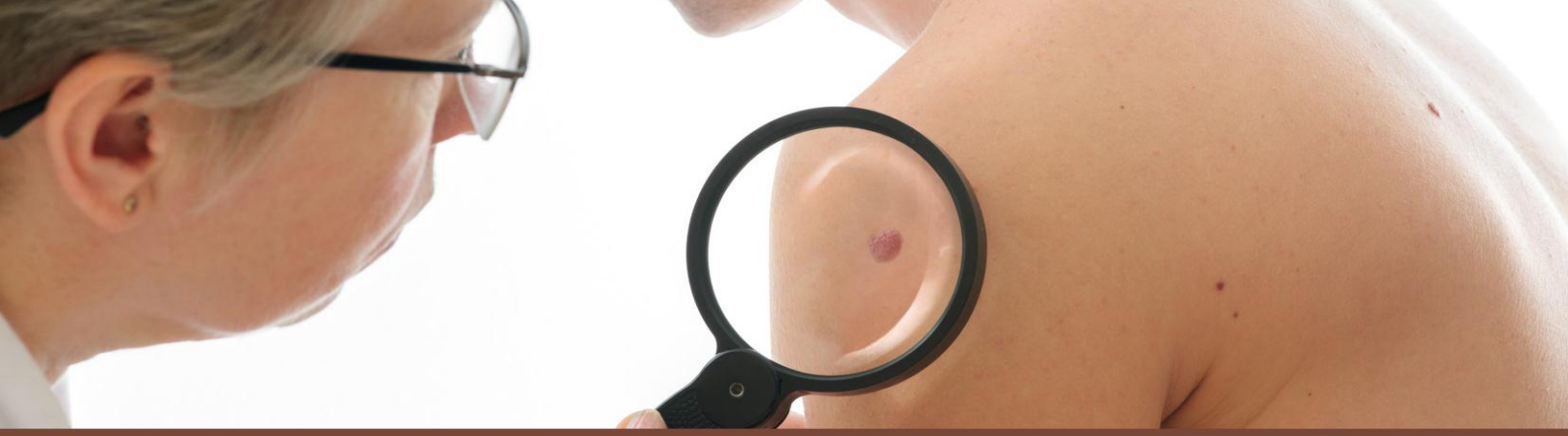

433 Teams

DERMATOLOGY

Lecture (9)

Atopic dermatitis

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Objectives:

- To know the definition & classification of Dermatitis/Eczema
- To recognize the primary presentation of different types of eczema
- To understand the possible pathogenesis of each type of eczema
- To know the scheme of managements lines

Color index: slides, doctor notes, 432 notes

A groups and spectrum of related disorders with pruritus being the hallmark of the disease.

-Acute: characterized by erythema, papules, vesicles, oozing, and crusting

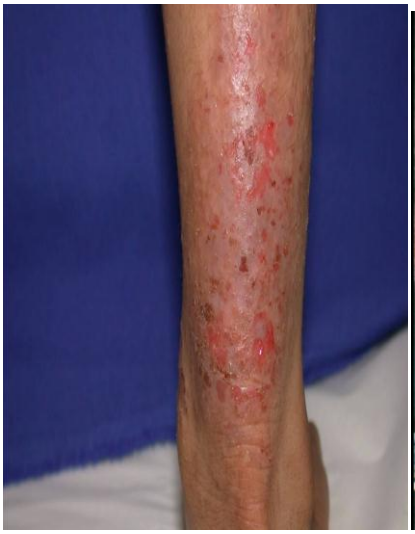
-Subacute : clinically it is represented by erythema, scaling, and crusting.

- Chronic: presents with thickening of the skin, skin markings become prominent (lichenification); pigmentation and fissuring of the skin occur.

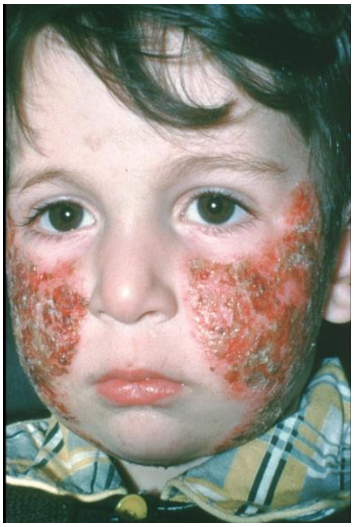
-Every atopic dermatitis is eczema but not every eczema is atopic dermatitis.

