LASERS

HAIR REMOVAL FACILITATED BY A NEW, LARGE SPOT-SIZE HANDPIECE USING A COMBINED 3-WAVELENGHT DIODE LASER

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Introduction: Photoepilation is an effective, safe and easily applicable technology over the last few decades. Over the years, it has become extremely popular with an ever-growing demand and technological improvements. Achieving selective hair follicle destruction is difficult when treating multiple depths, hair densities and individuals of dark skin type (V–VI). A novel large spot sized diode (4cm2) of three wavelengths was tested to accommodate for safe, painless, efficient and short laser hair removal treatment.

Methods: 12 male patients (19 distinct areas, 600cm2 treatment grids), who met inclusion criteria, were treated with a combined 755nm, 810nm &1064nm wavelengths laser diode (Soprano Titanium, Alma Lasers Ltd. Israel). Inclusion criteria were skin types III-V with dark coarse, high-density body hair. Hair removal was carried out with a 4cm2 spot size in the Super Hair Removal (SHR) In-Motion technique for 100-114 seconds per grid. A total of 32kJ/grid was delivered, at 8-10Hz with fluence range of 7-10 J/cm2. An average of 5.79 (ranging 5-6) consecutive treatment sessions at 6-8 weeks intervals followed by a 6 months follow-up visit.
Photographs were obtained before first treatment session and at the follow-up visit (6 months after final treatment). Assessment of hair reduction was evaluated and scored according to three groups: successful (>80% reduction), responders (50 to 80%) and failures (<50%).

Results: The combined 755nm, 810nm &1064nm laser diode hair reduction at 6 months follow-up visit showed significant hair removal efficacy: 0% failures, 15.8% (3/19) responders and 84.2% successful (16/19). No adverse events were reported.

Conclusion: The combination of three laser wavelengths and a large spot size proved safe and effective for hair removal over large treatment areas. The large spot size enabled better coverage and short treatment sessions with effective energy delivery for hair removal.