Current Practice

DISEASES OF THE SKIN

Infective Eczema

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"Infective" eczema may not exist as an entity, but for want of a better term it is a convenient one to describe those types of eczema which are traditionally ascribed to infection; these include intertrigo, seborrhoeic dermatitis, and infectious eczematoid dermatitis. This distinction from other types of eczema, in which infection definitely plays no primary role, is further justified because it draws attention to the need for cleansing and antiseptic measures in the treatment of infective eczema. Though it is suspected that the organisms (*Staphylococcus albus* and *aureus*, *Streptococcus*, *Candida albicans*, and *Pityrosporum orbiculare*) which can be cultured from affected areas of skin are primarily responsible for infective eczema, confirmatory evidence is lacking. These diseases have not been reproduced experimentally in susceptible subjects by inoculation of these organisms, nor has any allergy to them been demonstrated, and, furthermore, the organisms are found on normal healthy skin without any dermatitis.

Nomenclature

There is still dispute among dermatologists about these diseases. Most agree on what is meant by intertrigo and seborrhoeic dermatitis, but definitions are not entirely clear-cut nor are the boundaries distinct. Most also agree that many factors combine to produce infective eczema, though their relative importance may differ in each patient. Some hold the view that these three disorders form a spectrum of disease with intertrigo at one extreme, the various forms of seborrhoeic dermatitis in the middle, and infectious eczematoid dermatitis at the other end; certainly some patients cannot easily be given one diagnosis. Some dermatologists believe that seborrhoeic dermatitis does not exist at all, and that the various clinical pictures collected together by Unna should be regarded as separate entities, for though they may coincide in one patient no satisfactory explanation for their coexistence has yet been offered.

There are no diagnostic tests to confirm these diagnoses in the way that allergic contact eczema, impetigo contagiosa, and pityriasis versicolor can be proved, and the diagnosis is derived partly from clinical assessment and partly by exclusion of other dermatoses. Experience and familiarity with the many presentations of these disorders are of great value in making the correct diagnosis, and a trial of therapy may support the clinical impression. When a firm diagnosis is made the relative importance of the contributory factors must be assessed and treatment planned to diminish their effect. First treatments may prove unsatisfactory, and some experimentation may be necessary; maintenance therapy may be required, since all the factors may not be amenable to ready correction.

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Intertrigo

Intertrigo affects opposed surfaces subject to chafing. These include the axillary and submammary folds, the groins, perineum and natal cleft, the preputial sulcus, the toeweb, and also the angles of the mouth and creases behind the ears. In infants the neck, the elbow and popliteal bends, the wrists, and the napkin area may also be involved. The erythema is bright red, usually symmetrical and fairly well defined, and, when severe, tiny pustules, weeping, and crusts may develop. The predominant cause in most patients is maceration followed by chafing. If these are prevented other facts may not require specific therapy. It is wise to try to reduce obesity where possible, and patients with diabetes mellitus will demand special attention. Usually if the affected area is kept dry and clean no treatment directed against infection is needed.

Napkin Rash

In infants intertrigo usually starts in the napkin area, where maceration and chafing are produced by the urine-soaked napkin; it is more common in first-born children. It is still not determined whether maceration and chafing alone produce the dermatitis, or whether a part is played by irritation from the ammonia produced by bacterial decomposition of the urea in the urine or by an allergic or irritant reaction to the micro-organisms flourishing in the sodden keratin. Certainly if napkins are not worn napkin intertrigo does not occur, and mild attacks can readily be cured by keeping the affected area clean and dry. I am not aware of any convincing evidence that diet plays any part in producing napkin intertrigo, nor is there any connexion with other types of eczema, with seborrhoea, or with ichthyosis. Secondary infection with *C. albicans* can occur, and this is possibly related to the use of topical corticosteroid preparations and systemic antibiotics. As treatment I advise more frequent changing of napkins, which should be clean, rinsed free of all soap, and dry, leaving them off for long periods especially at night. I forbid the use of plastic pants and the Marathon napkin until cure is obtained, since these maintain a high humidity of the air next to the skin, perpetuate the maceration, and thus may contribute to the chronicity of the eruption. Talc dusting powder B.P.C. may be used after each change of napkin, but non-medicated creams are probably better, and combined with these other measures may suffice for mild cases. If the surface is weeping or if spread has occurred to distant sites such as the axillae, neck, and earfolds—a spread that has still not been explained—more specific topical therapy is needed. The corticosteroids are the most potent anti-inflammatory agents, but it is unwise to apply these too frequently in too potent a form for too long in the flexures, because local absorption into the dermis may be considerable; local weakening of the collagen may follow, striae

