Management of Atopic Dermatitis: Guideline from the American Academy of Dermatology

Key Points for Practice

- An essential nonpharmacologic component of treatment is regular application of moisturizers after bathing.
- If the atopic dermatitis has not responded to good skin care and moisturizers, topical corticosteroids are recommended, usually with application twice per day.
- If the atopic dermatitis has not responded to steroids, or if it occurs in sensitive areas, in areas with steroid-induced atrophy, or in patients using topical steroids uninterrupted over a long period, then topical calcineurin inhibitors are recommended.

From the AFP *Editors*

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Atopic dermatitis, a common and chronic skin condition, affects persons of all ages. Topical therapy is the mainstay of treatment, and in severe cases, it is often combined with systemic therapy. This guideline from the American Academy of Dermatology provides information about the treatment of atopic dermatitis, including the effectiveness, dosing, and adverse effects of nonpharmacologic and pharmacologic interventions.

Nonpharmacologic Interventions

Xerosis, which is caused by a dysfunctional epidermal barrier, is a key feature of atopic dermatitis. Moisturizers can help stop transepidermal water loss and the development of xerosis, and also reduce the severity of the condition and the need for pharmacologic treatment (good-quality, patient-oriented evidence). Therefore, moisturizers should be an essential part of atopic dermatitis treatment. Bathing can affect skin differently; it can hydrate skin and remove scale, crust, irritants, and allergens, but it can also cause more transepidermal water loss if water is left on the skin to evaporate. For this reason, moisturizers should be used after bathing to improve hydration (limited-quality, patient-oriented evidence).

Based on consensus opinion, case studies, or disease-oriented evidence, bathing is also recommended as part of treatment and maintenance regimens, but no best practices (frequency or duration) exist. It is recommended that use of nonsoap cleansers (with a pH that is neutral or low, that are hypoallergenic, and that do not contain fragrances) be restricted. Limited data exist regarding the use of oils, emollients, or other additives in bath water; therefore, they cannot be recommended. In addition, the use of acidic spring water has limited evidence and cannot be recommended.

Wet-wrap therapy, performed on an outpatient or inpatient basis, is an option for quickly reducing the severity of atopic dermatitis. It is often used in patients with significant flare-ups or with recalcitrant disease. Wet-wrap therapy, alone or in combination with a topical corticosteroid, can be recommended in persons with moderate to severe atopic dermatitis to decrease the severity of the condition and to reduce water loss during flare-ups (limited-quality, patient-oriented evidence).

Topical Corticosteroids

Topical corticosteroids are a mainstay of atopic dermatitis treatment. More than 100 randomized controlled trials have proven their effectiveness. Based on good-quality, patient-oriented evidence, topical corticosteroids are recommended for persons whose lesions have not responded to good skin care and moisturizers. Although the reported incidence of adverse effects is low, most trials do not follow patients long term for possible problems. The potential for adverse effects, including hypothalamic-pituitary-adrenal axis suppression, should be considered, especially in children.

Based on limited-quality, patient-oriented evidence, applying the cream or ointment twice per day is the most common practice and is the general recommendation;

however, evidence indicates that applying some more potent corticosteroids once per day may be just as effective. For acute flare-ups, daily use, for up to several weeks at a time, is recommended until lesions are significantly better and thinner. For maintenance therapy, intermittent use (once or twice per week) on areas that commonly flare up is recommended. This helps prevent relapses and is more effective than using emollients alone. Monitoring for cutaneous adverse effects (e.g., purpura, telangiectasia, striae, focal hypertrichosis, acneiform eruption, skin atrophy) in patients using potent corticosteroids for long periods is recommended. If a patient has a fear of adverse effects from corticosteroids, it should be acknowledged and addressed to try to improve treatment adherence and to avoid possibly undertreating the condition.

Topical Calcineurin Inhibitors

Topical calcineurin inhibitors are a second class of anti-inflammatory agents that became available in 2000. Based on good-quality, patient-oriented evidence, they are recommended and are effective for short-term, long-term, and maintenance therapy. They are particularly useful for treating atopic dermatitis recalcitrant to steroids; atopic dermatitis in sensitive areas, such as the face; areas with steroid-induced atrophy; and for patients using topical steroids uninterrupted over a long period. Off-label use of tacrolimus 0.03% (Protopic) or pimecrolimus 1% (Elidel) can be recommended in patients younger than two years who have mild to severe atopic dermatitis. Topical calcineurin inhibitors are also recommended for use as a steroid-sparing agent on actively affected areas.

Intermittent (two to three times per week) use of topical calcineurin inhibitors for maintenance therapy on areas that often flare up is recommended, because it has been shown to effectively prevent relapse. It is more effective than using emollients alone, and for helping reduce the need for topical corticosteroids. There is no evidence to indicate a need for routine monitoring of serum tacrolimus and pimecrolimus levels in patients with atopic dermatitis; therefore, it is not recommended (good-quality, patient-oriented evidence).

Limited-quality, patient-oriented evidence shows skin burning and pruritus as possible adverse effects of these agents, particularly when used on inflamed skin; therefore, it is important to consider using topical corticosteroids first to decrease these types of reactions from topical calcineurin inhibitors. The possibility of having these types of reactions should be discussed with the patient. Topical calcineurin inhibitors can be used with topical corticosteroids in a variety of regimens; concomitant use may be recommended.

According to consensus opinion, case studies, and disease-oriented evidence, there has been no predictable increase in cutaneous viral infections with topical calcineurin inhibitor use for up to five years. Because safety data for the use of topical calcineurin inhibitors over longer periods are lacking, physicians should still counsel their patients about this possible risk. Physicians should have knowledge of the U.S. Food and Drug Administration boxed warnings (e.g., rare cases of malignancy) regarding the use of topical calcineurin inhibitors in persons with atopic dermatitis, and should discuss this with patients when necessary.

Topical Antimicrobials and Antiseptics

Because they have a compromised physical barrier, decreased immune recognition, and reduced production of antimicrobial peptides, persons with atopic dermatitis are more susceptible to skin infections. *Staphylococcus aureus* is a common cause. However, no topical antistaphylococcal treatments (other than bleach baths with intranasal mupirocin [Bactroban]) have been determined to be beneficial in persons with atopic dermatitis, and they are not typically recommended (good-quality, patient-oriented evidence). Bleach baths with intranasal mupirocin may be recommended to reduce disease severity in persons with moderate to severe atopic dermatitis and signs of secondary bacterial infection (limited-quality, patient-oriented evidence).

Topical Antihistamines

Topical antihistamines have shown little usefulness for treating atopic dermatitis, and because of the risk of absorption and of contact dermatitis, their use is not recommended (limited-quality, patient-oriented evidence).

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