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## Vbeam® Treatment of Inflammatory Acne Vulgaris

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### Introduction

Acne vulgaris is a common disease that can lead to challenges in many areas of personal life. There are numerous treatment options currently available, but many require administration for at least six to eight weeks before benefits are observed. Existing treatments for acne are either topical or systemic and include benzoyl peroxide, retinoids, salicylic acid, antibiotics, hormone treatments, and Isotretinoin™. New therapies are needed that are both effective and well tolerated by patients. Recently, lasers and nonlaser light sources have shown promise in the treatment of common acne.

Early inflammatory acne lesions are characterized by the infiltration of the pilosebaceous duct with T-cells that are reactive to *P. acnes*. The association of the cells and the acnes yields inflammatory acne. *P. acnes* is the organism that can be killed through exposure to certain wavelengths of light. This concept is similar to that of exposure to sunlight, which serves as the original source of the theory of light treatment.

An optimum acne treatment would have long-lasting effectiveness in the control of active disease, improve acne scarring, have few local or systemic side effects, and be acceptable to patients. Experience in several practices suggests that a proportion of patients receiving low fluence pulsed dye laser treatments for inflammatory acne vulgaris have improved conditions after a single treatment of the face.

### Methods

Seven patients with Grade 3 acne participated in a four-month study. All had failed to achieve satisfactory control of their acne with traditional and conservative forms of therapy. Prior to each patient's first Vbeam treatment, we required that she/he discontinue all other acne therapies and not use them again for the duration of the study. Cleansing with plain soap was permitted.

Patients ranged in age and consisted of both four males and three females of Fitzpatrick skin types I-III. All patients were treated with a 10 mm spot size, 3 msec pulse duration, an energy fluence of 4.5 J/cm<sup>2</sup>, and Dynamic Cooling Device™ (DCD™) set at a 30 msec spray with a 30 msec delay, one pass with a 10% overlap. Each was treated once per month for three months.

### Results

Vbeam treatment of acne led to results that exceeded our expectations in terms of reduction in overall acne severity. Lesion counts were reduced by a minimum of 50% in five of the seven patients when examined one month after the third treatment. One patient failed to achieve a 50% reduction, and another patient exhibited little if any improvement. Those patients who had a background of erythema prior to the first treatment noted an improvement in their erythema along with a reduction in their acne lesions.



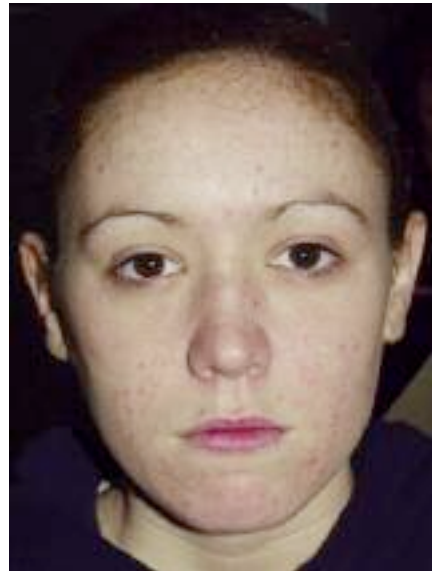
## Discussion

Experience within our practice has shown that the Vbeam pulsed dye laser is a successful treatment method for inflammatory acne. We continue to prescribe traditional treatment methods, including Isotretinoin™ (Accutane™), but more recently have received increased resistance from both patients and parents due to the concern over side effects. For this reason, laser therapy is a treatment option. We generally recommend a series of three treatments for optimal clearance, each with a one-month interval. We do not use a topical anesthetic such as LMX™ because the DCD has proven to be sufficient with regard to pain management. No test spot is performed.

In this small open study the Vbeam pulsed dye laser has proven to be successful in the treatment of inflammatory acne vulgaris. Although not controlled the results are exciting and warrant ongoing study of larger groups of patients with appropriate controls. Treatment results are more immediate than with topical or oral/systemic medications, and involve fewer side effects.



*Figure 1—Pretreatment*



*Figure 2—Post-treatment*

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