

Age Related Clinical Spectrum of Atopic Dermatitis: A Position Paper

Virendra N Sehgal*

Department of Dermato-Venereology (Skin/VD) Center, Sehgal Nursing Home, Panchwati, Delhi-110 033, India

*Corresponding author: Sehgal VN, Department of Dermato-Venereology (Skin/VD) Center, Sehgal Nursing Home, Panchwati, Delhi-110 033, India, Tel: 011-27675363; Fax: 91-11-2767-0373; Mob: 98101-82241; E-mail: sehgalvn@yahoo.co.in; drsehgal@ndf.vsnl.net.in.

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Abstract

Atopic dermatitis is well-known age-related/oriented condition recognized through well-defined clinical features usually having an onset in infancy invariably marching towards childhood, adolescent adult and elderly (senile) phases. This particular aspect seems unique, and was succinctly explored through literature, the highlights of which form the position paper for vivid comprehension of evolving clinical spectrum, which might add up to elevation of dreaded symptomatology, a part component of the entity. The criteria for intrinsic and extrinsic variant of AD, in particular, are emphasized.

Keywords: Atopic dermatitis; Intrinsic; Extrinsic

Introduction

Atopic dermatitis (AD) a well-conceived age-oriented entity, recognizable through wide spectrum clinical connotation [1], is an intriguing subject for walk the talk. AD overwhelming impact on quality of life as a public health problem is now being perceived because of its increasing global prevalence affecting both children and adults. Its prevalence is 20% in children and up-to 3% in adults (Figure 1) [2]. Nomenclature task force of European academy of allergy and clinical immunology (EAACI) after elaborate deliberations had put-up a 'position paper' on atopic dermatitis, wherein a new nomenclature atopic eczema/dermatitis syndrome (AEDS) was proposed to cover up wide ranging clinical manifestations of AD, emphasizing that the condition is no single but has several components in its fold. Accordingly, the adult-onset AD was divided into intrinsic/non-allergic (non-I.e.-mediated) [3] type of atopic dermatitis (constitutional dermatitis) and extrinsic/allergic (Figure 2) (I.e.-associated) [4,5] type, the outline of which are defined in the adjoining table 1. Its etio-pathogenesis is largely elusive [6], and a subject matter of continuing dialogue. Currently, the turbulence in the functions of stratum corneum [7-9] the skin barrier (Figure 3), are being incriminated through genetically determined risk factors along-with the immune system dysfunction [10]. The concomitance of atopic dermatitis in immuno-compromised/susceptible genetic and metabolic disorders might re-enforce the preceding observations. The proposed hypothesis seemed to have added new dimensions to the comprehension of its under currents and perspective studies. Simultaneously, it is worthwhile to retrieve [11] the clinical undertones in childhood phase of AD, facilitating to establish the continuous march of atopic dermatitis from childhood, adult-onset [12-14] and senile/elderly [15], invariably marked by remissions and recurrence, its hallmark. Furthermore, aforementioned observations are scintillating, and might raise expectations of comprehensive management of non-allergic atopic eczema/dermatitis syndrome (AEDS) (Figure 4) [2].



Figure 1: Childhood atopic dermatitis showing non-exuding lichenified lesions affecting the head, neck, wrists, hands, ankles and feet.



Figure 2: Adult-onset depicting dry, scaly and pigmented skin around the neck and back.

Infantile [16-18]	
Less than 2 years	Typically develops after 2 nd month of life
	Edematous papules, papulo-vesicles, and/or evolving plaques with oozing and crusting over the cheeks and centro-facial sparing
	Face and neck are affected in over 90% of the patients, in first 6 months
	Sparing of diaper area
Childhood [18]	
2 to 12 years	Lichenified, less exudative lesions
	Flexural eczema confined to antecubital and popliteal fossae
	Head, especially affecting peri-orifical region, neck, wrists, hands, ankles and feet
	Pronounced and widespread xerosis
Adolescent Adult [18]	
More than 12 and less than 18 years adult more than 18 years	Chronic hand dermatitis, both endogenous and exogenous components
	Facial dermatitis with severe eyelid involvement in a few
	Erythrodermic disease prominent in those with continuous AD since childhood
Senile atopic dermatitis or atopic dermatitis in the elderly [19,20] pattern, types and clinical features: More than 60 years	
Pattern	
Senile /elderly onset [20], either due to	Recurrence of AD with a history of classic childhood AD or
	Continuation of adult-onset AD marching to AD in the elderly
Types	
Intrinsic atopic dermatitis 1(iAD) non-allergic atopic eczema/dermatitis syndrome (AEDES) 2	Normal serum IgE levels <150-200 kU/L
	Serum specific IgE, none
	Association with respiratory diseases, none
	Skin prick testing (SPT) to common aero or food allergens
IgE associated allergic dermatitis, Extrinsic atopic dermatitis (eAD)	Invariably serum IgE level high>150-200 kU/L
	Serum specific IgE antibodies Positive
	Associated allergic rhinitis and/or asthma
	SPT Test Positive
Environmental factors, triggers	House dust mite
	Pollens
	Foods
	Erythroderma

Clinical features	
	Thickening of the skin, variable scaling arising secondary to repetitive scratching/rubbing, lichenification

Table 1: Atopic dermatitis: clinical undertones of age related orientation.



Figure 3: Showing erythematous dry, scaly skin sparing the antecubital fossae.



Figure 4: Showing marked xerosis and absence of lichenified flexural lesions.

Discussion

Atopic dermatitis (AD) has always been focus of walk the talk ever since its initial narrative. Several concerns facets seem to have eluded those chase into unfold its variety of known as well as unknown undertones, an overview of historical [21] vignette may provide a requisite inputs in comprehending an overall position prevailing currently microanatomy of epidermis including stratum corneum, stratum lucidum, stratum granulosum, stratum spinosum and stratum basale. The stratum corneum the formatable skin barrier has been

moted to play a significant role in its etiopathogenesis through its barriers physiological constituents comprised of loricirin, involucrin, trichohyalin, S 100 proteins and small proline-rich proteins. The stratum corneum has a built-in strength derived from other constituents layers namely keratins 1 and 10, keratin 2, profilaggrin, transglutaminase-3.

Conclusions

An exhorted endeavor to evolve status document to decipher the impact of age on course/natural history of atopic dermatitis, is a vital issue for comprehending not only its pattern, type, and also the clinical features, the succinct briefs of which are meticulously scanned, emphasizing the criteria of diagnosis of Intrinsic atopic dermatitis (iAD) non-allergic atopic eczema/dermatitis syndrome (AEDS) along-with Extrinsic/allergic (IgE-associated) dermatitis.

Learning points

Atopic dermatitis is an age-related entity extra-ordinary.

Recognized through phases namely infantile, childhood, adolescent, adult and elderly (senile).

Itching/pruritis and/or xerosis is a common ingredient of its symptomatology.

Complimented by lichenification of flexures subsequently also of extents of the body.

Extrinsic and intrinsic atopic dermatitis are now being envisaged as currently well-conceived and must be documented accordingly, elevated level of immunoglobulin IgE in extrinsic, in particular, is imperative in all phases, especially in senile/elderly [22].

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