Applications for Topical Corticosteroid Solutions

A roundtable discussion, Part II of II

Andrew Krakowski, MD: Patient adherence is a practical challenge. That's something we acknowledged when we were discussing barrier repair therapies. *(See Part 1 of the Roundtable discussion online at PracticalDermatology.com.)* Frequently, as in the case of atopic dermatitis, we ask patients to use multiple products, at multiple times, for multiple purposes.We know that this will cost them more money and require them to spend more time applying treatments.

We also know that these requirements are burdensome for some, and that they can contribute to poor adherence. But we also know that even with relatively simple regimens, some patients are non-adherent.

So we moved on to address the importance of recommending patient- and condition-appropriate vehicles. If application is convenient, patients may be more likely to stick with a particular regimen and see better long-term results. This same logic applies to the selection of a topical corticosteroid for inflammatory dermatoses.

As some of the relatively "new" vehicles like hydrogels and thermolabile foams have come to market, we have seen fewer choices in some of the conventional formulation types, such as solutions. For example, Texacort solution is a hydrocortisone 2.5% solution that we were asked to discuss today. Let's talk a little bit about this particular formulation and vehicle choice.

Neal Bhatia, MD: Hydrocortisone is the mildest class of the corticosteroids. As such, it has its place in some presentations, particularly for more mild to moderate disease and in what we've called "thin skin" areas, such as the intertriginous areas.

"If application is convenient, patients may be more likely to stick with a particular regimen and see better long-term results."
– Andrew Krakowski, MD

TABLE 1. CORTICOSTEROID POTENCY

Brand name	Generic name
CLASS 1—Superpotent	
Clobex Lotion/Spray/Shampoo, 0.05%	Clobetasol propionate
Cormax Cream/Solution, 0.05%	Clobetasol propionate
Diprolene Ointment, 0.05%	Betamethasone dipropionate
Olux E Foam, 0.05%	Clobetasol propionate
Olux Foam, 0.05%	Clobetasol propionate
Temovate Cream/Ointment/Solution, 0.05%	Clobetasol propionate
Ultravate Cream/Ointment, 0.05%	Halobetasol propionate
Vanos Cream, 0.1%	Fluocinonide
Psorcon Ointment, 0.05%	Diflorasone diacetate
Psorcon E Ointment, 0.05%	Diflorasone diacetate
CLASS 2—Potent	
Diprolene Cream AF, 0.05%	Betamethasone dipropionate
Elocon Ointment, 0.1%	Mometasone furoate
Florone Ointment, 0.05%	Diflorasone diacetate
Halog Ointment/Cream, 0.1%	Halcinonide
Lidex Cream/Gel/Ointment, 0.05%	Fluocinonide
Psorcon Cream, 0.05%	Diflorasone diacetate
Topicort Cream/Ointment, 0.25%	Desoximetasone
Topicort Gel, 0.05%	Desoximetasone
CLASS 3—Upper Mid-Strength	
Cutivate Ointment, 0.005%	Fluticasone propionate
Lidex-E Cream, 0.05%	Fluocinonide
Luxiq Foam, 0.12%	Betamethasone valerate
Topicort LP Cream, 0.05%	Desoximetasone

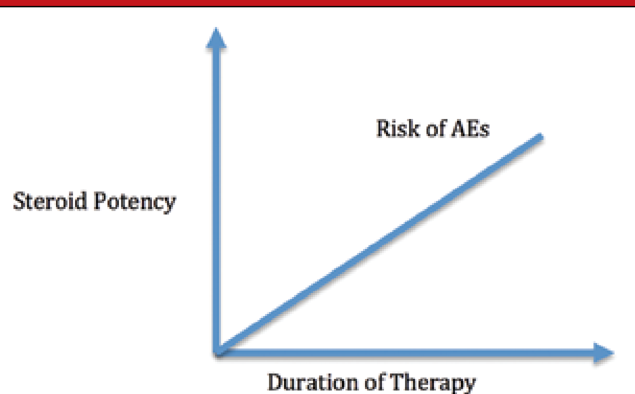
Table adapted from National Psoriasis Foundation, psoriasis.org

Table continued on next page.

