

Laser Based Skin Rejuvenation in Ethnic Populations

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SUMMARY

The application of lasers to treat darker-skinned patients is challenging because many skin conditions are particular to patients of nonwhite ethnicity. Laser treatments have proven to be effective for skin rejuvenation, inflammatory conditions, scar treatments, hair removal and the management of complex vascular malformations, however, these applications in patients with darker complexions remains a topic of great concern.

Overview: In this presentation, the author made a comparative analysis of the implementation of thermolytic and sub-thermolytic rejuvenation laser procedures in relation to the different characteristics of ethnic skin.

With the high risk of complications relative to lighter skin types, potential effects may be minimized with the use of longer wavelengths and lower energy settings. The longer pulse durations allow more energy to be delivered to the skin, and cooling devices help prevent burning.

Light based sources that have been successfully used for treating acne in ethnic patients include blue light, IPL and lasers, long-pulsed and short-pulse or Q-switched Nd:YAG 1,064 nm. Since ethnic skin usually contains a higher and denser concentration of melanocytes, there is greater chance of 'recruitment' of active melanocytes by stimulating the surrounding cells to produce more melanin, which migrates into the previously lesioned or hypo pigmented areas. The amount of repigmentation depends on either the presence of surrounding active melanocytes, which are capable of being recruited, or underlying dormant residual melanocytes capable of being stimulated.

In contrast to light phototypes, patients with darker skin types invariably experience PIH, which can last as long as a year, after thermal ablative laser resurfacing. The combination non-ablative laser helped cut patients' recovery times 50 to 70 percent. It also helped eliminate residual erythema and restore normal pigmentation faster. For skin tightening, a super-long Nd:YAG 1,064 nm laser pulse provides an exciting option. In our study, all 32 patients treated for cellulite and mild to severe abdominal skin laxity achieved a significant degree of improvement with no side effects.

Any laser system can potentially result in side effects like prolonged erythema, PIH, scars, infection and tissue damage when incorrectly used. These kinds of side effects and complications resulting from lasers can be significantly reduced if diagnosed and treated early.

Conclusion: With an increasing percentage of the population having darker skin types, laser practitioners must be aware of the unique needs, be able to exercise expert judgment in patient evaluation, and realize all risks and benefits of cutaneous laser procedures in this potentially challenging patient group.

SMOOTH/PIANO/PIXEL/ FRAC3- different combinations for different purposes

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Certain regions of the body show different signs of ageing. Women in particular suffer from aging skin on their neck, cheeks, upper arms and thighs. For the optimal laser treatment of these various areas, different approaches seem to be needed.

Several considerations should be taken into account, e.g. the requested result, the treatment target, possible local side effects or additional benefits, the patient's way of life and skin type. On the basis of these considerations and several case reports, this presentation shows different strategies and outcomes.

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