EFFICACY AND PATIENT SATISFACTION OF A NEW NON ABLATIVE FRACTIONAL ND:YAP LASER 1340 NM FOR FACIAL REJUVENATION IN BRAZILIAN PATIENTS.

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SUMMARY: This present study wants to demonstrate a new fractional nonablative Nd:YAP 1340 nm laser technology that has been safely and effectively applied to treat photodamage in different skin types. Efforts to attend a growing demand of patients who seeks a procedure that treats wrinkles and improves skin textures with minimal to none downtime has been led to a constant upgrade in nonblative fractional lasers technologies. Intend of study is to determine the safety, efficacy and patient satisfaction of a new nonablative fractional Nd:YAP laser 1340 nm in facial skin rejuvenation of Brazilian skin types.

A comparison was made between treatments with low fluence and multiple passes versus treatments with higher fluence in a single pass. Twenty subjects with visible cutaneous photodamage, all with skin phototypes II to VI, were treated with a new fractional nonablative laser handpiece (ETHEREA® 1340 ProDeep®; INDUSTRA® Technologies, São Carlos, Brazil). All patients returned every 4 weeks for a total of 3 sessions and were followed up with monthly photos and grading until 6 months after their last treatment session. They also were asked to fill out a “Severity Scale" where levels of pigmentation, rhytides, skin tone and tightness, texture, and patient satisfaction were noted after last treatment session. Pigmentation, rhytides, skin tone and tightness, and texture were also evaluated by two physicians not involved in the study and by Canfield® VISIA® Complexion. All patients answered a questionnaire at the end of evaluation. Post-evaluation questionnaire showed that 100% of the patients felt improvement and 75% would recommend the same treatment to a friend.

A new fractional nonablative Nd:YAP 1340 nm laser can be safely and effectively performed to treat photodamage in darker skin types. Although most patients preferred the single pass laser treatment, we did not observe significant difference in the outcome after a low fluence multiple pass versus high fluence single pass treatment and the incidence of side effects were higher in the high fluence single pass treatment.

Further studies with a larger number of subjects and biopsy specimens for histological assessment are required.

BACKGROUND AND OBJECTIVES: Efforts to attend a growing demand of patients who seeks a procedure that treats wrinkles and improves skin textures with minimal to none downtime has been led to a constant upgrade in nonblative fractional lasers technologies. This present study wants to demonstrate a new fractional nonablative Nd:YAP 1340 nm laser technology that has been safely and effectively applied to treat photodamage in different skin types. Intend of study is to determine the safety, efficacy and patient satisfaction of a new nonablative fractional Nd:YAP laser 1340 nm in facial skin rejuvenation of Brazilian skin types by comparing treatments with low fluence and multiple passes versus treatments with higher fluence in a single pass.

STUDY DESIGN AND METHODS: Twenty subjects with visible cutaneous photodamage, all with skin phototypes II to VI, were treated with a new fractional nonablative laser handpiece (ETHEREA® 1340 ProDeep®; INDUSTRA® Technologies, São Carlos, Brazil). A comparison was made between treatments with low fluence and multiple passes versus treatments with higher fluence in a single pass, in two halves of the face. Paremeters and treatment guidelines are shown in Table 1: Parameters and Treatment Guidelines.

All patients returned every 4 weeks for a total of 3 sessions and were followed up with monthly photos and grading until 6 months after their last treatment session. They also were asked to fill out a “Severity Scale" where levels of pigmentation, rhytides, skin tone and tightness, texture, and patient satisfaction were noted after last treatment session. Pigmentation, rhytides, skin tone and tightness, and texture were also evaluated by two physicians not involved in the study and by Canfield® VISIA® Complexion.