TABLE 1 (CONTINUED)	
CLASS 4—Mid-Strength	
Cordran Ointment, 0.05%	Flurandrenolide
Elocon Cream, 0.1%	Mometasone furoate
Kenalog Cream/Spray, 0.1%	Triamcinolone acetonide
Synalar Ointment, 0.03%	Fluocinolone acetonide
Westcort Ointment, 0.2%	Hydrocortisone valerate
CLASS 5—Lower Mid-Strength	
Capex Shampoo, 0.01%	Fluocinolone acetonide
Cordran Cream/Lotion/Tape, 0.05%	Flurandrenolide
Cutivate Cream/Lotion, 0.05%	Fluticasone propionate
DermAtop Cream, 0.1%	Prednicarbate
DesOwen Lotion, 0.05%	Desonide
Locoid Cream/Lotion/Ointment/Solution, 0.1%	Hydrocortisone
Pandel Cream, 0.1%	Hydrocortisone
Synalar Cream, 0.03%/0.01%	Fluocinolone acetonide
Westcort Cream, 0.2%	Hydrocortisone valerate
CLASS 6—Mild	
Aclovate Cream/Ointment, 0.05%	Alclometasone dipropionate
Derma-Smoothe/FS Oil, 0.01%	Fluocinolone acetonide
Desonate Gel, 0.05%	Desonide
Synalar Cream/Solution, 0.01%	Fluocinolone acetonide
Verdeso Foam, 0.05%	Desonide
CLASS 7—Least Potent	
Cetacort Lotion, 0.5%/1%	Hydrocortisone
Cortaid Cream/Spray/Ointment	Hydrocortisone
Hytone Cream/Lotion, 1%/2.5%	Hydrocortisone
Micort-HC Cream, 2%/2.5%	Hydrocortisone
Nutracort Lotion, 1%/2.5%	Hydrocortisone
Texacort Solution	Hydrocortisone
Synacort Cream, 1%/2.5%	Hydrocortisone

It's worth noting that we still sometimes face patient and/or parent reluctance to the use of topical corticosteroids. When it is appropriate to use a low-potency topical corticosteroid, we take away some of the fears in mothers and even some patients that worry about using steroids on the head and neck or all of these other supposed risks that are now disproven but that the public sometimes worries about.

TABLE 2. POSSIBLE CORTICOSTEROID RISKS



The risk of local adverse effects increases with the duration of therapy and the potency of the topical corticosteroid. Potential local adverse effects of topical corticosteroid use are skin atrophy, striae, prominent telangiectasias, perioral dermatitis, acne, increased spread of fungal infections, hypopigmentation, rosacea, cataracts, and glaucoma. Proper prescribing and use of topical corticosteroids is associated with very low incidence of adverse effects.

— Drake LA, Dinehart SM, Farmer ER, et al. Guidelines of care for the use of topical glucocorticosteroids. American Academy of Dermatology. J Am Acad Dermatol 1996;35:615-9.

This formulation has a broad indication for corticosteroid-responsive dermatoses. We know that it is used in pediatric patients. I understand that there are pediatricians using it in infants.

Joshua Zeichner, MD: A hydrocortisone solution is suitable for the diaper area. Being low potency, it can be used in an occluded area for short periods of time, without the worry of the adverse events associated with high potency steroids.

Of course, patients and parents should be educated that occlusion increases the potency of a topical corticosteroid and that, generally, they should not to use tight-fitting diapers or plastic pants on a child being treated in the diaper area in order to reduce unintended increase in potency.

