

Use of a Novel Small-Tip IPL Handpiece for Treatment of Discrete Pigmented and Vascular Lesions

MIN-WEI CHRISTINE LEE MD^a, E. VICTOR ROSS MD^b, SCOTT DAVENPORT^c

^a *The East Bay Laser & Skin Care Center, Walnut Creek, CA*

^b *Dermatology Division, Scripps Clinic, San Diego, CA*

^c *Cutera, Inc., Brisbane, CA*

BACKGROUND

A small-tip intense pulsed light handpiece is posited to optimize treatment of discrete, superficial pigmented and vascular lesions by offering targeted delivery of 500 to 635 nm light. This is coupled with controllable cold sapphire delivery. While the large spot size of traditional IPL devices offers rapid coverage, it has limitations in terms of visibility and uniform contact with the skin in contoured areas of the face. Also, the ability to treat patients with darker or tanned skin is limited, as the background pigment can preclude the use of sufficient fluence. Thus, a handpiece that delivers energy through a compact tip approximating the size of the lesion would be a significant advance.

PURPOSE

The purpose of this study is to evaluate the utility of a small-tip intense pulsed light handpiece (AcuTip 500, Cutera, Inc.) in the treatment of discrete lesions.

METHODS AND MATERIALS

Thirty-two patients ranging in age from 27 to 58 and with Fitzpatrick skin types I through IV, were treated using the AcuTip 500 handpiece. The 6.3 mm cooled sapphire tip was employed in one of two settings: vascular mode with a 10°C tip and pigmented mode with a 20°C tip. Lesions

on the face, hands and/or arms were treated with fluences ranging from 6 to 20 J/cm². One of two regimens was used: a single treatment with higher fluences and one pass that allowed for erythema, edema and mild desquamation; or six treatment sessions with lower fluences and multiple passes that kept erythema and edema to a minimum. Clinical endpoints were immediate darkening of pigmented lesions or persistent bluing and/or contraction of telangiectasia or cherry angiomas.

RESULTS

With the more aggressive approach of higher energy in a single treatment, 60 to 70% improvement was achieved in darker pigmented lesions, and 50% clearance of vessels. With the more conservative approach of lower energy over six treatments, 60 to 70% improvement was achieved in pigmented lesions, and 50 to 60% clearance of facial telangiectasia.

CONCLUSIONS

Precise placement of green-yellow light is an effective approach to treating discrete, superficial pigmented and vascular lesions. The ability to confine the light to the lesion can enhance the ability to effectively treat patients with darker and mildly tanned skin without sacrificing safety.

**SINGLE TREATMENT
PROTOCOL**



Veins



Lentigines



Angioma



Telangiectasia

**MULTIPLE TREATMENT
PROTOCOL**



Telangiectasia



Lentigines and Telangiectasia

THE DEVICE