-Atopic dermatitis mean that the patient has eczema (excoriated skin, itching and re-onset) and atopy (atopy; the patient or one of his family has allergic rhinitis, asthma or eczema). It starts early of life (eczema can happen at any time).

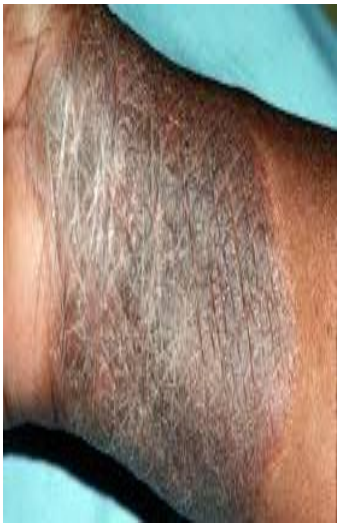
Notes: Look for history of Asthma, allergic rhinitis, family history of atopic disease



Ill defined plaques



4 years old boy with chronic, itchy, bleeding plaques. Well defined erythematous excoriated plaques on both cheeks with erosion



Acute on top of chronic very dry well defined brownish plaque with lichenifications.

Classification:

Atopic: more common in children

Seborrheic (oily skin): like naso-labial folds, scalp, ears.

Contact dermatitis :- Allergic - Irritant

Nummular: coined shape, usually in the shin.

Asteatotic :no seborrhea

Stasis: associated with venous insufficiency of the lower extremities.

Neurodermatitis (acute) /Lichen Simplex Chronicus.

Atopic dermatitis:

Pruritis is the hallmark of atopic dermatitis (AD) Eczematous eruption leads to lichenified dermatitis. Itching precedes the appearance of lesions. Vicious cycle.

Infantile Atopic Dermatitis:

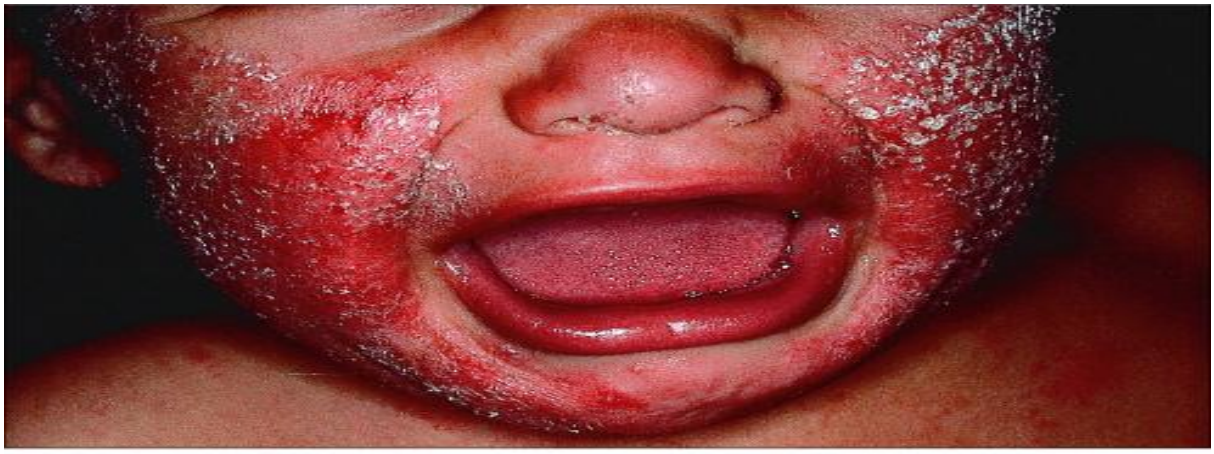
60% of case AD present in the first year of life, after 2 months of age. Begin as itchy erythema of the cheeks. Distribution include scalp, neck, forehead, wrist, and extensors (at the end when get old it may goes to flexors) .May become desquamate leading to erythroderma. Most cases the symptoms will disappear toward the end of the second year.

