

A practical treatise on eczema and its treatment / by M.J. Rae.

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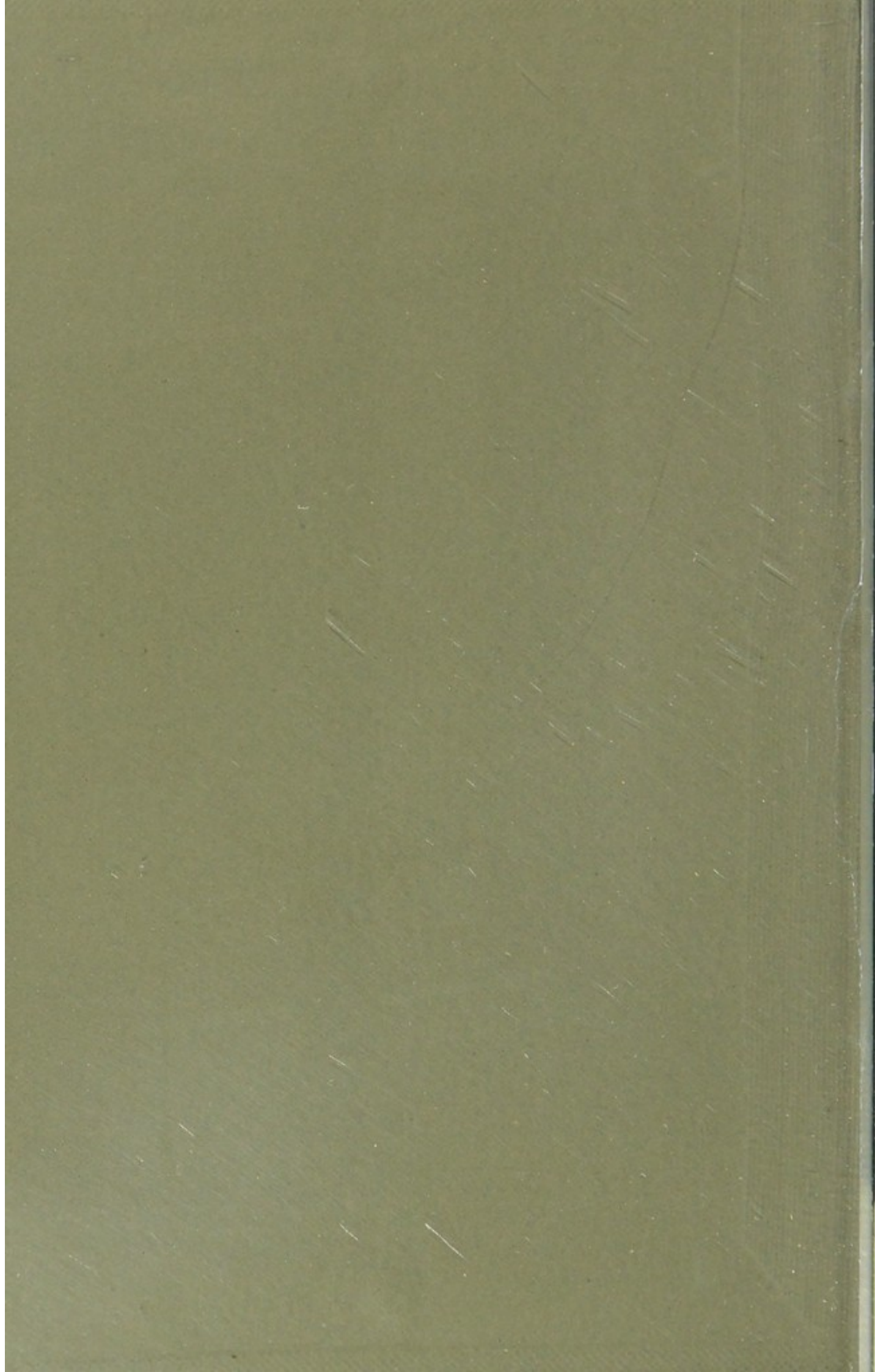
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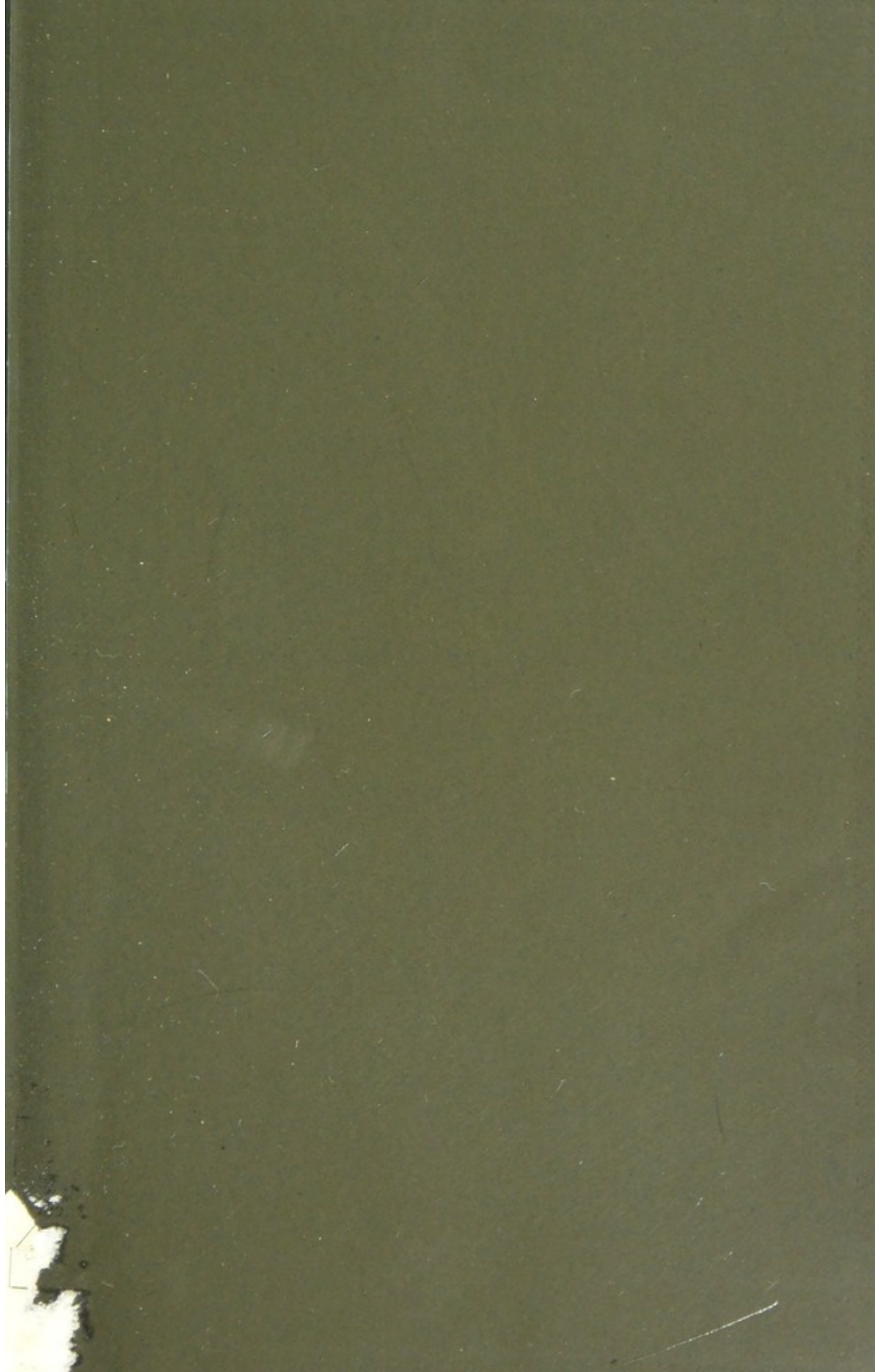


