CLINICAL BULLETIN

No. 16

Eliot Battle, M.D.

Hair Removal for Darker Skin Types with the GentleYAG®

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Introduction

At Cultura, our treatment philosophy is simple and straightforward: 1) We offer the most effective treatments possible based on available technology, and 2) We do not tolerate side-effects.

For our laser hair removal patients of color, this focus has required us to invest in the GentleYAG laser from Candela. While Nd:YAG technology has long been recognized to facilitate the treatment of skin types IV–VI, treatment speed and permanency using 1064 nm energy on dark skin patients has not matched the results more consistently observed for lighter skin types using shorter wavelength lasers.

The GentleYAG boasts 26,333 watts of peak power, giving it fluence, spot size and pulse duration specifications unequalled by any other laser. These treatment specifications, it was promised, would provide me the technology to treat my patients with the same speed, efficacy and ease-of-use that Candela promotes for its laser-of-choice for lighter skin types, the GentleLASE®.

This paper examines the performance of an Nd:YAG 1064 nm laser (the GentleYAG from Candela) for permanent hair reduction for all skin types, focusing on skin types IV, V and VI.

Method

Using the correct treatment parameters is critical with any laser, but especially with Nd:YAG energy on darker skin types. As with all hair removal lasers, the clinical endpoint in laser hair removal is perifollicular edema and erythema.

At Cultura, we like to keep laser hair removal simple not only to facilitate treatments, but also to minimize the potential of side-effects. It has been our experience that most lasers treat coarse hairs well, but that the real difference in laser hair removal efficacy is the ability to treat the finer, thinner hair.

When treating larger areas (legs and backs), we typically incorporate the GentleYAG's largest spot size (18 mm), which is the largest one found on any Nd:YAG laser. We treat at 10 ms pulse duration, as leg and back hairs tend to be of larger diameter in general. The Dynamic Cooling Device™ (DCD™) is typically set at 30/20/0 and fluences range from 18-30 J/cm^2, darkest to lightest skin types.

On the face, we'll use the GentleYAG's 12 mm spot (still larger and faster than the 10 mm spot typically found on other Nd:YAG's), a 10 ms pulse duration and 30/20/0 DCD. Fluences range from 34–40 J/cm^2 on lighter skin types down to 24–26 J/cm^2 on our darkest patients. On subsequent treatments for resistant hairs, we use a 3 ms pulse duration and adjust fluences slightly downward across skin types.

Results

The attached photography demonstrates the efficacy typically observed using the GentleYAG from Candela on a number of patients. In general, the treatments were well tolerated by the patient, in part due to Candela's means of epidermal protection, DCD, which actively cools the skin with a short spray of cooling cryogen prior to every laser pulse. Additionally, DCD protection is technique-independent, meaning that regardless which technician is firing the laser, DCD will offer the same level of patient protection with each and every laser pulse.

with DCD

GentleYAG®

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Discussion

As a pioneer in the research and development of lasers and light-based devices for the treatment of ethnic skin, I am pleased with the performance of the GentleYAG laser with DCD cooling from Candela. We are now able to deliver fast, efficacious and comfortable laser hair removal to people of color that matches the treatment experience of lighter skin types.

The only downside of the GentleYAG seems to be with its operating requirements. The machine, probably because of the power it is packing, requires a well-ventilated treatment room to remove the excessive heat generated by the laser. Unfortunately, Cultura is located in a commercial building, and we are unable to improve airflow to our treatment rooms. As a result, the GentleYAG often overheats and forces my technicians to wait to complete a large-area procedure. such as a back or full leg.

Our solution to this problem has been to purchase two GentleYAGs, and we simply switch lasers when necessary.

The promise of greater hair removal permanency with the GentleYAG is indicated from the initial clinical results observed using the laser, although longer-term studies should be conducted to substantiate this claim.

At Cultura, we use many different lasers for hair removal. The GentleYAG is our choice for darker skin patients with fine hair and for speed of treatment for large areas. Its overall ease-of-use makes the GentleYAG one of our favorite lasers for our patients of color.

Figure 1. **Pretreatment.**

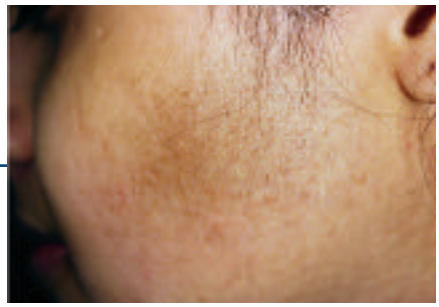

Figure 1. **Post-treatment.**

Figure 2. **Pretreatment.**

Figure 2. **Post-treatment.**

Figure 3 . **Pretreatment.**

Figure 3. **Post-treatment.**

Figure 4. **Pretreatment.**

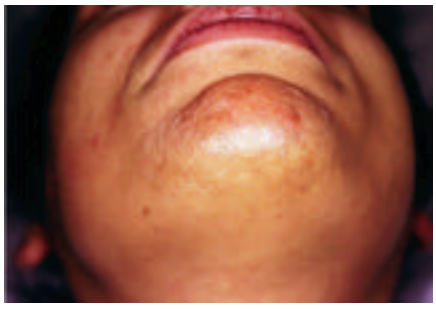

Figure 4. **Post-treatment.**

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Treatment parameters are subject to change—please consult your sales representative or clinical consultant, or visit www.mycandela.com to obtain current information regarding the use of your Candela device.

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