and purpura develop, and even a mild Cushingoid state can result. These complications are unlikely in patients with napkin intertrigo, even with the full-strength preparations commercially available, since treatment should be used for only a short period if the diagnosis is correct. If, however, therapy is to continue for more than two weeks, or a large area is to be treated, I dilute the creams with cetomacrogol cream and the ointments with emulsifying ointment *B.P.* so that a tenth- or quarter-strength preparation is achieved. The corticosteroids I use are either betamethasone valerate or fluocinolone acetonide, and I also add 1% iodochlorhydroxyquinolone (clioquinol or Vioform, though halquinol can be used) as the antibacterial agent. In severe cases instead of soap I recommend emulsifying ointment *B.P.*; it should also be used in the daily bath, first briskly stirring a tablespoonful (30 g.) in a jugful (500 ml.) of very hot water before adding it to the lukewarm bath; this helps to hydrate the corneous layer and is soothing for an inflamed epidermis.

Intertrigo in Adults

In adults it is particularly important to exclude other diagnoses. When the hands, face, or scalp are also affected seborrhoeic, atopic, and contact eczema should be considered; in the axillae a reaction to cosmetics, such as depilatories or deodorants, may be the cause. Flexural psoriasis may closely mimic intertrigo, and a search for more characteristic lesions of this disease should be made. In recent years the incidence of candidiasis of the skin has greatly increased, and, although *C. albicans* is a common secondary invader, occasionally it appears to be the prime cause of the eruption. It should be suspected in those peculiarly prone to candidiasis—infants, those with chronic paronychia, those who wear upper dentures at night and harbour thrush on the palate, diabetics, those using topical corticosteroid preparations, those on wide-spectrum antibiotics, and women taking oral contraceptive pills. The inadvertent use of topical corticosteroid preparations in fungus infections, particularly of the axillae and groins, encourages spread of the infection, and may so modify its appearance that it too can mimic intertrigo. A rare familial disorder, chronic benign pemphigus, which affects the sides of the neck, axillae, and groins, may also be mistaken for intertrigo.

Mild intertrigo of the trunk may respond to regular washing and careful drying, but usually medication is needed. Aqueous cream *B.P.* or a topical antibiotic preparation—chlortetracycline is virtually free from the risk of sensitization—is adequate, but when moderate or severe a corticosteroid-antiseptic cream should be prescribed, as recommended under infant intertrigo: small amounts should be rubbed in three times a day. If very widespread, emulsifying ointment *B.P.* should be added to the daily bath; it may be wise to wash with antiseptic soaps (Cidal, Derl, Medisoap, etc.), which contain hexachlorophane, or Wright's coal-tar soap), and even add an antiseptic such as hexachlorophane (30 ml. of a 1% solution) to the bath, though the superiority of these measures to ordinary soap in cleansing and sterilizing the affected skin in "infective" eczema is not definitely established. When the intertrigo has resolved, as a prophylactic measure talc dusting powder *B.P.C.* can be sprinkled in the flexures after they have been washed and thoroughly dried.

Intertrigo of the toeweb is very common in adults: frequently it is labelled athlete's foot and confused with tinea pedis. It usually responds to simple measures such as regular washing and careful drying and the liberal sprinkling of plain talc in the toeweb; antifungal preparations are not only unnecessary but also introduce the risk of contact eczema.

