ATOPIC DERMATITIS AND ECZEMATOUS DISORDERS

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Objectives

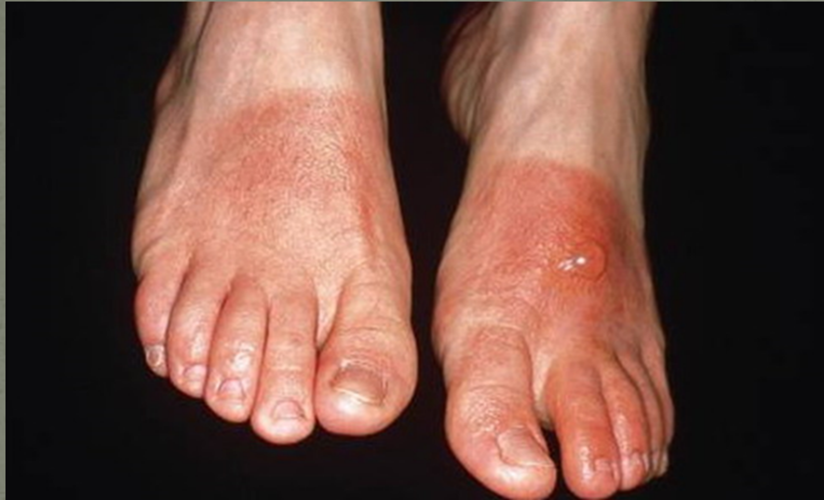
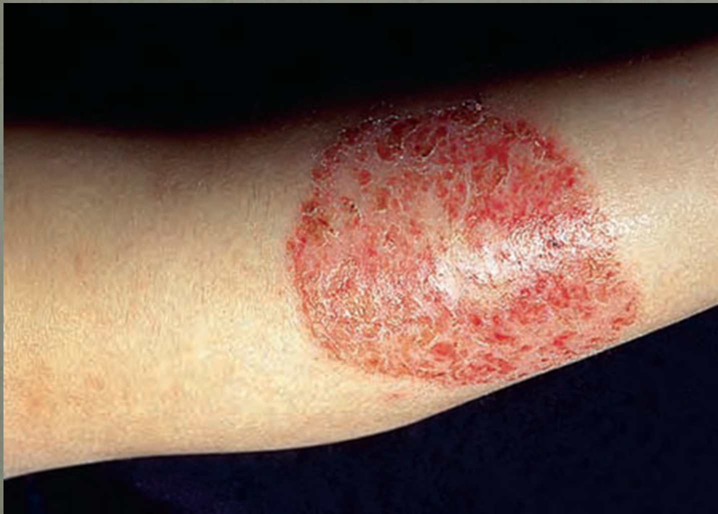
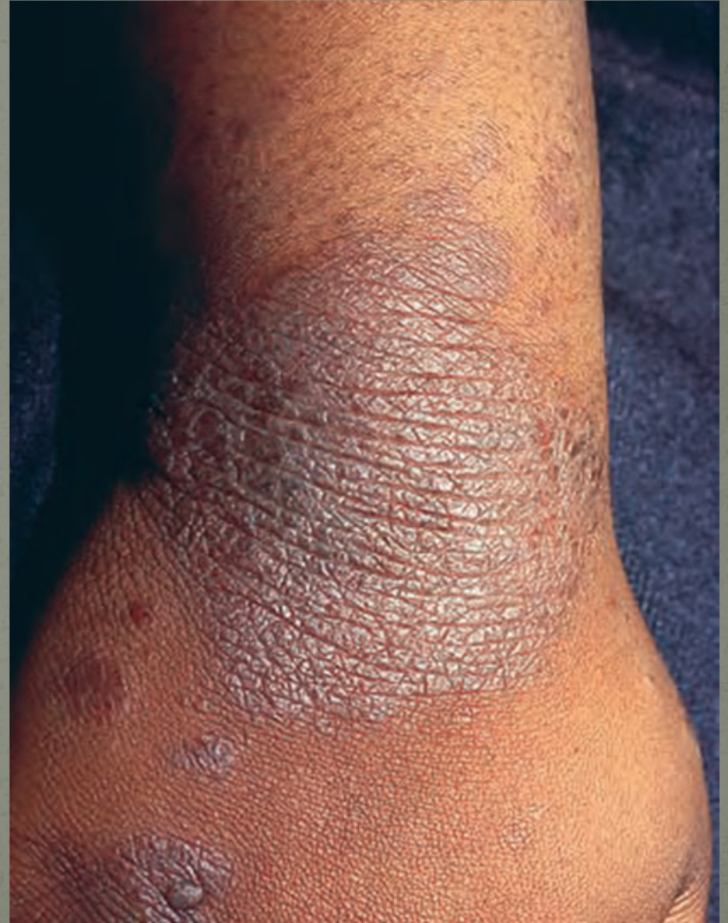
- To know the definition & classification of Dermatitis/Eczema
- To recognize the primary presentation of different types of eczema
- To understand the possible pathogenesis of each type of eczema
- To know the scheme of managements lines

Eczema - dermatitis

- Definition: inflammation of the skin

What are the eczema phases?

- Acute eczema: erosion, oozing and vesicles
- Subacute eczema: Redness+ swelling, crust-+ scale +infection
- Chronic eczema: lichenification, dark pigmentation and thick papules and plaques

Atopic Dermatitis

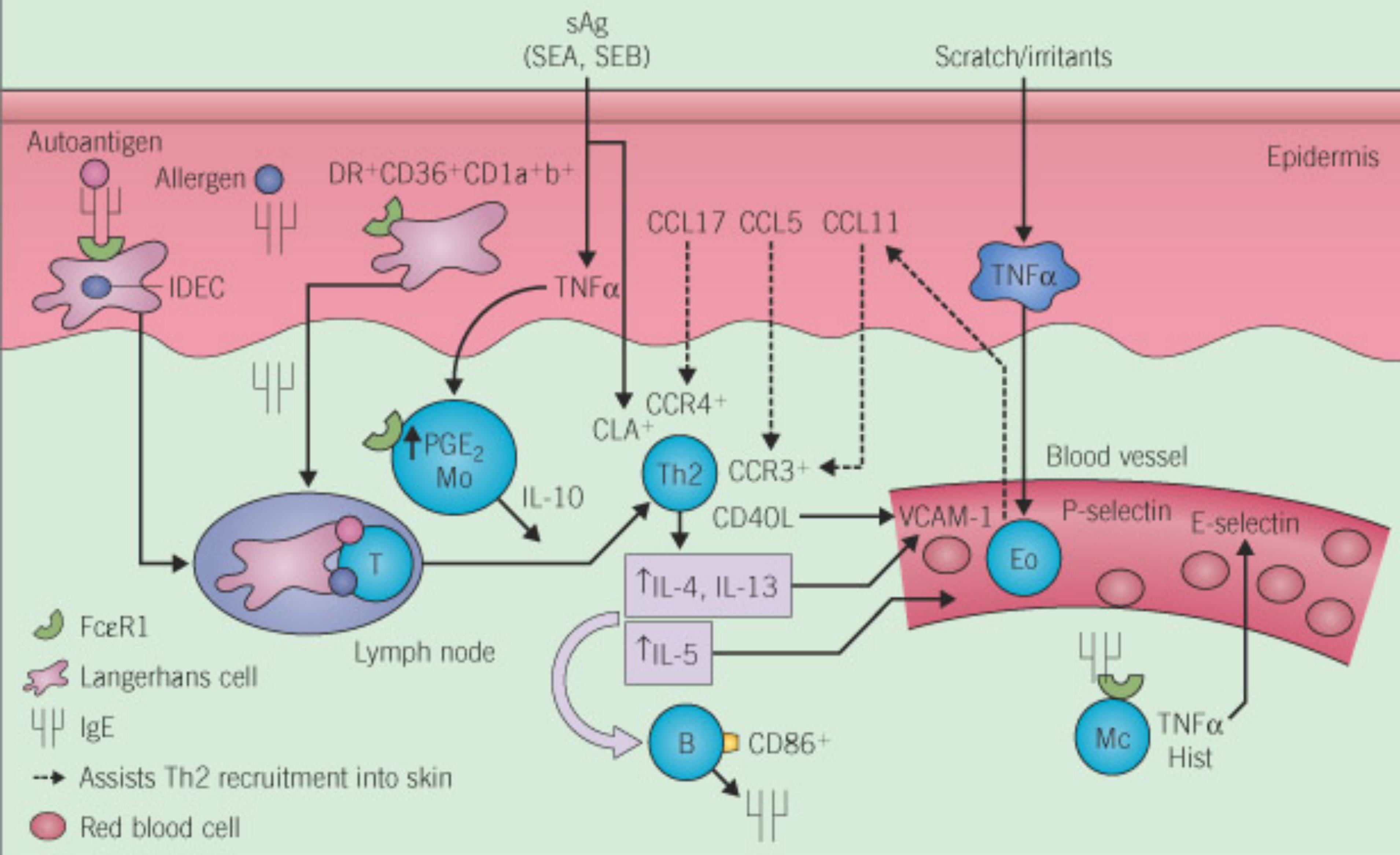
- Definition: chronic relapsing itchy skin disease in genetically predisposed patients.
- Associated diseases: bronchial asthma, allergic rhinitis, allergic conjunctivitis(personal or family Hx)
- Incidence: up to 15-20 % in early childhood
- More in male
- Age of onset:
- 60% ------ first 2 months of life
- 30 %------- by age of 5
- 10%-------- between age 6- 20 years

- Improves in summer and flare in winter

Pathogenesis:

- Cause :
- Atopy”: genetic predisposition
- skin barrier defect: Dry skin (decrease production of moisturizing lipids; sebum)
- Immune dysregulation:
  - T cell activation
  - Ig E ? (Epiphenomenon)

- Triggers:
- Allergy, increased tendency to certain allergens (Autoallergen)
- Infection : skin of pts with AD is colonized by S aureus. infection with S aureus often causes a flare of AD
- AD and Food! minor role