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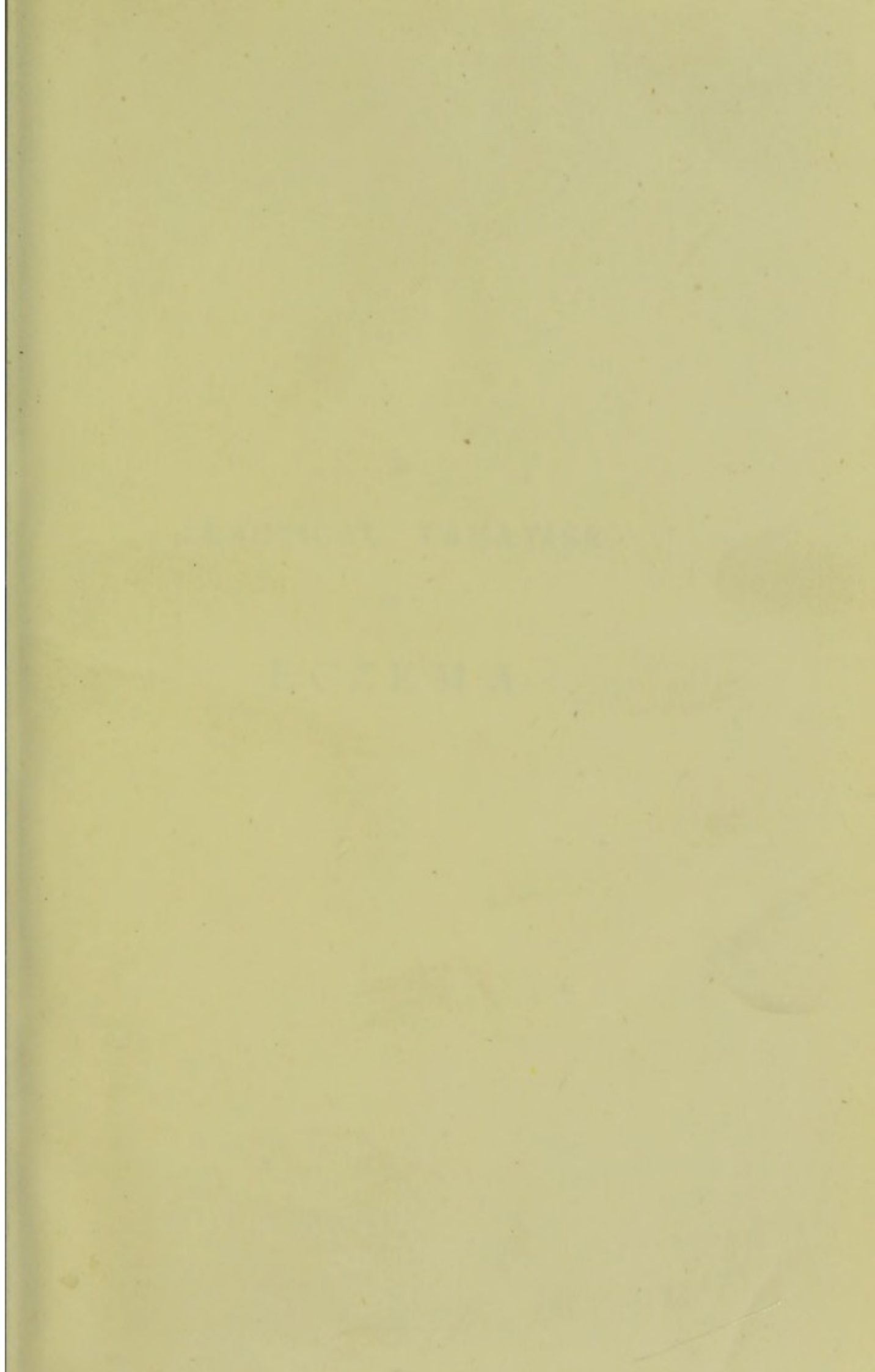
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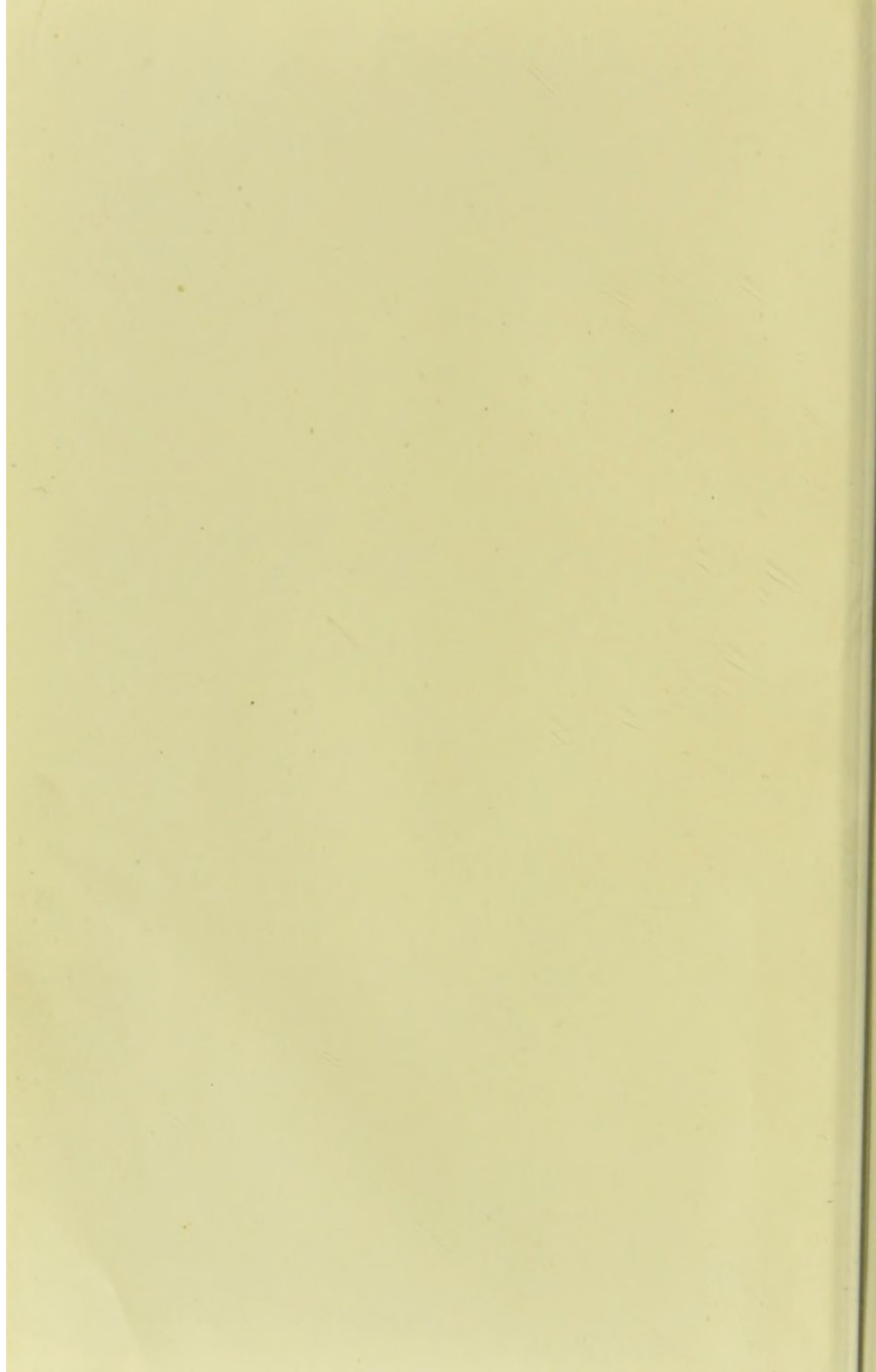




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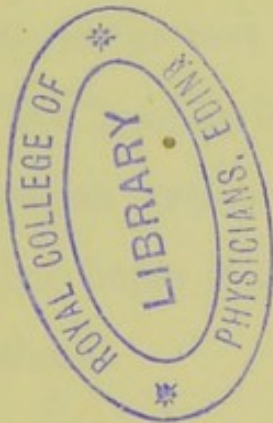
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A
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ON
ECZEMA
AND ITS TREATMENT

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LONDON
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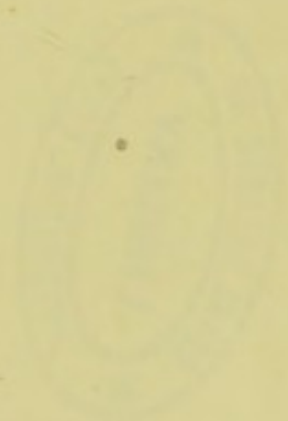
PRACTICAL TREATISE

ECZEMA

AND ITS TREATMENT

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J. & A. HARRIS

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1874

P R E F A C E.

THE following treatise has been prepared with the object of placing before the medical practitioner a full, yet succinct, history and description of Eczema and its treatment.

The views of former and living dermatologists and clinical physicians, both British and foreign, regarding Eczema, and their modes of treatment, are as fully set forth in the text as space would allow.

The treatise is written from the stand-point of a physician rather than that of a specialist, and the author hopes it may meet the approval of his medical brethren.

M. J. R.

177 BEDFORD STREET SOUTH,
LIVERPOOL, 1889.

PREFACE

The following treatise has been prepared with the object of placing before the medical profession a full and accurate history and description of leprosy and its treatment.

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ECZEMA.



SYNON.—*Εκζέμα* (from *εκζέω*, to boil over), anything thrown out by heat. Moist Tetter, Heat Eruption. Fr. : Eczème, Dartre Vive, Dartre Squameuse Humide. Ger. : Hitzblätterchen, Saltzfluss.

This affection of the skin will always interest the medical observer, on account of the great frequency of its occurrence, the varied and strikingly different forms and phases under which it presents itself, the difficulty that not unfrequently attends its diagnosis, and the obstinate resistance which it often shows to every known mode of treatment. It has been recognised in one form or another, but under different names, since the earliest period of medical science.

It was known to the Greeks as *psora*, which term was also used by them to denote diseases quite different in nature, but having itchiness in common as a constant accompanying subjective symptom. The Roman writers described it under the names of *kerion*, *porrigo madens*, *achor*, &c. The term *Eczema* does not occur in the works of the Greek, Roman, or Arabian physicians. According to Aetius, who wrote about the middle of the sixth century, the Greeks employed the

term *εκζέματα* to denote an itching eruption, probably on account of the heat, but it may be also from the resemblance of the small transparent vesicles of the disease to the bubbles of boiling water. His words are—"Eas (hot and tingling phlyctænæ) *εκζέματα* ab ebuliente fervore Græci vulgo appellant."* Eczema is the "popular Greek equivalent to our popular term eruption." The older medical writers have described eczema under various names, as hidroa (Sauvages), herpes serpegio (Turner), rachitis, including achors, herpes miliaris (Van Swieten), &c. The justly celebrated Willan was the first to use the term eczema in the sense it is now understood. He placed eczema in his sixth order, "Vesiculæ," and described it in his well-known and classical definition "as an eruption of minute vesicles, not contagious, crowded together, and which, from the absorption of the fluid they contain, form into thin flakes or crusts." The basis of Willan's classification of skin diseases and his definition of eczema were generally accepted by his contemporaries and by subsequent dermatologists in England, as Plumb, Green, &c. Bazin and Baudôt adopt Willan's definition of eczema, and the late Tilbury Fox, one of the most representative English dermatologists of recent times, was an enthusiastic supporter of Willan's views. Many modern dermatologists, both British and foreign, have misunderstood and misinterpreted Willan with regard to his classification of cutaneous diseases and his definition of eczema. Even Hebra does scant justice to the distinguished merit of Willan, and quite misinterprets his views. Speaking of the classification of Willan,

* Tetrab. iv. Serm. 1, cap. 129.