The role of food allergy in infantile and childhood atopic dermatitis has been clarified. Egg, peanut, milk, wheat, fish, soy, and chicken may exacerbate infantile AD "the best test is: if the parents suspect certain food make it worse, they should stop it for two weeks then reintroduce it. If it improve and worsen then they stop it". Allergens (like food) then it may cause eczema, asthma or anaphylaxis. Usually food allergy gone with time, but peanut butter is the most common food to remain an allergen to the patient for life.

High level of IgE antibodies to House dust mites IgE bound to Langerhans cells in atopic skin. Food exacerbates symptoms in some patients: eggs, peanuts, cows milk represent up to 75% of positive test. Dirty child theory??: Soap dry the skin; we avoid soap in the treatment. Also, dirty child has better immunity usually, in clean

child immunity doesn't learn what is self and non-self, antigens and normal cells of immune system may attack normal cells or non-harmful things and cause atopic dermatitis

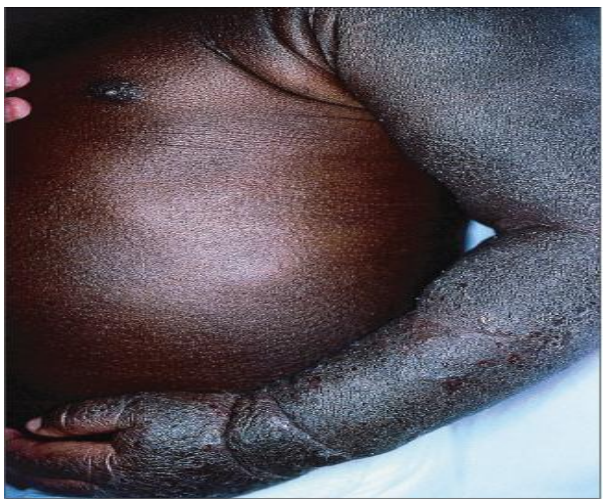
Early nerve development??: Children who have eczema they have better motor control than others do.



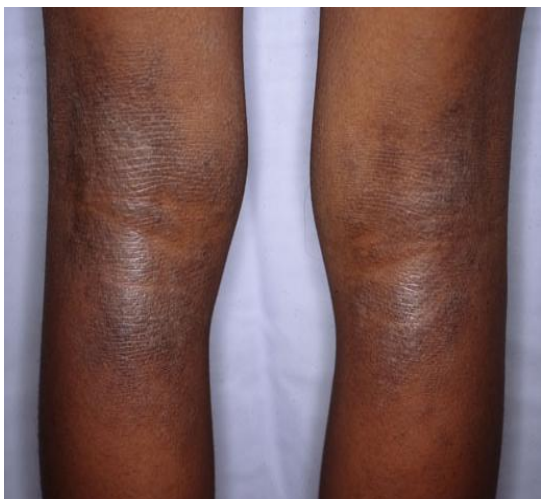
Involvement of the cheeks is characteristic of the infantile pattern of AD.

Childhood Atopic Dermatitis:

Characterized by less acute lesions Distribution: antecubital and popliteal fossae, flexor wrist, eyelids, and face. Severe atopic dermatitis involving more than 50% of body surface area is associated with growth retardation.



Severe case.



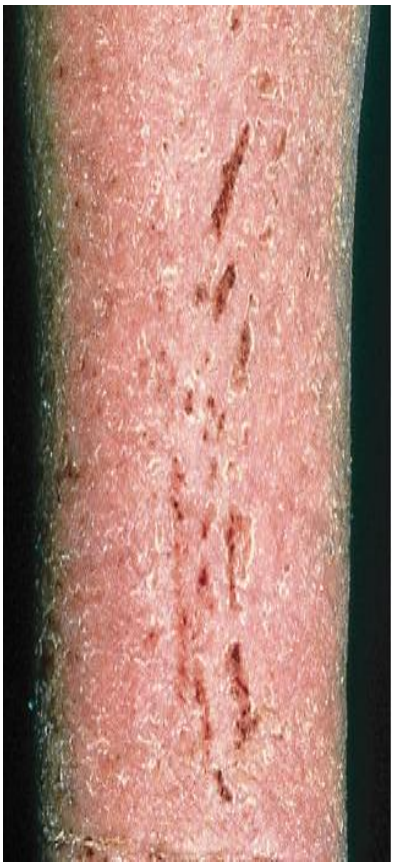
Involving the popliteal surface.

