INVITED ARTICLE

RATIONAL APPROACH TO THE MANAGEMENT OF ECZEMAS

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ABSTRACT

Eczema is an inflammatory skin disease commonly encountered in clinical practice where the underlying cause often appears uncertain. Diagnosis is essentially clinical, depending on clinical signs which varies with the stage of evolution of the inflammatory process. Although the mainstay of treatment is still topical corticosteroid preparations, much more can be done if an accurate diagnosis of the type of eczema is made and patients advised about the prognosis, and natural history of this troublesome and sometimes disabling condition.

Keywords: Eczema, endogenous, exogenous, steroids

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INTRODUCTION

Eczema (or dermatitis) is a descriptive term for an inflammatory dermatosis that is characterised by the presence of pruritis, erythema, papules, vesicles, scales and crusts seen in fairly discrete patches or in sheets affecting large areas of the body. It is a response of the skin to a variety of traumatic stimuli. Many terms, (some of which are more of a historical than clinical value), are used to describe the various forms of eczemas as can be seen in the list below. It can be acute where there is erythema, edema and vesiculation or chronic where there is mainly lichenification. In the subacute stage there is some blistering with crusting and scaling.

Since eczema has many causes, one reasonable approach is to broadly classify it into either endogenous or exogenous in origin and manage the patient accordingly.

CLASSIFICATION OF ECZEMAS

ENDOGENOUS

1. Atopic eczema
2. Seborrheic dermatitis
3. Pompholyx (dyshydrotic or palmar plantar eczema)
4. Discoid eczema
5. Gravitational eczema (Stasis eczema)
6. Lichen simplex chronicus

EXOGENOUS

7. Irritant contact dermatitis
8. Allergic contact dermatitis
9. Photosensitive dermatitis

1. Atopic eczema

Atopic eczema usually presents in infancy after age five months although the onset may be delayed till childhood or adulthood. In the infantile type, remission usually occurs by the age of five years, while the adult variety has a tendency to persist for years. The distribution in infantile atopics is fairly characteristic, affecting the face and flexures of the limbs although an "extensor" pattern is sometimes seen. A wide variety of subsets occur in the older age group such as juvenile plantar dermatoses in the school child, eczema around the nipple area in women, facial eczema and atopic hand eczema. A simple system for grading the severity of atopic eczema is available for clinical practice[1,2].

Atopic eczema of infancy usually responds readily to emollients such as emulsifying ointment and 1% hydrocortisone creams. The mainstay of treatment for the older patient is a topical fluorinated corticosteroid such as 0.1% betamethasone cream to be used for a few days in a graded step-down approach with the aim of maintaining the patient eventually on an emollient and 1% hydrocortisone cream for suppression of the eczema. There is little advantage in continuing with potent fluorinated steroids for prolonged periods but a diluted preparation (1:4 or 1:10) of 0.1% betamethasone 17-valerate, for example, can be used on a daily or twice daily basis. Since topical steroids rapidly pool in the skin, twice daily applications are more than sufficient[3]. However, in certain sites such as the palms and soles, more frequent application can benefit a stubborn lesion.

Systemic corticosteroids are seldom indicated. Systemic anti-histamines whether sedative or non sedative in a dose sufficient to reduce itching is useful in most patients although there is no real advantage in the latter[4] to relieve pruritis. In the acute exudative phase, diluted 1:10,000 potassium permanganate compress is needed. Secondary pyodermas are commonly seen in atopic eczema, and should preferably be treated with a systemic antibiotic such as cloxacillin, erythromycin or oral cephalosporin but occasionally, a topical corticosteroid and antibiotic combination such as 0.025% betamethasone et vioform cream is useful especially in children. For the problem atopic, a food allergy should be considered[5]. An 8 week trial of egg and milk free diet is worth attempting[6], but an elemental diet is difficult to perform and interpret and preferably referred for assessment. In older children, heavy exposure to an inhaled allergen such as house-dust mite is sometimes seen. There is some evidence (although controversial) that control of house-dust mite population, especially in those children with an early morning flare helps[7].