Bielt, Gibert, and others, Hebra says :—“These and others have in fact been the great cause of the erroneous notion that, for the recognition of a cutaneous disease, it is sufficient to determine the primary efflorescence which existed in that particular case ; as though for the determination of a disease a single character is sufficient although it be torn from its connection with the other symptoms with which it is associated, and although all the other appearances which present themselves in the course of the case are left unobserved, and the only point investigated is whether at its commencement the affected part presented a macule, a papule, a vesicle, a bulla, a pustule, or some other primary form of efflorescence.” *

This is not correct, so far, at least, as it applies to Willan. In his Lumleian Lectures on Eczema (p. 10), Tilbury Fox, alluding to the above-quoted remarks of Hebra, says :—“Now, speaking for Willan, let me say that he nowhere characterises—and this is the point I have been trying to reach—affections according to their initial stage ; nowhere will this be found in his writings. He says, ‘he wished to constitute general divisions and orders of diseases from their leading and peculiar circumstances in their appearances.’” Willan names diseases after their leading features at the period of their maturity. The initial lesion, or primary efflorescence, “is nothing with him,” in his system of classification. Modern dermatologists, and not Willan, adopted the initial lesion to determine eczema and other cutaneous diseases. Willan described the disease as a whole, not piecemeal, like many subsequent dermatologists. His three varieties

* *On Diseases of the Skin* (New Syd. Soc.), 1866, vol. i. p. 45.

of eczema are still regarded by some authors and clinical physicians as true varieties, and not mere stages or forms of the affections. He was well acquainted with the varied phenomena of eczema in all its stages, and has described all the varieties or forms of the affection named by some of the most celebrated of modern dermatologists most opposed to his views, as Hebra, Wilson, and their followers. Thus, Willan, in his description of *E. rubrum*, as pointed out by Tilbury Fox,* speaks of the first stage being erythematous and rough to the touch (*pityriasis rubra* or *E. squamosum* of Hebra). He points out the frequent papulation. He says of a later stage that the ichorous discharge is the most characteristic feature. "That it stiffens linen (*E. ichorosum*), that the surface has deep fissures, is covered with partial scaly incrustations," and, in the latest stage, "a roughness sometimes remains for a considerable period, like a slight degree of psoriasis."*

Here we have the *E. fendillé* or *fissum*, and *E. squamosum* of some authors, and the psoriasis of Sir Erasmus Wilson. But modern dermatologists say eczema is not always a vesicular disease, and therefore Willan is in error. Nowhere in his writings does he state that vesicles will invariably be found in every case. He only affirms that a vesicle is typical of eczema at the period of its maturity; and if the modern doctrine, held by many observers, that an eczematous papule is an undeveloped vesicle, be accepted, then Willan is right and his critics are in error; and should eczema be ultimately proved to be a catarrhal inflammation of the skin, as many well-known dermatologists and clinical physicians do so regard it, then Willan's definition may

* *Loc. cit.*, p. 11.

† Bateman's *Synopsis*, 1813, pp. 254, 255.

come to the front again, and the vesicle be considered as the prominent feature in a typical eczema at the period of its maturity, and the "peculiar discharge" as its most characteristic symptom. Unfortunately, it has been the fashion with some authors to undervalue the distinguished merits of Willan, while, as Tilbury Fox observes, they have appropriated his data, and have applied to his followers, in derision, the title of Willanists.

However graphic Willan's definition of eczema may be, many modern authors think it is too limited, referring to one only of its initial lesions, and that, according to Sir Erasmus Wilson, its least frequent one—the vesicular. But a multiform disease like eczema cannot well be defined. It would be difficult, if possible, to give a definition of eczema which would include all the various forms and phases of its development and decline. Wilson's own definition of the disease shows this. According to this, eczema is a "chronic inflammation of the skin, attended with desquamation, exudation, and pruritus." This does not include the papular or fissured forms; and exudation, on the surface of the skin at least, may be entirely absent. Besides, the disease is acute as well as chronic. Many of the definitions of eczema by modern and recent writers like Bazin, Tilbury Fox, &c., are either purely Willanean, or mere extensions of Willan's definition. Liveing, one of the greatest representative English dermatologists of the present day, defines eczema as a "simple inflammation of the skin, which in its typical form is characterised by the production of aggravated papules and vesicles, which quickly burst and leave an excoriated surface, discharging a gummy serous fluid, that stiffens as it dries." Viewing papules in a typical case as the tem-

porary form of a vesicle; the definition is an extension of Willan's or applies to his *E. rubrum*.

Many dermatologists and clinical physicians of note, as Tilbury Fox, Rindfleisch, Niemeyer, Crocker, Bulkley, &c., regard eczema as a catarrhal inflammation of the skin, analogous to catarrhal inflammation of the mucous membrane—moist or exuding eczema being the analogue of ordinary catarrh, and dry eczema representing the dry form of that affection; while F. T. Roberts and others, with the view of comprehending in the definition of eczema all the phenomena of the disease, prefer the term sero-purulent, and others "eczematous," inflammation. This latter is a mere phrase.

Tilbury Fox contended that the inflammation in eczema was catarrhal, in contradistinction to plastic, which he applied to that which produces the solid papules of lichen; and regarded lichen—including Willan's lichen simplex—on that account, as distinct a disease from eczema as catarrh is from pneumonia. On the other hand, Bulkley and others, who consider the inflammation to be catarrhal, say the papules in papular eczema are formed by "plastic matter." If this is correct, then the inflammation must partake of a plastic as well as a serous character. In my belief the inflammation in eczema is the same kind as that which occurs generally on the skin or in other parts of the organism. It will vary in degree, nature, and duration in every case, being influenced by the age, constitution, habit, and general health of the individual attacked; by the anatomical peculiarities and condition of the part affected; and by the nature, mode of application, and activity of the exciting cause.

Eczema may be described as an acute or chronic superficial inflammation of the skin, with serous exudation and cell-proliferation into the papillary layer and rete Malpighii, and characterised by an erythematous, papular, vesicular, or pustular eruption, and more or less swelling, thickening, and hardening of the affected parts; by a serous or purulent discharge, which is generally present at some period of its course; by the formation of crusts, scales, and fissures, and attended by burning heat, tingling or itching.

The pathological lesions may appear singly or be variously combined; or they may all be observed together, more or less pronounced, at the same time, in a case of extensive eczema, as *E. infantile*. The subjective symptoms vary in the different forms and stages of the affection. Burning heat, tingling, or smarting, rather than itching, may attend the early stages of vesicular eczema—the latter symptom is a marked feature in the chronic stage. The itching is most severe and distressing in the papular and dry scaly forms, and is less marked in erythematous, pustular, and crusted eczema. Tingling or itching in a part of the skin may be the first symptom of an impending attack of eczema. Itching may continue during the course, or for some time after the disappearance of the disease. The cause of itching is probably not the same in different forms and stages of the affection. In the early stages it may depend on tension of the skin; or on the serous infiltration compressing or irritating the terminal fibrils of the cutaneous nerves. The sensation is relieved by a free discharge of serous fluid whether produced spontaneously or artificially. In the latter stages it may

be owing to the hardened, thickened, dry, or fissured state of the affected parts. Eczema being an inflammatory affection, will, in a typical case, present in the course of its development and decline, various stages more or less pronounced, of hyperæmia, papulation, vesiculation, &c. But it is well known that eczema may be arrested or abort at any of these stages, or at a very early stage, as the papular one, forming the papular or so-called abortive form of the disease. Its development may be arrested for a time and afterwards be resumed, and then the disease may pass on to its final stage—as when an erythematous eczema develops into *E. rubrum*.

Eczema may also pass rapidly through its various stages, and in such a way, that the intermediate ones may not have been observed. It may also become chronic at any stage. These peculiarities of its mode of development, and the varying nature of the inflammatory process, explain the varied phases and phenomena which eczema presents. The inflammation may be local and circumscribed, or diffused, affecting the follicles or involving also the inter-follicular surface. If local, and the exudation is scanty and confined to the follicles or groups of papillæ, red, hard, acuminate papules will present themselves. If the inflammation is diffused, an erythematous patch will be the result. Both these lesions may appear together.

When the exudation is more abundant than in the papular form of eczema, vesicles instead of papules will arise, forming the variety *E. vesiculosum* = *E. solare*. If the inflammatory action is more intense than in the preceding form or variety, there will be rapid formation of minute, aggregated, papules

on the red inflamed surface, which quickly pass into vesicles, which soon burst; subsequently the epidermic layers exfoliate, exposing bright red surfaces, from which exudes the characteristic discharge forming *E. rubrum*, or, if the discharge be profuse, *E. madidans*. When inflammation is intense, or when the individual attacked is of strumous habit or of low vitality, vesico-pustules, or pustules instead of vesicles, will arise, and the discharge will be purulent, drying into thick, rough, various-coloured crusts=*E. pustulosum* or *impetigo*. After the discharge in acute eczema has ceased, and scaling begins, the affected parts—red, infiltrated, and thickened—instead of healing, may become the seat of a persistent desquamation=*E. squamosum*; or fissures may be formed, especially when the skin is dry and hardened, forming the variety *E. fissum* or *rimosum* of some authors.

