

Thesis Title	A Split-faced, Comparative Study of Pulsed Dye Laser: 595 nm and Dragon's Blood Serum for Acne-induced Post Inflammatory Erythema
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ABSTRACT

Background: Postacne erythema (PAE), or post-inflammatory erythema (PIE), is a common sequela of acne characterized by persistent redness due to vascular dilation and dermal inflammation. This condition often affects patients' quality of life due to its cosmetic impact. Existing treatments, including topical agents and laser therapies, provide inconsistent results, highlighting the need for more effective solutions. The Pulse Dye Laser (PDL), which employs selective photothermolysis to target vascular structures, and Dragon's Blood Serum (DBS), a plant-based extract with anti-inflammatory and wound-healing properties derived from *Croton lechleri*, are promising options for PAE management. However, direct comparative evidence for these treatments is limited.

Objectives: This study aims to compare the efficacy of PDL and DBS in reducing erythema intensity in patients with acne-induced PAE. Secondary objectives include evaluating treatment-related side effects and patient satisfaction.

Methods: This prospective, randomized, split-face study involves 12 participants with acne-induced PAE. Each participant undergoes PDL treatment on one side of the face and DBS application on the other, with treatment sides assigned randomly. The study spans nine weeks, comprising baseline assessments, three treatment sessions at three-week intervals, and a one-month follow-up. Outcomes include clinical photography, erythema index measurements, and patient-reported satisfaction, pain, and perceived improvement. Statistical analyses, including paired t-tests and ANOVA, will determine the comparative effectiveness of the two treatments.

Keywords: Postacne Erythema, Pulse Dye Laser, Dragon's Blood Serum, Split-face Study, Vascular Therapy, Anti-inflammatory Treatment