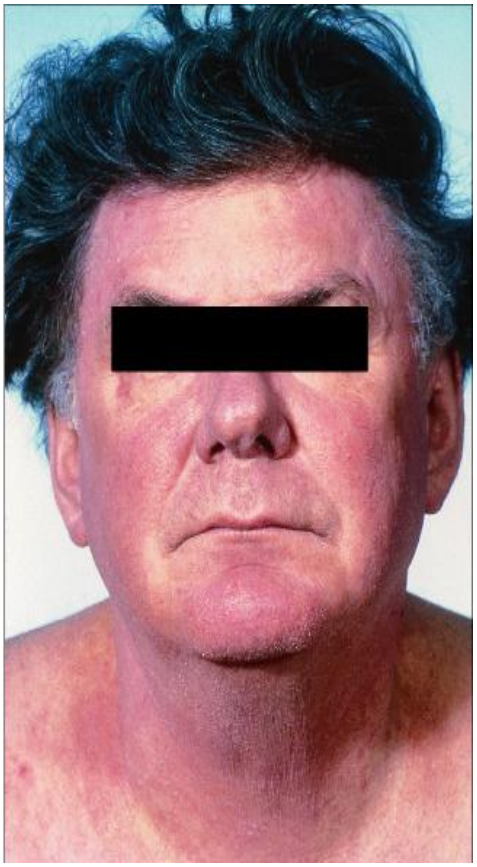
Adult Atopic Dermatitis:

Distribution: antecubital and popliteal fossae, the front side of the neck, the forehead, and area around the eyes.

Atopic individuals are at greater risk of developing hand dermatitis than are the rest of the population.

70% develop hand dermatitis some times in their lives.