But the primary inflammation may be of a low grade or type, just sufficient to impair the nutrition and natural elasticity of the part affected, and disturb epidermic formation thereon. In such conditions the result may be the appearance of red, more or less infiltrated, fissured, or scaly patches of irregular form and extent, forming the varieties of *E. fendillé*, *E. squamosum*, or *pityriasis rubra* of some authors. Although the papules, vesicles, and pustules are generally mentioned as primary lesions, they should be regarded as secondary. The primary being disturbed nerve and capillary action, resulting in perversion of sensation and hyperæmia or erythema of the affected part. The vesicle was at one time regarded as the most distinctive feature of eczema; the papules or pustules, if present, were looked upon

as accidental; or, if one or other became prominent, the disease was said to have passed into, or become associated with, lichen, or impetigo.

The papule is the primary form of the eruption, and it may remain a papule or develop into a vesicle or a vesico-pustule; it is therefore as typical of eczema as the vesicle. While recognising a papular form of eczema, I do not consider it to be a true lichenoid disease.

Besides these forms of eczema, which have been named after the principal initial lesions or the most prominent appearances presented during the further development or involution of the disease, other varieties have been described by authors. When by desiccation of the exuded fluid on the inflamed surface there are formed crusts varying in thickness, size, and colour, we have *E. crustosum*. This form is well marked in the *crusta lactea seu serpiginosa*, *impetigo faciei seu porrigo larvalis*, &c., of young children. Kaposi makes a variety or form of this stage of eczema.

The term *hypertrophicum* has been applied to a variety of eczema consequent on a permanent hyperæmia of the affected parts, which leads to hypertrophy of the epidermis and the deeper layers of the derma, as is often observed in the lower extremities, the result of long-standing venous congestion. When induration of the affected integument is the chief symptom observed, this forms the variety *E. sclerosum*. Other varieties of the disease have received names from the resemblance of their forms to certain well-known objects—such as *E. nummulare*, owing to the coin-like patches in which it occurs; *E. verrucosum*, so called from the resemblances of the papules to

a warty excrescence; *E. figuratum*, and so on. Regional divisions of the body have furnished a nomenclature for varieties—as *E. faciei*, *E. capitis*, &c. Varieties of eczema have also been named after their cause—as *E. solare*, *E. mercuriale*, &c. Other varieties have been formed or proposed—as *E. diabetica*, &c. But if bodily states and external causes are to determine varieties and fix their nomenclature, their number would be inconveniently augmented, and would serve no useful practical purpose whatever. M. Fourier has described about a hundred varieties of the disease; and Dr. Bulkley thinks the various names given to express various features in the eruption of eczema amount to about a hundred and eighty. The name *E. intertrigo* has been given to a variety produced by perspiration or urine, and the rubbing together of opposing surfaces—as in the groins, under the breasts, in the axilla, and on the necks of children, &c. When, by the continued friction of two cutaneous surfaces against each other, a mucous secretion is established, it constitutes the variety *E. mucosum*. Hebra described a disease under the title of *E. marginatum*, which occurs on the inner surface of the thighs, the pubes, and buttocks, its appearance being almost restricted to the male sex, and affecting chiefly people following sedentary occupations, as shoemakers. It is now considered that it may, in some instances at least, be a variety of *E. intertrigo*; and in others, a form of ringworm, due to the presence of the *trichophyton tonsurans*, or some other parasite.

There is a very rare variety of eczema named *E. unisquamosum*, occurring in circular, isolated, scaly

patches. This form, according to Anderson, was first described by Lievain under the above title. It has also been described by Devergie.

Owing to some peculiarity of constitution, sensibility of skin, or state of the nervous system, the chief symptoms present during an attack of eczema may be severe, excruciating pain, which adds greatly to the sufferings of the invalid. This constitutes the variety *E. neurosum*.

An eruption of small, scattered, acuminated vesicles sometimes appears as the result of an injury to a nerve; to this Weir Mitchell has given the name of *E. neuro-traumaticum*.

The eruption occurs on the skin of the part to which the filaments of the injured nerve are distributed. Professor Fischer,* alluding to the local changes which take place in the extremities after injury to nerves, observes:—"The first effect is one of hypertrophy and increased temperature and secretion in the parts supplied. The second, of atrophy, lower temperature, and more sweat. In the first stage we have rosy and polished integument, which, on section, appears particularly opaque and shining, the exuded serum containing many white globules, and the microscope revealing infiltration of small cells. At a later period we have eczema, especially at the borders of the nails and in the palms, which sometimes leads to the formation of small slowly healing ulcers, and sometimes are relieved after an intense outbreak of burning pain in the shining portion of the skin. There may be also ecthymatous pustules, which make their appearance in succession, or simultaneously, on

* *Berlin. klinische Wochenschrift*, vol. viii. pp. 13, 71.

several parts of the body, and terminate in ulcers. In addition, there is sometimes a thick scabbing of the epidermis, which follows in the course of the cutaneous nerves, leaving the intermediate skin normal." Irritation of the fifth nerve will evoke an eczema, as in a case recorded by Cavafy.*

Eczema may be clinically grouped and studied under the following forms—viz. :

- E. erythematosum.
- E. papulosum.
- E. vesiculosum.
- E. pustulosum—impetigo.
- E. rubrum or madidans.
- E. fendillé or fissum.
- E. squamosum.

E. Erythematosum.—This is usually a mild form of the affection, but it may be very persistent and recurrent. It may continue throughout its course in its original form, or develop into *E. squamosum* or *E. rubrum*. It begins by the eruption of irregularly formed patches of varying extent and of a uniform redness. These may remain in their original size, or, the eczematous process continuing, they may extend until a large portion of the cutaneous surface is involved. The colour of the skin varies from a bright or dull red to a purplish hue, and in old chronic cases it may assume a yellowish tinge. The diversity of colour is well seen in cases of *E. erythematosum* of the face. There is not much infiltration of the affected part; and there are neither papules,

* *British Medical Journal*, July 14, 1880.

vesicles, pustules, nor exudation found upon the surface, which is rough and scaly. Considerable swelling and œdema may accompany the disease, especially when it attacks the face. Itching is not so marked a feature in this form of eczema. The case generally soon ends in scaly desquamation of the cuticle, leaving the site of the affection of a reddish tint, which in time disappears, and the skin resumes its natural colour. In other cases the inflammation is more severe, and the disease may prove troublesome from its tendency to relapse. Should the inflammatory action be prolonged, resulting in considerable infiltration of serous fluid into the meshes of the papillary layer and rete mucosum, there may be exudation on the surface of the skin and subsequent incrustation; or, in consequence of the infiltrated state of the affected part, and perhaps of the dry scaly condition of the surface, there may be great itchiness, which forces the patient to apply his nails for relief. This causes excoriations, from which an ichorous discharge exudes; and so a case, at first mild, being apparently nothing more than an erythema, may be developed into an exuding eczema, and continue for an indefinite period.

It sometimes happens that red, itchy patches, partially covered with thin, brownish-coloured scales, or presenting a smooth and shining surface, make their appearance on some part of the body, as the back of the hand, and may continue for some time to be the only phenomena observed until an outburst of acute eczema takes place. This is excited by the scratching on the part of the patient to relieve the itching, or by the operation of some other exciting cause. Scratching

plays an important part in the development and aggravation of eczema.

Some of the milder forms of *E. erythematosum* are so similar in appearance to erythema that many observers would consider them to be mere varieties of that affection and not cases of eczema at all, because there is no serous exudation on the surface of the skin. It would be more in accordance with the views now generally held regarding eczema to look upon these as mild or abortive forms of that affection.

There are cases described as chronic erythema which are said to have passed into exuding, itching, and desquamative eczema, some of which perhaps ought rather to be classed as undeveloped eczema, requiring time and the operation of some exciting cause to develop fully the pathological changes characterising that disease. There is doubtless an affinity between the two diseases in question, but it would be difficult to determine when an erythematous affection ceases to be so and becomes an eczematous one.

That an erythematous patch may eventually become the seat of an exuding eczema has been too often observed to admit of any doubt on the subject. This was pointed out long ago by Sir E. Wilson, who writes thus:—“At its earliest appearance eczema may be nothing more than a redness or erythema, but an erythema by lapse of time and disturbed formation of epidermis may become an eczema: for example, a chronic erythema will be attended with infiltration and thickening; it will itch; the nails produce an excoriation, the excoriation exudes, and then we have an eczema with four out of the six enumerated signs—viz., redness, itching, desquamation, and exudation.”

It may be said there is here no real passing of the one disease into the other, but that the eczema has been excited by the application of the nails to the itching parts, just as it often is by the same means in scabies, or as it is sometimes developed in persons with a constitutional tendency to the disease on those regions of the skin which are the seats of pruritic sensations arising from an impure state of the blood, or a disturbed condition of the nervous system.

It would perhaps be more correct to consider such cases as eczematous from the first, the initial erythematous stage having been protracted. The appearance of erythematous-like patches in the course of an attack of eczema is not confined to its primary stage alone; they may occur when it is fully developed or during its period of involution; but it does not follow that in all cases where such appearances are observed that the primary pathological lesion was an erythema.

These patches are very characteristic. They present a red, smooth, brightly shining surface, as if they had been varnished over, accompanied sometimes with longitudinal folds or fissures.

This condition of the affected part is very deceptive. It indicates that the cure of the disease is further off than might have been expected. But no advance will be made towards that end until the polished-like surface of the skin has been entirely got rid of. This remarkable appearance, which the affected integument occasionally presents in the course of an eczema, was first particularly pointed out by Hardy, who has been followed by Anderson and others.

The erythematous form of eczema affects chiefly the backs of the hands, the legs, inner surface of the thighs,

and neck, and is best observed in the face, where it may remain for years.

