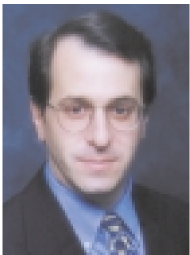
COSMETIC Clinic

Photo courtesy of The Neostrata Company

Back to Basics: Peeling

BY KENNETH BEER, M.D.



I attended a number of interesting courses during this year's American Academy of Dermatology (AAD) Annual Meeting. I registered for a 2-day self-assessment course in dermatopathology (I admit to being a dermpath geek) and think this may be the best course for sheer knowledge I've ever taken. However, I also attended some great lectures as I snuck from room to room. One of my favorites was a lecture by Dr. Gary Monheit, who will be President of the American Society for Dermatologic Surgery (ASDS) next year *(disclosure: Dr. Monheit is a friend).*

During his lecture, Dr. Monheit discussed chemical peels and how they remain an integral part of the cosmetic dermatology practice. Peels, it seems, are this year's hot topic. He began his talking by asking the audience how many still use chemical peels in this age of lasers and intense pulsed lasers. The answer was remarkable — almost every hand in the room was raised. As the concentrations of peels increased, fewer hands were raised and by the time he got to phenol peels, there were only a couple of attendees admitting to performing them. But, the review of peels was great and I thought I would try to share some of it here.

Peels act by different mechanisms to remove skin at different layers with different outcomes, risks and downtimes. The main peels utilized by dermatologists remain trichloracetic acid and glycolic, with a few others that occupy niches.

POPULAR PEELS

Trichloracetic acid (TCA) peels work by coagulating protein. Typical strengths used vary from 15% up to 50% (although when treating acne scars, higher strengths were used with great success). TCA peels may or may not contain dyes to make them blue. These peels are applied to the skin after a thorough cleansing with acetone or other degreasing agent. If this step is omitted, a very uneven peel may result. TCA peels are applied with a 2x2 gauze or a large cotton swab, and care should be taken to apply even amounts to the skin. When I do these peels, I will tend to taper the strength by applying a slightly lower strength to the ears and neck in order to avoid a major transition zone that I find to be the mark of an amateur.

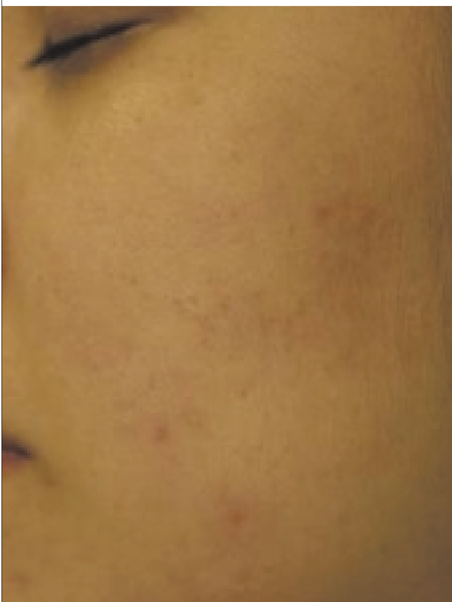
TCA peels form a frost that is self-determined. No neutralization is required and once the frost is obtained, the peel has finished. Because the peel can be uncomfortable, we typically use ice water and fans when peeling up to 35% TCA. For higher concentrations, you might consider the use of oral diazepam (Valium) or other drugs.

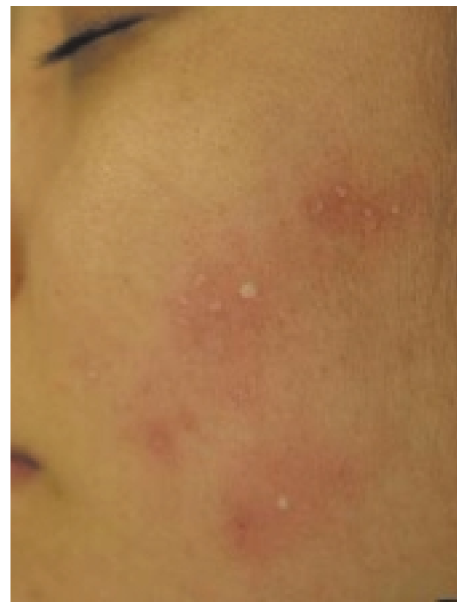
TCA may also be combined with other peels to provide deeper peeling.

The most common of these is Jessner's solution. When this is done, the Jessner's solution is applied first because it acts to open up the skin for better penetration by the TCA. This may allow lower concentrations of TCA to penetrate more deeply and evenly.

When I do a TCA peel on a patient, I discuss the opportunity to peel other areas, such as the backs of the hands, to make the face and hands match.