TABLE 1: Parameters and Treatment Guidelines

	RIGHT SIDE
number of passes	single
energy	120-140 mJ/mtz
total density • mtz	100 mtz/cm^2
spot size	Ø8 mm
	LEFT SIDE
number of passes	triple
energy	80-110 mJ/mtz
total density • mtz	100 mtz/cm^2
spot size	Ø8 mm

TABLE 2: Improvement Percentage

IMPROVEMENT PERC	*SCORE VALUES*
> 25%	poor
25-50%	good
51-75%	very good
< 75%	excellent

RESULTS AND CONCLUSION: Blinded observers of standarized photos taken before and after last treatment session has scored a percentage improvement, as shown on Table 2: Improvement Percentage. A final comparison between improvement with single or multiple passes treatments are shown in Figure 2: Single Pass and Multiple Pass Treatment Comparison

All patients answered a questionnaire at the end of evaluation and results are shown in Figure 1: Patient Treatment Evaluation. Post-evaluation qu.estionnaire has shown that 100% of the patients felt improvement and 75% would recommend the same treatment to a friend. None difference between the two halves of the face has been noted, however 70% preferred a single pass laser treatment even using higher

energy by justifying a less painful treatment. The only noticed side effect was a transient hiperpigmentation in 10% of cases (2 patients, both skin type IV). No permanent side effects or scarring were seen in any treated cases.

Although, most patients has preferred a single pass laser treatment, we did not observe any significant difference at the outcome results by comparing both single and multiple passes treatments. However, side effects were higher in treatments performed with a single pass due to the high energy dosis applied.

A new fractional nonablative laser Nd:YAP 1340 nm can be safely and effectively to treat photodamage in darker skin types. Further studies with a larger number of subjects and biopsy specimens for histological assessment are still required.

