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Freckles Removal using 1064 nm Q-Switched Nd:YAG Treatment

W.K. Book

Parameters:

Laser source:	Q-S Nd:YAG
Wavelength:	1064 nm
Fluence:	3.5 J/cm ²
Spot size:	6 mm
Frequency:	10 Hz

Treatment procedure:

A 44-year-old male patient with Fitzpatrick skin type IV having dark freckles over the full face was treated with Q-switched 1064 nm Nd:YAG laser to remove the freckles.

The treatment was started with milder settings: spot size: 8 mm, fluence: 1.5 J/cm², frequency: 2-5 Hz; the settings were increased, depending on the patient's skin tolerance, up to a fluence of 3.5 J/cm² and a frequency of 10 Hz, using the maximum available spot size. Manual scanning patterns were used to cover the whole area with freckles. First, the treated area was scanned horizontally, then vertically, and at the end the area was additionally covered with a circular scan. Stacking of pulses on the same spot should be avoided.

3-4 passes were performed over the treated area until erythema was observed or the patient felt too hot. Erythema typically disappears in a day or two. The patient's discomfort during the treatment was tolerable, without the need for any anesthesia or air cooling, but if a patient is more sensitive, cooling during treatment or a topical anesthesia before the treatment could be applied. Application of moistening gel to compensate for the water loss of the skin is recommended. Aside from this there are no special post-op precautions needed, except for general avoidance of sun exposure for 6 weeks (a thin layer of sunscreen protection is recommended). Three treatment sessions at 10-day intervals were needed to reduce the freckles.

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Before and after 5 months, right side

Before and after 5 months, left side