The second type of peel that is very popular among dermatologists is glycolic acid. This acid is different from TCA in a variety of ways. The most significant is that it is a time dependent peel that needs to be neutralized. Unlike TCA, this product can be left on and will continue to peel. It may be applied in various strengths and is typically applied for a few minutes and then neutralized with either dilute baking soda or water. Higher concentrations may be used to peel to the mid dermal layers.



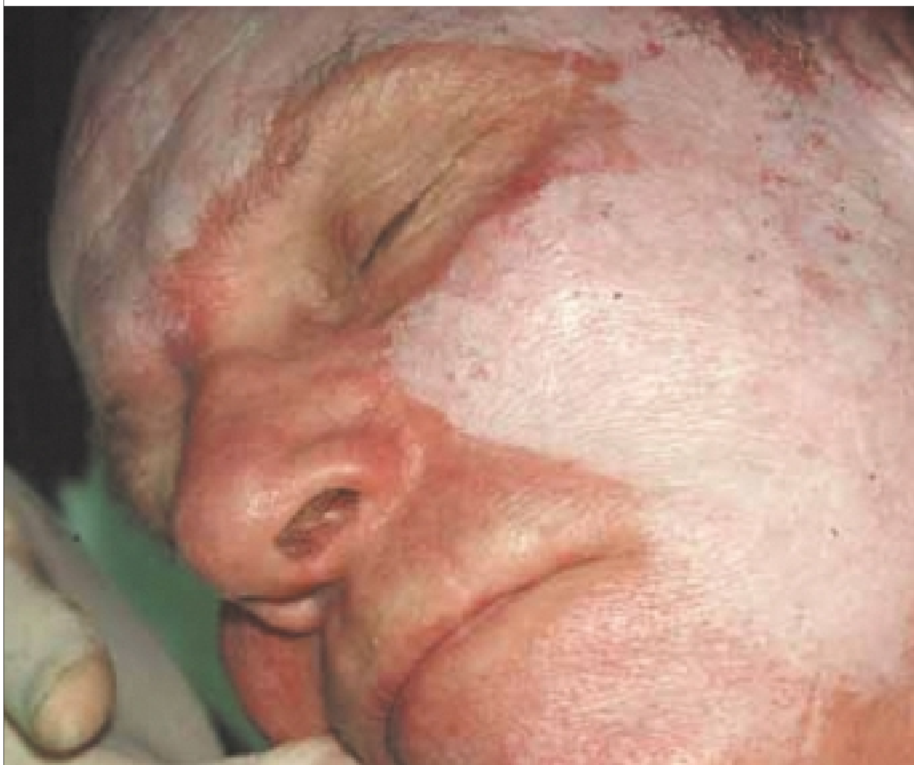


TCA peel 65% to 100% rubbed into ice pick scars. Patients underwent three to five treatment sessions for chemical reconstruction of skin scars.
Photos courtesy of Gary Monheit, M.D.

AT HOME PEELS

There is currently a large market for at-home peels. In fact, I constantly have patients asking me about the at-home peels — a force that has driven me to develop home peel systems with a staged series of peel pads.

When a patient asks me about products that are available for home use, I recommend them to patients with acne-prone skin or with photodamage, as long as the skin is not sensitive or dry. I instruct patients to start with mild, low-strength acid peels at first and work up from there as needed. And, I recommend that patients use them twice-a-week, again as long as their skin is not very sensitive or dry.



TCA frosting protein precipitations. This can be an indicator of completion of chemical reaction and depth of chemical destruction. It can not be neutralized.
Photo courtesy of Gary Monheit, M.D.

THE BENEFITS OF PEELS

One beneficial aspect of peels is that they can be customized for each type of patient. For instance, a patient who has significant photodamage and can have several days of downtime can be treated with a 35% TCA peel. Another patient who cannot afford to have this type of downtime may be treated with several 20% TCA peels spaced out several weeks or months apart.

Peels can also be included with a variety of other procedures performed in a cosmetic dermatology office. Most of my peel patients are interested in low impact cosmetic procedures and typically receive Botox, Captique, Restylane or another procedures so that the superficial and mid-dermal signs of aging are treated in one or two visits.

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Lustra-AF is indicated for the gradual treatment of ultraviolet induced dyschromia and discoloration resulting from the use of oral contraceptives, pregnancy, hormone replacement therapy, or skin trauma.

CONTRAINDICATIONS:
Lustra-AF is contraindicated in any patient that has a prior history of hypersensitivity or allergic reaction to hydroquinone or any of the other ingredients. The safety of topical hydroquinone use during pregnancy or in children (12 years or under) has not been established.