E. Vesiculosum (= **E. Solare** of Willan).—This used to be considered the typical form of eczema, and many authors still regard it so. It is the most common form of the disease, but by reason of the early rupturing or bursting of the vesicles these are not often observed when the case is first seen by the physician. It begins without fever or any premonitory symptoms, beyond, it may be, some slight gastric disturbance or headache, and a sensation of burning heat, tingling, or itching in the skin. It is characterised by an eruption of very small, shining, and transparent vesicles, crowded together and irregularly distributed on apparently healthy skin of the natural colour, or on an erythematous surface. The fluid contained within the vesicles is at first clear, of a white or citrine colour, and gradually becomes opaque; it is either absorbed or dries up within its vesicular chamber, when the vesicle desquamates; or by rupture of the vesicles it is exuded and concretes into small, thin, scales of a brownish-yellow colour, which soon exfoliate. In mild cases the disease may run its course in from four to six days; but usually successive vesicular eruptions make their appearance, and prolong the disease.

Tourists, travellers, sportsmen, harvestmen and other labourers, and women, who walk and work much in the sun, and are for a long time exposed to its direct rays, are often affected with this variety of eczema.

It is also frequently seen in blacksmiths, foundry and furnace men, and others who are exposed to the intense heat of the fire, furnace, stove, &c. Also in persons

engaged in dye, chemical, and sugar-refining works. It often affects woolworkers, washerwomen, bakers, grocers, bricklayers, and others who are compelled in their avocations to handle constantly substances of an irritant nature.

The action of the sun's rays, heat, and irritating powders, &c., upon the skin may develop the papular instead of the vesicular form of eczema, and the same exciting cause which has at one time produced a vesicular eruption on an individual, may at another time, and apparently under similar circumstances, develop a papular, pustular, or other variety on the same or on another person.

When Hebra showed that various forms of eczema could be produced by the application of croton oil to a healthy skin, he announced no new truth. The fact was well-known long before his day that the same local irritant evoked different forms of the disease.

It will be observed that *E. vesiculosum*, like other forms of eczema, generally pursues an irregular course, and that its duration cannot be definitely fixed. It may be confined to a small portion of the cutaneous surface, or involve a large extent of it, and be a local or a general affection. It may run, as it usually does, a mild, short course, or, occasionally, a protracted one, passing into the severer forms of the disease. Some dermatologists, however, do not admit that *E. vesiculosum* or *simplex* ever changes into the severer varieties. It was held by Cazenave that it "never terminates in the inflamed patches, serous exudation, or in the reappearance of the thin crusts observed in the other forms." This view is not in accordance with the experience of later observers, and it is now a well esta-

blished and recognised pathological fact that a mild attack of eczema may be followed by a severe form of the affection, and especially if it is injudiciously treated.

E. vesiculosum usually appears between the fingers, on the backs of the hands, on the flexor surface of the arm and forearm, and on the face and neck. It sometimes invades the scalp, less frequently the trunk and lower extremities.

E. Papulosum vel Lichenoides or Lichen.—This is the most common form of eczema in its initial stage, and more obstinate to treatment than the vesicular variety. According to Pye-Smith,* if the skin be less susceptible, or the irritant less powerful and more continuously applied, cell proliferation takes the place of exudation; the most vascular part of the affected organ—the papillæ and the hair follicles—is enlarged by the overgrowth of ill-formed tissue, and the skin becomes thickened, dry, and papular. The mild form of this variety begins in the same way, and pursues a similar course to *E. vesiculosum*. It is not generally preceded by febrile symptoms, should any be present, they subside on the appearance of the eruption. This consists of numerous, minute, acuminate papules, about the size of millet seed, of a bright red colour, irregularly scattered in patches over the cutaneous surface; it is attended by heat, smarting, tingling, or itching, which is sometimes intense; it generally appears first on the outer aspects of the arms, sometimes the face, and gradually spreads to the trunk and the lower extremities. The papules vary in size; they are larger on the softer

* *Guy's Hospital Reports*, Third Series, vol. xxi.

parts of the skin, as the face or front of the abdomen, than on the rest of the body. In five or six days, or sooner, the colour of the papules fades ; a minute scale is formed on their apices, a fine furfuraceous desquamation is established, and the disease may terminate before the ninth day, or be prolonged to two or three weeks. It may also become chronic, and continue for an indefinite period, or it may pass into the more severe form of eczema.

The mild form of *E. lichenoïdes* may end like the corresponding form of *E. vesiculosum*, by fine furfuraceous desquamation, and without there having been any serous exudation on the cutaneous surface ; or it may assume the severer form, or that represented by *L. agrius*. This is attended by acute febrile symptoms, which either entirely subside or are greatly modified on the appearance of the eruption. The intensity of the febrile symptoms, with the accompanying heat and redness of the skin, may sometimes lead to the case being mistaken for one or other of the exanthematæ. The eruption consists of small acuminate papules, of a bright red colour, formed in clusters on an erythematous surface of varying extent, and attended by heat, tingling, painful tension, and an extreme degree of pruritus.

The papules do not desquamate as in the other sub-variety, but slight ulcerations form on their apices, or they are abraded by the rubbing or scratching of the patient ; excoriations make their appearance ; from these and the papules a serous ichor exudes, which concretes into thin, yellowish, slightly adherent crusts ; the inflammation continues, the affected integument becomes more infiltrated and itchy, is fissured and

rugose ; fresh crops of papules, mingled with vesicles and pustules, make their appearance, and the disease passes into *E. rubrum*, presenting all the characteristic features of that affection, and finally ends in epidermic desquamation ; or it may assume a dry and scaly form, the skin being much thickened, rough, fissured and rugose, resembling psoriasis, which may be very chronic and prove obstinate to treatment.

In some mild cases the inflammation soon subsides, the redness becomes less vivid, the incrustations fall off, and the disease terminates about the twelfth or fifteenth day ; usually it pursues a chronic course, and may continue for months, or even years. The itching, which is so marked a feature in this affection, sometimes comes on in paroxysms, or waves, of extreme severity, driving the patient almost frantic, forcing him to violently rub and scratch the affected parts, which often causes blood to flow, and always greatly aggravates and prolongs the affection. A burning or scalding sensation sometimes takes the place of the itching and tingling, that are also very distressing to the patient. It was held by A. T. Thomson that a daily exacerbation and remission of these mingled sensations occurred, commencing soon after dinner. The paroxysms above alluded to may come on after dinner, in the early morning, or during the evening, or at any period, and without any apparent cause. All these sensations are increased when the patient gets warm in bed. They are aggravated by hot or stimulating drinks, or anything which excites the circulation or irritates the cutaneous surface. It sometimes happens that a very moderate quantity of wine or spirit may be allowed to a patient accustomed to

their use, with beneficial rather than injurious results. This form of the affection has a predilection for certain regions, and the outer aspects of the body, as the backs of the hands and fingers, the extensor surfaces of the arms and lower extremities, the face, &c. When it occurs on the latter, the swelling of the integument is usually much greater than when it attacks other regions of the body; the features, presenting a tuberculated aspect, are completely altered in expression, and the eyes are sometimes almost entirely closed by the thickening and swelling of the upper eyelids. There is an acute and well-marked form of eczema, very prevalent in hot and tropical countries, which was formerly considered as a variety of *L. agrius*—viz., *L. tropicus*, prickly heat or summer rash—the *E. caloricum* or *calore* of Italian writers, the sudamina of various authors. This has been described by Bontius, Drs. Cleghorn and James Johnson; the latter, having suffered himself from the affection, has given a graphic and lively description of it, from which the following extract, that may interest the reader, is taken:—

“Among the primary effects of a hot climate may be noticed the prickly heat, a very troublesome visitor, which few Europeans escape. It is one of the miseries of tropical life, and a most unmanageable one it is. From mosquitoes, cockroaches, ants, and the numerous other tribes of depredators on our personal property, we have some defence by night, and in general a respite by day, but this unwelcome guest assails us at all, and particularly the most unseasonable, hours. Many a time have I been forced to spring from table, and abandon the repast, which I had scarcely touched, to writhe about in the open air for a quarter of an

hour; and often have I returned to the charge with no better success against my ignoble opponent! The night affords no asylum. For some weeks after arriving in India I seldom could obtain more than an hour's sleep at one time, before I was compelled to quit my couch with no small precipitation, and if there were any water at hand to sluice it over me for the purpose of allaying the inexpressible irritation. But this was productive of temporary relief only, and what was worse a more violent paroxysm frequently succeeded. The sensations arising from prickly heat are perfectly indescribable, being compounded of pricking, itching, tingling, and many other feelings for which I have no appropriate appellation. It is usually, but not invariably, accompanied by an eruption of vivid red pimples not larger in general than a pin's head, which spread over the breast, arms, thighs, neck, and occasionally along the forehead close to the hair. The eruption often disappears in a great measure when we are sitting quiet, and the skin is cool; but no sooner do we use any exercise that brings out a perspiration, or swallow any warm or stimulating fluid, such as tea, soup, or wine, than the pimples become elevated, so as to be distinctly seen, and but too sensibly felt."

Three of the five species of lichen described by Willan—viz., *L. simplex*, *L. agrius*, and *L. tropicus*—are now very generally recognised by dermatologists as mere varieties of eczema—its so called abortive and papular forms. The late Tilbury Fox and others, while admitting a papular form of eczema, consider this to be quite distinct from *L. simplex*. Most authors consider the papule of eczema, which has a

tendency to change, as quite different from the solid, fleshy papule which occurs in lichen—as *L. planus*—which has no disposition to change throughout the whole course of its existence.