Dr. Krakowski: We have seen some reassessment of the conventional thinking about vehicles. There used to be some arbitrary designations, such as "gels works best for oily skin" and "foams are best for hair-bearing skin." But now, many prescribers make a more individualized consideration about convenience, ease of application, patient preference, and other practical considerations when choosing a topical therapy. We talked about that to some extent in our discussion of barrier repair creams. Given

> "A low potency corticosteroid may be useful for the maintenance phase of atopic dermatitis management. Once a flare is controlled, a low potency topical corticosteroid can help maintain clearance with lower risk of adverse events."
> – Diane Hanna, DNP

that, are there settings in which a topical corticosteroid solution could have some practical benefits?

Dr. Bhatia: I understand the Texacort solution has a watery feel, so it's not oily or gooey.

I would probably use it on the scalp. The scalp is the perfect spot for a class 7 steroid. So many dermatologists have been trained to use corticosteroids cautiously in the head and neck region. Texacort comes in a dropper bottle, which allows a very targeted application to the scalp or behind the ears.

Dr. Krakowski: How about in the ear—for eczema in the ear canal. A drop applied around or into the ear canal would probably be a very convenient formulation for that specific anatomic area.

Dr. Zeichner: I would consider using a solution anywhere you want to cover a large area quickly. Besides spreadability, it has the advantage of being quickly absorbed.

Dr. Krakowski: Based on the product's label, there appears to be alcohol in the formulation. Are there concerns about stinging or skin irritation?

Diane Hanna, DNP: I would not use anything with alcohol on a very inflamed flare of atopic dermatitis in a child. Sometimes a child's skin is so inflamed and sensitive that they simply cannot tolerate any degree of irritation. You don't want to take a chance of causing any discomfort because then the child is reluctant to let the parent apply anything; the parent is reluctant to apply anything.

For older patients or for skin that is not very inflamed, any irritation would likely be transient and may be acceptable.

Dr. Krakowski: Kids with atopic dermatitis are frequently colonized with Staph even if they rarely come in with true skin infections. Consequently, one of the things I am always concerned about is if you provide the caregiver with a 454-gram tub of triamcinolone 0.1% ointment, what happens if someone inadvertently scoops out some medication, touches the child's colonized skin, and then dips that hand back into the tub? Is the tub now contaminated? And do I want to risk that? You want to provide sufficient quantity of product to last the required treatment course, but you run that risk of contamination. From my perspective, the solution – coupled with a dropper bottle – may minimize this concern. There is no need to touch the applicator to the skin directly. A spray might be another option for convenience; you could cover a large surface area quickly, and there would be minimal risk of cross contamination because you're not touching the applicator directly to the skin.

Dr. Hanna, DNP: A low potency corticosteroid may be useful for the maintenance phase of atopic dermatitis management. Once a flare is controlled, a low potency topical corticosteroid can help maintain clearance with lower risk of adverse events.

Another option may be for use after cosmetic procedures. We had some patients who underwent CO_2 laser resurfacing and subsequently had vasovagal reactions in the office as a result of the intense heat, about 20 minutes after treatment. So we moved away from applying simply a petrolatum ointment post-operatively to using some topical steroids to cool patients off very quickly, to calm some of that inflammation.

The same goes for post hair-removal, especially in the bikini area.

Dr. Bhatia: Especially in laser hair removal, you are targeting treatment to the hair follicle, and you don't want to or need to affect the skin. But sometimes you do have a little collateral damage of the skin, and a corticosteroid could address that without interfering with the laser's work.

Dr. Krakowski: It sounds like a low potency topical steroid solution could have a range of potential applications in the dermatology clinic, from the obvious inflammatory steroid-responsive dermatoses like eczema or psoriasis into some more cosmetic uses.

