Eczema & Dermatitis (2)

Endogenous Dermatitis

1- Atopic dermatitis.
2- Seborrhoeic dermatitis.
3- Discoid eczema.
4- Pompholyx.
5- Gravitational eczema.
6- Lichen simplex chronicus.
7- Asteatotic eczema.
8- Pityriasis alba.

Atopic Dermatitis

Atopy
is a genetic predisposition to form excessive IgE antibodies as response to common environmental antigens leading to prolonged and generalized hypersensitivity and liability to manifest one or more of the atopic diseases (as asthma, allergic rhinitis, hay fever, eczema and food allergies).

Atopic Dermatitis
An itchy, chronic, or chronically relapsing inflammatory skin condition. It is characterized by itchy papules which become excoriated and lichenified and typically have a flextural distribution. The eruption is frequently associated with other atopic conditions in the patient himself or other family members.

Etiopathogenesis:
Exact cause is still unknown, but it is best considered as an interplay between genetic, immunologic, physiologic and pharmacologic factors.
1- Positive family history is found in 70% of cases, this is largely due to genetic factors and the mode of inheritance is mainly polygenic with some maternal imprinting.
2- Immunological abnormalities: Excessive IgE production predisposing to excessive anaphylactic sensitivity and increased mast cell activation and secretion of histamine and other mediators. Decreased delayed cell mediated immunity leading to increased susceptibility to viral & fungal infections
3- Abnormalities of essential fatty acid metabolism and decreased amounts of lipids leading to dry skin.
4- Decreased chemotactic function of leucocytes resulting in dense bacterial colonization and increased bacterial infections
5- Transient IgA deficiency of intestinal mucosa with increased intestinal permeability to food allergens result in increased production of IgE.
6- Tendency of small blood vessels in atopic dermatitis towards vasoconstriction.
7- Low itching threshold and easy skin irritability.

Clinical features:
Onset is usually between 2-6 months of age (in 75% of cases), but it may be delayed until childhood and adult life. Onset before 2 months is exceptional. The cardinal feature of atopic dermatitis is itching, *" the itch that rashes",* and scratching may account for many of the signs. The primary lesion is follicular papule that change into vesicle, then pustule. The distribution and character of the rash vary with the age, thus there are 3 clinical phases for atopic dermatitis.

- *Infantile phase:* (2 months-2 years)

Present as itchy erythema of the cheeks and face, with fine vesicles that may rupture and become exudative and crusted. Scalp, trunk and extremities can also be involved but diaper area is spared. Affected infants are usually irritable and have poor feeding and sleeping.

- *Childhood phase:* (2years- 12years)

Lesions are usually less exudative, drier, and slightly scaly. Sites most charecteristically involved are the elbow & knee flexures, wrists, ankles, retroauricularfolds and sides of the neck. In 2/3 of cased spontaneous remission occur by 12years, while 1/3 of cases change into

- *Adult phase:*

Lesions are usually dry, thick, lichenified, and hyperpigmented involving the same (but larger) areas as childhood phase. This phase may persist for life.

Diagnosis:
There is no definite sign or symptom and diagnosis is based on collecting criteria. There are major and minor criteria, we have to collect **3** majors & **3** minors to confirm the diagnosis.

Major criteria:

1- Pruritus
2- Chronic or chronic relapsing dermatitis.
3- Typical morphology and distribution:
  a- Facial & extensor involvement in infancy.
  b- Flexural lichenification in children & adults.
4-Personal or family history of atopic disease:
  (asthma, allergic rhinitis, or atopic dermatitis)

Minor criteria:

1- Xerosis (dryness) of the skin.
2- Palmar hyperlinearity.
3- Ichthyosis.
4- Immediate (type 1) skin reactivity.
5- Cheilitis (inflammation of lips).
6- Dennie-Morgan infraorbital folds (>2 folds).
7- Food intolerance.
8- Hand/ foot dermatitis-non allergic, irritant.
9- Increased serum IgE.
10- ↑ cutaneous infection (esp. staph aureus & herpes simplex)

11- Pityriasis alba
12- Itching when sweating
13- Keratosis pilaris.
14- Orbital darkening
15- Facial pallor/ fascial erythema.
16- White dermographism.
17- Wool intolerance.
18- Perifollicular accentuation of eczema.
19- Post auricular fissuring.
20- Hertoghe sign (thinning of lateral part of eyebrows).

Treatment:

1- General measures: explanation, reassurance and encouragement.
2- Avoidance of triggering factors: excessive bathing, irritating soaps, woolen clothes, extremes of cold and heat, and emotional stress.
3- Topical therapy:

- *Topical corticosteroids* in appropriate strength and base to suppress inflammation, “if lesion is dry, wet it by ointment & if wet, dry it by lotions”.
- Regular use of *emollient* especially after bathing to increase skin hydration. ex. Vaseline or Zinc oxide ointments.
- *Topical immunosupressants*: tacrolimus ointment is safe with slight burning sensation being most common side effect.