E. Impetiginosum (=Pustular Eczema or Impetigo).—This variety of eczema is the result of a pyogenic habit or low vitality of the individual attacked, or of a higher degree of inflammation than occurs in the vesicular form of the disease. It is true that the pus formation may be out of proportion to the severity of the existing inflammation, showing its dependence on the pyogenic condition of the patient; but this pyogenic habit is not the only factor in the development of an impetiginous eczema, which may occur in individuals of different temperaments. The pyogenic habit favours the development of an impetiginous rather than a vesicular form of eczema.

E. impetiginosum is preceded and attended by similar constitutional and local symptoms, and pursues a similar course to the other varieties of eczema—being sometimes mild, often severe and chronic, and exhibiting in its evolution and decline, red, inflamed, fissured, exuding and incrustated surfaces corresponding to *E. rubrum*.

The chief difference between this variety and the other two is the presence of pustules instead of vesicles or papules, and the form and appearance of the incrustations, which, instead of being thin and flat, as in the vesicular varieties, are thick, rough, slightly furrowed, semi-transparent, soft, spongy, and of a yellowish-brown, or greenish-yellow colour, resembling, as Rayer observes, “fragments of dried honey.” The eruption may at first be vesicular or pustular from

the beginning. The affection may begin by an eruption of red, circumscribed, circular, or oval patches, on which are developed small yellow pustules arranged in irregular circular groups. This form (*I. figurata* of Willan) generally attacks the face or upper extremities first, and then gradually spreads to the lower. When it begins first on the face of children or young people, it usually appears on the cheeks and sides of the nostrils. Instead of the pustules being grouped circularly, they may be scattered singly over the surface of the body (*I. sparsa* of Willan). When such a case becomes chronic, it sometimes happens that by repeated pustular eruptions which take place on the spaces intervening between the primary pustules and by the subsequent drying of the exuded fluid, a considerable extent of skin may be covered with incrustations; and when the disease is seated on the leg or arm, the extremity may occasionally be observed to be completely encased in a thick layer of these.

The single and aggregated arrangement of the pustules is often seen in the same case. Sometimes an erysipelas-like surface is observed, which, before the pustules have made their appearance, may lead to the belief that it is a case of erysipelas itself with which the medical attendant has to deal. This error may generally be avoided by simply passing the hand gently over the inflamed integument, which gives the sensation of its being rough, and studded with minute papules, which may be seen by means of a lens or a good side-light.

The pustules may be crowded together on an inflamed surface, as when this variety of eczema

attacks simultaneously the face and scalp of a child, which results in the frightful mask-like incrustations (*I. larvalis* of Willan) that so disfigures the infant.

The pustular variety of eczema is most frequently met with in infants and young children of strumous habit. The itching is sometimes severe. Pustules, like vesicles, are not always seen. When such cases come first under notice, a mass of yellowish crusts only, as in *crusta lactea*, is observed. A contagious form of impetigo has been described by Tilbury Fox under the name of *Impetigo contagiosa*, and by Startin as *Porriago*.

E. Rubrum (= **E. Madidans**).—This is the acute inflammatory or inveterate form of eczema of the older writers. It is now generally regarded to be a sequence or condition of other forms, rather than a variety of the disease. Many authors and practical physicians, however, still look upon it as a variety.

It may be developed from any one of the four forms already mentioned, but is most frequently a consequent of *E. vesiculosum*. At the same time, in a typical case of eczema the disease will begin, run its course, and develop all the phenomena described by Willan as *E. rubrum* (whose description of the disease is the best extant), that one can hardly doubt its claim to rank as a variety, and not a condition or a sequel only. It may be both. In a typical case the inflammatory symptoms are well marked.

It may be ushered in by febrile, gastric, or gouty symptoms, more or less severe. The pain and itching are generally intense. When the vesicles burst they give exit to a more or less abundant acrid, serous discharge, that irritates and excoriates the parts over

which it flows, and which stains and stiffens linen. The disease may spread rapidly from the part on which it first makes its appearance, until the whole of that region, or a considerable portion, or the entire area, of the skin is affected; or the whole of the disease may be concentrated on one part of the body—as on the face, or lower extremities. As the disease progresses, the affected parts become more swollen and infiltrated, and attended with a greater degree of pain and itchiness. When the disease is at its height, it presents a remarkable appearance. One part of the affected integument is covered with the characteristic thin, yellow, lamellar incrustations, sometimes very broad; another, with the ichorous discharge, and presenting a bright, red, highly inflamed smooth surface, resembling that produced by a cantharides plaster; or, where the part has been entirely denuded of its epidermic layer, there may be observed innumerable very minute openings or ulcerations, surrounded by bright red areolæ—the orifices of the follicles, or the sites of the ruptured vesicles—whence issues, more or less copiously, the irritating *serous* fluid; in another part, cracks and red fissures are also present, which discharge a serous, sometimes a sanious, fluid.

In some cases the exudation is so excessive in quantity (*E. ichorosum*) as to wash away the epidermic débris from the surface of the affected parts, and to prevent for a time the formation of crusts thereon. A very small patch of *E. rubrum* may become the seat of a most profuse serous discharge. When the inflammation is more acute, pustules make their appearance on and around the eczematous surface,

accompanied with increased itchiness; and the serous discharge becomes sero-purulent or purulent, which, on drying, forms thick, rough, yellowish-green or dark-coloured crusts, which may be present at the same time as the thin lamellar ones, representing the serous exudation; and it is not rare, in a severe case of *E. rubrum*, to observe all the forms and phases of the disease on different parts of the body at one and the same time, or even on one large eczematous patch. The sufferings of the patient afflicted with this disease are often greatly increased by the stiffened and hardened state of his body linen, which follows on the drying up of the sticky exudation. The irritation so produced keeps up the febrile state, and tends to the prolongation of the affection.

The duration of *E. rubrum* is very variable. In some cases the inflammation may subside, the exudation cease, the incrustations fall off, and the disease terminate by epidermic desquamation, sometimes in large shreds, in two or three weeks. But it may last as many months, or begin *de novo*; or pass into the chronic stage, with an aggravation of all the symptoms, undergoing frequent relapses without apparent cause, each relapse repeating the acute type; and so its duration may be prolonged for months or years. It may also assume the dry scaly form, and prove very rebellious to treatment.

There is no part of the body on which *E. rubrum* may not make its appearance. It may be confined to a very small spot, or involve a large extent of the cutaneous surface; be an entirely local or a general disease. There are some regions of the body that are more frequently the seat of *E. rubrum* than others—viz., the face, particularly round the beard, where the

follicles are numerous; on the genitals, the groins, axilla, and lower extremities, especially in old people. It is sometimes confined to one particular spot—as the head, the ear, the mamma, hands, the flexor surfaces of the joints, &c.—giving rise to the local varieties of the affection, which often prove obstinate to treatment.

E. Fendillé or Fissum.—This is not considered by all dermatologists as a distinct variety of eczema. Some, like Hebra, regard the “cracks and chaps, the fissures and rhagades,” that are often observed at the bends of the joints in the course of various forms of eczema, as merely accompanying phenomena, produced by bodily movements, and not to be looked upon as constituting a distinct variety of the affection. Others admit the variety, but regard it as chronic supervening on some other form of eczema. It is, however, both a primary and a secondary affection, and its ordinary seat is not at the flexures of the joints. It may usher in, accompany, or supervene on, other forms of the disease, or it may begin and end its course without the presence of either vesicles, papules, or pustules.

Occasionally it is observed that cracks, superficial or deep, and either dry or exuding, may hold possession of an eczematous surface for a considerable time preceding an eruption of vesicles or the accession of some other form of eczema. The skin, in its healthy state, stretches easily, and freely responds to all the ordinary bodily movements; but when it is affected by eczematous inflammation, its structure is often profoundly altered; it is infiltrated, becomes hard, and loses its natural elasticity, and sometimes is so brittle that it cracks even on the slightest movement in the part affected. A familiar example of this is seen in chilblains, and it is often seen on the tips of the fingers.

Devergie,* who was the first to describe this fissured variety of eczema, says:—"It has quite a distinctive character. It is primary or secondary. It shows itself by a diseased patch (plaque) seated ordinarily on the front of the legs, but it is also often met with on the thighs and forearms. Instead of presenting a uniformly diseased surface, the epidermis exhibits zigzag cracks, furnishing a more or less abundance of serosity. These cracks or fissures heal by degrees in the space of eight or ten days, and without any known cause a new crop of fissures is produced, which pursues the same course, and also in a more or less considerable space of time." Crusts form and cover the epidermic fissures, and there is constant smarting and itching.

The successive eruption of fissures, according to Devergie, is characteristic of this form of eczema, and is the cause of its prolonged duration. He thinks it resembles the eruption produced by the use of sulphurous waters.

Hardy adopted Devergie's views of *E. fendillé*, and has graphically described it.† Hardy says: "I think I ought to connect with *E. fendillé* a variety commonly described under the name of *E. sec* (*E. siccum*), and characterised by limited red patches crossed by epidermic fissures. These patches appear in regular or irregular circles; and some are lozenge-shaped, some square. They are not of great extent, but many of them often exist in the same region. They are ordinarily dry, unless the scratching occasioned by the itching produces some superficial excoriations of short duration.

* *Traité des Maladies de la Peau*, 1867.

† *Jaœcoud's Dict. de Médecine et de Chirurgie*, tom. xii.; and *Traité des Maladies de la Peau*, p. 728, 1886.

“ E. sec is principally observed on the anterior aspect of the chest, in the sternal region, and the back. I have met with it more rarely on the face and on the limbs. This variety has been wrongly indicated by authors as belonging either to lichen or pityriasis; there are no papules, and the fissured epidermis is not detached in such a way as to form veritable scales. Besides, these patches coincide sometimes with an eruption freely eczematous, and they may be the starting-point of an ulceration and sero-purulent secretion characteristic of eczema.”