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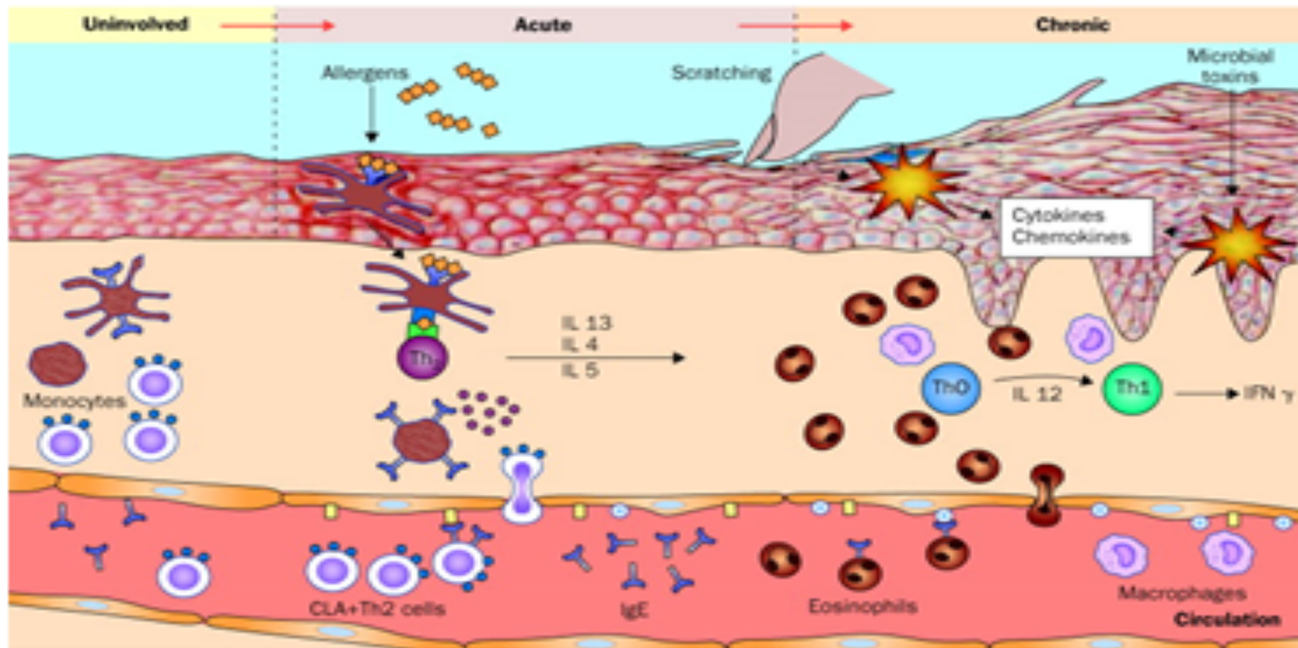
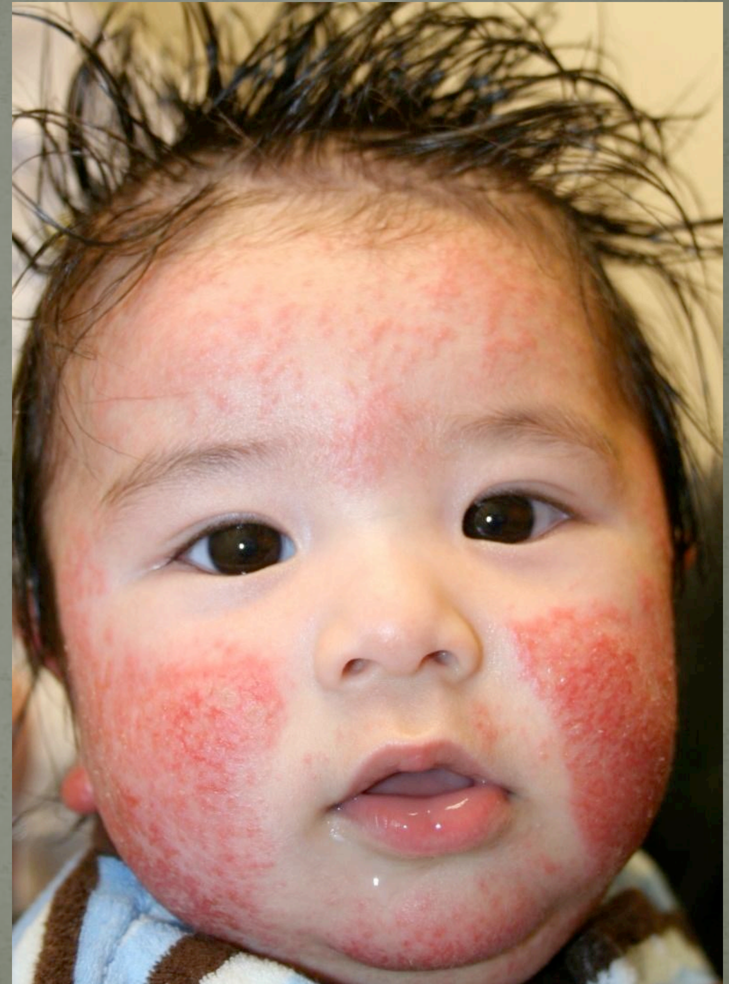

Uninvolved
Acute
Chronic
Allergens
Scratching
Microbial toxins
Cytokines
Chemokines
IL 13
IL 4
IL 5
Th0
IL 12
Th1
IFN γ
Monocytes
CLA+Th2 cells
IgE
Eosinophils
Macrophages
Circulation

Clinical Variants:

- Infantile AD
- Childhood AD
- Adult AD

Infantile AD

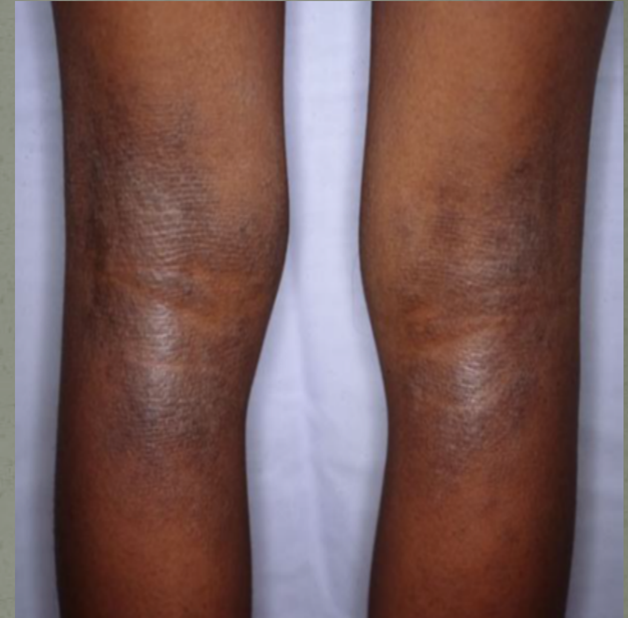
- Distribution
- Presentation



- Red skin, tiny vesicles on “puffy “ surface. Scaling, exudate With wet crust and fissures.
- Diaper area is usually spared

Childhood AD:

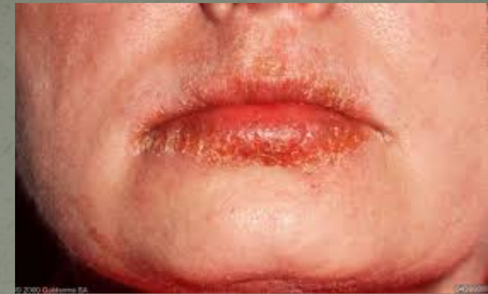
- Distribution
- Presentation

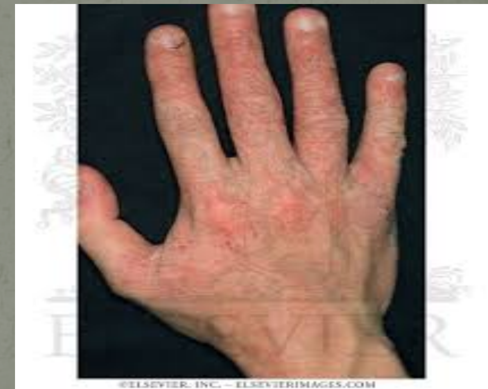


- Antecubital, popliteal fossae, neck and face.
- May be generalized
- Papular, lichenified plaques, erosions, crusts.

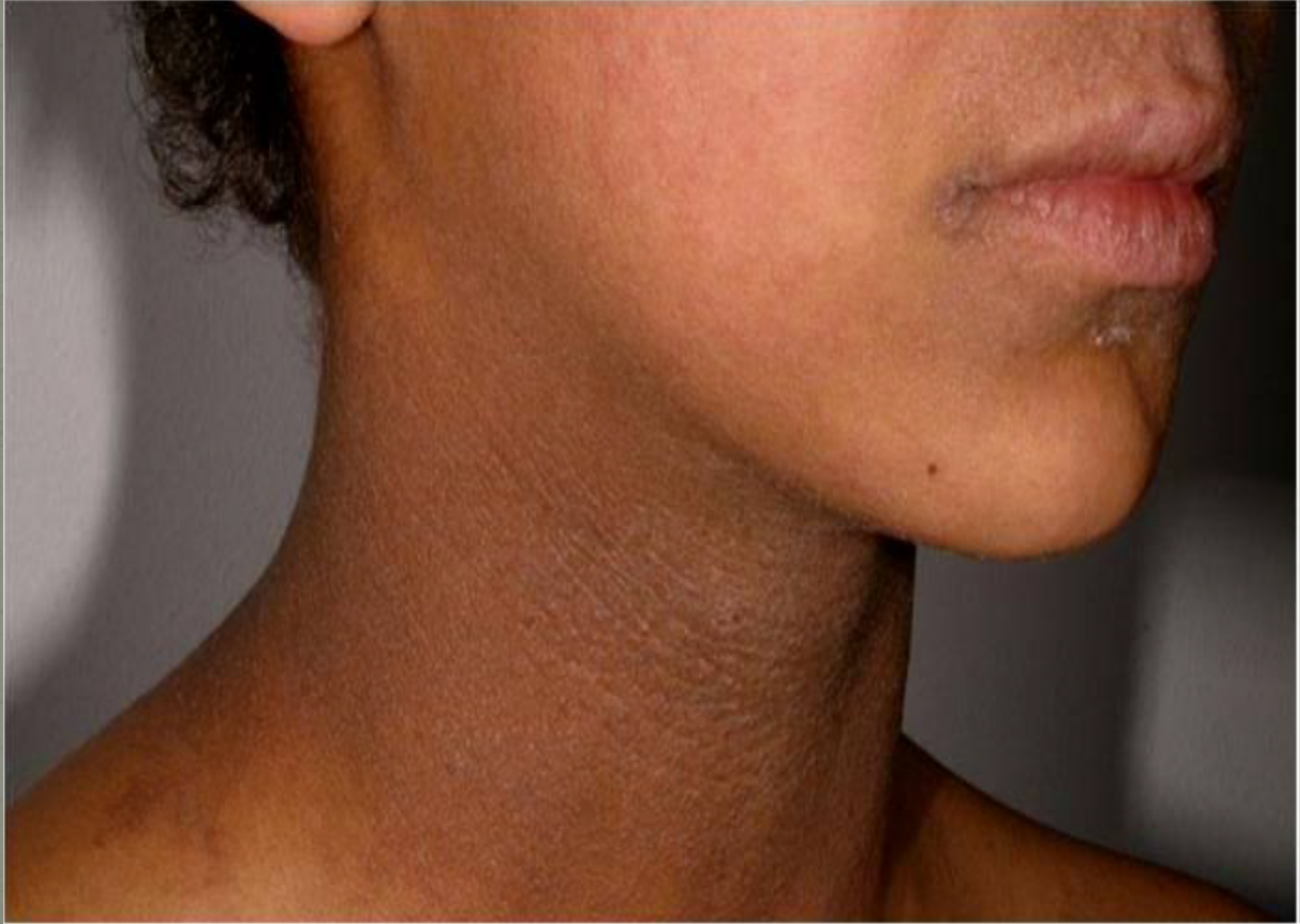
Adult AD:

