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PSORIASIS TREATMENT WITH A 450 μ s PULSED DYE LASER IN COMBINATION WITH CRYOGEN SPRAY COOLING

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Background and Objective: Pulsed dye laser (PDL) treatment of psoriasis has achieved some success, but optimal parameters have not been determined. A new PDL (C-beamTM, Candela Corporation, Wayland, MA) was designed for treatment of psoriasis. This device has a 450 μ s pulse duration designed to target small psoriatic vessels with high radiant exposures delivered with or without cryogen spray cooling (CSC). The objective of this Phase I trial was to determine the safety/tolerance and efficacy of this laser for psoriasis treatment.

Study Design: Ten psoriasis patients received up to 5 treatments at 3 weeks intervals utilizing a C-beamTM PDL with the following parameters: $\lambda = 585$ nm; Pulse duration = 450 μ s; Spot size = 10 mm; Radiant energy = 6–8 J/cm²; CSC spurt = 10–30 ms; CSC delay = 10–20 ms. Digital photographs were used to evaluate erythema, thickness and degree of scaling of control and laser treated psoriatic plaques at each visit and up to 4 weeks after the final treatment.

Results: With the use of EMLA, PDL treatments were well tolerated. Patients experienced several days of scabbing followed by resolution. Preliminary efficacy assessment indicated some improvement in the psoriatic plaques.

Conclusion: PDL may offer a safe and effective alternative for treatment of localized psoriasis. Further optimization of laser parameters may improve results.