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LETTER TO EDITOR

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Congenital erythrodermic psoriasis with atopic dermatitis: An example of immunogenetic spinoff

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Sir,

Psoriasis (Ps) and atopic dermatitis (AD) are chronic and relapsing inflammatory diseases of the skin associated with various immunologic abnormalities together constituting to more than half among the causes of neonatal and infantile erythrodermas. The association or overlaps of AD with psoriasis sometimes pose diagnostic and management difficulties. We report an 85-day-old infant with clinical and histological features of both diseases concurrently. The infant, born to asthmatic mother and psoriatic father, had congenital erythrodermic psoriasis (CEP) with AD [\[Figure 1\]](#). The serum Ig E was 300 I.U/ml. The histology of skin biopsy showed features of psoriasis over the leg and that of eczema over the trunk [\[Figure 2\]](#). The infant did not have signs of infection and had not had treatment so far. Though there are many reports in older patients, such concurrent occurrence of both Ps and AD with histological evidence has so far not been documented in an infant.



Figure 1: Infant showing dry skin with well-defined erythematous scaly papules and plaques and the father's hand showing psoriatic plaques

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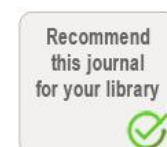
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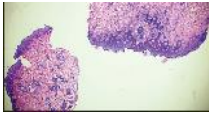


Figure 2: Photomicrograph showing two specimen i. on the left showing psoriasiform acanthosis and ii. on the right showing spongiosis, irregular acanthosis, and lymphocytic infiltrate in the dermis. (H and E, ×40)

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Psoriasis (Ps) and atopic dermatitis (AD) were once believed to be mutually exclusive. In a prospective study undertaken by Beer *et al.*,^[1] 16.7% of AD patients had Ps and 9.5% of Ps patients had AD. In consecutive occurrences, Ps generally followed AD. The ratio of concurrent to consecutive incidences was 3:1. The two diseases are shown not to be mutually exclusive and may co-exist in the same individual.^[1] Distinct populations of T cells are defined by their unique patterns of cytokine production.^[2] Keratinocytes of patients with AD and psoriasis show an intrinsically abnormal and different chemokine production profile and favor the recruitment of distinct leukocyte subsets into the skin.^[3] However, in spite of their differences, both AD and psoriasis share epidermal hyperplasia, aberrant immunity, and skin barrier anomalies.

Genetic studies of both psoriasis and AD suggest that defects affecting cells of the skin need to be as seriously considered as defects in adaptive immunity. The epidermal differentiation complex has been implicated in both AD and psoriasis.^[4] It transcribes within terminally differentiating keratinocytes and contains many genes that may modify immune processes in the epithelium. The co-localization of AD to psoriasis loci indicates that AD is influenced by genes that modulate dermal responses independently from atopic mechanisms.^[5]

The histological findings of both diseases occurring simultaneously as early as in infancy definitely adds further evidence to the association between Ps and AD. Such early onset of AD in a child with CEP indicates a common trigger factor for these two diseases. Some endogenous factor common to both may probably be genetic. Possibly both the diseases manifest at an earlier age when the inheritance is polygenic. This intricate genetic proneness could play a trigger to switch on the immunological cascade of events. What spins off the immune system and decides on the pathogenesis, clinical presentation in a genetically prone infant needs to be explored.

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[\[Figure 1\]](#), [\[Figure 2\]](#)

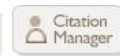
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