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2. Sehorrhelc dermatitis

This is a chronic dermatosis with a predilection for areas of sebaceous gland activity. A variety of clinical variants are seen. In the infant, usually up to 3 months old, it can present as a cradle cap or on the flexures and diaper areas. In the adult, it can be seen as scalp dandruff when it is non-inflammatory, or it can be inflammatory when it extends into the non-hairy adjacent areas such as behind the ears. On the face it can appear around the eyebrows, nasolabial and beard area. The truncal variety can be localised around the axillae, inframammary, intergluteal and groin areas and on the chest and rarely appear generalised. The etiology is a mystery but androgenic hormones, pityrosporum ovale[9] and emotional stress probably play an important role. Treatment depends on the location but adult seborrheic dermatitis responds well to antiseborrheic shampoo containing selenium sulphide, tar, salicylic acid, sulphur and ketaconazole. For non-hairy areas, 1% hydrocortisone cream is used. It is best to avoid prolonged use of a flourinated steroid preparation as this is a chronic disorder.

3. Pompholyx (dyshydrotic or palmar plantar eczema)

Pompholyx usually affects the older age group. It is a cyclical disorder characterised by recurrent acute outbreaks of tiny vesicles on the fingers and palms which settles within a week or two, leaving circumscribed hyperkeratotic areas of scaling. It is considered a hypersensitivity disorder to an allergen such as an underlying dermatophytosis but is often seen in palmar hyperhydrosis as well. Removal of the offending agent and use of potassium permanganate soaks followed by application of a moderate potency topical corticosteroid such as 0.025% fluocinolone acetonide or 0.1% betamethasone valerate cream is usually effective. For the patient with persistent vesicular hand eczema an underlying nickel sensitivity should be looked for[10].

4. Discoid eczema

This is characterised by the presence of sharply demarcated coin-like patches of dermatitis on the extremities which is often seen in association with dry skin. It has a relapsing course and is probably triggered off by emotional stress. For the acute cases which can be fairly exudative due to a coexistent bacterial infection, a mixed preparation such as betamethasone et vioform cream is useful.

5. Gravitational eczema (Stasis eczema)

This patttern of eczema is frequently observed in the elderly and is secondary to venous hypertension in the lower limbs often a result of previous deep vein thrombosis. It is probably mediated through tissue hypoxia and fibrin deposition in the skin in the lower limbs in such patients. The main clinical features are dilated venules with pigmentation and lichenification around the ankles and is often complicated by contact dermatitis to topical medicaments. The underlying venous hypertension should be treated with supportive stockings and rest of the legs by elevation, while a mild topical corticosteroid such as 0.025% betamathasone valerate cream is used to reduce irritation.

6. Lichen simplex chronicus

Formerly called neurodermatitis, it is the result of itch and repeated rubbing and scratching over certain sites such as the forehead, back of the neck, calves and the wrists leaving the skin lichenified and thickened. In addition to an oral antihistamine such as chlorpheniramine to relieve pruritis, a potent topical corticosteroid ointment such as 0.05% clobetasone propionate once daily for 2 weeks or a month duration is useful. If no improvement occurs, reassessment or referral is needed. It should be remembered that application of a weekly dose of a potent corticosteroid in excess of 50gm in the adult can cause adrenal suppression.

7. Irritant contact dermatitis

An irritant damages the skin without the need for prior sensitisation by gradually destroying the stratum corneum, and altering the surrounding keratinocytes. An irritant can be from a mild agent such as frequent use of soap and water, or a harsh agent such as an acid or alkali. The sites frequently affected are the hands especially the web spaces. The clinical signs range from a transient erythema to an acute dermatitis with blister formation. An irritant contact dermatitis is often indistinguishable from an allergic contact dermatitis, and epicutaneous patch tests should be carried out liberally in such patients.

