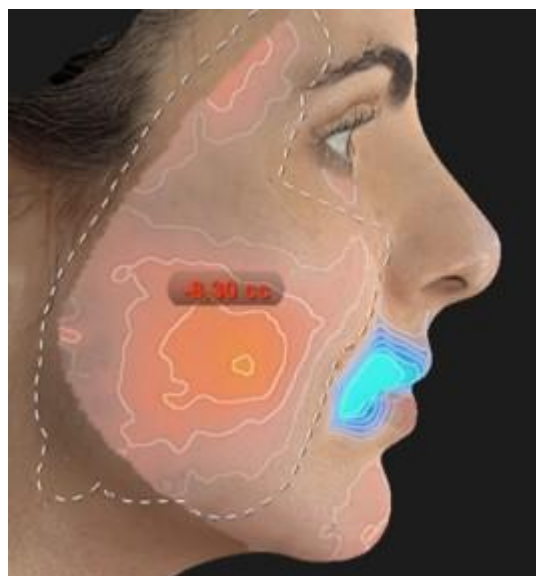
After 120 days, a new stereophotogrammetric scan revealed even greater volume reduction, ranging from 8.30 in the right hemiface to 15.82 ml in the left hemiface (Figures 5 to 7). These long-term results demonstrate the continued efficacy of the treatment, with significant volume reduction maintained over time.

Figure 5 - Comparative images of the initial appearance with the result at 120 days after treatment, showing a change in the pattern of the middle third of the face, minimal asymmetry, and “great happiness for my smaller cheeks” (sic).



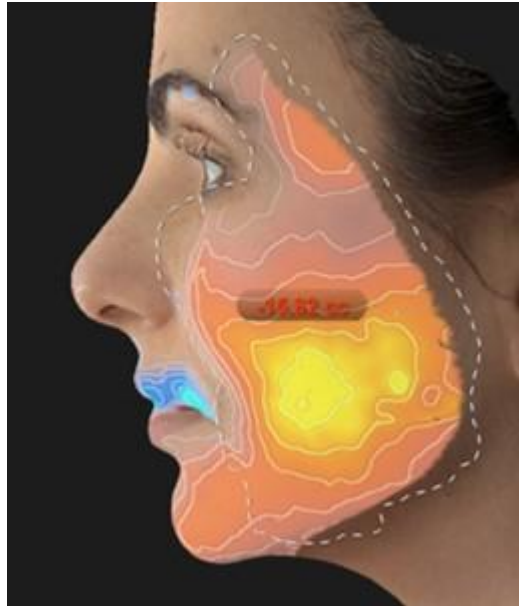
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Figure 6 - Volumetric decrease in shades from orange to yellow on the right side.



Source: Own archive

Figure 7 - Volumetric decrease in shades from orange to yellow on the right side.



Source: Own archive

At 60 and 120 days after treatment, there was a total facial volume reduction of 24.12 mL, confirming the studies cited above and demonstrating the effectiveness of MFU as a non-invasive alternative for facial slimming (Table 1).

Facial Volume Loss		
	60 days later	120 days later
Right Hemiface	-5.06mL	-8.30mL
Left Hemiface	-7.17mL	-15.82mL

Table 1: Comparison of volume loss at 60 and 120 days after treatment.

Safety Analysis

The safety of the procedure was closely monitored throughout the treatment and

follow-up period. The patient reported no complaints of pain during the procedure and experienced no adverse effects, such as erythema, ecchymosis, edema, inflammatory pigmentary changes, or transient paralysis. This absence of adverse effects underscores the safety of Microfocused Micropulsed Ultrasound as a viable technique for facial weight loss.

In addition to the lack of immediate adverse effects, the treatment demonstrated long-term safety, with no post-procedural complications observed for up to 120 days. The integrity of the skin and underlying tissues was preserved, demonstrating that Microfocused Micropulsed Ultrasound is a safe, minimally invasive, and effective method for treating excess facial fat.

Comparison with Traditional Methods

When comparing the results of MFU with traditional methods, such as bichectomy, it was found that MFU achieved a significant reduction in facial volume without the associated surgical risks, including damage to the parotid gland and facial nerve. Additionally, the rapid recovery and absence of surgical interventions were aspects highly valued by the patient.

Beyond bichectomy, other non-invasive methods for reducing facial fat include the use of lipolytic enzymes, radiofrequency, and cryolipolysis. For instance, lipolytic enzymes employ injections of substances that promote the breakdown of fat cells. However, these injections can lead to pain, swelling, and bruising, necessitating multiple sessions to attain visible results.

Radiofrequency, on the other hand, heats the deeper layers of the skin, stimulating collagen production and fat reduction. Although effective, this method achieves non-focused temperatures of 42°C and may not deliver results as effective or long-lasting as MFU, often requiring several sessions to realize the desired outcome.

Cryolipolysis, which employs controlled cooling to destroy fat cells, is also a popular option. However, it may induce discomfort during treatment and necessitates considerable time for results to manifest. Furthermore, its application on the side of the face still lacks scientific validation regarding efficacy and safety.