- Distribution
- Presentation





- Mostly flexural, face and neck.
- May be generalized
- Lichenification and excoriations



DIAGNOSTIC FEATURES OF ATOPIC DERMATITIS

Major features (3 of 4 present)

- Pruritus
- Typical morphology and distribution of skin lesions
- Chronic or chronically relapsing dermatitis
- Personal or family history of atopy

Minor features (3 of 23 present)

- Xerosis
- Ichthyosis/palmar hyperlinearity/keratosis pilaris
- Immediate (type I) skin test reactivity
- Elevated serum IgE
- Early age of onset
- Tendency towards cutaneous infections/impaired cell-mediated immunity
- Tendency towards non-specific hand or foot dermatitis
- Nipple eczema
- Cheilitis
- Recurrent conjunctivitis
- Dennie–Morgan infraorbital fold
- Keratoconus
- Anterior subcapsular cataract
- Orbital darkening
- Facial pallor/erythema
- Pityriasis alba
- Anterior neck folds
- Pruritus when sweating
- Intolerance to wool and lipid solvents
- Perifollicular accentuation
- Food intolerance
- Course influenced by environmental/emotional factors
- White dermographism/delayed blanch

Table 5.I. Revised criteria for the diagnosis of atopic dermatitis[4]

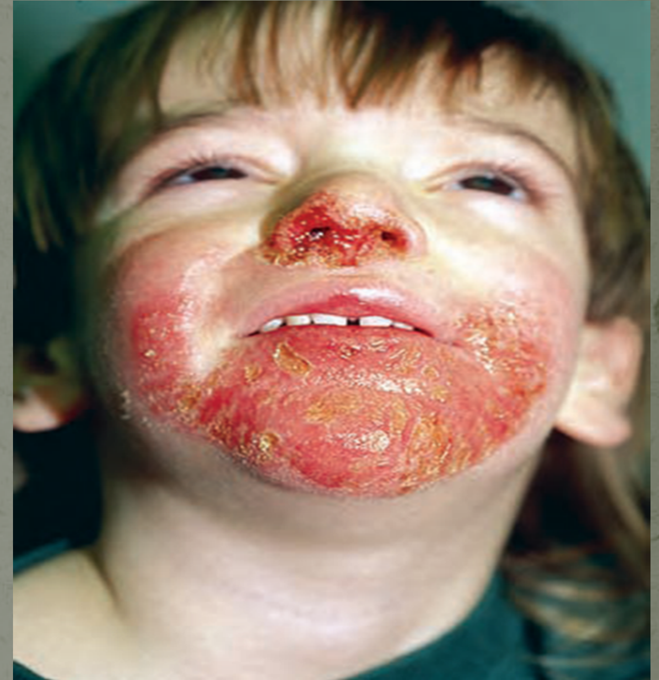
a. Must have:
- Pruritus

b. Plus 3 or more of the following:
- History of involvement of skin creases (front of elbows, back of knees, front of ankles, neck, around the eyes)
- History of a generally dry skin in the past year
- Personal history of asthma or hay fever
- Onset under the age of 2 years
- Visible flexural dermatitis

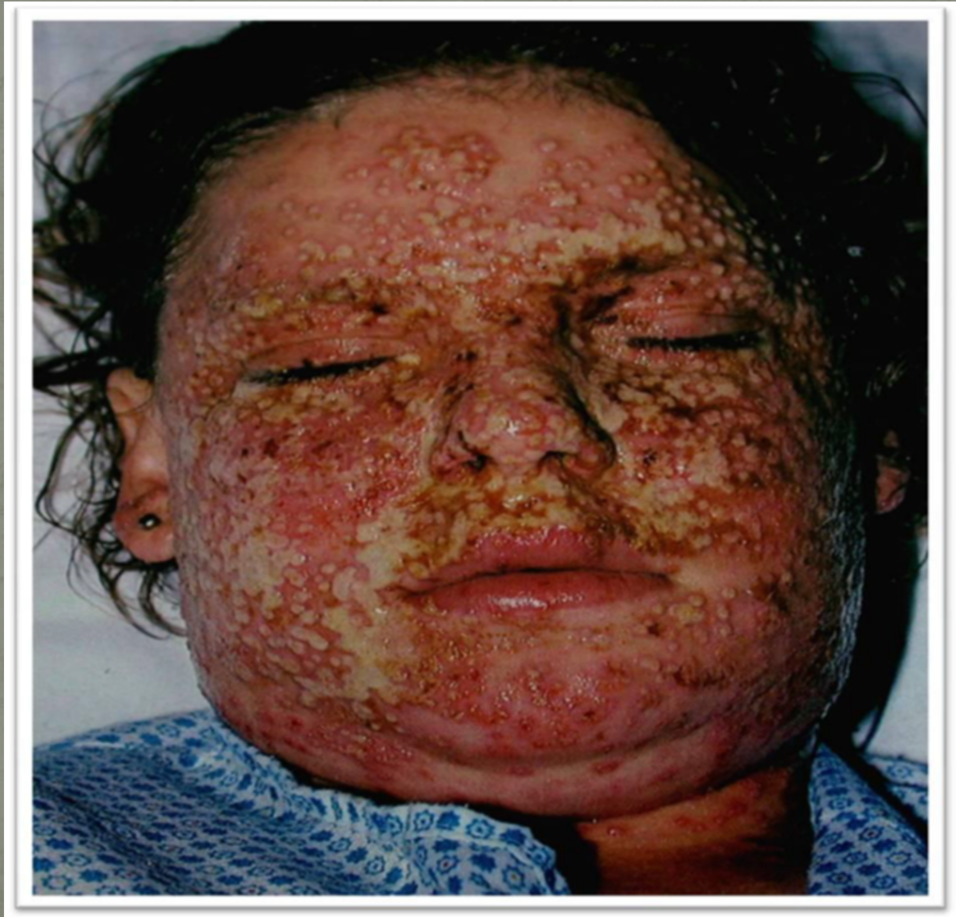
The diagnosis of atopic dermatitis in adults is primarily clinical; special investigations only contribute in identifying external aggravating factors.

Complications:

- Secondary infections



Complications:
Eczema herpeticum



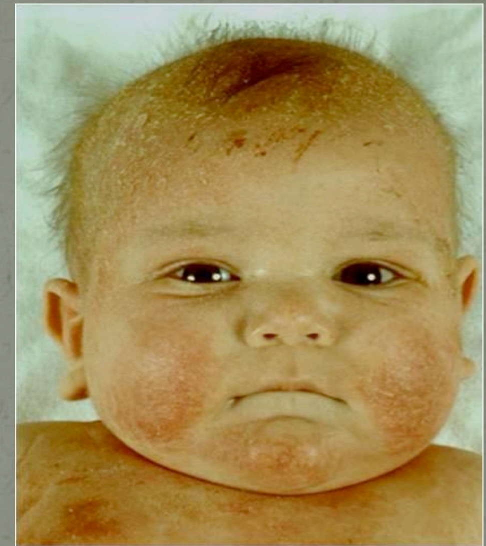
Complications:

- Growth retardation
- psychological

Prognosis

- Half of the cases improve by 2 years of age
- Most improve by teenage years
- <10% of patients have lifelong problems

- 30-50% will develop BA or hay fever



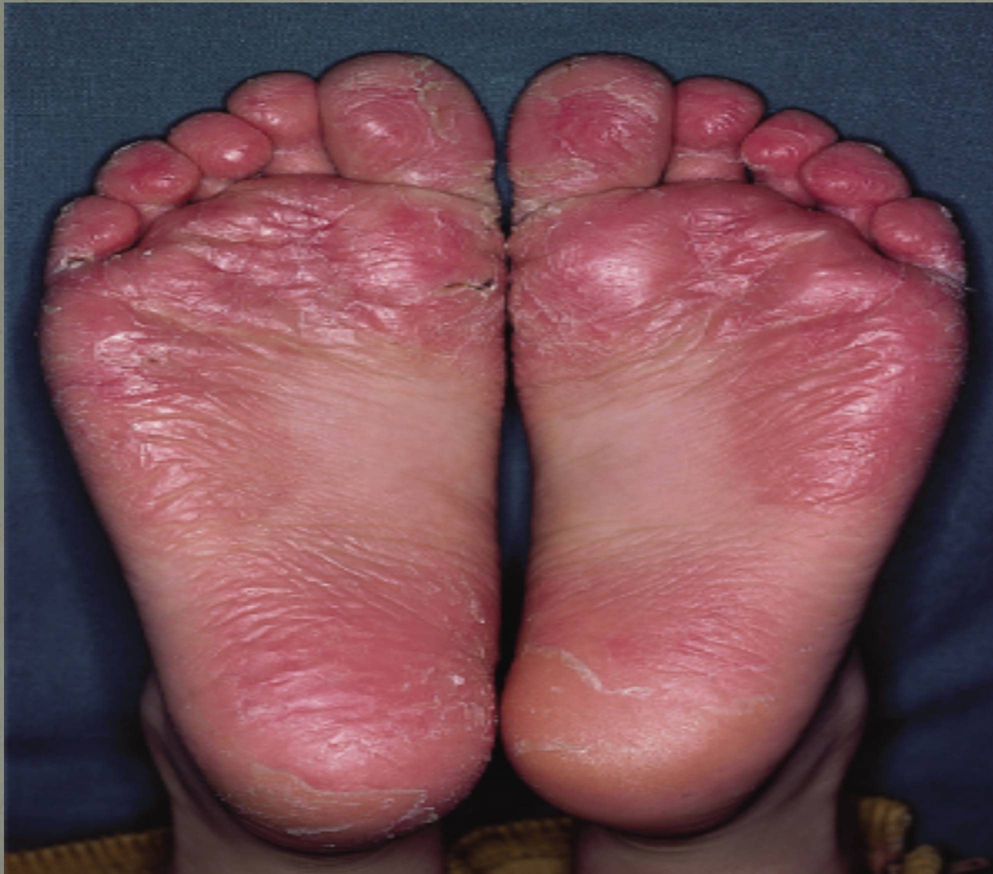
Options include

- Remains clear
- Localized hand eczema provoked by irritants
- Generalized low-grade eczema
- Eczema stays confined to limb flexures

Management:

- Education! Education! Education!
- Psychological support!
- Skin care: moisturizing the skin
- Avoid irritant like soaps
- Topical therapy: (topical steroids, Tacrolimus, Pimecrolimus)
- Antibiotics--- Antistaphylococcal drugs
- Sedative antihistamine (Oral H_1 antihistamine) to control itching and help sleep
- Phototherapy
- Systemic therapy: steroids, Cyclosporin, Methotrexate, Azathioprine

Juvenile planter dermatosis



Seborrhoeic Dermatits

Definition: redness and scaling in regions where the sebaceous glands are most active as the face, scalp, presternal area and body folds.