BEFORE AND AFTER PHOTOS

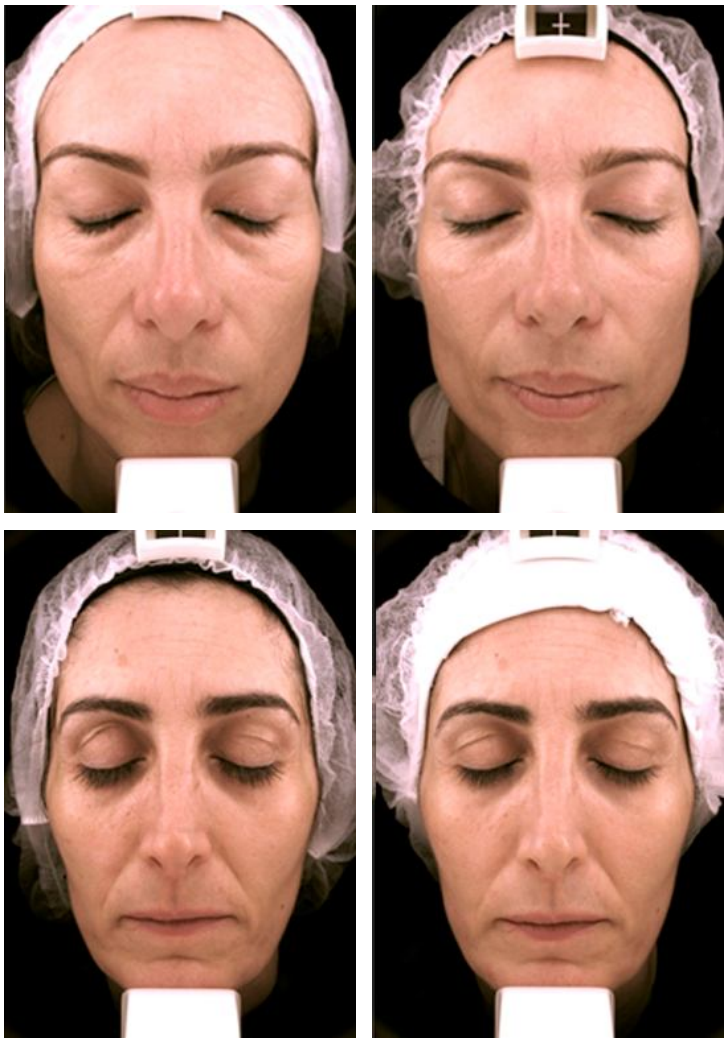


FIGURE 1: Patient Evaluation

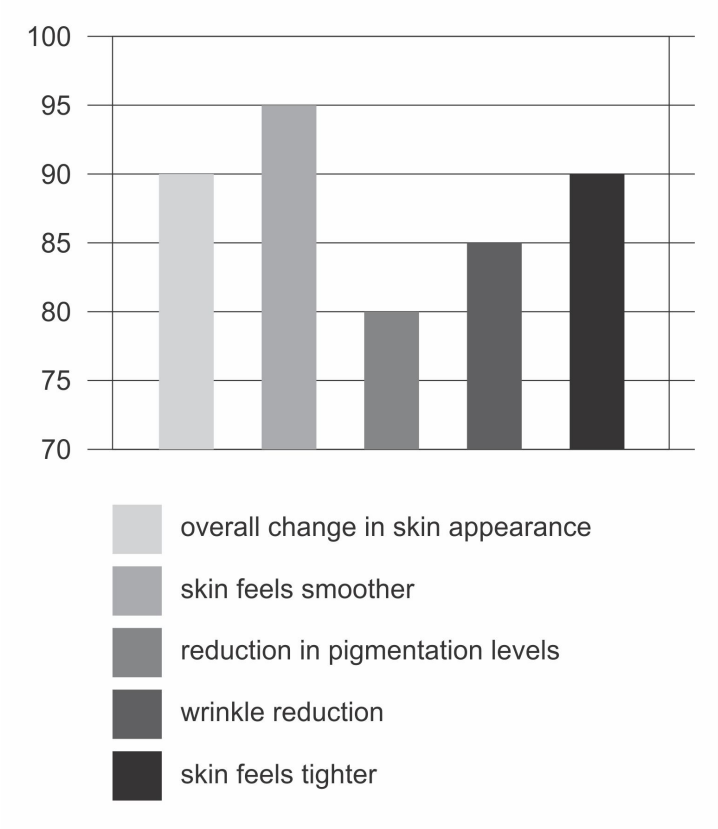
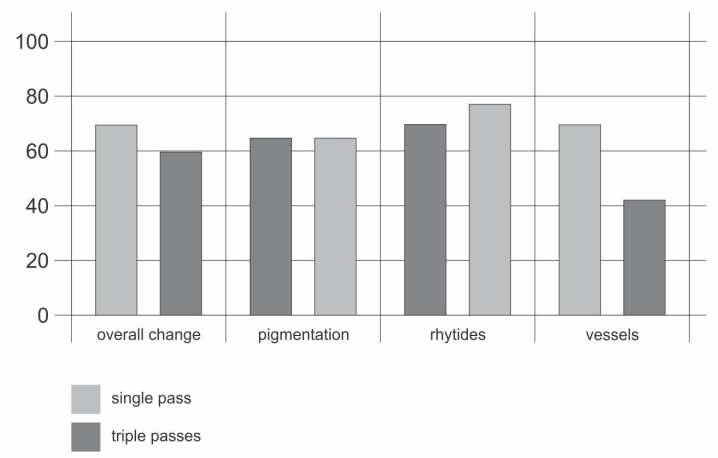


FIGURE 2: Treatment Comparison



P8269

Ablative vs. nonablative LASER technologies in aging hands: A randomized trial for a new treatment perspective

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Background: Aged hands is a condition typically characterized by wrinkles, dermal atrophy, skin laxity, solar lentigines, actine keratoses, seborrheic keratoses, and proeminent veins. The search for effective treatments for rejuvenation hands has led to the use of LASER technologies and IPL systems as well.

Objective: To assess the efficacy of 2940-nm and 1340-nm LASER devices and IPL system for overall improvement of skin quality, collagen regeneration and also depigmentation on the dorsal surfaces of the hands.