Comparatively, MFU provides a faster and more effective solution with reduced discomfort and a quicker recovery period, making it a preferable option for many patients.

Development of Treatment Protocols

Based on the results obtained, specific treatment protocols were developed for the application of Microfocused Micropulsed Ultrasound. These protocols encompass parameters such as ultrasound intensity and depth, as well as frequency and duration of sessions, providing detailed guidance for safe and effective treatment.

In the reported case, the application of Microfocused Micropulsed Ultrasound followed a structured approach that ensured treatment efficacy. Transducers of 4.5 mm and 3.0 mm were utilized, applied in previously demarcated areas with adequate safety margins. The protocol consisted of 280 shots in the middle third of the face and 140 shots in the lower third, distributed evenly between normal and micro-pulsed modes, optimizing energy delivery and minimizing discomfort.

This application method proved effective in reducing fat, yielding results comparable to those of bichectomy, but without the risks and complications associated with surgical procedures. Standardizing this protocol could significantly enhance clinical practice, enabling more practitioners to adopt this innovative technique in their treatments.

Exploring the Long-Term Potential

The long-term effects of the treatment were investigated, revealing that the results were maintained after 120 days, with a progressive and significant volumetric reduction and no requirement for maintenance treatments. The durability of these results suggests that MFU can offer sustainable aesthetic benefits following a single session, thereby decreasing the necessity for frequent interventions.

This innovative technology not only delivers long-lasting results but also boasts a commendable safety profile, making it a highly recommended option for beauty professionals. The broader implementation of Microfocused Micropulsed Ultrasound could revolutionize the field of facial harmonization, providing an effective and safe alternative to traditional invasive methods.

Promoting Education and Training

The findings and results of this study contribute significantly to the education and training of healthcare professionals. Providing practical and detailed information on the technique of utilizing this new Microfocused Micropulsed Ultrasound technology is essential for disseminating knowledge and performing the procedure safely and effectively. Moreover, this study serves as a valuable resource for continuing education programs, workshops, and seminars designed to train new professionals in the use of this advanced technology.

Promoting education and training not only enhances individual clinical practice but also elevates industry standards as a whole, encouraging the adoption of evidence-based techniques and the development of new therapeutic approaches. The integration of advanced technologies and the proper training of practitioners are critical to ensuring that patients receive safe, high-quality treatments.

Contribution to Science

In addition to the clinical and educational benefits, this study contributes to the scientific literature by providing the first empirical data on the efficacy and safety of Microfocused Micropulsed Ultrasound. The detailed documentation and analysis of the results help expand the existing body of knowledge, enabling other researchers to leverage these findings to explore new applications and technical refinements.

Continued innovation and rigorous research are fundamental to the advancement of aesthetic science, and studies such as this play a vital role in that process. They provide a solid foundation for future research, assist in establishing standardized protocols, and promote continuous improvement in clinical practices.

5. DISCUSSION

This study demonstrated the efficacy and safety of Microfocused Micropulsed Ultrasound (Ultraformer MPT®) as a noninvasive technique for facial thinning and volumetric fat reduction in the lower third of the face. Through a detailed case report, significant changes in the patient's facial contours were documented using quantitative and qualitative analysis with three-dimensional scanning technology (Vectra H2®).

MFU was reported by Contini et al. (2023) to be a high-tech treatment that promotes facial lifting through its mechanism of action, employing several coagulation microdots through subdermal heating at temperatures between 60 and 70°C. This process results in collagen synthesis derived from the inflammatory response stimulated by tissue repair, generating firmer skin with increased dermal thickness. This effect is prolonged, initiating collagen remodeling from day 28 and increasing three months post-treatment (Contini et al., 2023).

The results indicated a significant volumetric reduction, with losses of 5.06 ml in the right hemisphere and 7.17 ml in the left hemisphere after 60 days, and 8.30 ml in the right hemisphere and 15.82 ml in the left hemisphere after 120 days, totaling a reduction of 24.12 ml. These data confirm the efficacy of MFU in promoting skin firmness and improving facial contours in a sustained and safe manner.

Analysis of results through facial scanning with three-dimensional imaging is more accurate than assessments made with 2D photographs. The stereophotogrammetric

images provide precise dimensional information and objective measurements of facial features, allowing for quantification of the results of aesthetic procedures and enabling more reliable before-and-after comparisons. This revolutionizes the evaluation and documentation of aesthetic outcomes, and the efficacy of treatments can be better assessed (CAMISON et al., 2017; De Lucca; Santos, 2023).

Although surgical procedures remain an alternative for patients seeking facial weight loss, MFU presents numerous advantages and benefits as a non-invasive procedure that generates heat and dermal heating to induce collagen denaturation and degradation of adipose tissue. It requires minimal post-procedural restrictions, offers more natural results, and has fewer side effects (Montezuma et al., 2023; Shome et al., 2019).