E. Squamosum.—This is both a primary and a secondary affection. In the former it is characterised by an eruption of slightly red, ill-defined, irregular, and slightly infiltrated scaly patches. This generally runs a mild course, and is not infrequently met with on the face and hands. It was formerly called pityriasis simplex, or rubra, by Hebra. The secondary forms of this affection may arise from any of the preceding varieties. Here the parts are red, much infiltrated, thickened, and covered with coarse or fine scales, which are easily detached and are quickly reproduced. To this condition Wilson wished the term psoriasis to be applied. Whether E. squamosum occurs as a primary affection or is the sequel to other varieties it is the result of sub-acute or a low form of inflammation. The inflammatory process “is of too low a grade to cause much exudation from the vessels, exciting instead hyperplasia of the rete cells” (Crocker.)

E. squamosum is often seen on the scalp, neck, and limbs, where it not unfrequently proves very intractable to treatment by reason of the marked thickening of the affected part. By pinching up a fold of the skin the

extent of the thickening may be roughly ascertained. Biett has pointed out in his clinical lectures "many cases in which eczema became a true scaly disease," and the dry, scaly, psoriasis-like form of chronic eczema is well described by Cazenave.* The term pityriasis rubra has been very loosely applied to diseases of very different character. By some it has been employed to designate a mild form of eczema or erythema; by Neumann and others to the sequela of exuding eczema or the healing stage of the affection. By Devergie, Hebra, and others to denote a severe, peculiar, and generally universal scaly disease.

Devergie, who first described the affection, regarded it as the only scaly disease which involved the whole cutaneous surface, leaving no part from head to foot unattacked. He considered it an acute affection, running a very chronic course. Wilson and others have described the disease under the title of eczema exfoliatum rubrum, which would be a very appropriate one, and not misleading like *P. rubra*. The terms dermatitis exfoliativa, general exfoliative dermatitis, superficial dermatitis, or acute general dermatitis, have been applied to this or an allied disease by Baxter, Hutchinson, Jamieson, Pye-Smith, and others. The late Tilbury Fox objects to the term dermatitis, as it involves the presence of inflammation, and according to his view of the malady "there is no true inflammation present." He describes *P. rubra* "as a primary form of disease characterised essentially by general hyperæmia of the superficial parts of the skin and hyperplastic growth of the cuticular layer." In its typical form the surface of the body is deeply reddened

* *Skin Diseases*, translated by Burgess, p. 70.

hyperæmic) and covered by large and freely imbricated flakes or scales. But according to Crocker and more recent authors, *P. rubra* "may be primary or follow some other form of dermatitis, and be acute, chronic, or relapsing." It may be partial or universal. The views of Devergie and Hebra regarding the universality of the affection are not borne out by modern experience, nor is the latter's opinion of its uniformly fatal termination confirmed by later observers, as cases of recovery from it have been recorded by Tilbury Fox, Liveing, &c. It is still *sub judice* whether *P. rubra* is a rare form of eczema, or an affection *per se*, or is one of a special group of dermatitis. It is regarded by many authorities (as Liveing) as a peculiar form of eczema, and it is probable that it will be so regarded by future dermatologists.

Two forms of eczema-like diseases have been described by Crocker under the names of *E. Circumscriptum* (?) *Parasiticum* and *Dermatitis Repens*. The former looks like dry eczema, and may remain for years if not attended to. It is easily cured by a weak parasiticide ointment. It is probable that this, like *E. marginatum*, is of parasitic origin. The latter resembles *E. rubrum*, and its chief characteristic is its tendency to spread steadily and uninterruptedly. In one case the lactate of lead, and in another Beissel's permanganate of potash treatment seemed to arrest the morbid process and effect a cure. The arm was the seat of the affection. It is probably a phase of *E. rubrum* depending on some peculiar condition of the nervous system.

Development plays an important part in the production of the varieties of eczema. The disease is also

modified in its general appearance by the mode of distribution. It may be either general or partial in its distribution. When the different regions of the body are at one and the same time affected with eczema, it is rare to find the eruption presenting the same uniform appearance throughout its whole extent. It assumes a different appearance in the different regional divisions of the body, owing to the anatomical peculiarities of the parts affected, the operation of various external causes, and other influences; and so in general or universal eczema it is usually found that the scalp and face are the seats of the impetiginous form of the malady, the trunk of the squamous, and the extremities of the vesicular and papular. A regional classification of cutaneous diseases has been proposed and adopted. It was first introduced by Mercurialis and Turner in the last century, and has generally been used by subsequent dermatologists with respect to eczema.

The regional division of eczema is not without advantage, in a practical point of view, as facilitating the study of the disease. The chief regional or local varieties of eczema to be noted are the following—viz. :

E. capitis.	E. umbilici.
E. faciei.	E. genitalem.
E. barbæ.	E. perinæale et ani.
E. tarsi et palpebrarum.	E. crurum.
E. labialis.	E. articularum.
E. narii.	E. manuum, pedum, et digitorum.
E. aurium.	E. unguium.
E. mammæ.	E. infantile.

E. Capitis.—This local variety presents various forms of the affection. Its outbreak is usually preceded

by the symptoms characteristic of an attack of eczema in other parts of the organism. It often, in the vesicular form, commences behind the ear, close to the margin of the hair, and from this point spreads either very rapidly or slowly until the whole scalp is completely affected. The vesicles are very minute, sometimes exuding copiously a serosity which keeps the hair constantly wet. The gluey exudation on drying often mats the hair together.

This fluid dries into thin, light-coloured incrustations, which, being entangled in the hair, become more fixed, and are less easily detached. Cracks may appear in the crusts, through which the red, raw, moist surfaces are seen. In some cases these raw, moist surfaces are the chief appearances observed. They are generally about the size of a sixpence, and exude a pus-like fluid, which concretes into thin, greyish-white crusts. Instead of a profuse serous exudation, there may be only a very scanty one, which dries into thin, white, minute, glistening, loosely adherent scales, that are easily detached by the slightest friction. These minute shining scales are produced in great abundance, and give a very striking appearance to persons of dark complexions. Their hair looks as if it had been powdered. Although the vesicular form of *E. capitis* ends, as it does on other parts of the cutaneous surface, in epidermic desquamation, the squamous variety of the affection may alone be observed from the beginning to the end of the attack.

The pustular variety of eczema is the most common form of it affecting the scalp. It is very frequently seen in children and young people; less so in adults.

It assumes a great variety of aspects. and its

diagnosis in some of its phases is not unattended with difficulty. The disease sometimes appears in the form of distinct pustules scattered over the surface of the scalp; or they may be crowded together in groups or inflamed patches of varying extent. It may be confined to one part of the head, as the back; or it may affect the whole scalp, and extend to the forehead and to other parts bordering on the hair. It usually begins on the forehead, and thence spreads to the hairy scalp.

Different names have been given to the malady by authors, according as it is limited and discrete, or general—affecting the entire scalp—as *impetigo granulata*, *porrigo granulata*, *E. impetiginosum*, &c. Its appearance is greatly modified by the length and thickness of the hair, the degree of attention given to it, and the habits of the persons affected; so that the most severe and disgusting examples of the disease are usually found among children reared amidst dirt and squalor, or those whose hair and the affection have been alike neglected. The pustules vary in size, being generally larger in the single or discrete form than when they are grouped together. In the former case they usually attain to the size of small peas; on bursting, they give exit to the yellow-coloured pus which they contain, that dries into thick, yellowish-green, discrete crusts, having intervals of healthy skin between them. When the pustules are grouped together, they generally become confluent before bursting. The yellow-coloured pus in a well-developed case, concretes, forming the large, thick, friable, semi-transparent, yellowish-green or greenish-brown crusts characteristic of the affection. The crusts increase by successive additions of the exuded products to their

under-surfaces. The secretion from the sebaceous glands of the scalp mingles with the purulent secretion, and adds to the size of the incrustations.

Vesicles often accompany the pustular eruption, and their serous contents, mingling with the other secretions, modify the appearance of the crusts. The intense itching which attends the disease provokes scratching; this aggravates the severity of the affection and prolongs its duration. In scratching, the pustules and vesicles are freely ruptured, and the deeper layers of the cutis are sometimes reached, causing blood to flow, the admixture of which with the eczematous and purulent fluids darkens the colour of the resulting crusts.

Dirt, dust, and other extraneous materials help to increase the bulk of the incrustations and affect their colour.

There is a free secretion of pus going on beneath the crusts; these frequently separate in cracks that disclose the red, secreting surface beneath, and through which the pus wells up and flows over them.

The crusts become drier and brittle in time. Through neglect they may remain adherent to the scalp long after the disease is cured. Their long and continued pressure, coupled with other causes, may lead to the obliteration of the hair bulbs and to permanent baldness of the part. As a rule, however, the hair remains unaltered in *E. capitis*. It may fall off in the course of an attack, but soon grows again when a cure is effected; sometimes the new hair may be lighter in colour, or even grey.

In some chronic cases of *E. capitis*, small abscesses form at the nape of the neck, and the posterior

cervical glands are not unfrequently enlarged and tender, but they rarely suppurate.

E. Faciei.—This is generally preceded in young subjects by a sharp febrile attack, which may last a few days before the eruption makes its appearance. In adults, the premonitory symptoms are either very slight or entirely absent. It is accompanied with itching and painful irritation, especially in children. Redness and swelling (*E. erythematosum*) are more marked features at the commencement of this local variety of eczema than the eruption, which usually consists of numerous very minute papules or vesicles, that may easily escape observation unless the affected parts be examined in profile or by a side light.