WARNINGS:
A. CAUTION: Hydroquinone is a depigmenting agent, which may produce unwanted cosmetic effects if not used as directed. The physician should be familiar with the contents of this insert before prescribing or dispensing this medication.
B. Test for skin sensitivity before using Lustra-AF by applying a small amount to an unbroken patch of skin and check within 24 hours. Minor redness is not a contraindication, but where there is itching, vesicle formation, or excessive inflammatory response further treatment is not advised. Close patient supervision is recommended. Contact with the eyes should be avoided. If no lightening effect is noted after two months of treatment, use of Lustra-AF should be discontinued. Lustra-AF is formulated for use as a treatment for dyschromia and should not be used for the prevention of sunburn.
C. Sunscreen use is an essential aspect of hydroquinone therapy, because even minimal sunlight sustains melanocytic activity. During treatment and maintenance therapy sun exposure should be avoided on treated skin. The sunscreens in Lustra-AF provide the necessary sun protection during therapy. During and after the use of Lustra-AF, sun exposure should be limited or sun-protective clothing should be used to cover the treated areas to prevent repigmentation.
D. Keep this and all medications out of the reach of children. In case of accidental ingestion, contact a physician or poison control center immediately.
E. WARNING: Contains sodium metabisulfite, a sulfite which may cause serious allergic reactions (e.g. hives, itching, wheezing, anaphylaxis, severe asthma attack) in certain susceptible persons.
F. On rare occasions, a gradual blue-black darkening of the skin may occur. In which case, use of Lustra-AF should be discontinued and a physician contacted immediately.

PRECAUTIONS: SEE WARNINGS
A. Pregnancy Category C: Animal reproduction studies have not been conducted with topical hydroquinone. It is also not known whether hydroquinone can cause fetal harm when used topically on a pregnant woman or can affect reproductive capacity. It is not known to what degree, if any, topical hydroquinone is absorbed systemically. Topical hydroquinone should be used in pregnant women only where clearly indicated.
B. Nursing mothers: It is not known whether topical hydroquinone is absorbed or excreted in human milk. Caution is advised when hydroquinone is used by a nursing mother.
C. Pediatric usage: Safety and effectiveness on pediatric patients below the age of 12 years have not been established.

ADVERSE REACTIONS:
No systemic reactions have been reported. Occasional cutaneous hypersensitivity (localized contact dermatitis) may occur, in which case the medication should be discontinued and the physician notified immediately.

OVERDOSAGE
There have been no systemic reactions reported from the use of topical hydroquinone. However, treatment should be limited to relatively small areas of the body at one time, since some patients experience a transient skin reddening and a mild burning sensation which does not preclude treatment.

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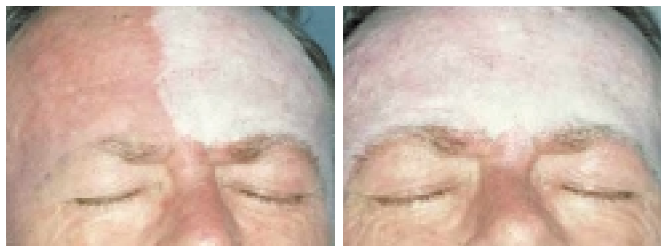

Jessner's solution and 35% TCA peel with appropriate frosting.
Photos courtesy of Gary Monheit, M.D.

AVOIDING ADVERSE EFFECTS

Some precautions must be used when treating patients with chemical peels. The risks associated with peels increase as the strength of the peels increase. If your patient has a history of cold sores, peels may precipitate an outbreak and prophylaxis should be used. Pretreatment with a retinoid will help to condition the skin for a peel (and also make it more sensitive to the peeling agent) and many dermatologists will utilize this regimen prior to a peel.

Perhaps the most important thing to discuss with a potential peel patient is the down time associated with a peel. For a low strength glycolic peel, there is typically no down time. For anything upward of a 25% TCA peel, warn the patient to expect 3 to 5 days of peeling that may be unsightly. Some dermatologists will use intramuscular triamcinolone (Aristocort, Kenalog, Triacet) to shorten this window. Another strategy is to employ several low-strength (20% TCA) peels spaced out over the span of a week.

One other aspect of post-peel patient care that we find helpful is to give patients a small bag prepared with products that are needed, such as mild moisturizers, mild cleansers and a business card so people can call with questions.

GETTING STARTED

For dermatologists starting a cosmetic practice, I would recommend spending some time with one of the peel experts, such as Dr. Monheit or Dr. Brody, as well as reading one of the excellent books on the subject.

Start by peeling lightly — use 20% TCA. Make sure that your consent and post-operative care sheets are in place before you treat your first patient.

Peels offer a great way to rejuvenate the epidermal and upper dermal layers. There are some great textbooks about them and the talks at the ASDS and AAD are great starting points for those of you who have not yet incorporated them into your practice. ■

Dr. Beer is a private practice in West Palm Beach, FL. He's also Clinical Instructor in Dermatology at the University of Miami, a Consulting Associate in the Department of Medicine at Duke University, and Section Chief of Dermatology at Good Samaritan Medical Center in West Palm Beach.

Disclosure: *Dr. Beer is a speaker for SkinMedica, does clinical trials for Medicis, and does clinical trials and speaks for Collagenex and Dermik.*