Seborrhoeic Dermatitis

This diagnosis covers a wide variety of eruptions that have little in common except that they may occur together in the

same patient. Histology of the eruption, whether from the scalp, the flexures, or the trunk, shows the picture of eczema, but there is no adequate evidence to implicate seborrhoea, and the term "seborrhoeic" is a misnomer. Unna's belief that the *Pityrosporum orbiculare* is the prime cause of all forms of seborrhoeic dermatitis, because he found it in all lesions, is still held by some; this is in spite of the failure to reproduce seborrhoeic dermatitis in susceptible subjects by inoculating the organism or to demonstrate any allergy to it, and even though normal healthy scalps have been shown to harbour *Pityrosporum* without harm. Patients are often advised to eat less "rich food," but such vague advice still awaits the support of scientific evidence. The term "seborrhoeic diathesis" conceals our ignorance of the aetiology of this dermatitis.

Pityriasis Capitis

Each form of seborrhoeic dermatitis mimics other dermatoses. Mild scaling of the scalp is quite common in normal healthy individuals, but when moderate has to be distinguished from atopic eczema, psoriasis, and tinea capitis. The vast number of proprietary remedies for the treatment of dandruff is sufficient proof of its wide occurrence and the lack of a specific cure. For mild scaling of the scalp, with or without pruritus, twice-weekly washing with mild shampoos without added medication is sufficient. Preparations containing selenium sulphide (Selsun, Lenium), and more recently zinc pyridine-thione (ZP11), have been widely used, as they are quite effective at reducing scaling, but with continued use the hair becomes greasier than ever, there is often more dandruff, and even mild hairfall can result. There may be a place for short courses of this treatment, once weekly for a month, in patients resistant to the simpler regimen, but such preparations should not be used as a regular shampoo. If erythema is present as well salicylic acid and sulphur cream *B.P.C.*, or, if a lotion is preferred:

Salicylic acid	...	...	...	1%
Sulphur	...	...	...	1%
Aqueous cream	...	...	...	50%
Water to	...	...	...	100%

rubbed into the scalp twice daily may suffice; the salicylic acid and sulphur have a mild keratolytic and antiseptic action. If this is inadequate topical corticosteroid preparations should be used, but, as ointments are cosmetically unacceptable on the scalp, lotions and creams should be prescribed. It is usually beneficial to add an antibacterial agent, but it must be carefully chosen; halogenated quinolones, coal-tar solution (liquor picis carbonis), or dyes are suitable for dark-haired people, but they cannot be used by those with white or fair hair because they discolour it, and neomycin or hexachlorophane are preferable. If there are adherent crusts which are not loosened by washing and creams, coal tar and salicylic acid ointment *B.N.F.* 1966 is usually effective; this is a messy preparation that should be applied liberally each night and washed out thoroughly next morning. As soon as the crusts have separated a more elegant product should be prescribed. If boils develop systemic antibiotic therapy may be needed. Hairfall is often attributed to seborrhoeic dermatitis of the scalp, but evidence to support this view is lacking; when severe, as in any dermatitis of the scalp, reversible hairfall can occur, but in mild cases any hairfall is due to other causes, and regrowth is unlikely to depend on resolution of the dermatitis.

Face

Seborrhoeic dermatitis of the face should be diagnosed with great caution, especially in the absence of scalp involvement. Erythema, with or without oedema, of the eyelids, ears, or lips is so often due to contact eczema that it must be excluded

before seborrhoeic dermatitis is diagnosed. Cosmetics, especially nail varnish and lipstick, nickel allergy, topical medication, particularly neomycin, plants, non-safety matches, and a host of chemicals used in the home, at work, and in hobbies must all be exonerated. Blepharitis and otitis externa are often attributed to seborrhoeic dermatitis, but primary or superimposed contact eczema must not be overlooked. Candidiasis too can be mistaken for seborrhoeic dermatitis, and not uncommonly it complicates or even replaces the dermatitis. Sometimes the clinical picture resembles rosacea. Fixed scaly patches can be confused with discoid lupus erythematosus and even pemphigus erythematosus.

