

Facial Partial Unilateral Lentiginosis Treated with Low-Fluence Q-Switched 1,064-Nm Neodymium-Doped Yttrium Aluminum Garnet Laser

Authors : En Hyung Kim

Abstract : Partial unilateral lentiginosis (PUL) is an unusual pigmentary disorder characterized by numerous lentigines grouped within an area of normal skin. Although treatment is not necessary, many patients with facial PUL seek medical help for cosmetic reasons. There is no established standard treatment for PUL. Conventional lasers may cause postinflammatory hyperpigmentation because keratinocytes are injured during the process. Also scarring, long downtime and pain are important issues. Case: A 19-year-old patient with facial PUL was treated with 1064-nm Q-Switched Neodymium-Doped Yttrium Aluminum Garnet (QS Nd:YAG) laser. The patient was treated at one-week intervals starting with a spot size of 6 mm, a fluence of 2.5 J/cm² and a pulse rate of 10 Hz with 1-2 passes of slow sliding technique with approximately 5-15 % overlap. The fluence was elevated to 3 J/cm² after the 4th session according to treatment response and patient tolerance. After 10 treatment sessions the lesions were remarkably improved. Discussion: Although the exact mechanism by which low fluence 1,064-nm QS Nd:YAG laser improves pigmentary lesions is unclear, the term 'subcellular selective photothermolysis' and 'melanocyte apoptosis and replacement' have been proposed. If appropriate measures are taken to monitor patient response during and after the procedure, low fluence 1064-nm QS Nd:YAG laser may achieve good cosmetic result in the treatment of PUL with a very safe and effective profile.

Keywords : laser toning, low fluence, 1064-nm Q-switched neodymium-doped yttrium aluminum garnet laser, partial unilateral lentiginosis

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020