Eczema Boot Camp: Addressing the Burden of Severe Refractory Atopic Dermatitis

An intensive regimen consisting of numerous concurrent topical therapies yields encouraging results.

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Although atopic dermatitis (or eczema) is not an easy condition to manage, those with mild to moderate disease can often take solace in the fact that with basic gentle skin care and a few topical medications, they are usually able to combat most flares successfully. For more severe cases, however, finding successful interventions can be a challenge due to the cumbersome nature of the treatments, fewer options, and the overwhelming feeling that even when the disease is better controlled, it always recurs. There are many roadblocks to treatment for these patients, including the necessity of frequent office visits, poor compliance, time-consuming counseling, and parental reluctance to use both topical and systemic therapies. The extent to which each of these factors inhibits care is unknown; nevertheless, the fact remains that atopic dermatitis is a serious disease that requires timely intervention. The burden of atopic dermatitis on the US healthcare system has been estimated at roughly $1 billion per year. More importantly, however, eczema places a burden on the quality of life of sufferers that has shown to be greater than that of hypertension and diabetes.1 Thus, the need for aggressive treatment has never been more urgent.

“BOOT CAMP”

For patients with severe refractory eczema, a combination of approaches is often required to treat the disease. Intensive topical therapy with wet dressings and topical corticosteroids has been shown to result in a rapid controlling of disease.2 5 Additionally, the introduction of antihistamines and antibiotics may also be required to yield the desired response. In our experience, a two-week intensive plan consisting of a combination of topical approaches constitutes a safe and effective approach for flares and controlling the disease. Our approach is very similar to that published by Dabade et al. in their recent review on the efficacy of wet dressings for atopic dermatitis in the inpatient setting; however, intensive topical therapies can also be done successfully at home.5 Moreover, attempting to address all facets of the underlying flare at the same time appears to optimize the effects of each individual therapy. We’ve informally called this the eczema “boot camp” regimen.

Before going on to the specifics of the regimen, one important point bears mentioning. While the regimen itself is highly efficacious, it only works if parents/patients are convinced that it is worth pursuing and adhering to. It is therefore essential that parents receive proper education and instructional handouts on all aspects of the treatment regimen. A good atopic dermatitis handout provides information on the condition, detailed instructions on how to properly do bleach baths, and where/how to apply or take any medicated ointments, emollients, or oral antihistamines. When counseling patients who might be candidates for the boot camp regimen, emphasize the importance of a plan that treats all aspects of the disease simultaneously: dry skin, itch, inflammation, and infection/colonization.

Without the proper education, parents might be prone to object to some elements or even the idea of such an
THE REGIMEN
The boot camp regimen consists of many elements and very specific instructions of care from morning until evening. It first requires that patients take a 10-minute bleach bath in lukewarm water nightly; no soap is needed. To decrease bacterial colonization, add 1/2 cup of plain Clorox bleach to a full tub of bath water. After bathing, the patient should pat skin dry. As soon as possible, within seconds to minutes, the patient should then apply a topical anti-inflammatory agent (generally a mid-potency topical corticosteroid), followed by a bland emollient. The choice of which agent depends on the age of the patient and site of application. Patients should be applying emollients on top of medications twice daily, even when not taking a bath. Also, it is important to stress to patients and parents to avoid water-based lotions, choosing instead ointments or creams when possible during the day. At night, patients can then use wet wraps.

While the basic template for the regimen is relatively simple, there are conditional details that will vary based on each patient’s unique disease state. Patients who have infections, for example, should be started on an anti-staphylococcal systemic antibiotic such as cephalexin. If patients appear to be secondarily infected, it is important to obtain a bacterial culture to help guide treatment with appropriate antibiotic agents. If patients experience itching at night, taking hydroxyzine or diphenhydramine 30 minutes before bedtime can bring relief for some, or at least enough sedation to facilitate sleep. For itching during the day, fexofenadine and/or cetirizine in the morning can be helpful, particularly in patients where allergic urticarial reactions trigger eczema flares.

When selecting a topical steroid, be sure to account for the age of the patient and vehicle tolerability. For infant patients, favored agents are fluocinolone oil, fluocasmide ointment, 2.5% hydrocortisone ointment, or triamcinolone 0.025% ointment, whereas for toddlers and older children triamcinolone 0.1% ointment is a common choice. Creams are not as effective as ointments but if patient compliance to ointments is poor, creams can be used instead of ointments in some cases. Without patient adherence, the regimen will most certainly fail. The decision to add antihistamines—and subsequently which specific agents—should also depend on several factors, such as whether the patient has prominent pruritus and sleep disturbance. In older children and adults, for example, doxepin can be considered as a powerful antihistamine that, despite its classification as a tricyclic antidepressant, has an affinity for histamine receptors almost 800 times greater than that of diphenhydramine.

Another key component to ensuring success with the boot camp regimen are follow-up appointments. One way to check in on patients is when you call them with culture results after two to three days. This helps reinforce the role of bacterial colonization and infection, which, if present, allows you to further encourage the family to continue with the intensive topical therapies and bleach soaks. Also, scheduling a two-week follow-up visit to check the progress also may affect the patient’s willingness to adhere to the regimen. If the patient has been compliant, often they should be mostly clear plus or minus some residual hot spots. At that point, one can taper the topical steroids to only on any residual areas or perhaps add a slightly stronger steroid for any stubborn areas or hot spots (like hands and feet) that might be persistent. The frequency of bleach baths and wet wraps can also be tapered.

In the rare event that intensive topical therapy is not working, systemic agents or phototherapy may be required. These should be administered with the help of an experienced dermatologist or pediatric dermatologist and require appropriate monitoring and follow up. Some systemic therapies to consider include oral cyclosporine, mycophenolate mofetil, and methotrexate. NB-UVB can also be a safe and somewhat effective option for some older patients.

CONCLUSION
Atopic dermatitis can be debilitating and affect every aspect of the patient’s life from sleep to psychosocial functioning. Despite this, many patients in the community are often undertreated due to improper basic gentle skin care, misconceptions surrounding topical steroids, and a lack of understanding regarding the role of bacterial colonization and secondary infection in the disease. A “boot camp” regimen, with all of its multi-faceted components, can serve to shut down flaring skin and energize the patient and their family, empowering them to regain control.

Beyond simply “managing the symptoms,” experience shows that many of these patients maintain that control long past the boot camp regimen, suggesting that “breaking the back” of eczema may have more than a psychological effect. It is exciting to speculate on the ramifications of such an approach actually altering the long-term progression of the disease. While we do not yet know if this hope will be borne out, in the meantime, the immediate improvement is ample reward.
**Feature Story**

Based on highlights from the “What’s Boiling Over in Atopic Dermatitis” symposium at the 2012 Summer Meeting of the American Academy of Dermatology Meeting in Boston, MA.

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