Very common chronic dermatosis.

Age: infancy, puberty , old age

More in male

Pathogenesis:

- Increased Sebum!(seborrheic state)
- Tendency
- Pityrosporum ovale (Maalassezia furfur)over growth
- More in Parkinson, HIV/AIDS patients.

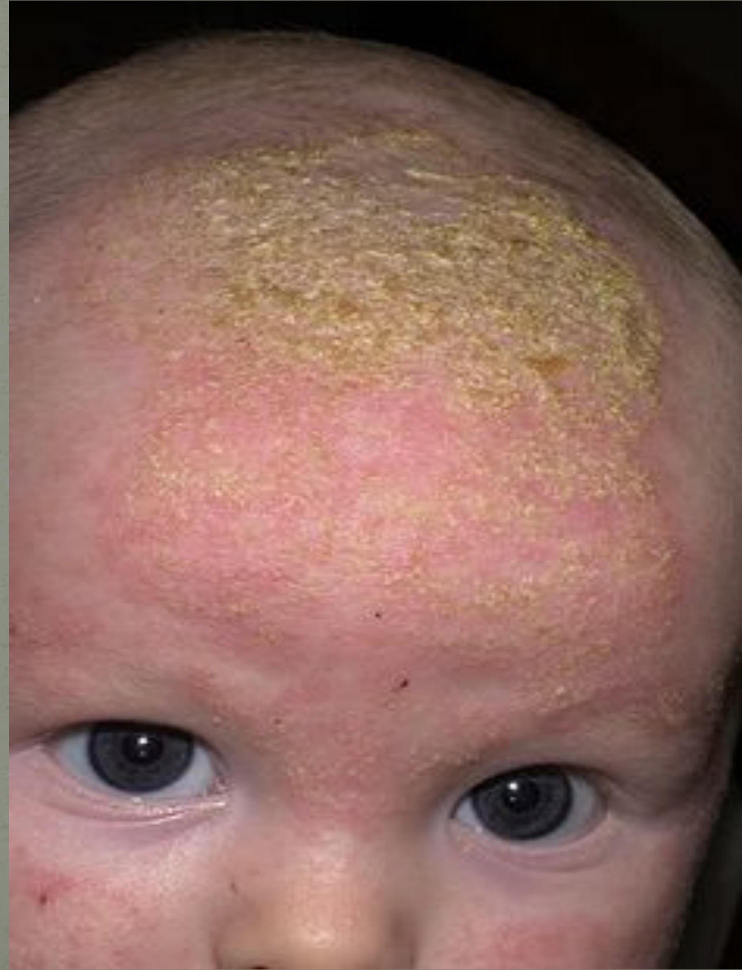
Clinical features

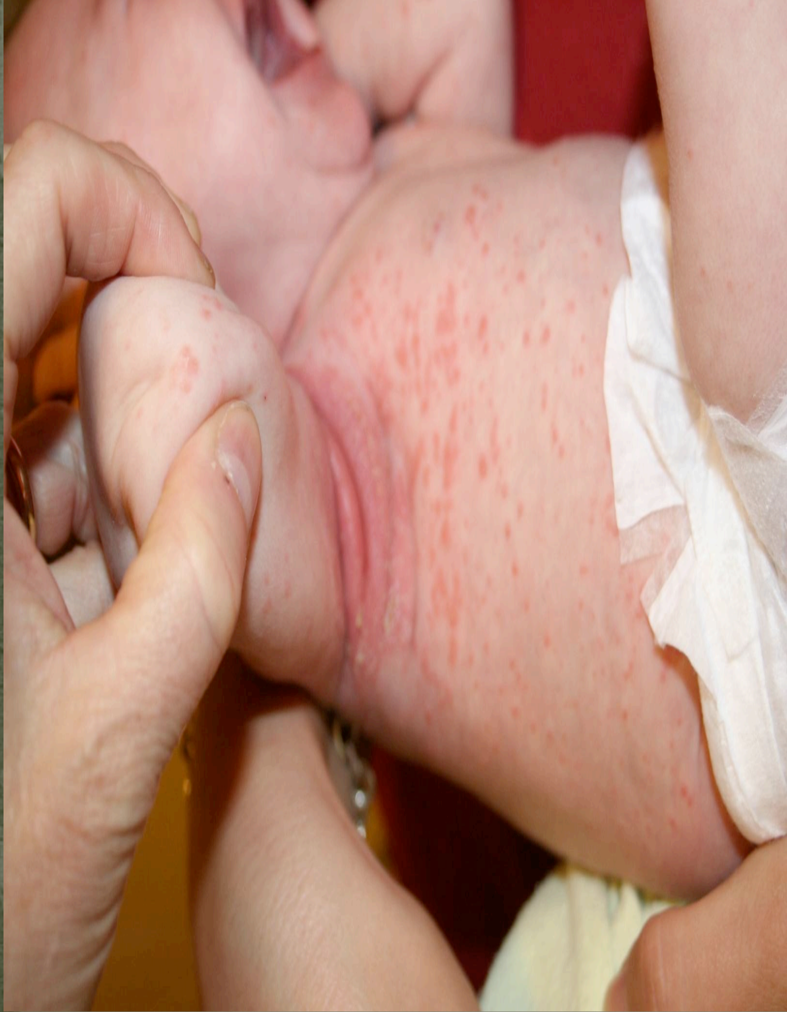
Presentation

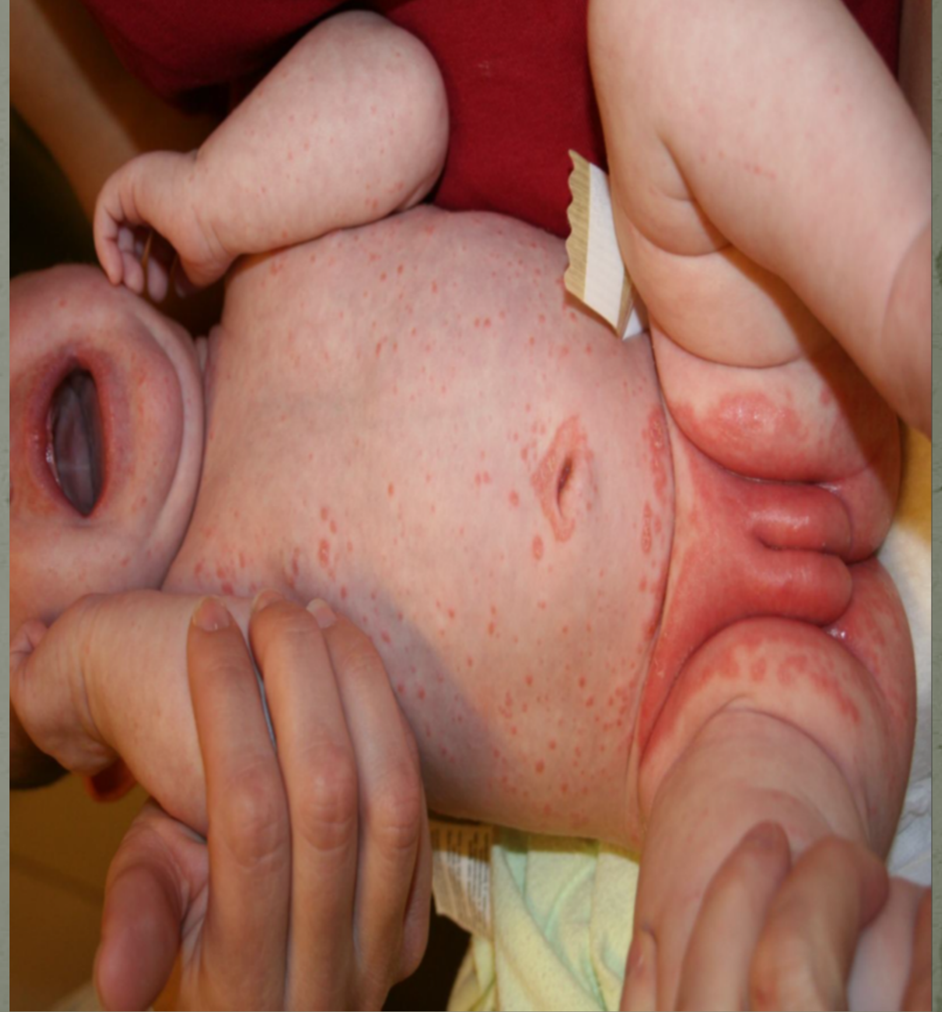
- Pruritus is variable
- Gradual onset, worse in winter dry environment.
- Orange- red greasy scaling macules, papules of varying size
- Trunk: nummular, annular
- Scalp: marked scaling, diffuse involvement

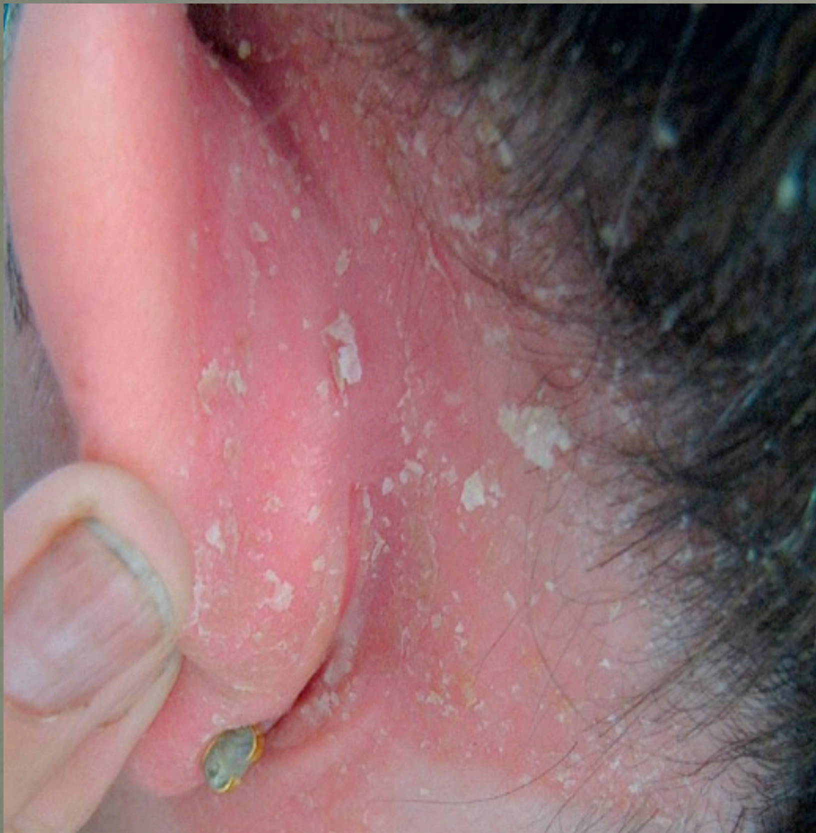
Distribution:

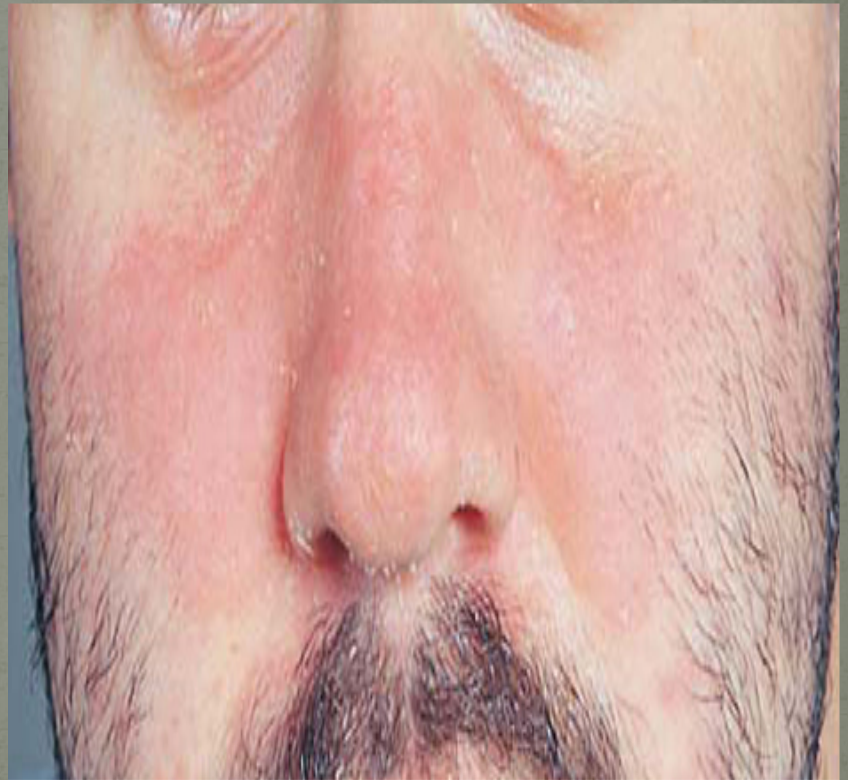
- Hairy are of head, cradle cap
- Face: forehead, nasolabial folds , glabella and eyebrows.
- Trunk: DDx: PR vs pityriasis versicolor
- Body folds: axillae, groins, anogenital area, submammary areas, umbilicus and diaper area (infants)--- sharply marginated erythematous eruption, erosions and fissures
- Genitalia: with yellow crust and psoriasiform lesions.







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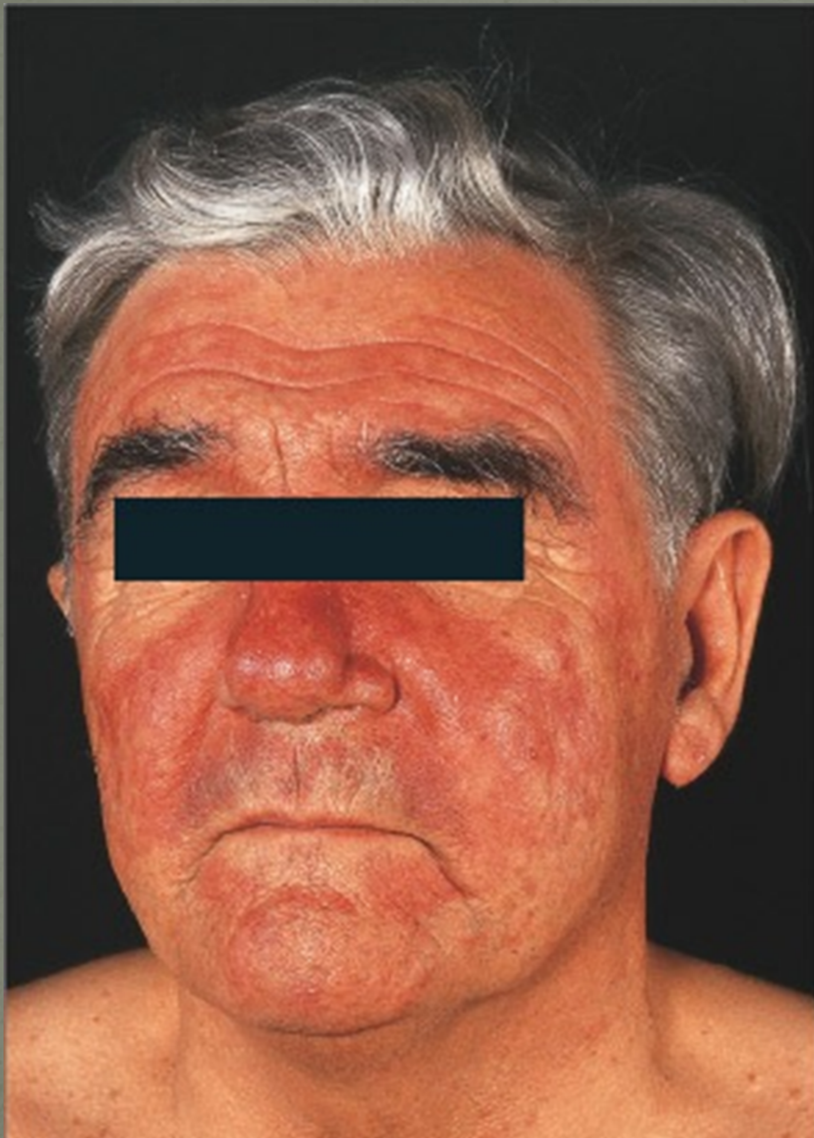
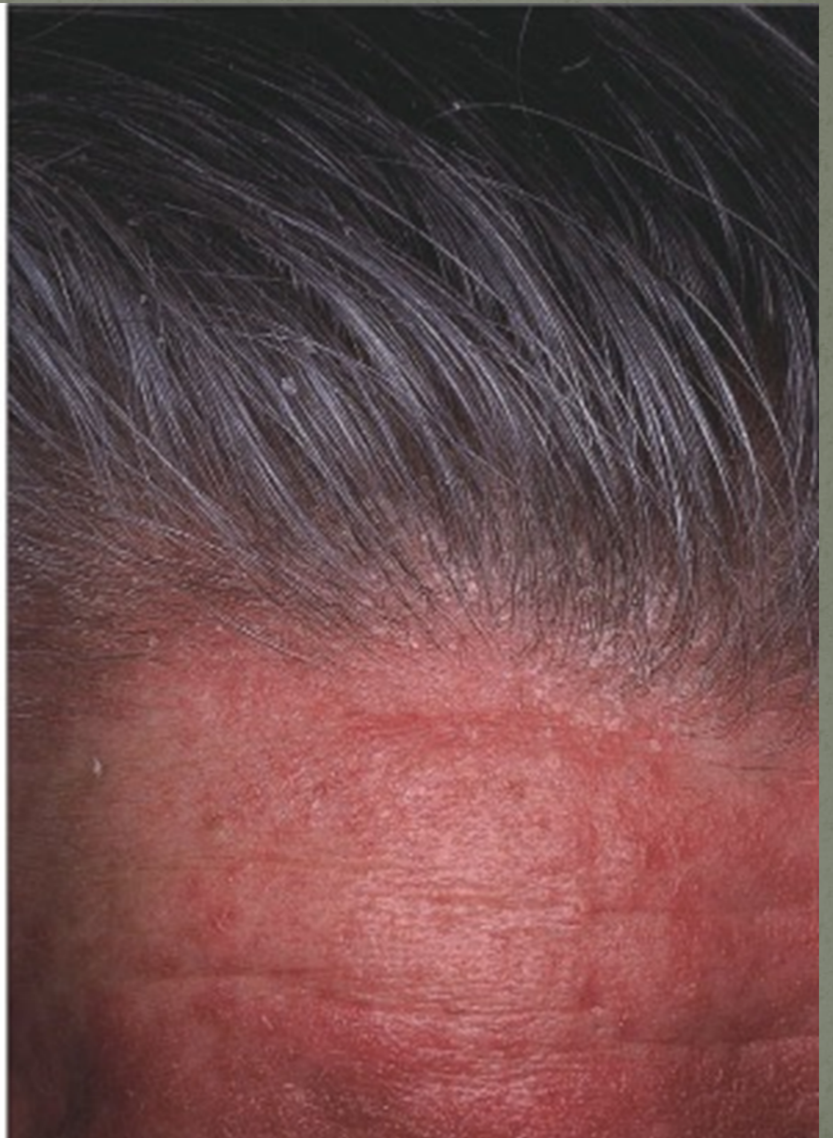



Management:

Scalp :

- Zinc pyrithione Shampoo
- Selenium sulfide 2.5% shampoo
- 2% ketoconazole shampoo
- Low – potency glucocorticoid solution, lotion or gels.

Skin:

- Topical: antifungals, glucocorticoid, pimecrolimus
- Combined therapy
- Maintenance & recurrence

Contact Dermatitis

- Definition: dermatitis results from contact with external materials.

Pathogenesis:

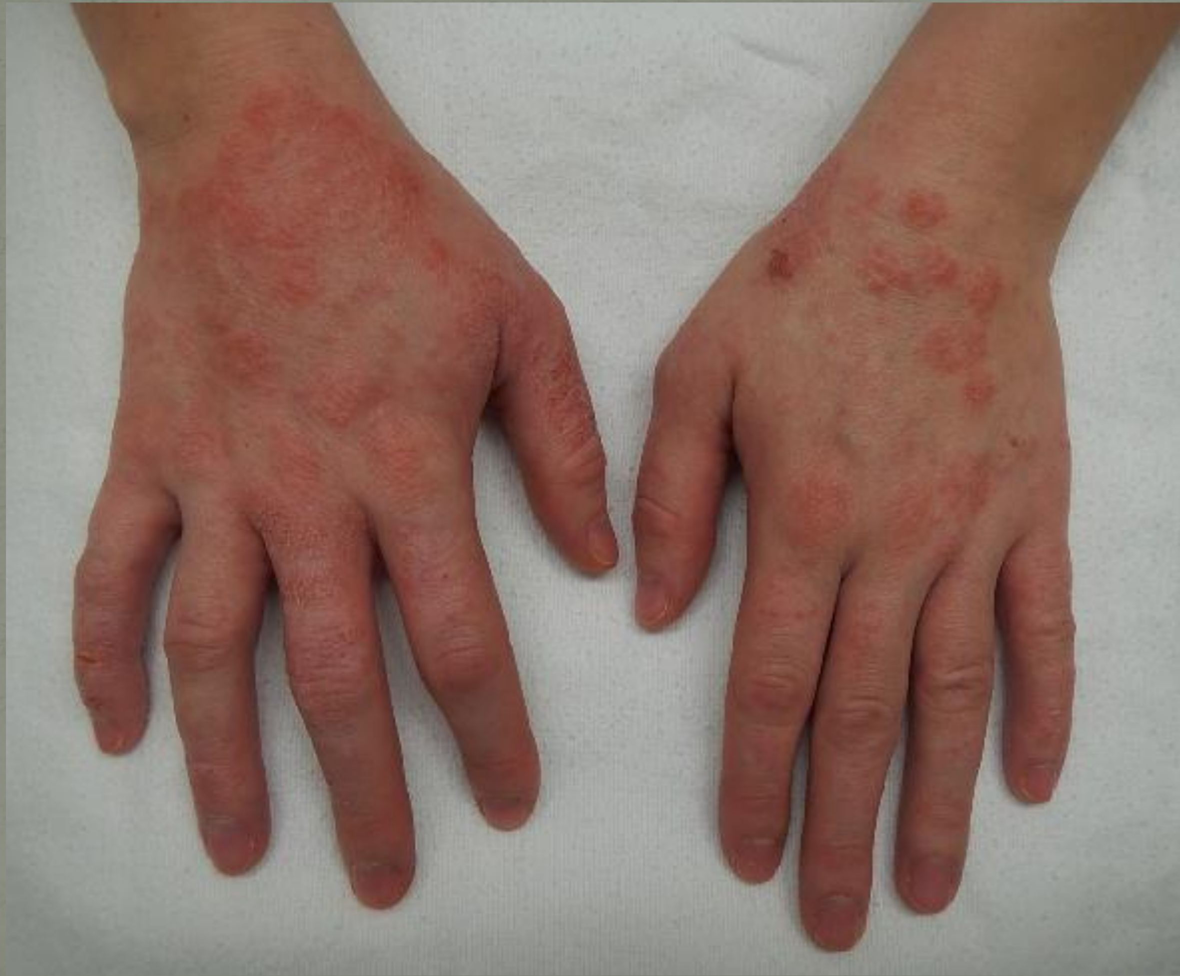
- Irritant vs. allergic : (cytotoxic vs type IV)
- Common irritants: detergent, acids, dust, burning chemicals, etc
- Common allergens: perfumes, hair dyes, nickels, leathers, metals, rubbers, latex, cosmetics, etc

