

Low Fluence 1064nm Laser Hair Reduction for Pseudofolliculitis Barbae in Skin Types IV, V, and VI

Rafael Schulze, MD¹, Ken J. Meehan, PA-C², Antonia Lopez, PA-C², Kasina Sweeney, MD², Doug Winstanley MD², William Apruzzese, MPH³, E. Victor Ross, MD⁴

¹ Dermatology Department, Brooke Army Medical Center, Ft Sam Houston, Texas

² Dermatology Department, Naval Medical Center San Diego, San Diego, California

³ Palomar Medical Technologies, Boston, Massachusetts

⁴ Scripps Green Hospital, San Diego CA

Background and Objectives: To evaluate the efficacy of a 1064nm Nd:YAG laser using lower than traditional fluences (22-40 J/cm²) for pseudofolliculitis barbae (PFB) treatment.

Study Design/Material and Methods: Interventional study conducted on 22 patients (skin types IV, V, and VI) referred with pseudofolliculitis barbae refractory to conservative therapy. Investigators conducted five weekly treatments over the anterior neck using a 1064nm Nd:YAG laser at 12 J/cm². Pulse duration was 20 ms with 10mm spot size and contact cooling. Topical anesthesia was not used. Treatments were completed within 15 minutes of patient arrival. Patients presented for 2 and 4 week follow-up. The outcome measure was overall PFB reduction by assessing dyspigmentation, papule counts and cobblestoning. Evaluators used a Global Assessment Scale (GAS) to compare baseline to 4-week follow-up visit photographs. In addition to GAS, hair and papule counts were performed on a subset of five patients. Investigators recorded adverse effects using a Visual Analog and Side Effect Scale.

Results: Overall 83% improvement in the Global Assessment Scale ($P < 0.01$). There was a mean 59.5%, 91.2% and 75.6% reduction in dyspigmentation ($P < 0.03$), papule count ($P < 0.01$), and cobblestoning ($P < 0.02$) scores, respectively. In the 5 patient subset, there was an 80.5% and 89.5% reduction in hair and papule counts, respectively. Patients reported “1/10” in both adverse effects scales, described as mild discomfort and erythema.

Conclusions: Low fluence 1064nm laser treatment achieved significant reduction in pseudofolliculitis barbae. Subjects reported minimal pain without topical anesthesia and high degree of satisfaction.