

Combination therapy for PIH in skin of colour

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Postinflammatory hyperpigmentation (PIH) is very common in skin of colour with up to 65% of African, Hispanic, and Asian populations experiencing symptoms from acne and up to 90% of patients experiencing symptoms from pseudofolliculitis barbae (PFB) [1,2].

PIH can be epidermal, dermal, or mixed, with epidermal being easier to correct and dermal, or mixed, being very difficult to treat due to the presence of deeper pigment.

For effective long-term treatment of PIH, the underlying skin problem leading to discolouration should be addressed, but for addressing the acute condition, new combination therapy of a high-powered 650-microsecond laser (Aerolase Neo Elite®) and topicals are proving to quickly and comprehensively clear PIH presenting at both epidermal and dermal levels.

The 650-microsecond Nd:YAG laser has been found to remove both dermal and epidermal melanosis in patients of all skin types. The laser penetrates deeper than q-switched lasers and produces much higher energy within the 650-microsecond pulse duration than traditional long-pulsed lasers. The unique combination of a short pulse and high energy provides efficacy, comfort, and a greater margin of safety, therefore reducing risks of burns and hyper- or hypopigmentation [3]. This new delivery of laser energy also allows for combination therapies, such as chemical peels or resurfacing devices, to be performed within the same treatment session. Alone or in combination with other therapies, the 650-microsecond 1064nm laser has been used successfully to treat melasma, acne, postinflammatory hyperpigmentation, pseudofolliculitis barbae, hair removal, acne keloidalis nuchae, and ageing skin in skin of colour [4].

Case report

A 22-year-old female with Fitzpatrick skin type VI, presented with acne and acne-induced PIH and scarring.



Firstly, prescriptions of tretinoin 0.05% cream and a combination of 4% hydroquinone, 1% hydrocortisone, and ascorbic acid was given for use on alternate nights, and 5% benzoyl peroxide with 1% clindamycin gel plus sunscreen to be used during the day.

Secondly, two laser treatments were performed: treatment one with two passes over the entire facial area at 21J/cm²; and treatment two with two passes over the entire facial area at 21J/cm² and one pass over the areas of PIH at 64J/cm². No numbing or anesthetic was used during treatment. Ice packs were applied to the treated area post treatment.

Immediately after the second laser treatment, a chemical peel (salicylic acid, lactic acid, citric acid, kojic acid and hydroquinone) was performed. Her topical medications were discontinued three days before laser treatment and resumed five days after.

Results were assessed with clinical photos and by the patient. Two weeks after the second laser treatment and chemical peel combination, the patient noted significant lightening of the PIH with complete visible clearance six weeks post-treatment. The patient was highly satisfied with her results, which were maintained when examined nine months post treatment.

Conclusion

Combination therapy with a 650-microsecond laser, chemical peel and

topical medications is an effective and safe treatment for PIH in skin of colour. The advent of the Neo Elite's high energy in a short pulse appears to help alleviate both epidermal and dermal PIH aiding in quicker resolution of the condition.

References

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Declaration of competing interests:

None declared