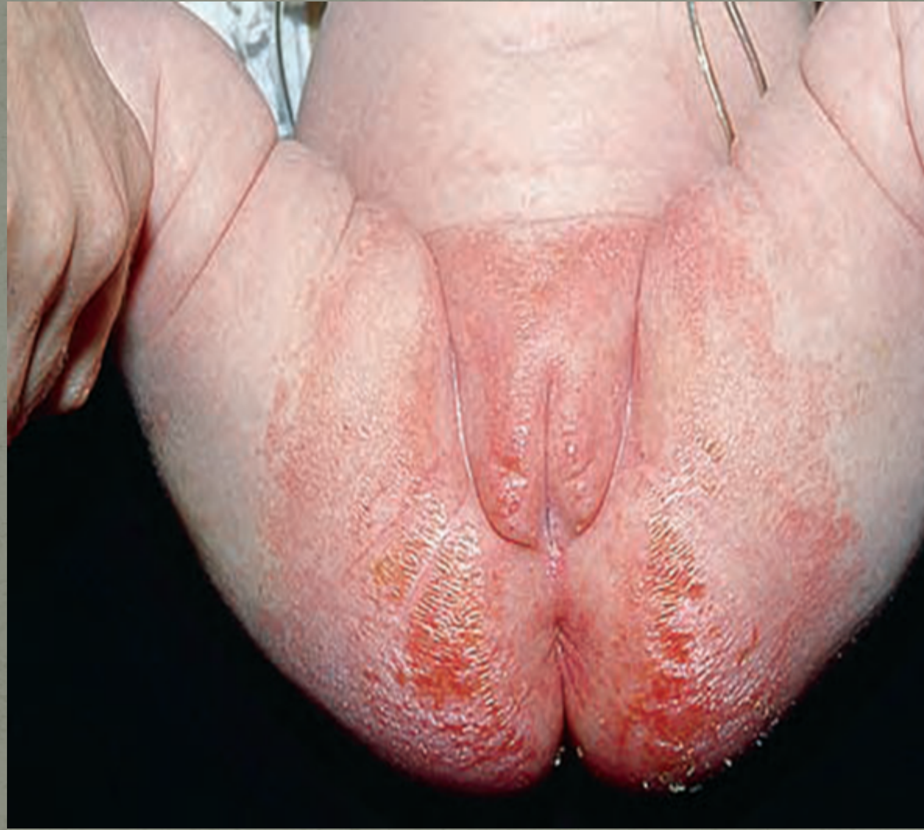
IRRITANT CONTACT DERMATITIS

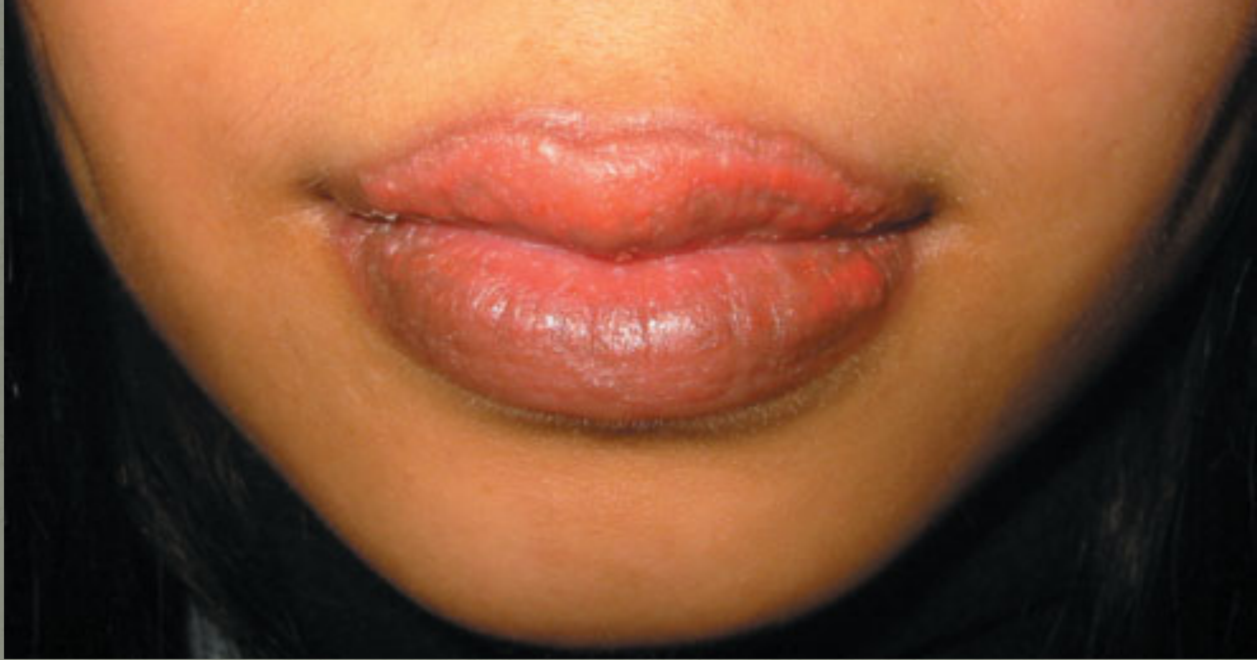
- All people will react to an irritant if applied in a high enough concentration
- At 1st exposure

Common causes:

- Hands repeatedly exposed to water, cleansers
- Lip-licking habit – wetting and drying caused by saliva
- Napkin dermatitis







ALLERGIC CONTACT DERMATITIS

- It is caused by allergen that trigger type IV hypersensitivity reaction in a sensitized person.
- Characteristics
- First exposure does not cause a reaction
- Begins 24 h after subsequent exposure if already allergic

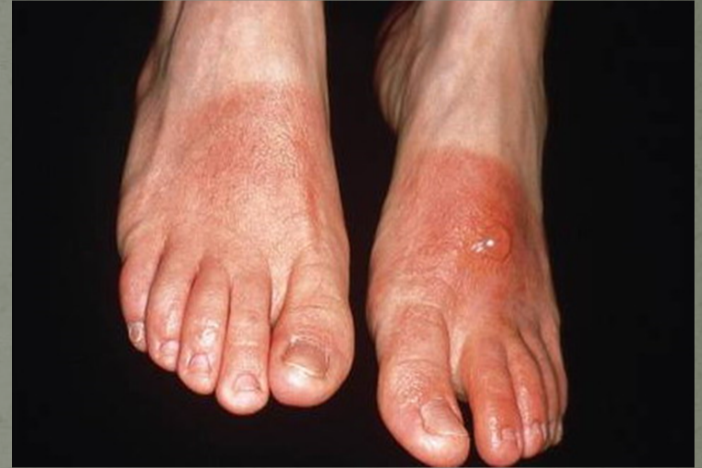
- Commonest: Nickel, chromates, rubber, preservatives, topical Abx, topical cs

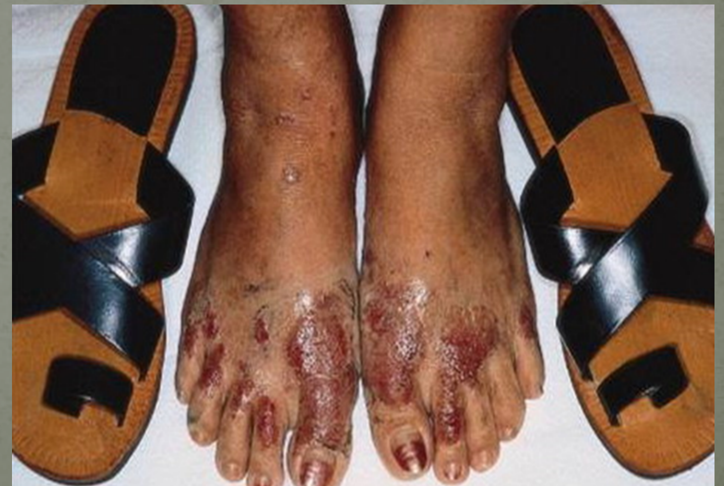
- Diagnosis: Skin patch tests(read at 48, 96 h)

Shoe dermatitis

Causes:

