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COMPARISON THE EFFICACY OF COMBINED TREATMENT WITH CLEARLIGHT & NLITE AND CLEARLIGHT ONLY IN TREATMENT OF ACTIVE ACNE**Ahmad Moradi,¹ Shahin Aghaei,² Zahra Abbasfard,¹ and Mahshid Moradi¹**¹Moradi Skin Laser Clinic, Shiraz, Iran²Jahrom Medical School, Jahrom, Iran

Background and objectives: It was been experienced that during the routine acne scarring treatments, Nlite system dramatically reduces the active acne as well. The goal of this study was to compare the effectiveness of acne therapy with both Clearlight & Nlite and with Clearlight only.

Study Design/Materials & Methods: Two groups of patients with Fitzpatrick skin type III–V were randomly selected for this study: group A, 10 patients, mean age of 21. Group B, 9 patients, mean age of 24. All patients were diagnosed with moderate to severe inflammatory acne and had significant covering of spots on faces. Group A received only ClearLight therapy and group B were treated with ClearLight and following 2 sessions of Nlite therapy. The interval periods between each treatment were 1.5–2 months.

Results: The data is shown in following tables.

Group A:

#Cases	#ClearLight sessions	Response rate
5	5	20–30%
3	8	30–50%
2	11	>60%

Group B:

#Cases	#of Clear Light sessions	#Nlite sessions	Response rate
2	3	2	30–40%
2	8	2	60–80%
1	4	2	>80%
4	10	2	>80%

Conclusion: The level of positive response and acne clearance was higher and also the development of new acne was not observed in patients who used both systems.

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OBJECTIVE EVALUATION OF THE EFFECT OF NON-ABLATIVE PERIORBITAL WRINKLE REDUCTION WITH A DIODE LASER COMBINED WITH RADIOFREQUENCY DEVICE**Kei Negishi, Nobuharu Kushikata, Yukiko Tezuka, Kaori Takeuchi, and Shingo Wakamatsu***Department of Plastic and Aesthetic Surgery, Tokyo Women's Medical University Tabata NSK Building Clinic, Tokyo, Japan*

Background and Objectives: The efficacy and safety of the combination device of 900nm diode laser and 1 MHz bipolar radiofrequency was evaluated employing 3D analysis.

Study Design/Materials and Methods: Eighteen female with Fitzpatrick skin types III–IV enrolled in the study. Patients received three full-face treatments at three-week intervals with the Polaris[®] (Syneron, Inc, Israel) system. Laser and RF joule settings were 25–30/ and 85–95, respectively. Clinical evaluations were done at before and three months after three treatments subjectively by patients, objectively by physician, and by 3D analysis with Primos[®] (PRIMOS, Germany) analyzing Ra, Rz and wrinkle depth parameters.

Results: Seventeen of eighteen cases showed clinical improvements in periorbital wrinkles, and these were objectively verified as with 3D analysis in all parameters with statistical significance. Subjective evaluations, however, were slight lower than objective evaluation. In contrast, skin texture evaluations were higher or almost the same as objective results. Adverse effects were minor and only one case showed slight erythema that resolved within two days.

Conclusions: Non-ablative periorbital wrinkle reduction by Polaris was evaluated as safe and effective. Patient satisfaction, however, was not as high as objective evaluation results.

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VISIBLE RED LED PHOTOTHERAPY FOR SKIN REJUVENATION**Tokuya Omi, Seiji Kawana, Shigeru Sato, Masumi Okuyama, and Mitsuyoshi Honda***Queen's Square Medical Center, Yokohama, Japan, Nippon Medical School, Central Institute For Electron Microscopic Researches, Tokyo, Japan*

Background and Aims: Ablative and nonablative skin rejuvenation procedures demand deposition of heat damage in the upper dermis. The latest light-emitting diodes (LEDs) are now being used in the clinical setting for athermal skin rejuvenation. This study was designed to examine the ultrastructural and immunobiological changes induced in human skin by visible red LED energy.

Subjects and Methods: Six adult male volunteers (35–48 years old) who satisfied all study criteria had the skin over the medial fibula irradiated once per week for 8 weeks with a visible red (633 ± 3 nm) LED-based system, irradiance 105 mW/cm², 15 min/session, radiant flux of 94 J/cm². Skin biopsies were taken after the second and eighth treatment sessions and routinely prepared for transmission light microscopy (TEM). In addition, cultures were prepared from skin biopsies taken after the 8th session to assay the type and quantity of skin homing T-cells using the qualitative and quantitative PCR techniques.

Results: TEM after the 2nd session showed normal undamaged tissue with mild interstitial edema and vimentin fibers notable in fibroblasts. After the 8th session, the number of fibroblasts had increased with vimentin granules in their cytosol. Qualitative PCR showed the presence of both Th-1 and Th-2 T-cells, and quantitative PCR showed an increase in the numbers of both types of skin-homing T-cell, much more so for Th-2 than for Th-1.

Conclusions: The ultrastructural changes in human skin after 8 LED phototherapy sessions showed activation of fibroblasts. Visible red LED irradiation may also activate the skin-homing immune system.