Differential Diagnosis of Atopic Dermatitis

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KEYWORDS

• Atopic dermatitis • Eczema • Mimickers • Differential diagnosis

KEY POINTS

- Atopic dermatitis (AD) is a common inflammatory condition of the skin that has a broad clinical spectrum leading to frequent misdiagnosis.
- The characteristic features of AD, including age of onset, distribution, severe pruritus, xerosis, lichenification, and association with atopy, can help distinguish AD from common mimickers.
- The differential diagnosis of AD in children and adults includes seborrheic dermatitis, psoriasis, allergic contact dermatitis, molluscum dermatitis, tinea corporis, mycosis fungoides, dermatomyositis, pityriasis lichenoides chronica, Langerhans cell histiocytosis, polymorphous light eruption, actinic prurigo, and nutritional deficiency.

INTRODUCTION

Atopic dermatitis (AD) is a chronic inflammatory disorder characterized by severe pruritus and an eczematous dermatitis. The estimated prevalence in the United States is approximately 20%,[1] rendering it the most common chronic skin disease in children. Clinically patients with AD can present with mild to severe disease, and lesions can range from weepy erythematous papules and plaques to lichenified xerotic plaques. The characteristic clinical features and distribution tend to evolve based on the patient's age (**Table 1**).

Occasionally, patients who carry a diagnosis of AD may display atypical clinical features that prompt the clinician to broaden the differential diagnosis. When the diagnosis is unclear, both knowledge of clinical findings seen in association with AD (**Table 2**) and recognition of potential alternative diagnoses are important for patient care because management and prognosis may differ. This article provides an overview of the dermatologic conditions that can potentially mimic AD. Although patients

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Table 1
Characteristic features of atopic dermatitis by age

	Infantile	Childhood	Adolescent or Adult
Age Range	Birth to 6 mo	6 mo to 12 y	>12 y of age
Lesions	Exudative erythematous weepy papules and plaques	Weepy erythematous papules and plaques intermixed with lichenified plaques, particularly in flexural areas	Erythematous papules and plaques with xerotic scale and crust Lichenified plaques in flexural areas
Distribution	Scalp, face, trunk, extensor surfaces	Flexural surfaces, including antecubital and popliteal fossa, wrist, and neck	Hands, flexural surfaces, upper trunk

Data from Saeki H, Nakahara T, Tanaka A, et al. Clinical practice guidelines for the management of atopic dermatitis 2016. J Dermatol 2016. [Epub ahead of print]; and Eichenfield LF, Tom WL, Chamlin SL, et al. Guidelines of care for the management of atopic dermatitis: section 1. Diagnosis and assessment of atopic dermatitis. J Am Acad Dermatol 2014;70(2):338–51.

with immunodeficiency, autoimmune, or genetic syndromes, such as hyper-IgE syndrome, immune dysregulation polyendocrinopathy X-linked syndrome (IPEX), Wiskott-Aldrich, and Netherton syndrome can also present with clinical features of AD, this article mainly focuses on primary dermatologic disorders and their distinguishing morphologic features.

SEBORRHEIC DERMATITIS

Seborrheic dermatitis is a common inflammatory condition of the skin with 2 peaks in incidence during early infancy (weeks 2–10) and adulthood.[2,3] Sebaceous gland stimulation and hypersensitivity to yeast, particularly *Malassezia*, have been implicated in the pathogenesis of seborrheic dermatitis.[3,4]

Table 2
Associated features of atopic dermatitis

Features	Clinical
Pityriasis alba	Hypopigmented patches on face, upper trunk, upper extremities
Keratosis pilaris	Follicular hyperkeratosis of outer arms, lateral cheeks, buttocks, thighs
Dennie-Morgan fold (atopic pleat)	Extra line on lower eyelid
Allergic shiners	Violaceous to gray color of infraorbital area
Allergic salute	Transverse linear crease on nose
Hyperlinear palms	Increased and exaggerated skin markings on palms
Ichthyosis vulgaris	Scaling of extensor extremities, fish-scale appearance of extensor leg
Hertoghe sign	Loss of lateral eyebrows
White dermatographism	Blanching of skin after stroking
Circumoral pallor	Pallor of perioral area
Nummular dermatitis	Sharply circumscribed thick coin-shaped scaly plaques