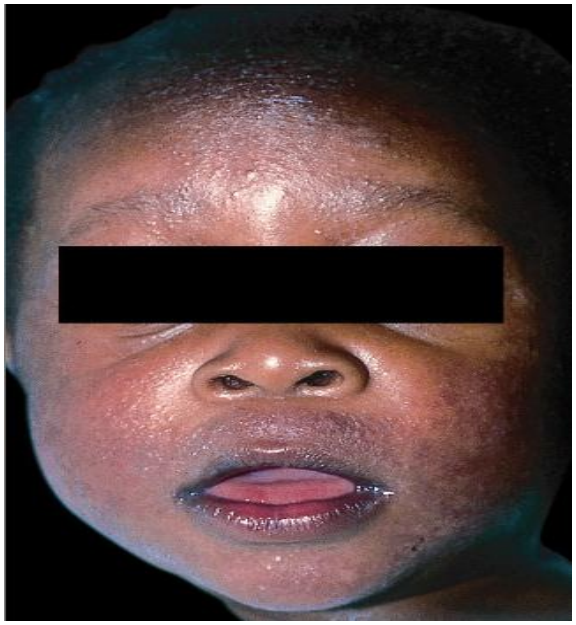


Adult with **atopic dermatitis** that favors the face and neck

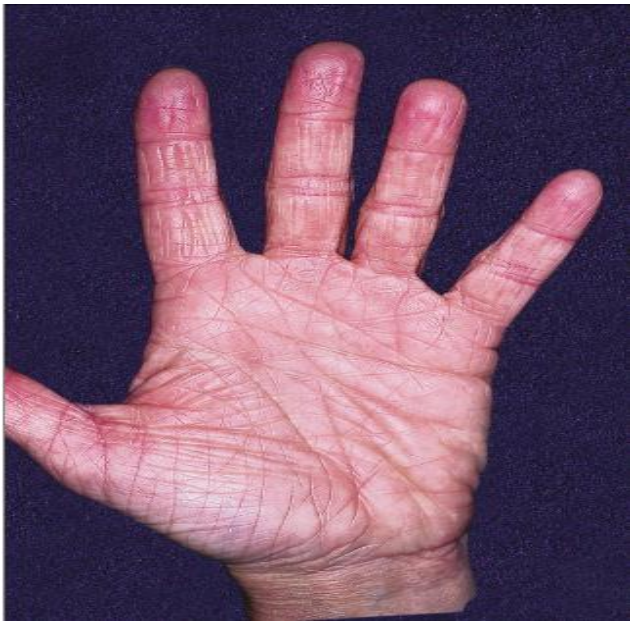
Cutaneous stigmata:

Patient with eczema usually has one or more of these sign and symptoms (they use them in the criteria as associated features):

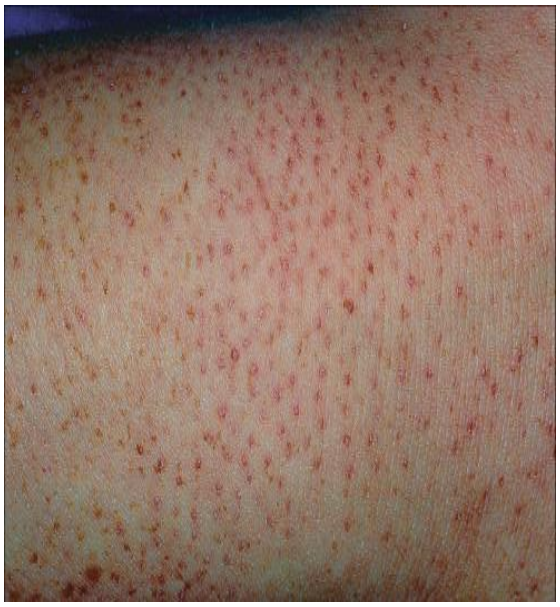
- **Dennie-Morgan fold**
- **Pityriasis alba**
- **Keratosis pilaris**
- **Hertoghe's sign – thinning of the lateral eyebrows**
- **Xerosis**
- **Icthyosis**
- **Hyperlinear palms**



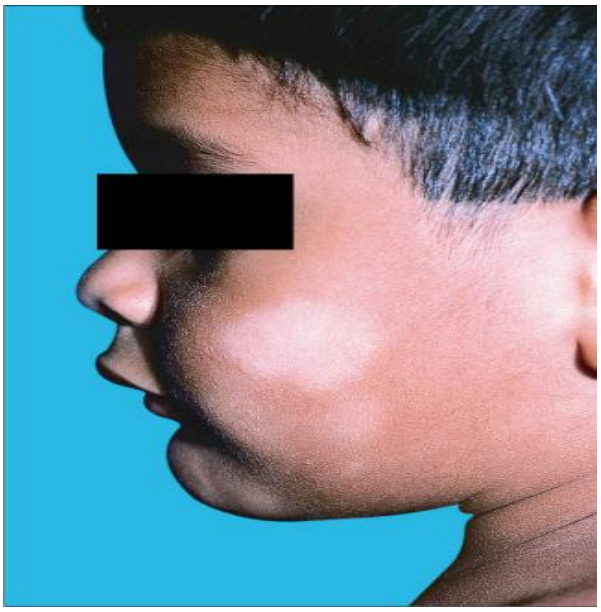
Note the Dennie– Morgan lines (folds) and central facial pallor. They look tired and stupid. In this case, it is acute.



