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Vbeam® Treatment of Post-acne Redness

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Introduction

Post-acne redness is a condition that affects many patients. While numerous modalities exist to treat either active acne (topical and oral therapies) or post-acne scarring (various laser treatments), post-acne redness remains a therapeutically challenging problem.¹ Indeed, the postinflammatory redness can remain long after the acne is gone, up to 12 months or more in some patients.

The pulsed dye laser has long been recognized as the gold standard treatment for a variety of vascular lesions. While it was developed initially to treat port wine stains in infants, its versatility goes beyond debilitating birthmarks. Indeed, physicians today use the device for rosacea, leg veins, scars, stretch marks, and more. In addition, the Vbeam provides a valuable treatment modality for post-acne redness.

Method

Two hundred patients (skin types II-V) suffering from post-acne redness were selected.

The first Vbeam session involved the following parameters: 10 mm spot, 1.5 ms pulse duration, and 6.5 J/cm² with the Dynamic Cooling Device™ (DCD™) set with a spray of 20 ms and a delay of 20 ms. Subsequent treatment sessions involved longer pulse durations (3-6 ms), while the fluence level was typically increased by 0.5 J/cm².

Only the areas showing postinflammatory redness were treated in each session. The number of pulses depended on the total area of involvement.

Patients were treated a total of three to four times at three-week intervals. The number of treatments varied based on the severity of the acne causing the redness.

The clinical endpoint is for the post-acne redness to turn purple within two minutes of treatment.

Results

All patients benefited from a 30-50% reduction in the post-acne redness after the first treatment. After three or four treatments, a reduction in redness of 75-90% was achieved. In a number of patients, the post-acne redness disappeared altogether. The results seemed to vary based on the depth of the acne scarring. See figures 1 and 2.

Most patients suffered from light purpura after treatment, lasting approximately three to four days. This was a light pink purpura rather than the eggplant purpura seen when using older models of the pulsed dye laser. At the parameters noted above, there was no pigmentary change. There was no pretreatment or post-treatment care regimen.



Discussion

While effective in all areas of the face, bony areas such as the forehead or mandible seem to respond quicker than less bony areas such as the cheeks or nose.

One of the advantages of the Vbeam is that patients of all skin types can be treated. With integrated DCD, optimal epidermal protection is possible, even for skin types IV-VI.

In addition, patients can be treated no matter how long the postinflammatory redness has been present, and regardless of any oral or topical treatment regimens they are undergoing. Indeed, some patients were treated while taking roaccutane, with no side effects and good clinical results.

The Vbeam offers an ideal treatment modality for the of postinflammatory acne redness. Targeting oxyhemoglobin specifically, this pulsed dye laser offers patients a safe and effective treatment modality.

Bibliography

1. Alster, Tina S., et al. "Improvement of facial acne scars by the 585 nm flashlamp-pumped pulsed dye laser." *J. Am. Acad. Dermatol.* 35 (1996) 79-81.



Figure 1—Pretreatment



Figure 2—After 4 treatments

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