

Use of lasers and light-based therapies for treatment of acne vulgaris

Kavita Mariwalla, MD 1, Thomas E. Rohrer, MD 2 3 *

1Department of Dermatology, Yale School of Medicine, New Haven, Connecticut

2Department of Dermatology, Boston University School of Medicine, Boston, Massachusetts

3SkinCare Physicians of Chestnut Hill, Chestnut Hill, Massachusetts

email: Thomas E. Rohrer (Trohrer@SKINCAREPHYSICIANS.NET)

*Correspondence to Thomas E. Rohrer, SkinCare Physicians of Chestnut Hill, 1244 Boylston Street, Suite #302, Chestnut Hill, MA 02467.

Lasers in Surgery and Medicine

Volume 37, Issue 5 , Pages 333 – 342

ABSTRACT

Over the last two decades, lasers and light-based therapies have been developed to treat a wide variety of cutaneous maladies. Given the prevalence and number of patients who suffer from refractory acne, alternatives to existing care are constantly sought after. In this review, we discuss the evidence currently available to justify the use of laser and light-based modalities and conclude that in combination therapy, such approaches provide a safe and effective treatment for acne vulgaris. *Lasers Surg. Med.* 37:333-342, 2005. © 2005 Wiley-Liss, Inc.

Treatment of inflammatory facial acne vulgaris with combination 595-nm pulsed-dye laser with dynamic-cooling-device and 1,450-nm diode laser

Adrienne S. Glaich, MD 1, Paul M. Friedman, MD 1 2 *, Ming H. Jih, MD, PhD 1, Leonard H. Goldberg, MD, FRCP 1 3

1DermSurgery Associates, Houston, Texas 77030

2University of Texas School of Medicine, Houston, Texas 77030

3Department of Medicine (Dermatology), University of Texas, MD Anderson Cancer Center, Houston, Texas 77030

email: Paul M. Friedman (pmfriedman@dermsurgery.org)

*Correspondence to Paul M. Friedman, DermSurgery Laser Center, 7515 Main Street, Suite 210, Houston, TX 77030.

Presented at the 25th Annual Meeting of the American Society for Laser Medicine and Surgery, Lake Buena Vista, Florida, April 3, 2005.

Lasers in Surgery and Medicine

Volume 38, Issue 3 , Pages 177 - 180

KEYWORDS

acne vulgaris • 1,450-nm diode laser • laser therapy • pulsed-dye laser

ABSTRACT

Background and Objectives

The 585-nm pulsed-dye laser and the 1,450-nm diode laser have been found effective for the treatment of mild-to-moderate inflammatory facial acne. This study was designed to evaluate the efficacy and safety of the combined treatment with the 595-nm pulsed-dye laser and the 1,450-nm diode laser for inflammatory facial acne.

Study Design/Materials and Methods

Fifteen patients with inflammatory facial acne were treated with a combination of the 595-nm pulsed-dye laser and the 1,450-nm diode laser. Patients' subjective response to treatment was evaluated regarding improvement in acne, acne scarring, oiliness, and redness of the skin.

Results

All patients had reductions in acne lesion counts. Mean lesion counts decreased 52% ($P < 0.01$), 63% ($P < 0.01$), and 84% ($P < 0.01$) after one, two, and three treatments, respectively. Patients described moderate-to-marked improvement in acne, acne scarring, and post-inflammatory erythema. Adverse effects were limited to mild, transient erythema.

Conclusions

The combination of the 595-nm pulsed-dye laser and the 1,450-nm diode laser is safe and effective for the treatment of inflammatory facial acne, acne scarring, and post-inflammatory erythema. *Lasers Surg. Med.* 38:177-180, 2006. © 2005 Wiley-Liss, Inc.