4- Systemic therapy:

- Sedative *antihistamines* to control pruritus and give sedation.
- Systemic *corticosteroids* to control acute, generalized and severe cases.
- *Antibiotic* for treatment and prophylaxis of secondary bacterial infections.
- *Phothothrapy* (PUVA or UVB) is often helpful for severe cases.

Seborrhoeic Dermatitis

A distinctive type of eczema characterized by yellowish greasy scaling over red inflammed skin affecting the seborrheic areas of the body (mainly the scalp, eyebrows, eyelids, nasolabial folds, beard, moustache, external auditory canal, retroauricular fold, sternal areas, shoulders, interscapular area, axillae, & groins). It usually start with puberty and exacerbate in winter.

Etiopathogenesis:

It is due to the effect of pityrosporum ovale overgrowth, (a yeast like fungus regarded as part of normal skin flora), which act on TG present in the sebum to produce FFA that is very irritant to skin resulting in itching, erythema, scale & inflammation.

Clinical features:
It may presesnt in many ways:
1- A red scaly or exudative eruption of the scalp, ears, face and eyebrows. May be associated with blepharitis and otitis externa.
2- Dry scaly “petaloid” lesions of the presternal and interscapular areas. There may also be extensive follicular papules or pustules on the trunk (pityrosporum folliculitis).
3- Intertrigenous lesions of axillae, inframmamary, umbilicus, inguinal folds, ano-genital areas, and even under spectacles or hearing aids.
4- Seborrheic dermatitis may affect infants up to 3 months of life and present as cradle cap, flexural eruption, or erythroderma.

Treatment: Combined topical steroid and topical antifungal preparation. Treatment is suppressive rather than curative.

Discoid eczema

A common pattern of endogenous eczema characterized by multiple, well defined, coin-shaped, vesicular or crusted, highly itchy plaque usually less than 5 cm in diameter. It classically affects the extensor surface of limbs of middle aged and tends to persist for months. Emotional stress is important causative factor. Topical steroid-antibiotic mixture does better than either separately.

Pompholyx

A special form of endogenous eczema characterized by development of recurrent bouts of deep seated vesicles or larger blisters appear on the palms, fingers and/or the soles of adult. Bouts lasting a few weeks & recur at irregular intervals. Secondary infection and lymphangitis are recurrent problem. Heat, emotional upsets, nickel ingestion, or fungal infection may trigger pompholyx.
Treatment: K+pemaenganate soaks followed by very potent steroid. A course of systemic steroid and appropriate antibacterial may be needed.

Gravitational eczema

A chronic itchy, patchy eczematous condition of the lower legs secondary to venous hypertension and varicosity. It is often associated with signs of venous insufficiency (edema, red or bluish discoloration, loss of hair, small patches of atrophy, induration, hemosiderin

pigmentation and ulceration). Secondary allergic sensitization to topical antibiotics and persistent ulceration may complicate the condition.
Treatment: correct the cause, eliminate edema by elevation & pressure bandage, use mild-moderate topical steroid. Avoid topical antibiotics and very potent steroids.

Neurodermatitis
(Lichen Simplex Chronicus)

A usually single itchy fixed plaque of lichenified eczema due to repeated rubbing and scratching of accessible areas, as a habit or in response to stress. The favorite sites are the nape of the neck of women, the legs in men, and the anogenital area in both sexes. Lesions may resolve with treatment but tend to recur either in the same place or elsewhere. Potent topical steroids under occlusion may break the scratch itch cycle and sedative antihistamines are often needed.

Asteatotic Eczema

Often unrecognized, this common and itchy pattern of eczema occurs usually on the legs of elderly patients who have dry skin and tendency to chap. Removal of surface lipids by over-washing, low humidity of winter and the use of diuretics are contributory factors. Against a background of dry skin, a network of fine red superficial fissures creates a “crazy paving” appearance. Treatment: stop irritants, restrict bathing, topical steroids in ointment base, then use unmedicated emollients daily to prevent recurrence.

Pityriasis Alba

May be part of atopic dermatitis or not. It usually affect children aged 3-15 years, affecting exposed parts mostly the face, chest, sides of neck, upper trunk and extrimities. It present as single or multiple hypopigmented patches (preceded by transient erythematous stage) and covered with fine whitish scale. Treatment: reassurance about self limiting nature of the condition, restriction of excess soap use, mild topical steroid ointment and emollients.