

Successful Treatment of Laser Induced Hypopigmentation with Targeted Narrow Band UVB Therapy

Mysore *et al*^[1] report a case of Q-switched 1064 nm neodymium-doped yttrium aluminium garnet laser-induced hypopigmentation successfully treated with narrowband ultraviolet B targeted Phototherapy. Darker skins have a high content of melanin in their basal epidermal layer. Since melanin has a wide range of UV absorption spectrum ranging from 250 nm to 1200 nm, all lasers working in this range are capable of targeting this pigment and lead to untoward pigmentary disturbances.^[2] This can be in the form of both hypo and hyperpigmentation. As post-inflammatory hyperpigmentation resolves with time and responds to various topical therapies, post-inflammatory hypopigmentation can be really difficult to treat and more distressing to the patient.

All sorts of treatment have been tried but the hypopigmentation is usually very resistant to treatment. Narrow band UVB therapy can be quite useful in these patients and helps patients who have shown resistance to other treatments. With the advent of targeted phototherapy, it has become possible to deliver high energies to localized areas without exposing the surrounding areas to the effects of this high dose treatment.

We have tried this in a number of conditions associated with post-inflammatory hypopigmentation including post-QS laser treatments. Post-inflammatory hypopigmentation associated with resolving psoriasis,

pityriasis versicolor, burns, etc., have shown quite promising results with this modality. In a few patients of hypopigmentation post-QL treatment that we tried this modality, some showed promising repigmentation within a few sessions whereas there were some who did not respond at all. It is possible that those showing minimal or no response may have had a greater injury to their melanocytes in the basal epidermal layer.

The best way to deal with this situation, however, is to try and prevent the development of hypopigmentation in the first place. We should not depend upon the western parameters for assessing the end point of treatment in our patients. During pigmented lesion laser treatment, the right threshold energy should be used. This is achieved clinically by either immediate lesional whitening or a sensation of warmth in the treated area. This in turn signifies proper laser absorption and heat or shock wave generation in the melanosomes. If the threshold is exceeded epidermal exfoliation and pin point bleeding occurs and this can latter lead to pigmentary disturbances particularly in darker skins.^[3]

REFERENCES

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