8. Allergic contact dermatitis (ACD)

Allergic contact dermatitis is due to a delayed type hypersensitivity reaction where the allergen is usually a low molecular weight compound which links up with protein compounds in the skin. Once acquired, the sensitivity remains for life. The face and hands are the most common sites affected but other areas can be involved as well. On the face some of these lesions appear pigmented and resemble melasma[11,12]. The pattern of ACD differs with different age groups[13] and occupation[14] but some common examples are:

scalp	-	hair dye and lotion
face	-	cosmetics, plants, neomycin, hydroquinone
lips	-	lipsticks, tooth paste, foods (eg. mangoes, cinnamon)
ears	-	earrings, perfume, earphones
hands	-	topical medicaments, lubricants, gloves
feet	-	rubber, potassium dichromate (for tanning leather shoes)
body	-	garments, rubber, soaps, deodorants
anal	-	remedies for hemorrhoids
genitalia	-	deodorants, condoms

In the era of AIDS, we can expect to see an increase in contact dermatitis due to condoms and rubber gloves caused by the corn starch and rubber compounds. Latex itself sometimes causes an immediate allergic reaction (contact urticaria)[15] and one can elicit the urticaria within 30 minutes by scratching the skin and rubbing the rubber into it. Patch testing with various compounds such as nickel, chromium, neomycin, rubber compounds, ethylenediamine, benzocaine, and common cosmetic ingredients of fragrances and preservatives necessary to confirm clinical suspicion for suspected allergens.

In the majority, the rash clears following removal of the contactant and treatment with topical corticosteroids. A short course of oral prednisolone 20-30 mg daily for several days may be used in more severe cases. In addition, for hand dermatitis instructions on gloves, hand creams and emollients, avoiding excessive use of soap and water is necessary. It should be stressed that chronic contact dermatitis can interfere with the patient's ability to work if left unattended.

9. Photosensitive dermatitis

The rash has a fairly typical distribution involving the sun exposed areas and is aggravated by exposure to sunlight. The exaggerated reaction to ultraviolet light irradiation can be exogenous or endogenous in origin. An exogenous phototoxic reaction is an exaggerated physiologic sunburn seen following

the use of psolarens and in patients on medication with drugs such as sulphonamides, tetracyclines and griseofulvin. Endogenous photoimmunologic reactions usually occur in patients with an underlying systemic problem such as in lupus erythematosus or dermatomyositis, pellagra in alcoholic abusers and severe malnutrition, and in polymorphic light eruption. Photosensitivity reactions can be induced by topical application of sensitizers such as tars, plants, dyes and perfumes.

Investigations of these patients include a screen for autoimmune disorders and testing with UVA, UVB and visible light and in some cases a photopatch test as well. In addition to identifying the underlying cause, an effective sunblock (of sun protective factor 15 and above) is necessary in the daytime.

DIFFERENTIAL DIAGNOSIS

Other dermatoses often mistaken for eczema include dermatophyte infections, psoriasis and scabies. The main differentiating feature in tinea corporis is the presence of an active margin with central clearing and its distribution in an asymmetrical fashion. Psoriasis is characterised by thick erythematous plaques which are sharply demarcated and usually involves the elbows and knees. Scabies is often mistaken for eczema since the main signs are also pruritis and papules, sometimes with vesicles and scales. However, telltale burrows and crusting in the characteristic sites such as the interdigital web spaces and umbilical areas are useful signs. Swabs for bacterial culture should be done in areas of impetiginised eczema, especially in children.

SUMMARY

The diagnosis of eczema is essentially clinical and few investigations are needed in most patients. Accurate diagnosis is based on observation of the sites affected, its distribution and secondary changes that often occur with infection and treatment. Eczema responds well to topical corticosteroids. The choice of preparation is dependent on individual preference but a typical regime can consist of 0.1% betamethasone cream for a few days to be stopped or reduced to 0.01% betamethasone cream when the eczema is controlled. This is substituted with an emollient such as aqueous cream or emulsifying ointment for the dry skin that often follows. For the face and genitalia fluorinated steroids is best avoided but 1% hydrocortisone cream can be used. If the acute eczema fails to respond after a month or so, possible contact dermatitis should be considered[16]. In the recalcitrant atopic eczema, in addition to counselling for psychological stress and the exploration of food allergy other newer modalities of treatment such as cyclosporin[17] and phototherapy[18] are now available.

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