Second Thoughts On Preoperative And Postoperative Co_2 Laser Care

"Second Thoughts" focuses on ways in which aesthetic plastic surgeons have modified or even dramatically changed their techniques over time to achieve optimal results. Contributors are Aesthetic Society members and other recognized experts.

The most common questions that I am asked about CO_2 laser skin resurfacing pertain to preoperative and postoperative care. This topic seems to be a leading source of contention among plastic surgeons. Actually, most of the care relies on common sense, and, once principles are understood, the plastic surgeon can add to or subtract from the basic formulas.

I originally used a closed dressing approach. I used Second Skin® and held this in place with Surginet®. I found that the Second Skin® would not stay in place but would migrate across the face and become a nuisance to the patient. I then tried Flexzan®. I believed that this would be very convenient and easy for my patients. I would apply the Flexzan® immediately after surgery and expect it to last 5 to 7 days. Unfortunately, this was rarely the case. The Flexzan® would loosen and separate within 48 hours, usually in the middle of the night. This was both anxiety-provoking for the patient and fatiguing for myself and my staff.

At the suggestion of some of my colleagues, I tried using a blow dryer to further enhance the stick-ability of Flexzan®. However, the blow dryer was not only uncomfortable for the patient but would denude the newly rejuvenating skin and perhaps lead to hindrance of further reepithelialization. The Flexzan® provided a moist, dark, warm, environment with plenty of nutrient. This may have accounted for some of the early *Staphylococcus* and *Candida* infections that I saw after laser skin resurfacing. Also, after the initial 48 hours of edema, the Flexzan® would loosen as the volume beneath it contracted. Some patients complained about the claustrophobic effect of having this "mummy-like" dressing applied to their face.

I began to explore open techniques. Originally, patients were instructed to apply Vaseline® throughout the day. In addition, they applied compresses of diluted vinegar in chilled water every 2 hours. Besides the unpleasant odor, the patient would have a noticeably bright erythema for a couple of weeks. It was at this point that I developed my current regimen.

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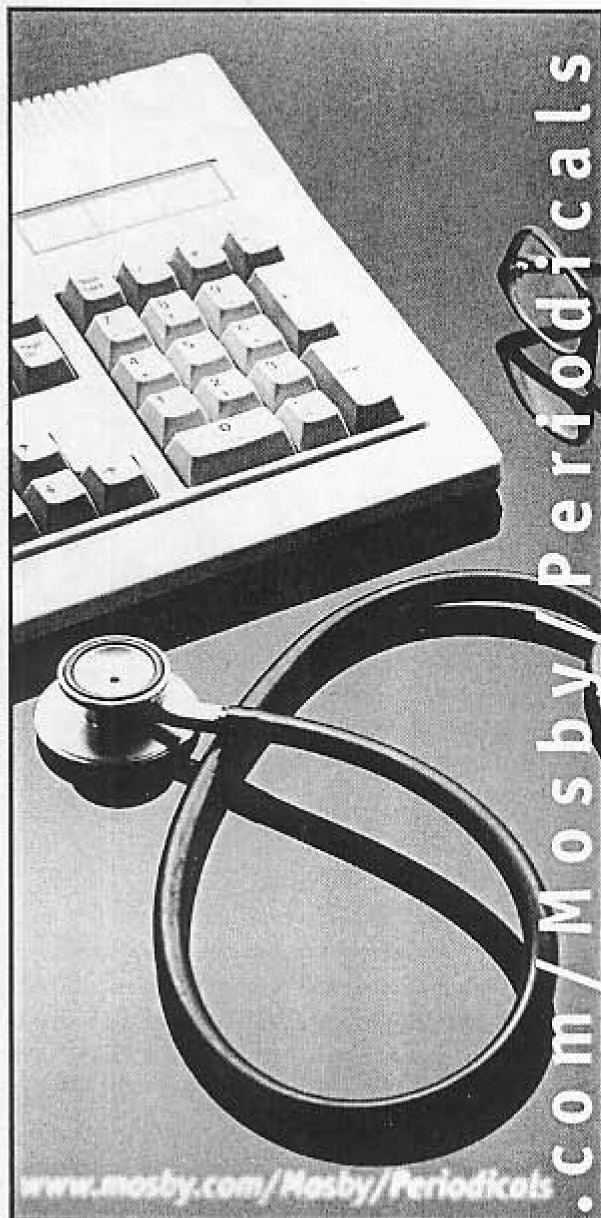
The following system has worked very well for me and my patients and can serve as a basic guideline for the laser surgeon. My postoperative regimen has resulted in a low infection rate among my patients and only two minimal scars. I attribute this success to the following:

Two days before surgery patients begin taking Valtrex® 500 mg by mouth two times daily for 7 days, which helps prevent herpes infection. Twenty-four hours before surgery patients begin receiving Keflex® 500 mg by mouth two times daily for 7 days. To help prevent nausea, patients take Zofran® the morning of surgery. Skin types I and II receive no preoperative preparation. Type III skin will be treated with hydroquinone 4%, hydrocortisone 1%, and Retin-A® 0.125% two times daily 2 weeks before surgery. Skin types IV and V will be treated with the same regimen, but treatment will begin 4 to 6 weeks before surgery.

I am a proponent of the open dressing technique of post-laser resurfacing.[1] In fact, at the February 1997 meeting of the American Society for Laser Medicine and Surgery in Phoenix, AZ, it was demonstrated that closed dressing techniques show a significant increase in postoperative infections.[2] I also believe that the open technique permits the patient to be more actively involved with their postoperative care. For the first 24 hours, the patient applies cold compresses using soaked gauze or a washcloth for 15 minutes every hour until bedtime. A thick layer of chilled Vaseline® is applied at all times. After 24 hours



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the patient will apply compresses of 50/50 hydrogen peroxide/water to be alternated every hour with Domeboro® compresses (one pack dissolved in 16 oz. of cold water). The peroxide serves to help loosen and remove the postoperative debris and detritus. The Domeboro® is an astringent and helps to reduce swelling.

Also, on rising and just before going to sleep, the patient will wash with a mild medicated skin cleanser to soothe the resurfaced area. Most patients will be completely reepithelialized in 6 to 7 days. Then patients apply (1) hydrocortisone 1% cream twice daily to help soothe the skin for 2 weeks, (2) a cream moisturizer throughout the day to prevent and avoid dryness, and (3) a number 45 or greater sun block. Patients often ask in what order they should apply these items. The order as listed is correct. As a last step, they can apply makeup.

The patient should not attempt to remove scabbing, scaling, or dry skin. These will separate with time and a proper moisturizing regimen. Following these steps should enable you and your patients to achieve positive, long-lasting results from laser skin resurfacing. ■

References

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2. Sriprachya-Apunt S, Fitzpatrick RE, Goldman MP, Smith SR. Infections, complicating carbon dioxide laser resurfacing for photoaged facial skin. Dermatol Surg 1997:23:527-35.

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