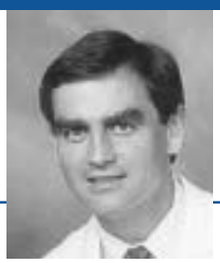
CLINICAL BULLETIN

No. 7



Claude S. Burton, III, M.D.

GentleLASE® Treatment of Café au Lait

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Introduction

Café au lait macules are benign though occasionally distressing forms of congenital macular hyperpigmentation. We recently had the opportunity to treat such a lesion with the GentleLASE long pulse Alexandrite laser.

The patient is a 13-year-old female noted at birth to have macular hyperpigmentation on the calf (see Figure 1). The lesion had not changed since birth. The child and her parents sought consultation in our office to determine if the lesion might be removed safely with laser technology. After discussing the biology of café au lait macules with the patient and her family, we proceeded to do a small test site with the GentleLASE laser, which operates at a 755 nm wavelength and a fixed 3 ms pulse duration. Since we were specifically targeting melanin in this instance, the Dynamic Cooling Device™ (DCD™) was turned off. A single 8 mm test site was delivered at 40 J/cm^2. At these settings, the immediate laser-tissue interaction produces an audible snap and slight graying or frosting of the epidermis. Post-operatively, topical antibiotic ointment was applied continuously to the test site until the lesion had fully re-epithelialized. On follow-up 12 weeks later, the treatment test site revealed excellent clearing of the macular hyperpigmentation and no untoward effects. The remainder of the lesion was then treated with a total of 15, 8 mm spots at 755 nm, 40 J/cm^2, 3 ms pulse width in a nonoverlapping fashion. Again, the Dynamic Cooling Device was turned off. EMLA, a numbing cream, was used preoperatively. The patient denied discomfort from the procedure. A photograph taken at eight weeks' follow-up shows excellent clearing of the treated portion of the lesion.

Discussion

The 755 nm long pulse Alexandrite laser has proved extremely effective at removing unwanted hair and treating leg veins in fair-skinned patients provided the epidermis is precooled with the Dynamic Cooling Device to prevent epidermal injury from melanin absorption at this wavelength. However, by turning off the Dynamic Cooling Device, one can take advantage of melanin absorption to treat a variety of pigmented neoplasms, including café au lait macules and simple

GentleLASE® with DCD

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lentigines, among others. Certainly in the management of café au lait macules, the large spot sizes available with this particular laser have proved to be advantageous. Studies are under way to evaluate the response of café au lait macules that have been resistant to therapy with Q switched lasers.

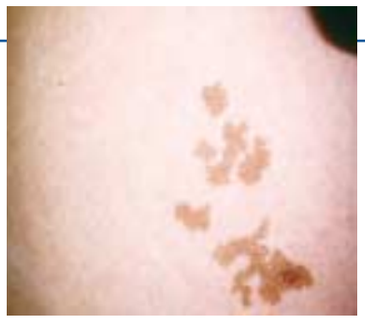

Figure 1—Pretreatment

Figure 2—Post-treatment

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