Cleansing of the face may have to be restricted to the use of cleansing creams, since soap and detergents may be too irritating. Saline washes are probably the kindest therapy for crusted eyelids and external auditory meati, but the frequent use of cotton-wool swabs on orange sticks to clean ears is not recommended because the trauma worsens the eczema. In acute weeping or crusted lesions corticosteroid lotions, with or without concomitant antibacterial agents, are the best therapy, while aerosol sprays have no clear superiority. Mild attacks will respond to creams, while minimal erythema should be controlled by salicylic acid and sulphur cream *B.P.C.* applied twice daily. Failure of response to therapy should cast doubt on the diagnosis, though not infrequent causes for this are superimposed candidiasis and allergy to the medication. Unfortunately a list of all the ingredients of topical medication is not readily available, so that the actual allergen may be difficult to identify and to avoid.

Eruptions on the Trunk

At least four eruptions on the trunk are accepted as seborrhoeic dermatitis. These include intertrigo if widespread and combined with pityriasis capitis, figurate scaly erythema of the chest and back, follicular papules with or without scaling of the trunk, and ill-defined scaly red macules similar to pityriasis rosea but longer lasting. In dark-skinned people eczema of the trunk often starts with a follicular eruption and later assumes a more obvious seborrhoeic pattern. Psoriasis, tinea corporis, contact and atopic eczema, candidiasis, erythrasma, and pemphigus erythematosus and vegetans can all be mistaken for seborrhoeic dermatitis. For lesions on the body cleanliness is an important part of therapy, and the advice on intertrigo of the trunk applies. Salicylic acid and sulphur cream *B.P.C.* will suffice for most patients and should be tried first, but a corticosteroid-antiseptic cream is often necessary. I favour quinolone preparations with either betamethasone valerate or fluocinolone acetonide, which I dilute to tenth or quarter strength; resistant patches may require full-strength preparations. When pyoderma is a complication corticosteroid preparations should be withheld, and antiseptic and antibiotic therapy administered until the infection is controlled. Severe attacks may merit hospital admission, and on rare occasions even systemic corticosteroid therapy.

Since the prime cause is still unknown, treatment is empirical and results only in remission rather than cure, and too often relapse occurs. It is sensible to prescribe maintenance therapy, and I advise patients to continue with emulsifying ointment

baths for some weeks, to use salicylic acid and sulphur cream *B.P.C.* from time to time, and always to have to hand a small supply of corticosteroid cream should acute relapse supervene.

Infectious Eczematoid Dermatitis

Most dermatologists use this term to describe an exudative dermatitis springing from an infected discharge such as a suppurating ear, boil, or wound, and even infected eczema. The dermatitis is contiguous with the discharging focus, and discrete exudative lesions develop at a distance from it. The condition overlaps to some extent with discoid eczema. Fresh patches of dermatitis appear wherever the exudate impinges on the patient's skin—hence the term infectious—but this phenomenon cannot be produced on a normal subject.

Treatment must first be directed at drying up the discharge, and systemic antibiotic therapy may be required. If the dermatitis is mild this treatment may be sufficient, but usually topical therapy is also needed. The skin must be cleansed gently. Corticosteroid-antibiotic preparations are the most effective agents, though in very acute dermatitis they may fail; lotions are the best vehicle, but if the dermatitis is widespread, very moist, crusted, or painful it may be more convenient to use an aerosol spray. In very acute dermatitis wet dressings with saline or potassium permanganate soaks (1 in 8,000), followed by zinc cream, may be more soothing and more effective; the corticosteroid preparations can be used when the very acute phase is over. Greasy preparations are best avoided on moist surfaces, because they do not emulsify with the exudate but float upon it and so do not come in contact with the skin itself.

Summary

Though the clinical pictures presented by infective eczema may be confusing, provided diagnosis is certain a good response to topical therapy should be obtained. Corticosteroid-antiseptic combination therapy is probably the most effective treatment at present, and infective eczema remains the main justification for this polypharmacy so popular among pharmaceutical firms. Cleanliness is most important both as treatment and as part of prophylaxis, and the use of antiseptics in the bath and as soap is probably also advisable. Until the exact cause of this type of eczema is determined some maintenance therapy will be required by many patients, and relapse will be a recurring problem.

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