Safety analysis of the procedure revealed an absence of immediate and long-term adverse effects, underscoring MFU as a viable and reliable technique for reducing facial fat. Comparisons with traditional methods, such as bichectomy, and other noninvasive treatments, including lipolytic enzymes, radiofrequency, and cryolipolysis, indicated that MFU offers significant advantages, including less discomfort, faster recovery, and no scarring.

The development of specific treatment protocols for MFU, detailing parameters such as ultrasound intensity and depth, as well as frequency and duration of sessions, provided a structured approach that optimized treatment effectiveness. This delivery method proved comparable to the results of bichectomy but with fewer associated risks and complications.

The long-term effects of the treatment, with results sustained after 120 days and no need for immediate maintenance interventions, illustrate the durability and continued effectiveness of MFU. The innovative Microfocused Micropulsed Ultrasound technology represents a promising option that should be more widely adopted by aesthetic professionals, revolutionizing the field of facial harmonization.

Promoting the education and training of healthcare professionals through the dissemination of the details and results of this study is crucial for the safe and effective execution of the procedure. This study contributes significantly to aesthetic science by providing empirical data and fostering continued innovation and rigorous research.

Ultimately, Microfocused Micropulsed Ultrasound presents itself as an advanced and safe technique for facial weight loss, offering substantial benefits compared to existing traditional and non-invasive methods. The adoption and integration of this technology into clinical practice can elevate the standards of aesthetic treatments, providing natural, safe, and long-lasting results for patients while advancing scientific and educational progress in the field of facial harmonization.

6. CONCLUSION

In conclusion, the results of this study corroborate the efficacy and safety of Microfocused Micropulsed Ultrasound as a non-invasive technique for facial weight loss, emphasizing the absence of adverse effects and the potential as an alternative to invasive methods, with significant benefits for patients and valuable contributions to education, training, and science in the realm of aesthetics. Although well established for treating skin sagging and stimulating neocollagenesis, its application for facial weight loss remains underexplored in the literature, necessitating further studies to establish protocols and evaluate possible adverse effects.

REFERENCES

AGUIAR, Saskya Vieira Melo et al. MICROFOCUSED ULTRASOUND FOR BICHECTOMY EFFECT. **Health and Society**, v. 3, n. 06, p. 400-410, 2023.

CAMISON, L. et al. Validation of the Vectra H1 portable three-dimensional photogrammetry system for facial imaging. **International Journal of Oral and Maxillofacial Surgery**, v. 47, 1 set. 2017

CHAVES BELLOTE, Talitha Possagno; MIOT, Helio Amante. Microfocused ultrasound with visualization for face slimming: preliminary results in four women. **Clinical, Cosmetic and Investigational Dermatology**, p. 1613- 1619, 2021.

CHAUDHARY, Manupriya; KHAN, Azmi; GUPTA, Madhu. Skin ageing: pathophysiology and current market treatment approaches. **Current aging science**, v. 13, n. 1, p. 22-30, 2020.

CONTINI, Mark et al. A systematic review of the efficacy of microfocused ultrasound for facial skin tightening. **International journal of environmental research and public health**, v. 20, n. 2, p. 1522, 2023.

DE LUCCA TROMBINI, Aline; SANTOS, Marcelo Januzzi. IMMEDIATE LIFTING EFFECT AFTER MICROFOCUSED ULTRASOUND APPLICATION. **Health and Society**, v. 3, n. 04, p. 365-397, 2023.

Fabi, Sabrina Guillen. Noninvasive skin tightening: focus on new ultrasound techniques. **Clinical, cosmetic and investigational dermatology**, p. 47-52, 2015.

Hernandez, Oscar et al. Anatomical relationships of the adipose buccal fat pad associated with bichectomy complications. About a case. **International Journal of Morphology**, v. 39, n. 1, p. 123-133, 2021.

MEYER, Patricia Froes et al. Effect of microfocused ultrasound on facial rejuvenation: clinical and histological evaluation. **Journal of Biosciences and Medicines**, v. 9, n. 7, p. 112-125, 2021.

MOURA, Lucas-Borin et al. Buccal fat pad removal to improve facial aesthetics: an established technique?. **Medicina oral, patologia oral y cirugia bucal**, v. 23, n. 4, p. e478, 2018.

MONTEZUMA, Gina Elayne Silva et al. MICROFOCUSED ULTRASOUND FOR FACIAL LIFTING AN INNOVATIVE TREATMENT PROPOSAL. **Health and Society**, v. 3, n. 04, p. 262-277, 2023.

Shome, Debraj et al. Use of micro-focused ultrasound for skin tightening of mid and lower face. **Plastic and Reconstructive Surgery Global Open**, v. 7, n. 12, 2019.

WULKAN, A. J.; FABI, S. G.; GREEN, J. B. Ultrassom microfocado para fotorejuvenescimento facial: uma revisão. **Cirurgia Plástica Facial**, v. 32, p. 269-275, 2016.

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