

Prominent Pruritic Periumbilical Papules: A Diagnostic Sign in Pediatric Atopic Dermatitis

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Abstract: Establishment of diagnostic criteria for atopic dermatitis has been a subject of controversy and frequent reevaluation. The diagnostic criteria of Hanifin and Rajka are those most frequently cited. In order to fit the diagnosis, a patient must demonstrate three major criteria plus four or more minor criteria. Although individually the minor criteria are not diagnostic, their presence suggests the possibility of atopic dermatitis. Recently we evaluated several children who developed prominent periumbilical papules as a major component of their atopic dermatitis. This finding, while not present in all children with atopic dermatitis, can provide a specific clue to diagnosis and should be considered as a new minor criterion for atopic dermatitis in children.

CASE REPORTS

Patient 1

A 7-year-old African American boy with a history of dry, sensitive skin and a family history of atopic dermatitis presented with pruritic, scaly, follicular papules on the flexures of the arms and legs as well as the lower abdominal wall (Fig. 1). His rash responded within several days to liberal applications of petrolatum to the entire skin surface and triamcinolone acetonide 0.1% ointment twice a day to the most severely involved areas. On several visits over the subsequent 3 months he continued to have recurrent symmetric eczematous patches on the knees, shins, elbows, forearms, and periumbilical area.

Patient 2

A 9-year-old Caucasian boy had a more than 1-year history of an itchy, scaly rash over much of the skin surface. This rash healed quickly when treated with oral prednisone or topical steroids, but recurred within several days of discontinuing the medication. Family history was significant for multiple family members with hay fever. Physical examination was notable for multiple, symmetric, red, scaly patches on the back, flexures of the arms and legs, and periumbilical and suprapubic areas (Fig. 2). Excoriations were widespread and discrete prurigo nodules coalesced into large plaques in some areas. On reevaluation several months later, marked improvement was noted on a regimen consisting of petrolatum for lubrication, triamcinolone acetonide

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Figure 1. Prominent papules recurred in the periumbilical area of this 7-year-old African American boy.

0.1% ointment twice a day to the most severely involved areas, and hydroxyzine 10 mg orally at bedtime for itching. His skin was clear except for prominent follicular periumbilical papules.

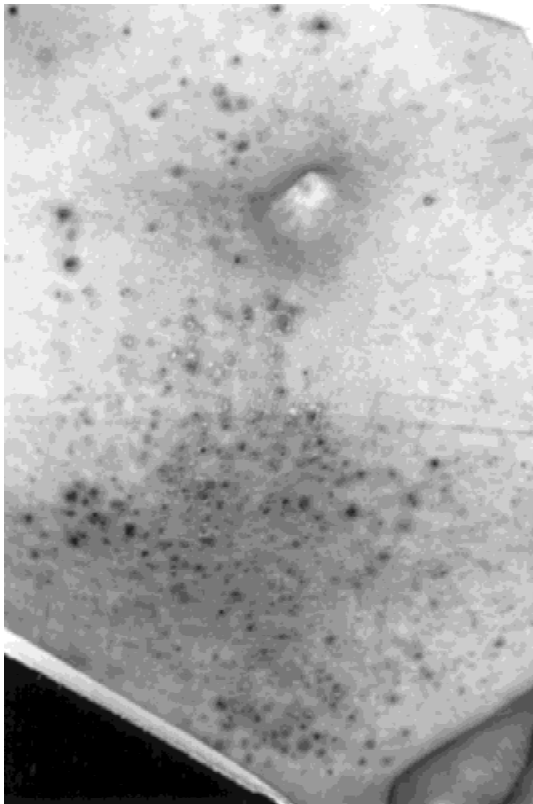


Figure 2. Persistent papules on the abdomen of a 9-year-old Caucasian boy were most prominent on the periumbilical and suprapubic areas.

Patient 3

A 7-year-old African American boy with a history of chronic sinusitis presented 2 years ago for evaluation of a rash on his abdomen. His family history was positive for atopic dermatitis (AD) and reactive airway disease.

TABLE 1. *Hanifin and Rajka Criteria for Diagnosis of Atopic Dermatitis*

Major Criteria	Minor Criteria
Pruritus	Xerosis
Adults: flexural lichenification or linearity	Ichthyosis, palmar hyperlinearity
Children: facial or extensor involvement	Keratosis pilaris
Chronic or chronically relapsing dermatitis	Type I skin test reactivity
Atopic history, personal or familial	Elevated serum IgE
	Early age of onset
	Tendency toward skin infections
	Nipple eczema
	Cheilitis
	Recurrent conjunctivitis
	Dennie–Morgan fold
	Keratoconus
	Anterior subcapsular cataracts
	Orbital darkening
	Facial pallor/facial erythema
	Pityriasis alba
	Anterior neck folds
	Pruritus with perspiration
	Intolerance to wool and lipid solvents
	Perifollicular accentuation
	Food intolerance
	Course influenced by environmental/emotional factors
	White dermatographism/delayed blanch

On physical examination, scaly, excoriated papules were present on his mid-forehead, left cheek, and suprapubic area. The dermatitis on his face responded quickly to 2.5% hydrocortisone ointment, petrolatum, and mild soap. Follicular papules, some forming confluent, lichenified plaques, persist in the periumbilical area.

DISCUSSION

We describe three children with prominent pruritic periumbilical papules which were the most prominent or persistent component of AD. Although the differential diagnosis would also include irritant and allergic contact dermatitis, the chronic course, lack of an identifiable contact allergen, family history of atopy, and other findings characteristic of AD make it the most likely diagnosis in these children.

The major criteria of Hanifin and Rajka (Table 1) include pruritus, typical age-related patterns, a tendency toward chronic or relapsing dermatitis, and familial or personal atopic history (1). The 22 original minor criteria have been the topic of considerable debate. Several investigators have attempted to define and validate both existing and new criteria for the diagnosis of AD (2,3).

Infra-auricular fissures and diffuse scaling of the scalp have recently been proposed as additional minor criteria (4).

Although prominent, pruritic periumbilical papules are not present in all children with AD, this may be a particularly helpful sign in a child without other characteristic physical findings at the time of evaluation. Further studies, including patch testing, will be required to test the reliability of this finding as a new minor criterion for the diagnosis of AD in children.

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