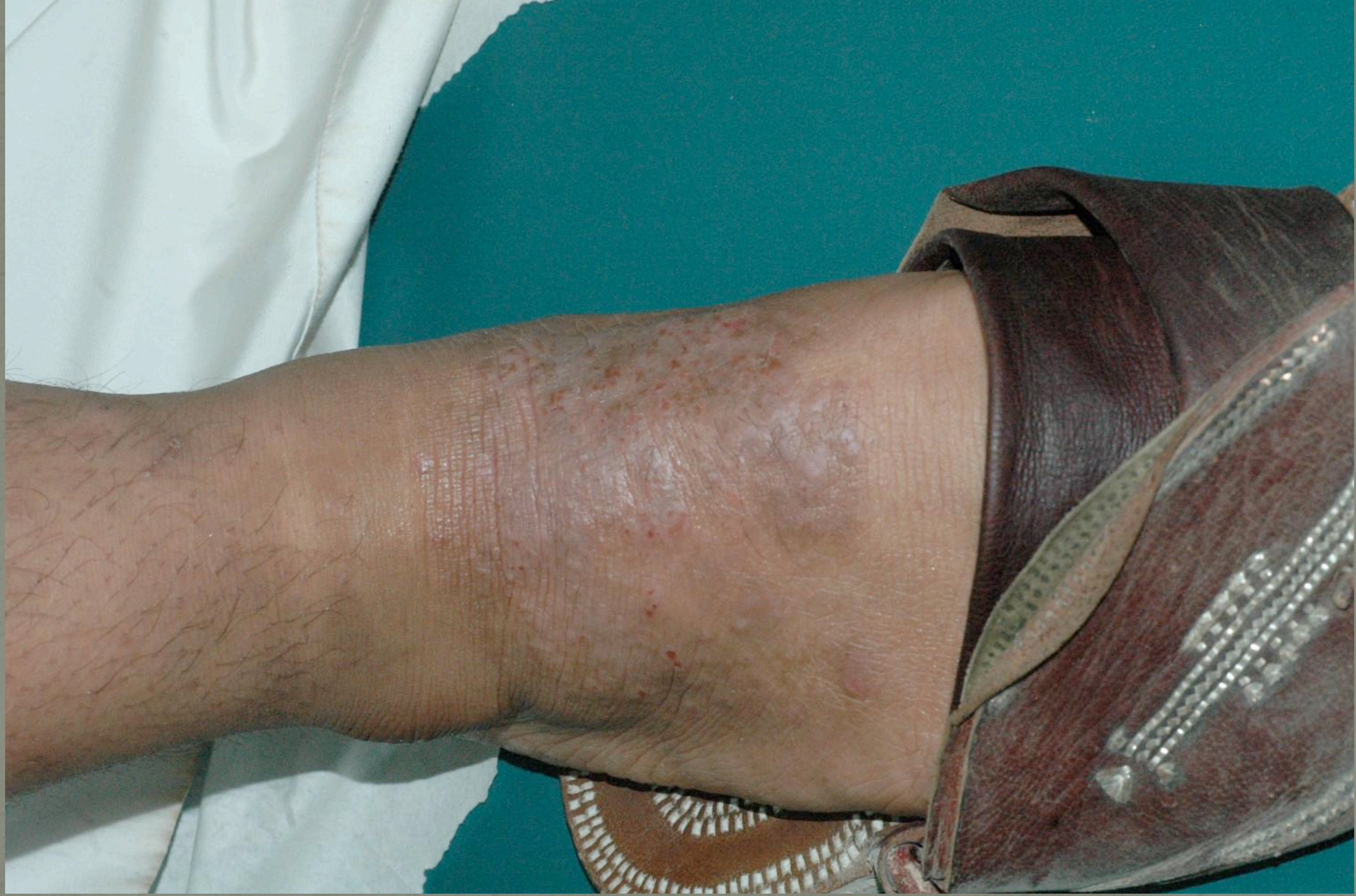
a. Rubber (most common)
b. Chromates (in leather)
c. Glutaraldehyde (in leather)
d. Adhesives
e. Dyes