Methods: Twelve patients with brown macules and sun damage spots on dorsal hands were treated. Both dorsal hands were split in 2 equal areas each. Lateral-side part of the right hand was used for controlling and was not treated, while 2940-nm LASER device was performed over medium side of the same hand. On left dorsal hand, 1340-nm LASER device was used on the lateral-side part, while on the medium side both 1340nm LASER and IPL system combined treatment was performed. Patients were treated twice with 4-week intervals. Treatment photos and informed consent were obtained. Pre- and posttreatment pictures, clinical data assessment investigation, and also patient questionnaires were collected for data analysis.

Results: Good to excellent results for rejuvenating hands were observed with all light-source systems. Remodeling of collagen and neocollagen and normalizing the mottled hyperpigmentation were mostly observed on the medium surface of the left hand with 1340-nm LASER plus IPL sources 92% (11/12 patients). The majority of patients, about 83% (10/12), do prefer this treatment modality while 2 of them do prefer the 2940-nm LASER treatment. Most common reported side effects were mild erythema, longer-lasting edema, blister, and pruritus.

Conclusion: Although all of the light devices had been effective for skin rejuvenation of the dorsal hands, 1340-nm LASER plus IPL system were the best treatment option in this study not only for overall efficacy, by stimulating collagen but also improving the discromia, but also for its safety assestment. Additional studies are also required to confirm these findings.

Commercial support: None identified.

P7999

Efficacy of 1064 nm Q-switched Nd:YAG laser in the treatment of nevus of Ota in patients with Fitzpatrick skin types IV and V and utility of melanin index in the treatment outcome

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Background: Q-switched Nd:YAG laser has been used in the treatment of nevus of Ota in all skin types with variable success rate. Data with an objective assessment parameter to this laser treatment is lacking.

Objective: To determine the efficacy and safety of the Q-switched Nd:YAG laser (1064-nm) in the treatment of nevus of Ota in Fitzpatrick skin type IV and V and also to evaluate the utility of melanin index in assessing the treatment response.

Methods: Patients treated with 1064 nm Nd:YAG laser at an interval of 6 to 10 weeks, for a period of 1 to 2 years were studied. The objective improvement (pigment clearance) was determined by melanin index from 2 fixed points: A1, 2 cm below the pupil at the midpupillary line (when the gaze is fixed); A2, the most prominent part of zygoma. The melanin index in these 2 areas was recorded as M1 and M2 respectively. The subjective clinical improvement was determined by the physician and the patient global assessment score.

Results: Thirty-five patients of nevus of Ota were included in the study. All excepting 1 patient had unilateral involvement. The mean baseline melanin indices M1 and M2 were 59.54 $\pm$ 9.72 and 59.02 $\pm$ 9.16, respectively. At the last visit the mean M1 and M2 decreased to 53.8 $\pm$ 8.55 ($P < .001$) and 54.13 $\pm$ 6.01 ($P < .001$), respectively. Patient global assessment showed that overall 26 (74.3%) had >50% pigment clearance from the baseline). Fifteen patients (42.8%) had 50% to 75% improvement, 10 patients (28.6%) had 75% to 95% improvement and only 1 (2.9%) patient had >95% improvement. Assessment performed by the dermatologist blinded to the laser sessions and parameters, showed that 20 patients (57.1%) had >50% improvement. Eight patients (22.9%) had 50% to 75% improvement, 11 patients (31.4%) had 75% to 95% improvement and only 1 (2.9%) patient had >95% improvement. Spotty hypopigmentation after laser treatment was seen in 8 (22.9%) patients which improved over a period of time in most of them. Hyperpigmentation seen in 2 patients also reduced gradually.

Conclusion: The 1064 nm Q-switched Nd:YAG laser offers good improvement in patients with nevus of Ota in darker skin types IV/V. The melanin index, a simple noninvasive parameter is useful in assessing the treatment response more objectively.

Commercial support: None identified.

