Eczema: Come from the Greek name for boiling, a reference to the tiny vesicles (bubbles) that are commonly seen in the early acute stage of the disease

Dermatitis: means inflammation of skin, it’s a broader term than eczema which is only a type of several skin inflammations

**Eczema classification**

1. Mainly by exogenous factors (contact): irritant, allergic, photodermatitis
2. Other types: atopic, seborrheic, discoid (nummular), pompholyx, gravitational, asteatotic, neurodermatitis, juvenile plantar dermatosis, napkin dermatitis

**Pathogenesis**

Similar in all types involving similar inflammatory mediators (prostaglandins, leukotriens, cytokines). Helper T cells sometimes activated by superantigens from *Staph. aureus*. Epidermal cytokines help to produce spongiosis & that their secretion by keratinocytes elicited by T lymphocytes, irritants, bacterial products, & other stimuli

**Histology**

Acute stage: spongiosis, intraepidermal vesicles & blisters

Chronic stage: less spongiosis & vesication, acanthosis, hyperkeratosis & parakeratosis

These changes accompanied by various degree of vasodilatation & lymphocyte infiltration

**Clinical appearance**

Acute eczema:

1. weeping & crusting
2. blistering with vesicles
3. redness, papules, swelling
4. scaling

Chronic eczema:

1. less vesicular & exudation
2. more scaly, pigmented, thickened
3. lichenification
4. fissures

**Complications**

1. Heavy bacterial colonization esp. in seborrhoeic, atopic, nummular
2. Local superimposed allergic reaction to medicaments can provoke dissemination
3. Interfere with sleep
4. Interfere with work
5. Interfere with sporting, activiteis

**DDX**

1. Psoriasis: sharply marginated, very scaly, involve knee & elbow
2. Scabies: itchy contacts, face spared, burrows, affect nipple & genitalia
3. Lichen planus: mouth lesion, violaceous flat topped papules
4. Fungal infection: annular lesions with active edge
5. Palmoplantar pustulosis: obvious pastules on palm & sole
6. Angiodema & erysipelas: Unusually swollen, on face
Investigations
1. Patch test
2. Photopatch test
3. Total & specific IgE antibodies
4. RAST

Treatment
1. Acute weeping eczema:
   - Rest & liquid application
   - Nonsteroidal preparation
   - Daily 10 min soaks in cool 0.65% aluminium acetate solution
   - Saline or tap water & soaks followed by a smear of corticosteroid cream or lotion
   - Potassium permanganate
   - Calamine lotion
   - Magenta paint
   - Wet wrap dressing: esp. in children a bath followed by steroid application covered with double layers of tubular dressing

2. Subacute eczema:
   - Steroid lotions or creams
   - Vioforms, bacitracin
   - Fucidic acid, mupirocin, neomycin

3. Chronic eczema:
   - Steroid in ointment base
   - Icthamole
   - Zinc cream or paste
   - Nothing stronger than 0.5-1% hydrocortisone oint. On face or in anfants
   - Mild potency c.s. not more than 200g/wk
   - Moderate potency c.s. not more than 50g/wk
   - Potent c.s. not more than 30g/wk

4. Systemic therapy
   - Systemic steroid (prednisolone)
   - Hydroxyzine
   - Doxepin
   - Trimeprazine
   - Systemic antibiotics

COMMON PATTERNS OF ECZEMA

Irritant contact dermatitis
80% of dermatitis cases
 Mostly industrial
 Usually on hands & forearm
 Acute reaction elicited after brief contact
 Commonly by detergents, alkalis, solvents
 May lead to loss of work
 DDX: allergic contact dermatitis, atopy
 Patch test with irritants is not helpful & may be misleading
 Rx: avoid irritants, use protective measures, barrier creams, topical steroids & emollients, change of job

**Allergic contact dermatitis**

The mechanism is delayed type 4 hypersensitivity

Previous contact is needed

Its specific to one chemical usually

Remote areas may be affected

Sensetization is persists indefinitely

Most allergens are simple chemicals that bind to a protein to become complete antigen

