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Smoothbeam™ Diode Laser for Periorbital Dermal Remodeling

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Introduction

In treating Asian skin with the Smoothbeam 1450 nm diode laser, certain characteristics must be considered:

Asian skin has a range of color from light to dark.

Even light Asian skin has a relatively high melanin content.

Asian skin shows a fairly low tolerance for unopposed cryogen cooling.

Asian skin is vulnerable to scarring, and its soft, transparent quality exacerbates the appearance of spots and scars.

Using the Smoothbeam in our practice in Bangkok, we have treated patients for periorbital dermal remodeling. Thus far, we have treated 30 patients with the Smoothbeam, averaging two treatments per patient. This comparatively large sample size has yielded a significant amount of clinical data, which we share in this paper.

Typically, when treating Asian skin, the safe and conservative fluence zone is between 12-14 J/cm². For light-skinned Asians, we typically use Dynamic Cooling Device™ (DCD™) cryogen setting 1, and with dark-skinned Asians, DCD setting 2. Light Asian skin may have more issues of cryogen intolerance with lower fluences, as evidenced by hypersensitivity to cold cryogen injury. Cryogen-related erythema is more likely with DCD setting 3.

Some of the most common wrinkle areas we treat with the Smoothbeam laser are around the eyes. We have had the most dramatic improvement in the periorbital area. We use 12-13 J/cm² around the eyes. In all these areas, our treatment technique is to fill in the whole area tightly without overlapping.

Before treatment, we inform patients that immediately after treatment, they will have bumps like little insect bites around the eyes; that these will last for a few days; that they may turn into larger papules temporarily; and that compared to more aggressive treatments for wrinkles, this is still a “minimal downtime” procedure.

Results

Smoothbeam produces such dramatic results with wrinkles that both the treating physician and the patients are very happy. The most dramatic results have been in the periorbital area.

We have seen no blisters, scarring, or permanent hyperpigmentation with the Smoothbeam. However, we have seen the temporary mild purple-blue discoloration. This is not an epidermal effect but, rather, a dermal effect from edema. We see this not just under the eyes, but also on the bony areas, possibly because of light reflection there. It looks like a bruise but can easily be covered by makeup.



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Discussion

Our results with the Smoothbeam in treating Asian skin for wrinkles have been very positive. The “minimal downtime” with Smoothbeam treatment provides an excellent alternative to more aggressive treatments. Patients report the improvement in their appearance to be “dramatic,” most noticeably in the periorbital area.

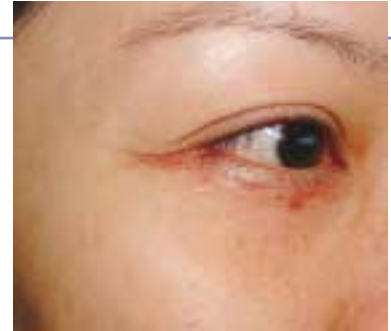


Figure 1—Pretreatment



Figure 2—One month after two treatments

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