Hyper linear palms: One of the reason is using a lot of corticosteroid, which cause



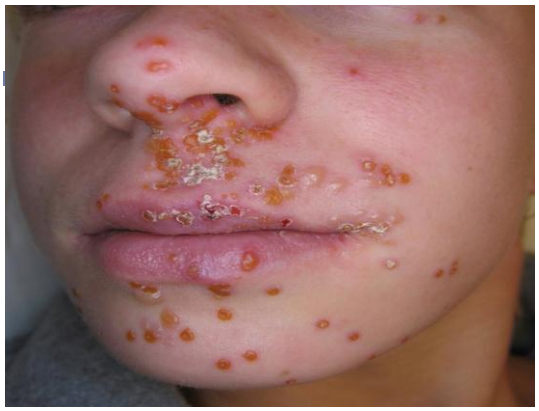
Keratosis pillaris. Seen in atopic dermatitis, very common, seen in the outer arm, outer thigh or the buttocks. Distance between



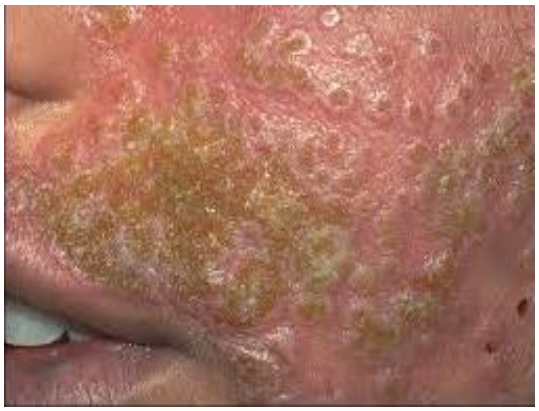
Pitryaisis Alba Well defined hypopigmented patch. Differ from vitiligo, is the color; vitiligo is depigmented. In this case, it is acute

Infection:

Patients with atopic dermatitis can have infections Staph aureus – 90% of chronic lesions. Eczema herpeticum – generalized herpes simplex infection "on top of eczema". Young children usually.99