P8585

Efficacy and patient satisfaction of a new nonablative fractional Nd:YAP laser 1340 nm for facial rejuvenation in Brazilian patients

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This present study wants to demonstrate a new fractional nonablative Nd:YAP 1340 nm laser technology that has been safely and effectively applied to treat photodamage in different skin types. Efforts to attend a growing demand of patients who seeks a procedure that treats wrinkles and improves skin textures with minimal to none downtime has been led to a constant upgrade in nonblative fractional lasers technologies. Intend of study is to determine the safety, efficacy, and patient satisfaction of a new nonablative fractional Nd:YAP laser 1340 nm in facial skin rejuvenation of Brazilian skin types. A comparison was made between treatments with low fluence and multiple passes versus treatments with higher fluence in a single pass. Twenty subjects with visible cutaneous photodamage, all with skin phototypes II to VI, were treated with a new fractional nonablative laser handpiece (Etherea 1340 ProDeep; INDUSTRA Technologies, São Carlos, Brazil). All patients returned every 4 weeks for a total of 3 sessions and were followed up with monthly photos and grading until 6 months after their last treatment session. They also were asked to fill out a "severity scale" where levels of pigmentation, rhytides, skin tone and tightness, texture, and patient satisfaction were noted after last treatment session. Pigmentation, rhytides, skin tone and tightness, and texture were also evaluated by 2 physicians not involved in the study and by Canfield VISIA Complexion. All patients answered a questionnaire at the end of evaluation. Postevaluation questionnaire showed that 100% of the patients felt improvement and 75% would recommend the same treatment to a friend. A new fractional nonablative Nd:YAP 1340 nm laser can be safely and effectively performed to treat photodamage in darker skin types. Although most patients preferred the single pass laser treatment, we did not observe significant difference in the outcome after a low fluence multiple pass versus high fluence single pass treatment and the incidence of side effects were higher in the high fluence single pass treatment. Additional studies with a larger number of subjects and biopsy specimens for histologic assessment are required.

Commercial support: None identified.

P8575

Fractional ablative LASER versus fractional ablative and coagulative LASER for treatment of photodamaged skin in arms and forearms

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Photodamaged skin in arms and forearms are a common issue in dermatologic offices. Treatment with topical creams, peelings, and nonablative fractional lasers have mild results. Ablative lasers showed to have achieved the best results. The main issue, however, relies on extra facial areas, by increasing the risk of adverse effects caused by ablative lasers enhancement. The aim of this present study is to compare the whole effects of a fractional pure-ablative laser versus a fractional ablative and coagulative laser to treat photodamaged skin in arms and forearms, by using low energy doses in order to prevent side effects. Twenty patients have received a pure-ablative fractional laser treatment (known as single mode laser) in 1 arm and forearm, and in the other arm and forearm a combination of both ablative and coagulative laser treatment (known as dual mode laser). Both sides have been treated with a single pass by using a 2940 nm Er:YAG fractional laser (ETHEREA 2940 DualMode, INDUSTRA Technologies, Brazil), receiving 2 treatment sessions with 1 month of between sessions. In single mode was used 500-us pulse width with 10 mJ/MTZ fluence, and 500 us/3 ms pulse width with 10 mJ/MTZ and 10 J/cm^2 fluences for tx in dual mode. Patients were submitted to a skin biopsy before treatment, 1 month after the first and the second treatment, and 3 months after second treatment. Clinical pictures were recorded pretreatment and 3 months of posttreatment. Fifty percent of the patients have prefered the results of dual-mode treatment sessions. The pain was related to be more intense in this side in all of patients, as well. All patients noted a clear improvement in both sides. Biopsy has shown an epidermal and dermal collagen thickering after both treatments, but a more prominent result were observed in dual mode treated areas. No side effects were noticed in any treatment options. The use of low energy of fractional pure-ablative and fractional ablative and coagulative lasers are a safe and effective treatment option to treat photodamaged arms and forearms.

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