



A new ERA for global Dermatology 10 - 15 JUNE 2019 MILAN, ITALY

PIGMENTATION

## CELLULAR GRAFTING AS A TREATMENT FOR PUNCTATE LEUKODERMA SECONDARY TO LASER TONING – A CASE REPORT

Kenneth Fong<sup>(1)</sup> - Boon-kee Goh<sup>(2)</sup>

National Skin Centre, Dermatology, Singapore, Singapore<sup>(1)</sup> - Skin Physicians, Mount Elizabeth Medical Centre, Singapore, Singapore<sup>(2)</sup>

Background: Q-switched 1064nm neodymium-doped yttrium aluminum garnet (QS Nd:YAG) laser is frequently used for laser toning in the treatment of melasma. Punctate leukoderma is a common complication, resulting from overzealous treatment: too high a fluence and/or too frequent an intervention. Biopsies from leukodermic regions demonstrate reduced melanocyte numbers with attenuated dendritic processes and /or loss of melanocytes, a result of cell destruction when treatment exceeds the total toxic cumulative threshold. Various treatments for these regions have failed to demonstrate satisfactory repigmentation, and may paradoxically darken areas of melasma (e.g. with targeted phototherapy). Here, we report the use of cellular grafting as an effective treatment for punctate leukoderma post-QS Nd:YAG laser toning for melasma.

Observation: A 50-year-old gentleman presented with confetti-like leukodermic macules over bilateral cheeks after frequent, multiple sessions of QS Nd:YAG laser toning over 2 years for melasma. He had also been treated with intralesional tranexamic acid and bimatoprost microneedling with suboptimal results. Cellular grafting using the non-cultured epidermal cell suspension transplantation, which is effective in treating stable leukoderma including segmental vitiligo, piebaldism and post-burn depigmentation, was attempted for the leukodermic regions. Oral tranexemic acid was used in conjunction with judicious photoprotection to treat existing melasma. Early repigmentation of leukodermic regions was seen at 6 weeks, with good colour matching seen at 1 year. No complications were reported.

Key message: Cellular grafting is traditionally indicated for treatment of stable leukoderma like segmental vitiligo and piebaldism. To our knowledge, this is the first report of its use for treatment of punctate leukoderma secondary to laser toning. Mechanistically, cellular grafting restores melanocytes which are depleted in leukodermic areas. This represents a safe and effective treatment option with superior cosmetic outcomes.





International League of Dermatological Societies Skin Health for the World