Eczmetous herpitica: Highly colored vesicles and eosions

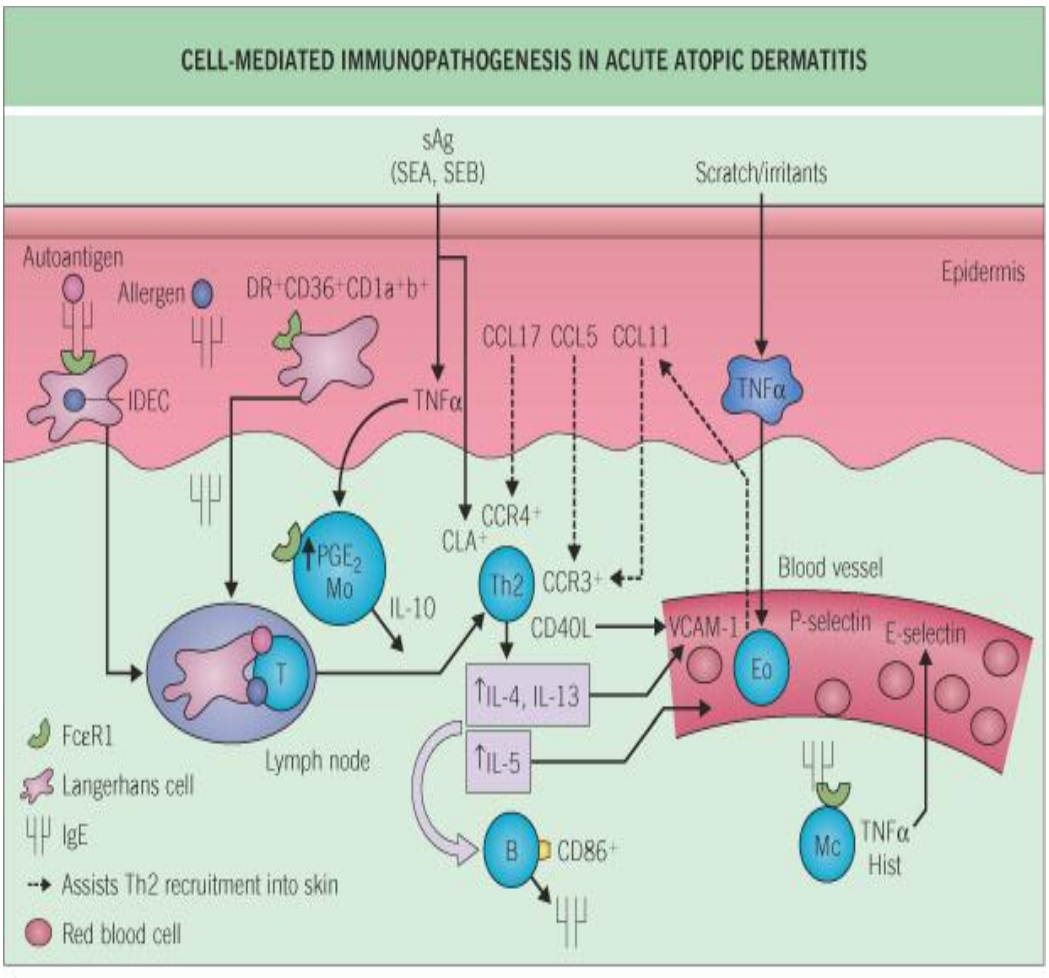


Eczmetous herpitica Severe case

Immunology

T helper cell type 2 (Th2) dominanceTh2 produces IL-4, 5, and 10 IL-4 and IL-5 produce elevated gE and eosinophilia. IL-10 inhibits delayed type hypersensitivity. Th2 maybe sensitive to house mites or grass pollen

Monocytes produces elevated amount of prostaglandin E2 (PGE2). PGE2 reduces gamma-interferon production, but not IL-4 from helper cells thereby enhancing the Th2 dominance. PGE2 also directly enhances IgE production from B cells. Langerhans cells of AD patient stimulate helper T cells into Th2 phenotype without the presence of antigen Langerhans cells have IgE bound to their suface receptors. These IgE are associated with atopic antigens, such as house dust mites.



Differential Diagnosis:

- Seb Dermatitis
- Contact dermatitis
- Nummular eczema (those three are eczema)
- Scabies
- Psoriasis (scaly more than itchy)

Table 13.4 Diagnostic features of atopic dermatitis as suggested by the AAD consensus.

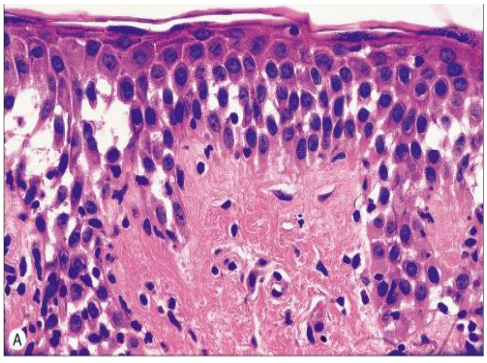
DIAGNOSTIC FEATURES OF AD AS SUGGESTED BY THE AAD CONSENSUS
Essential features: must be present, and if complete, are sufficient for diagnosis:
• Pruritus • Eczematous changes – Typical and age-specific patterns – Facial, neck, and extensor involvement in infants and children – Current or prior flexural lesions in adults/any age – Sparing of groin and axillary regions • Chronic or relapsing course
Important features: seen in most cases for support of the diagnosis:
• Early age of onset • Atopy (IgE reactivity) • Xerosis
Associated features: help in suggesting the diagnosis:
• Keratosis pilaris/ichthyosis vulgaris/palmar hyperlinearity • Atypical vascular responses • Perifollicular accentuation/lichenification/prurigo • Ocular/periorbital changes • Perioral/periauricular lesions

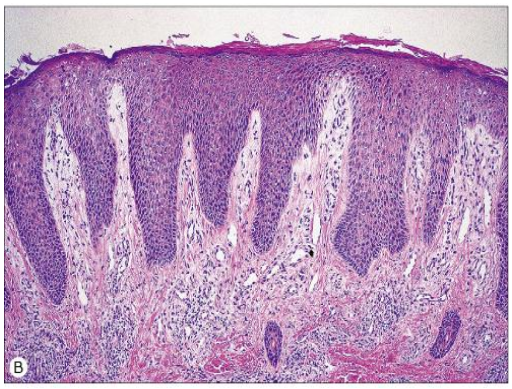
Histology:

o Spongiotic dermatitis (Edema)

