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A Global Review of Melanoma Follow-up Guidelines

•
The Role of Inflammation in the Pathology of Acne

•
Photopneumatic Technology Used in Combination with
Profusion Therapy for the Treatment of Acne

•
Impact of Botulinum Toxin A on the Quality of Life of Subjects
Following Treatment of Facial Lines

•
Easy as PIE (Postinflammatory Erythema)

•
Asymptomatic Petechial Eruption
on the Lower Legs



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Easy as PIE (Postinflammatory Erythema)

YOON-SOO CINDY BAE-HARBOE, MD; EMMY M. GRABER, MD

Boston University, Department of Dermatology, Boston, Massachusetts

ABSTRACT

Background: No term exists to date describing the phenomenon of pink-to-red discoloration after an inflammatory acne lesion. **Objectives:** To introduce new terminology into the dermatology literature to describe erythema often seen after inflammatory acne vulgaris and to present a treatment option for this type of erythema. **Methods:** New terminology describing erythema after inflammatory acne is addressed, and a treatment option for postinflammatory erythema is presented. **Results:** Postinflammatory erythema is a new, accurate descriptor of erythema that occurs after inflammatory acne. Additionally, pulsed dye laser treatment improved postinflammatory erythema in the authors' patients. **Limitations:** This paper only presents anecdotal cases. **Conclusion:** The addition of postinflammatory erythema to the dermatology literature may facilitate accurate communication among providers and direct laser treatment for postinflammatory erythema. (*J Clin Aesthet Dermatol.* 2013;6(9):46–47.)

The authors propose that a new term, post-inflammatory erythema (PIE), be added to the dermatology lexicon. In practice, many patients suffering from acne not only have the after effects of scarring (boxcar, rolling, and ice pick), but also have postinflammatory dyspigmentation. In darker skin phototypes, this postinflammatory dyspigmentation often presents as hyperpigmentation. However, in patients with lighter skin types (I–III), the postinflammatory dyspigmentation is often not hyperpigmentation, but instead discrete erythematous macules. Acne may not be the only cause of postinflammatory erythema, as any resolving cutaneous inflammatory process may have residual erythema. In contrast, erythematotelangiectatic rosacea is a separate diagnosis as the redness of rosacea is not part of a resolving process.

Postinflammatory erythema differs from postoperative erythema¹ that is described in the literature, as the latter attributes the erythema to a procedure and is found within a surgical scar. PIE refers to localized skin erythema following any type of skin inflammation, including the erythema that may result in a scar. Accordingly, PIE may reside on normal skin or within a scar, whereas postoperative erythema is limited to a surgical scar.

Accurate use of terminology is important to improve communication not only among dermatologists, but also when speaking to patients. This is particularly helpful as

many treatment options are available for the sequelae of acne.

Acne may resolve with postinflammatory hyperpigmentation (PIH), PIE, or true scars, which often cause a textural skin change. PIE is distinct from PIH because PIE describes residual erythema, while PIH describes subsequent pigment change. Both PIH and PIE tend to resolve over time, thus differing from a true scar that persists. Oftentimes, patients will have any combination of PIH, PIE, and true scars. Recognizing these distinctions is essential to adequately meet the patients' concerns over residual acne imperfections. The physician should ask the patient to identify the lesions of concern to direct treatment toward either PIH, PIE, or true scars, as each has a unique therapeutic approach.

The authors present two patients who, after successful treatment of their facial acne, had residual post-inflammatory erythema. For treatment of the PIE, the authors utilized the pulsed dye laser.

CASE 1

A 30-year-old woman with postinflammatory erythema secondary to acne was successfully treated with pulsed dye laser (Figures 1 and 2). Treatment was administered to the face using the pulsed dye laser (Vbeam Perfecta 595nm; Candela SPTL IB, Candela Laser Corp, Wayland, Massachusetts) at a fluence of 6.50J/cm², 3ms pulse

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ADDRESS CORRESPONDENCE TO: Yoon-Soo Cindy Bae-Harboe, MD; E-mail: yoonsoobae@yahoo.com