# Allergic Dermatoses

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**KEYWORDS**

• Atopic dermatitis • Contact dermatitis • Urticaria • Angioedema • Eczema

**KEY POINTS**

- Triggers should be identified and avoided in atopic dermatitis (AD), contact dermatitis (CD), urticaria, and angioedema.
- Pruritus is a required symptom in the diagnosis of AD.
- The mainstay of treatment of AD and CD is topical corticosteroids.
- Urticaria is characterized by superficial tissue swelling, whereas angioedema is deep tissue swelling.
- The preferred treatment of urticaria and angioedema is antihistamines.

## INTRODUCTION

The purpose of this article is to review the current available material pertaining to AD, CD, urticaria, and angioedema. This article focuses on the clinical presentation, diagnosis, and management of each of these disorders. Although AD and CD are similar, their development is different and can affect a patient's quality of life. Urticaria and angioedema are also similar, but the differentiation of the two processes is crucial because they have significant morbidity and mortality with different prognoses.

## ATOPIC DERMATITIS

### *Background*

AD, also known as atopic eczema, eczema, and dermatitis, is an inflammatory skin condition that affects both children and adults.[1] The condition affects approximately 5% to 20% of people worldwide and 11% of children and 1% to 3% of the adults in the United States.[2–5] The economic burden of AD rivals that of asthma.[6] AD is a pruritic inflammation of the epidermis and dermis that can be acute, subacute, or chronic.[1] It is often associated with a personal or family history of asthma or allergic rhinitis, creating the atopy triad.[1,7]

The authors have nothing to disclose and no conflicts of interest.
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Prim Care Clin Office Pract 43 (2016) 433–449
http://dx.doi.org/10.1016/j.pop.2016.04.011 **primarycare.theclinics.com**
0095-4543/16/$ – see front matter 

The etiology of AD is most likely multifactorial – the result of genetics, pharmacologic abnormalities, skin barrier defects, the environment, and immunologic factors.[5] AD is influenced by environmental factors, such as low humidity and heavily populated, urban areas.[8,9] These environmental factors break down the skin's integrity, triggering an allergen-specific immunoglobulin E (IgE)–mediated hypersensitivity reaction. This hypersensitivity reaction then leads to cytokine dysregulation.[7,9] This immunologic hypothesis, however, is controversial because a majority of children with AD do not demonstrate the presumed IgE-mediated sensitivity to allergens.[10]

### *Clinical Symptoms and Signs*

Depending on age, the clinical symptoms of AD can vary. The infantile stage, up to 2 years of age, is often pruritic, erythematous, and scaly and can have crusted lesions (**Fig. 1**). It may include vesicles and serous exudates. The childhood stage, ages 2 to 12 years, usually has less exudates and may have some evidence of lichenification, presenting as thickened plaques and skin discoloration (**Fig. 2**). The adult stage can present with a chronic and relapsing course, occurs in patients greater than age 12, and is often localized and has evidence of lichenification (**Fig. 3**).[8]

Moreover, the clinical presentation of AD depends on the stage of the disease. Acute and subacute skin lesions are usually intensely pruritic, erythematous papules with evidence of excoriation and serous exudate (**Fig. 4**). Chronic AD still has these papules and excoriations but the skin is also noted to be lichenified.[5]

Pruritus is a required symptom to diagnose AD.[1] It is the intense and constant pruritus that leads to the cycle of itch-scratch-rash-itch. This itch-scratch cycle further disrupts the epidermis and leads to further skin inflammation. This then progresses to the skin lichenification as noted in the childhood and adult stages of AD.[1,8]

### *Diagnosis*

Skin biopsy is of little diagnostic value in the diagnosis of AD.[11,12] Diagnosis of AD is best based on an array of clinical signs and symptoms. In 2003, the American Academy of Dermatology recommended a revised version of the 1980 Hanafin and Rajka and United Kingdom Working Party criteria for AD (**Box 1**). These criteria are preferred to the more extensive 1980 Hanafin and Rajka and United Kingdom Working Party criteria because it can be applied to all age groups.[13]

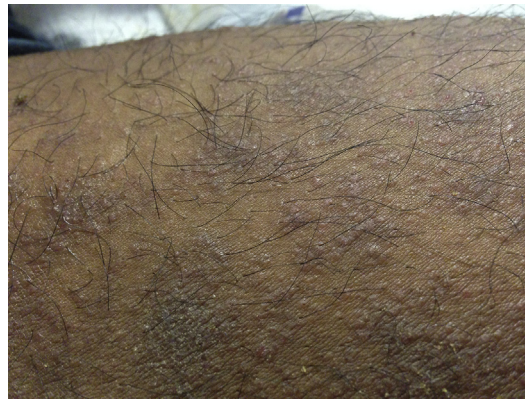

**Fig. 1.** Atopic dermatitis often consists of erythematous, scaly patches that can be very pruritic.