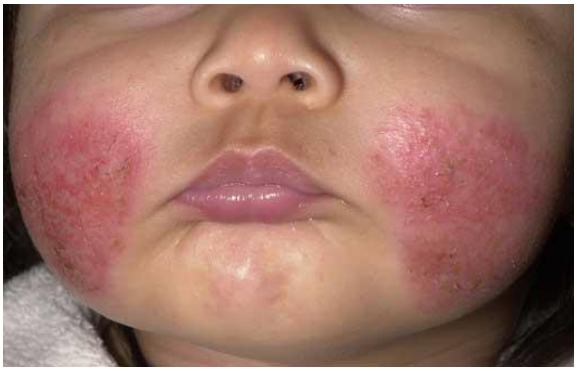
o Lichen simplex chronicus

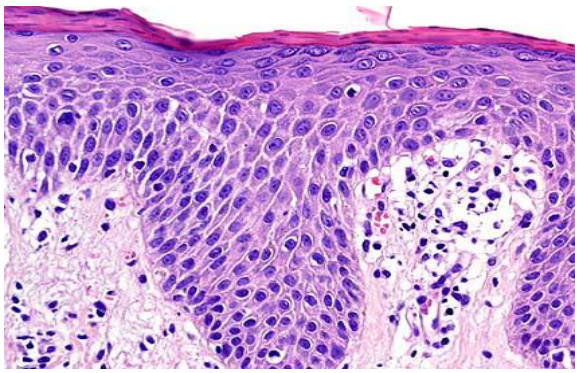
o Eosinophiles may be seen





Acute Dermatitis - Less layer	- Chronic Dermatitis - More layer





Subacute Dermatitis Commonly misdiagnosed as tinea.

Management:

Protect from scratching o Gentle cleanser or discontinue, stop soaps. Anti-histamines, especially if it wakes him up at night, if it doesn't we don't give because of its drowsy side effect. Bathing protocol o Food allergies concerns and dietary restrictions. Hydrate skin daily with moisturizers Avoid wool. Tell them it could be chronic

Treatment:

Barrier,moisturizer.

Topical steroids, potency depend on the site of the disease.

Tacrlimus, less potent than mid potent steroid

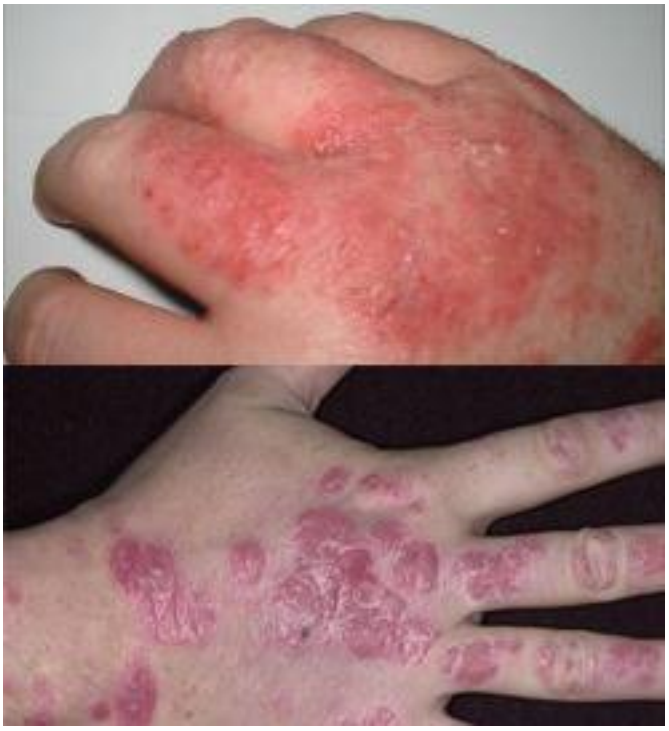
Systemic Corticosteroids

Phototherapy – UVA, PUVA

Immunosuppressive therapy

When to use immunosuppressive therapy? If it involves large body surfaces Topical FK506 (Tacrolimus) is dramatically beneficial in SEVERE atopic dermatitis"

95% showed good improvement in Alaiti and Rusicka study in JAAD 1998, Archive 1999 Comparable to less potent topical steroids



Eczema is not very well defined.

Psoriasis is very well defined.

Done By:

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