FROM THE ACADEMY

Guidelines of care for the management of atopic dermatitis

Section 3. Management and treatment with phototherapy and systemic agents

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Atopic dermatitis is a chronic, pruritic inflammatory dermatosis that affects up to 25% of children and 2% to 3% of adults. This guideline addresses important clinical questions that arise in atopic dermatitis management and care, providing recommendations based on the available evidence. In this third of 4 sections, treatment of atopic dermatitis with phototherapy and systemic immunomodulators, antimicrobials, and antihistamines is reviewed, including indications for use and the risk-benefit profile of each treatment option. (J Am Acad Dermatol http://dx.doi.org/10.1016/j.jaad.2014.03.030.)

Key words: atopic dermatitis; azathioprine; cyclosporin A; interferon gamma; methotrexate; mycophenolate mofetil; oral antihistamines; oral antimicrobials; oral steroids; photochemotherapy; phototherapy; systemic therapy.

DISCLAIMER

Adherence to these guidelines will not ensure successful treatment in every situation. Furthermore, these guidelines should not be interpreted as setting a standard of care, or be deemed inclusive of all proper methods of care nor exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific therapy must be made by the physician and the patient in light of all the circumstances presented by the individual patient, and the known variability and biological behavior of the disease. This guideline reflects the best available data at the time the guideline was prepared. The results of future studies may require

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Abbreviations used:

AAD:	American Academy of Dermatology
AD:	atopic dermatitis
AZA:	azathioprine
BB:	broadband
CSA:	cyclosporin A
FDA:	Food and Drug Administration
GI:	gastrointestinal
HSV:	herpes simplex virus
IFN-G:	interferon gamma
MMF:	mycophenolate mofetil
MTX:	methotrexate
NB:	narrowband
PUVA:	psoralen plus ultraviolet A
QOL:	quality of life
SASSAD:	Six Sign Six Area Atopic Dermatitis
SCORAD:	SCORing Atopic Dermatitis
TPMT:	thiopurine methyltransferase
UV:	ultraviolet

revisions to the recommendations in this guideline to reflect new data.

SCOPE

This guideline addresses the treatment of pediatric and adult atopic dermatitis (AD; atopic eczema) of all severities, although systemic modalities are mainly recommended for moderate to severe disease, or for patients whose dermatitis causes significant psychosocial impact. The treatment of other forms of eczematous dermatitis is outside the scope of this document. Recommendations on AD treatment and management are subdivided into 4 sections given the significant breadth of the topic, and to update and expand on the clinical information and recommendations previously published in 2004.[1] This document is the third of 4 publications in the series and discusses the management of AD via phototherapy and systemic agents, including immunomodulators, antimicrobials, and antihistamines.

METHOD

A work group of recognized AD experts was convened to determine the audience and scope of the guideline, and to identify important clinical questions in the use of phototherapy and systemic agents for the treatment of AD (Table I). Work group members completed a disclosure of interests that was updated and reviewed for potential relevant conflicts of interest throughout guideline development. If a potential conflict was noted, the work group member recused himself or herself from discussion and drafting of recommendations pertinent to the topic area of the disclosed interest.

An evidence-based model was used and evidence was obtained using a search of the PubMed and the Global Resources for Eczema Trials[2] databases from November 2003 through November 2012 for clinical questions addressed in the previous version of this guideline published in 2004, and 1960 through 2012 for all newly identified clinical questions as determined by the work group to be of importance to clinical care. Searches were prospectively limited to publications in the English language. Medical Subject Headings terms used in various combinations in the literature search included: "atopic dermatitis," "atopic eczema," "systemic agent(s)," "immunomodulatory," "immunosuppressive," "cyclosporine," "azathioprine," "mycophenolate mofetil," "methotrexate," "interferon gamma," "prednisone," "prednisolone," "biologics," "TNF-alpha inhibitor," "etanercept," "infliximab," "leukotriene inhibitor," "omalizumab," "oral tacrolimus," "oral pimecrolimus," "ascomycin," "thymopentin/TP-5," "intravenous immunoglobulin," "theophylline," "papaverine," "phototherapy," "photochemotherapy," "ultraviolet," "laser," "systemic/oral antimicrobial," "systemic/oral antibiotic," "antihistamines," "cetirizine," "fexofenadine," "loratadine," "terfenadine," "olopatadine," "clemastine," "leukotriene," "zafirlukast," and "montelukast."

A total of 1063 abstracts were initially assessed for possible inclusion. After removal of duplicate data, 185 were retained for final review based on relevancy and the highest level of available evidence for the outlined clinical questions. Evidence tables were generated for these studies and used by the work group in developing recommendations. The American Academy of Dermatology's (AAD's) prior published guidelines on AD were evaluated, as were other current published guidelines on AD.[1,3-5]

The available evidence was evaluated using a unified system called the Strength of Recommendation Taxonomy (SORT) developed by editors of the US family medicine and primary care journals (ie, *American Family Physician*, *Family Medicine*, *Journal of Family Practice*, and *BMJ USA*).[6] Evidence was graded using a 3-point scale based on the quality of methodology (eg, randomized control trial, case-control, prospective/retrospective cohort, case series) and the overall focus of the study (ie, diagnosis, treatment/prevention/screening, or prognosis) as follows:

I. Good-quality *patient-oriented evidence* (ie, evidence measuring outcomes that matter to patients: morbidity, mortality, symptom improvement, cost reduction, and quality of life [QOL]).
II. Limited-quality patient-oriented evidence.
III. Other evidence including consensus guidelines, opinion, case studies, or *disease-oriented evidence* (ie, evidence measuring intermediate, physiologic, or surrogate end points that may or may not reflect improvements in patient outcomes).