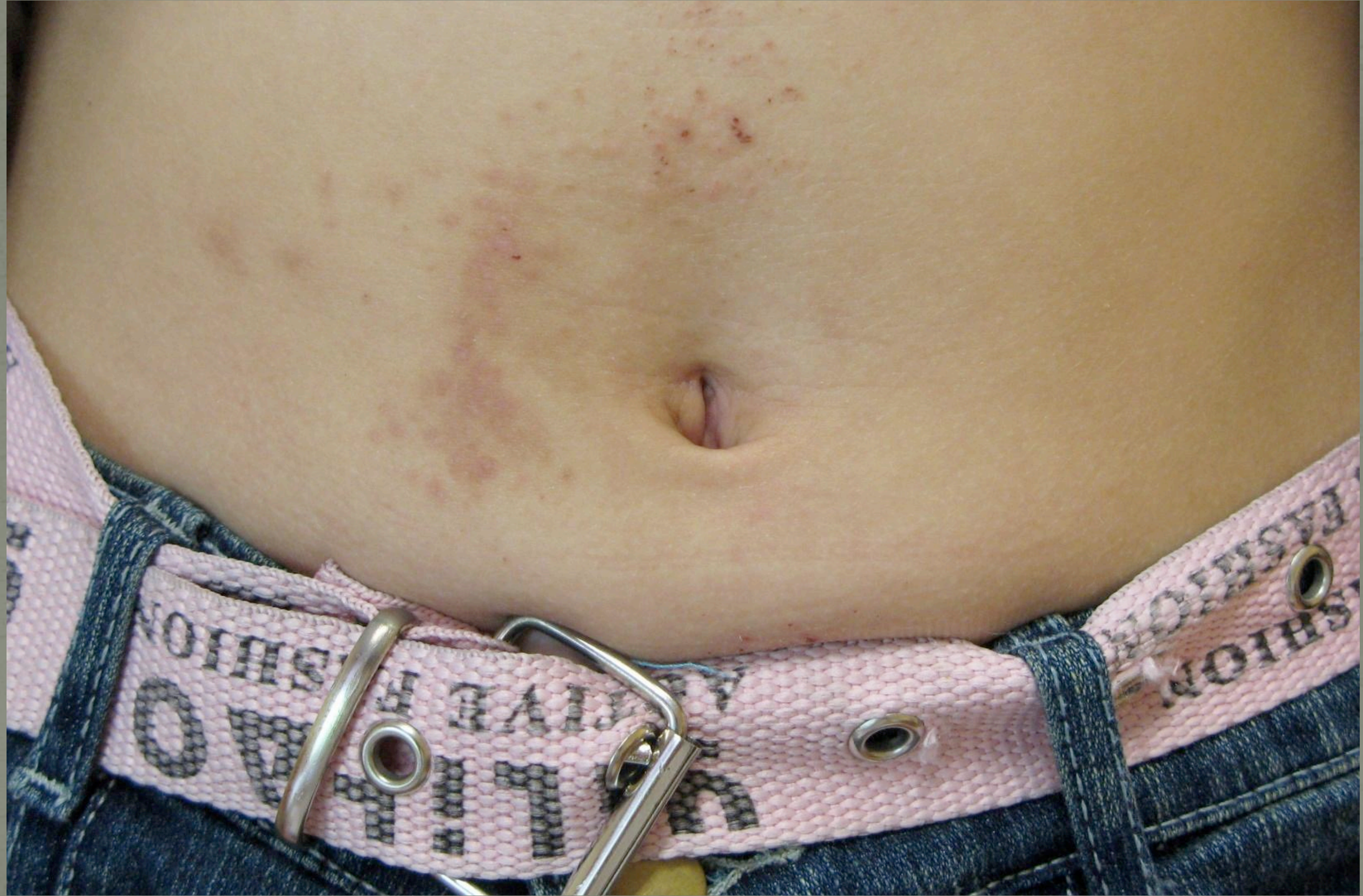




Clinical features

- Predilection sites: site of contact
- Distribution & configuration

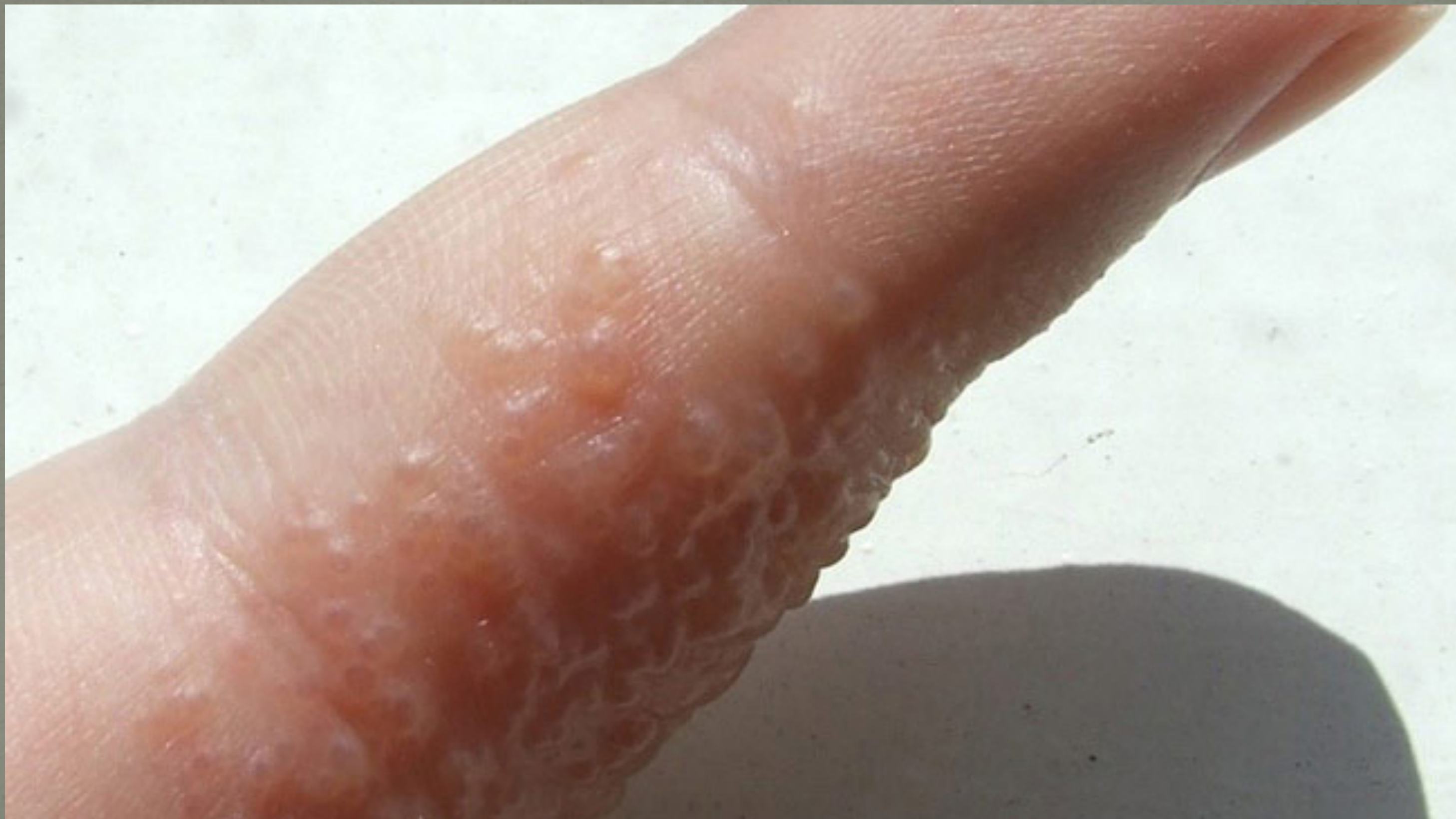




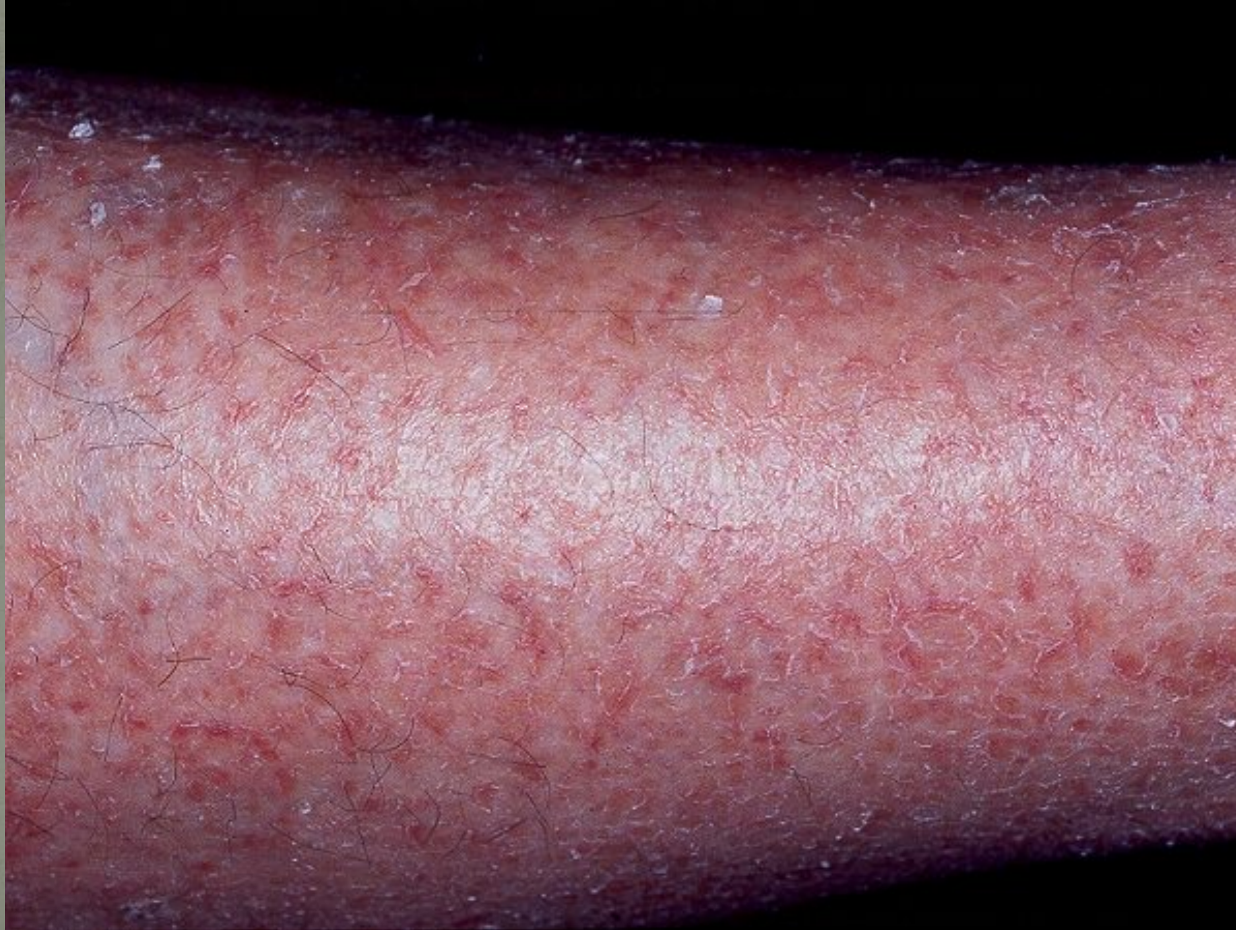
Management:

- Identification removal of causes.
- Patch testing:
  - for allergic contact dermatitis not for irritant
- Avoidance allergens
- Topical corticosteroids

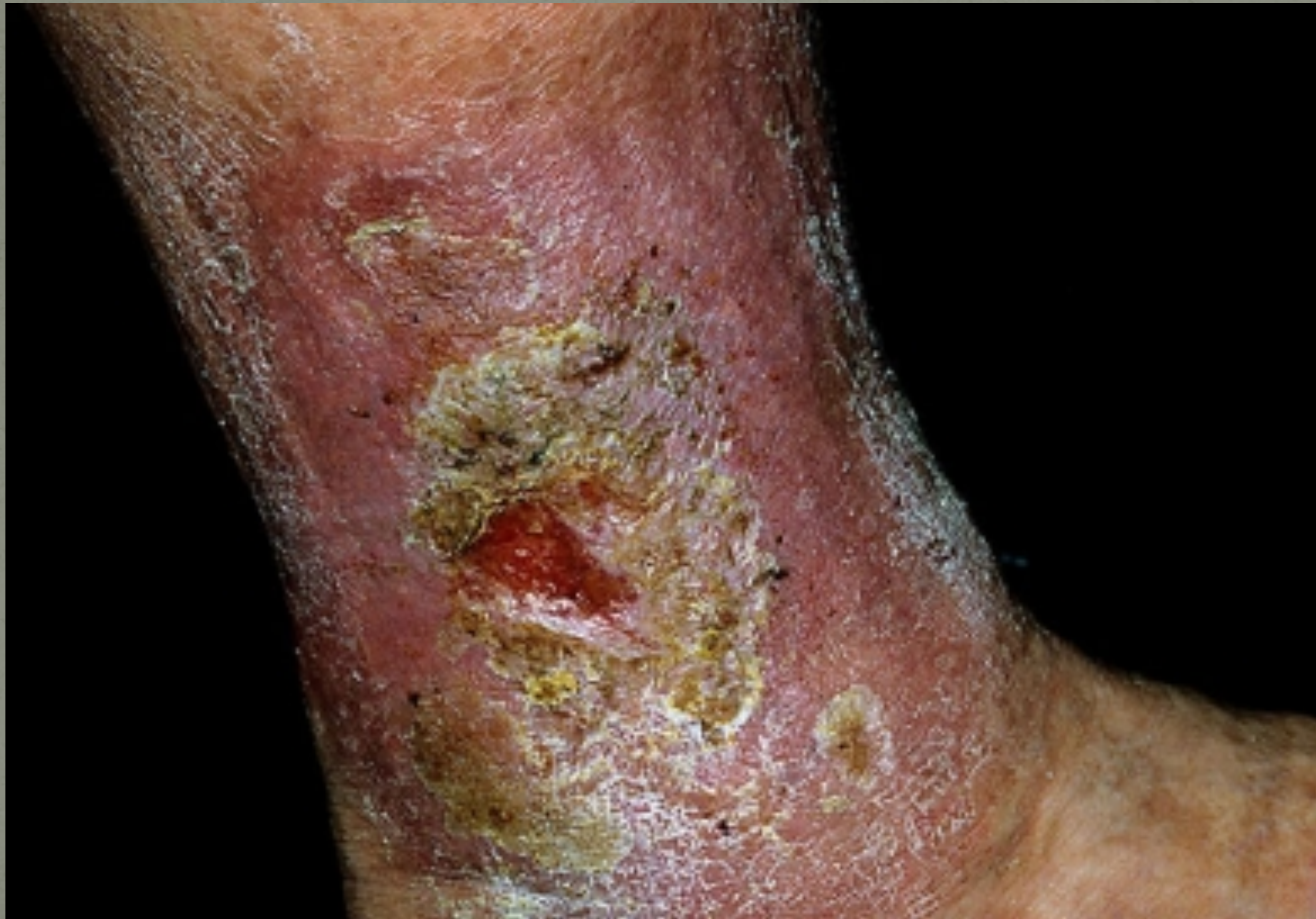
Dyshidrotiform eczema



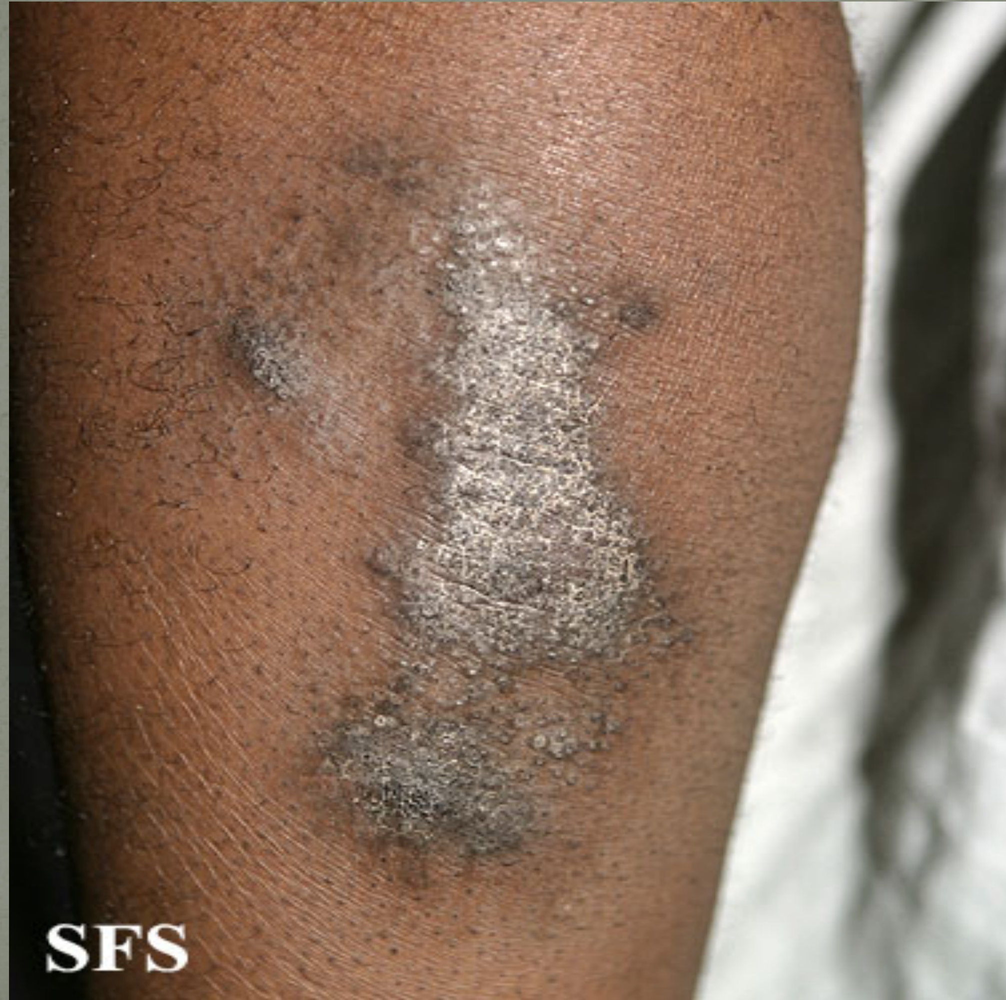
Asteatotic eczema



Stasis eczema



Lichen simplex Chronicus



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