

Eczema

Dr. Althea East-Innis
Dermatology Sub-unit
Department of Medicine, UWI

Definition

- Eczema is a pattern of inflammation of the skin characterized clinically in the acute stage by ill defined groups of erythematous vesicles and/or papules and in the chronic stage by scaling and lichenification

Definitions

- Vesicle: Fluid filled lesion less than 0.5 cm. in diameter
- Papule: Solid elevated lesion less than 1 cm. in diameter
- Lichenification: A thickening of the skin with an exaggeration of normal skin markings

Clinical Classification

- Acute
- Subacute
- Chronic

Histology

- In the acute stage, intercellular epidermal oedema (spongiosis) is most prominent.
- In the subacute stage, spongiosis diminishes and hyperplasia and thickening of the prickle-cell layer (acanthosis) increases.
- In the chronic stage acanthosis is the dominant feature.

Eczema

- Eczema is usually associated with inflammation of the skin and so the terms eczema and dermatitis are often used interchangeably
- The condition may be induced by a wide range of external and internal factors acting singly or in combination

Classification Based On Aetiology

- Endogenous
- Exogenous

Endogenous

- Atopic
- Seborrhoeic dermatitis
- Asteatotic eczema
- Nummular eczema
- Dry discoid eczema
- Exudative discoid and lichenoid dermatitis
- Chronic superficial scaly dermatitis
- Pityriasis alba
- Gravitational
- Juvenile plantar dermatosis
- Pompholyx
- Chronic acral dermatitis
- Hyperkeratotic palmar dermatitis
- Metabolic eczema
- Unusual patterns

Exogenous Eczema

- Irritant dermatitis
- Allergic contact dermatitis
- Infective dermatitis
- Photo-allergic contact dermatitis
- Eczematous polymorphic light eruption
- Eczematous dermatophytosis
- Dermatophytide

Endogenous: Atopic Dermatitis

- Atopy is said to exist when there is a personal or family history of eczema of a particular distribution, asthma or hay fever (allergic rhinitis)
- A.D. is common affecting all races
- Usually starts at age 2 to 6 months
- Often starts on the face and spreads to trunk and limbs

Atopic Dermatitis

- In infantile stage primarily involves chest, face, scalp, neck and extensor extremities
- In childhood to adult phase often localized in flexor folds of neck, elbows wrists and knees

Management of Atopic Dermatitis

- Management of the dryness
- Management of infection
- Management of the dermatitis: specific treatment is topical and occasionally oral glucocorticoids

Corticosteroids

- Naturally occurring corticosteroids are synthesized from cholesterol by the adrenal cortex
- The major naturally occurring glucocorticoid is cortisol (hydrocortisone)
- Corticosteroids used in Dermatology are synthetic forms
- Potent immunosuppressive and anti-inflammatory properties

Endogenous: Seborrhoeic Dermatitis

- An eczematous process of varying degrees
- Propensity for the face, scalp, flexures, upper trunk
- Aetiology unknown
- Pityrosporum suspected to play a role
- Clinical features: ill-defined roughness, redness and scaling

Distribution

- Face and scalp: Glabella, eyelids and alae of the nose, eyebrows, moustache area, sideburns, ears, scalp
- Presternum and upper back
- Flexural area

Management Of Seborrhoeic Dermatitis

- Management is aimed at treatment of the dermatitis and reduction of Pityrosporum ovale
- Topical corticosteroid + imidazole antifungal
- Topical corticosteroid + precipitated sulphur
- Selenium sulphide topically as shampoo
- Zinc pyrithione topically as shampoo or soap
- Lithium succinate cream 5% with or without hydrocortisone
- Oral itraconazole for up to 3 weeks

Exogenous Contact Dermatitis

- Irritant contact dermatitis
- Allergic contact dermatitis

Irritant Contact Dermatitis

- Any person exposed to an irritant substance for a long enough period of time will develop an irritant contact dermatitis
- Common irritants include: alkalis and acids, chlorine bleach, strong detergents, disinfectants
- Pruritus and scratching develop, followed by erythema, scaling and superficial fissuring

Management Of Irritant Contact Dermatitis

- The irritant substance should be removed from the skin and avoided
- The skin must be kept out of water as much as possible
- Emollients should be used liberally
- Oral antihistamines for itching
- Mild topical glucocorticoids

Allergic Contact Dermatitis

- Only those who are sensitized to the substance will develop an allergic contact dermatitis

Common Allergens

- | | |
|--------------------------------------------|---------------------------------------------|
| • Nickel sulphate | • Cobalt (metals, blue pigment) |
| • Fragrance mix | • Para-phenylenediamine (dye) |
| • Neomycin sulphate | • Thiuram mix (rubber products, fungicides) |
| • Balsam of Peru (fragrances, flavorings) | • Carba mix (rubber products, fungicides) |
| • Thimerosal (preservative) | • Lanolin (vehicle for creams and lotions) |
| • Formaldehyde (preservative, nail polish) | |
| • Quaternium-15 (preservative) | |
| • Paraben mix (preservative) | |

Most common allergens

- | | |
|----------------|----------|
| • Rubber | • Cement |
| • Perfumes | • Resins |
| • Nail varnish | • Glue |
| • Some plants | |
| • Metal | |
| • Dyes | |
| • Cosmetics | |
| • Medicaments | |

Management Of Allergic Contact Dermatitis

- The diagnosis should be confirmed by patch testing.
- The patient will recover if the antigen is permanently removed.

HTLV 1 Associated Infective Dermatitis

- Characterized by a severe exudative dermatitis

Areas Involved In HTLV 1 Associated Infective Dermatitis

- Scalp
- External ear
- Retroauricular areas
- Eyelid margins
- Paranasal skin
- Neck
- Axillae
- Groin

Other Features Of HTLV 1 Associated Infective Dermatitis

- Generalized fine papular rash
- Chronic watery nasal discharge sometimes associated with crusting
- Staphylococcus aureus and/or β haemolytic streptococcus commonly cultured from the anterior nares or skin

HTLV 1 Associated Infective Dermatitis

- The disease responds to antibiotics but relapses if antibiotic are withdrawn.
- The average age of onset is 2 years.
- 60% of patients are females.
- The pathogenesis is as yet undefined.
- The skin manifestations become less severe with age.

Other HTLV 1 Associated Disorders

- Adult T-cell lymphoma / leukaemia (ATL)
- HTLV 1 associated myelopathy / tropical spastic paraparesis (HAM/TSP)
- Uveitis
- Crusted scabies
- Corneal opacities
- Lymphocytic interstitial pneumonitis
- Chronic bronchiectasis

Treatment Preparations

- Lotions
- Creams
- Ointments
- Gels

Lotions

- Almost pure water
- Solutions or suspensions
- Liquids evaporate and are cooling, soothing and drying
- Water, normal saline and calamine lotion are examples of lotions

Creams

- Semisolid emulsions containing both oil and water.
- Oil in water (aqueous) creams are water miscible, with mild moisturizing and emollient effect.
- Water in oil (oily) creams are immiscible with water, with moderate moisturizing and emollient effect.

Ointments

- Oil or grease based.
- Emollient and protective.
- Restrict trans-epidermal water loss therefore hydrating and moisturizing.
- Used on dry scaly lesions.

Gels

- Semisolid solutions
- High molecular weight polymers
- Non-greasy
- Water miscible
- Easy to apply and wash off
- Especially suitable for use on hairy areas of the body

Topical Corticosteroids

- Mild: used on the face, babies and children
- Moderately potent: used on children and adults
- Potent: used on adults on trunk and limbs
- Very potent: used for short periods under supervision for resistant lesions