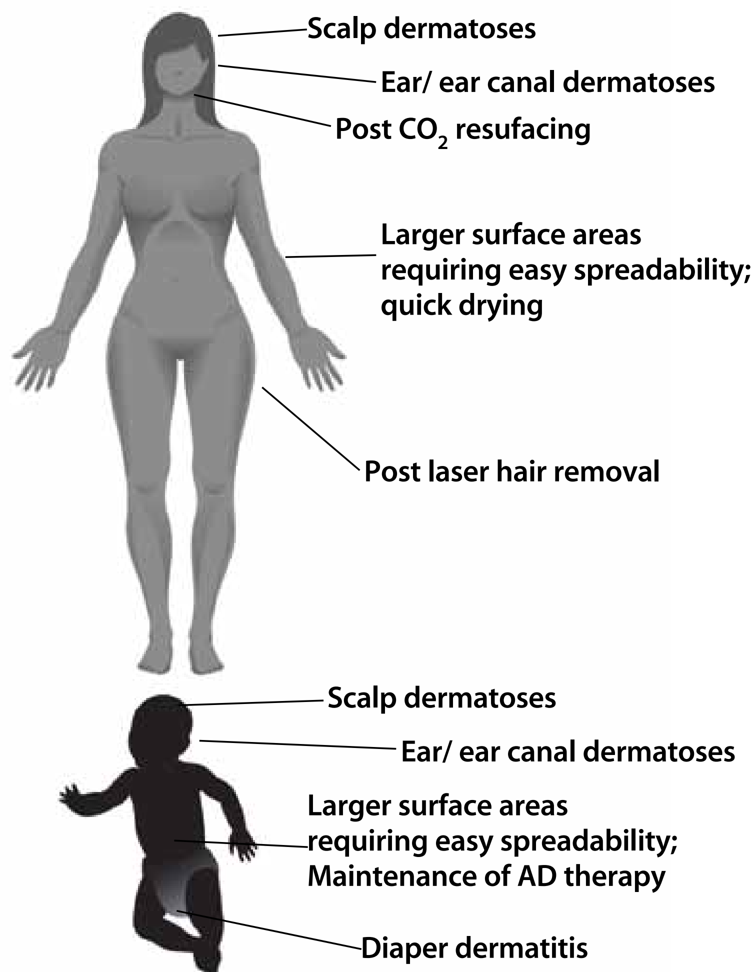
TABLE 3. POTENTIAL BENEFITS OF A TOPICAL CORTICOSTEROID SOLUTION

- Low likelihood of product contamination.
- Liquid easy to apply to larger surface areas.
- Suitable for application to hairy skin.
- Applicator facilitates dosing recommendations (i.e., 1 drop in the ear).
- Can be directly applied to hard-to-treat areas like ear canal.
- Watery feel, quick drying, not sticky.

Each clinician has her or his own approach to the use and selection of topical corticosteroids—we could spend 10 hours on that discussion alone—but the consensus here seems to be that when a low potency topical corticosteroid is appropriate, the hydrocortisone solution may offer some unique potential advantages over other vehicle forms.

We know that the risk of adverse events associated with corticosteroids increases as a function of both increasing steroid potency and increased duration of therapy; therefore, it is usually in the best interest of our patients to provide therapies with the lowest effective dose for the shortest length of time. ■

TABLE 4. POSSIBLE USES FOR CORTICOSTEROID SOLUTION



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Coming soon: Neal Bhatia, MD discusses topical corticosteroid solutions.

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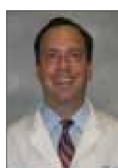
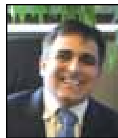
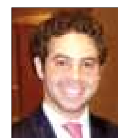


Andrew C. Krakowski, MD, FAAD is Assistant Clinical Professor of Pediatrics & Dermatology at Rady Children’s Hospital, San Diego and University of California, San Diego (UCSD) and is founder/editor of www.EczemaCenter.org. He has no financial or consultancy relationships with any relevant companies and agreed to serve as an objective moderator for this roundtable.



Neal Bhatia, MD, FAAD is on staff at Laser Skin Care Center in Long Beach, CA. He serves on several AAD committees and just completed a one-year vacant term on the AAD Board of Directors. He is widely published and active in professional societies.

Diane Hanna, DNP is Director of Clinical Research at Midwest Modern Dermatology in Leawood, KS.



Joshua Zeichner, MD, FAAD is Assistant Professor at Mount Sinai Medical Center in Manhattan and Director of Cosmetic and Clinical Research in the Dermatology Department there.