Areas involved eyelids, external auditory meatus, hands & feet

High risk individuals are hair dressing, working in flower shop, dentistry

Common allergens: chrome, nickle, cobalt, lanolin, neomycin, rubber, poison ivy & oak

Jewellery, bra clips, jeans stud are common causes

Patch test is recommended

Rx: avoid allergens, topical steroid, adding ferrous sulphate to cement to reduce its water soluble chromate content

**Atopy**

Means without place in greek

Is a state in which exuberant production of IgE occurs as a response to common environmental allergens

Atopic patient develop one or more of atopic diseases as asthma, aczema, hay fever, & food allergies

Concordance rate in monozygotic twins is 86%, in dizygotic is 21%

75% begin before 6 months, 80-90% before 5 years, totally affect 3% of infants

60-70% will clear by their early teens

It has 3 phases:

Infantile: vesicular, weeping, start at face

Childhood: leathery, dry, excoriated, affects elbow, knee flexures, wrist ankle

Adults: lichenification, more wide spread, white dermographism is striking

Cardinal feature is itching
Diagnostic criteria:
Must have:
chronically itchy skin
**plus 3 or more of the following:**
history of itching in skin creases
history of asthma or hay fever
general dry skin
visible flexural eczema
onset in first 2 years of life
Complications: bacterial infections, widespread Herpes simplex, M. contagiosum
Prick test used to show type 1 reaction
Rx: explanation, reassurance, avoid exacerbating factors, topical steroids, tacrolimus, sedative antihistamines, antibiotics, UVA, UVB, cyclosporin

**Seborroeic dermatitis**
Common eczema of the hairy areas show characteristic greasy yellowish scales
Red scaly exudative or dry scaly or intertriginous
Affects scalp, ears, eyebrows, face, presternal area, armpits, umblicus, groin
May be familial, affect those with dandruff
There may be overgrowth of of pityrosporum yeasts
May be early sign of AIDS
Mainly affect adults, usually recurrent
May associated with furunculosis, or superadded candida infection
Rx: topical imidazole, sulphur, salicylic acid, topical steroids, ketoconazole shampoo

**Discoid (nummular) eczema**
Common endogenous eczema
Affects limbs of middle age males
Reaction to bacterial antigen is suspected
Multiple coin shaped vesicular crusted itchy plaques
Rx: topical steroid & antibiotics

**Pompholyx**
Recurrent bouts of vesicles or blisters on palms, fingers & or sole of adults
Cause is unknown, may provoke by stress or heat or may be allergy to nickle
Recurrent infection & lymphangitis is a recurrent problem, it may follow acute Tinea pedis
Rx: antibiotics, aluminium acetate, potassium permanganate, steroids

**Gravitational (stasis) eczema**
Usually accompanied by venous insufficiency, haemosidrin deposition
Chronic patches of eczema on lower legs
Patient may become sensitized to local antibiotics or to preservatives in medicated bandages
Rx: eliminate oedema, topical steroids, zinc cream

**Asteatotic eczema**

Itchy eczema patches on lower legs of elderly
Contributory factors: Dry skin in old, low humidity in winter, central heating, diuretics, hypothyroidism
Rx: steroids, restrict bathing, daily use of emollients

**Localized neurodermatitis (lichen simplex)**

Single fixed itchy lichenified plaque on nape of neck in women, legs in men & anogenital area in both sexes
Skin damaged from repeated rubbing or scratching as a habit in response to stress
Rx: topical steroid with occlusion, tranquilizers are with little effect

**Juvenile plantar dermatosis**

May be related to modern socks & shoe lining with subsequent sweat gland blockage
Called toxic sock syndrome
Forefeet & undersides of toes become dry shiny with deep painful fissures
Rx: use of cork insole in shoes, cotton or wool socks, emollients, ichthammol, steroid

**Napkin (diaper) dermatitis**

Irritant in nature aggravated by waterproof plastic pants, feces, urine
Moist glazed sore erythema of napkin area sparing skin folds (which diff. it from seborrheic eczema)
Candida superinfection is common appears as erythematous vesicopustules on periphery
Rx: keep this area clean & dry, use disposal diapers, topical zinc, caster oil, silicone, mild steroid-antifungal combination
The child should be allowed to be free of napkins as much as possible