The swelling is constantly present, but in a varying degree. This is more especially seen in the eyelids, where it is sometimes so great as to completely close them. The skin of the swollen eyelids never presents the shining appearance that it does in ordinary œdema of those parts when the tension is greater. This swollen state of the eyelids may be the only primary lesion present to indicate an impending attack of the disease. All parts of the face are liable to an attack of eczema. Sometimes the whole face is affected; at other times the smooth or hairy parts alone suffer; while frequently the disease is limited to some particular locality—as the eyelids, nose, centre of the cheeks. The disease may appear in this region in all its protean forms—from its mild and simplest to the most severe form of *E. rubrum* and *E. impetiginosum*.

In some young children it assumes a vesicular, and in others an impetiginous character—generally the latter. The incrustations in this local variety of

eczema vary in extent, form, thickness; and colour, according to the condition and nature of the eruption—whether vesicular or pustular, or a mixture of both, or a preponderance of either—and on the activity of the exuding process. Authors have been led to give different names to the affection by the appearances which these incrustations present. When the crusts are large and retain their yellow colour, having a resemblance to lumps of dried honey or to the exuded gum on a cherry-tree, this condition is an example of what the ancients named *Melitagra*, which term, with the addition of *flavescens*, Alibert adopted to designate a specific variety of the disease. In time the crusts become discoloured, assuming a brown or olive tint, or, by the admixture of blood, becoming dark-coloured or black. To this condition the above writer gave the name of *melitagra nigricans*. Sometimes the whole face is covered, as with a mask, with large, yellowish-green, or dark-coloured, disagreeable-smelling incrustations—the *impetigo larvalis* of some authors, *porrigo larvalis* of others.

When the impetiginous form of eczema occurs in infants at the breast, it is called *crusta lactea*, or milk crust, *Milchschorf* by German and *gourmes* by French authors.

The parts of the face covered with hair, as the chin and cheeks, are often the seat of an eczematous affection, usually the pustular form. Occasionally the dry, scaly form of eczema is met with in the bearded part of the face. At other times we find the vesicular variety established here, and presenting its characteristic red, moist, exuding surfaces and thin, lamellar, yellow-coloured incrustations. But it is the pustular

or impetiginous form of the disease (*E. faciei barbatae impetiginosum*, *E. pilare faciei*, *impetigo sycosiforme*) that usually attacks this region in men. This is a very troublesome and disagreeable malady, attended by severe burning pain and itching of the affected parts. The act of shaving is accomplished with pain and difficulty, and the operation tends to aggravate the disease. It should therefore be discontinued in the acute stage of eczema, and the hair be kept closely cut instead. Some authorities, however, advise regular shaving of the beard.

The disease often proves very rebellious to treatment, especially when it occurs in scrofulous subjects or in those whose constitutions are tainted with syphilis. It begins with an eruption of small, slightly elevated pustules situated at the orifices of the hair follicles, and each pustule is observed to be perforated by a single hair. The pustules dry up, and form greenish-yellow crusts or scabs, which, being entangled in the hair, are not easily detached. Sometimes numerous pustules are seen to be set closely together, which coalesce before bursting. Here the resulting crusts are larger than those formed by the desiccated discrete pustules. In mild cases the disease may terminate in a few weeks, and leave no permanent marks behind. But when a severe form of pustular eczema has held possession of this part of the face for a considerable length of time, the attendant inflammation may so profoundly affect the hair follicles and the glandular structures that the duration of the disease may be indefinitely prolonged, and it may assume that form of eczema described by Hardy as *impetigo sycosiforme*, and end in obliteration of

the hair follicles, with corresponding permanently bald patches, and sometimes leaving scars.

Pustular eczema frequently attacks the edges of the eyelids—*E. tarsi*. This has been usually described by ophthalmic surgeons as *ophthalmia tarsi*, *tinea tarsi*, &c. It is attended by heat, itching, and lachrymation. The edges of the eyelids are red, excoriated, and often ulcerated. Greyish-yellow crusts adhere to them, and surround the eyelashes. The purulent discharge mingles with the altered Meibomian secretion. This incrustates during sleep, and binds the eyelashes, and sometimes the eyelids, together. It often requires considerable effort on the part of the patient to separate the eyelids unless, previous to the attempt, proper means to soften the incrustations or glutinous product have been employed. This affection is often accompanied by chronic conjunctivitis and by an eczematous eruption on the cheeks, excited by the irritation of the tears flowing over the integument. If *E. tarsi* is neglected, or is improperly treated, it may lead to closure of the Meibomian apertures, to the complete or partial loss, or twisting of the eyelashes, and be quite incurable. Eversion of the edges of the lids, and their thickening and hardening, are also sequelæ of the affection.

The eyebrows are occasionally the seat of eczema—*E. palpebrarum*. Here the squamous form is most frequently met with. This is also the variety which is usually seen on the eyelids.

The upper lip (*E. labialis*) is often attacked by pustular eczema, either alone or simultaneously with its outbreak in other parts of the face. This local variety often proves a very troublesome and intractable affection.

Pustular eczema also shows itself at the entrance of the nostrils—*E. narii*.

The same appearances are presented here as in *E. faciei barbatae impetiginosum*—viz, each pustule is seen to be perforated by a hair. The pustules may be ranged singly or be grouped together. In the latter case the resulting crusts may be so large as to block up the nostrils, which may cause swelling of the nose, the skin of which may assume an erysipelas-like hue that may extend to the adjacent parts. Generally the Schneiderian membrane is involved in the attack, and it may be affected throughout its whole extent. When this happens, there is a very profuse discharge from the nostrils, composed of the natural secretion of the parts and the eczematous exudation. This local variety may become chronic, and continue for months, or even years.

Dried-up morbid products, moulded into crusts of considerable length and thickness and emitting a most offensive odour, are discharged from time to time from the nostrils. Their presence interferes with the efficient application of local remedies. These should be removed by appropriate means, and the formation of fresh ones prevented. The skin of the nose, including that covering the septum narii, may be the seat of every form of eczema. It may be affected by the extension of the disease from the adjacent parts, or be attacked independently. In some cases attended by a profuse eczematous discharge the resulting incrustations at the tip of the nose or nares assume a stalactitic form—the *dartre stalactiforme* of Alibert.

E. Aurium.—Of all parts of the face, the ear, when it is the seat of a typical eczema, exhibits in the most marked degree the characteristic features of the affection. With the usual subjective symptoms there are great swelling, redness, and free vesiculation of the part affected. The vesicles often attain to a considerable size; the exudation is profuse, and quite out of proportion to the extent of surface affected. The swelling may be so great as to conceal the hollows and elevations of the auricle, giving to it the appearance of “standing out and forwards from the side of the head.” Eczema may attack the whole of the auricle, or be confined to a portion of it, as the lobule, or to the back part of it.

In certain cases of old standing the auricle loses its natural graceful form and shape, and becomes a thickened, shapeless mass. It is also sometimes disfigured by loss of substance. When eczema affects the meatus there is present a certain degree of deafness, owing to the swelling and consequent narrowing of the canal, but the hearing returns on the cure of the eczema. As in eczema of the nose, icicle-like crusts may hang from the lobule of the ear, forming the variety *E. stalactiforme*.

Eczema may occupy the part behind the ear, or be confined to the groove below it. In young children, and in women at the climacteric period, eczema is often limited to the parts behind the ears; and in the latter the disease often proves very troublesome and obstinate to treatment.

Eczema is often seated on the breasts—*E. mammæ*. According to Cazenave, chronic eczema of the mamma

is, more frequently than any other variety of the disease, confined within a very small area.

It often attacks the nipples, *E. mammillarum*, producing the "sore nipple" seen during lactation. It is rare for one nipple to suffer alone; generally both are affected at the same time, but usually one is more so than the other. The nipple is red, excoriated, often deeply fissured, and very sensitive. The disease generally extends to its base, and not unfrequently to the parts adjoining, the nipple appearing in the centre of a disc of eczematous eruption. In some cases the parts surrounding the nipple are red, much swollen, fissured, exuding, and incrustated, the nipple appearing flattened, shrunken, and as if placed in the centre of a cavity. The reflected irritation from the irritable nipple often leads to suppurative inflammation of the glandular and other structures of the breast.

Eczema appears on the other parts of the breast locally, or as part of a general attack of the malady. Eczema is met with on the lower aspects of the large pendulous breasts of some women—that part which is in contact with the chest, where there may be a corresponding development of the disease owing to the combined action of the secretion of the parts and friction between the opposing surfaces.

E. Umbilici.—The umbilicus is sometimes the seat of eczema. It may be acute or chronic. In some cases the swelling of the part affected is not marked, while in others it is very considerable, the umbilicus presenting a tumour-like appearance, and being red, raw, chapped, and exuding. This variety may be excited by the scratching provoked by the itching in cases of scabies. It sometimes follows on the separation of the umbilical

cord, and, owing to neglect on the part of the nurse, it may, in scrofulous infants, become chronic and continue for a long time, even years, proving very rebellious to treatment. Such cases have come under my own observation where the disease had continued from birth to the eighth year of the child, in spite of various treatment. In one case of this kind the disease had existed from birth till the boy had reached his seventh year, when he was placed under my care, and a complete cure was effected by the combined use of external and internal means, the chief internal remedies being cod-liver oil and syr. ferri iodidi.

E. Genitalium.—Eczema attacks the genital organs of both sexes. In women the disease may be limited to the labia and their mucous surfaces. It is attended by heat, painful smarting, and distressing pruritus. The parts are swollen, infiltrated, exuding, and often much torn and excoriated, the result of the uncontrollable scratching by the patient to relieve the pruritus.

The disease may extend to the mons veneris, the lower part of the abdomen, the inside of the thighs, and to the perinæum. It may also involve the vulva, nymphæ, and clitoris, the latter in some cases being greatly increased in size. The disease occasionally invades the vagina, and, according to Simpson, the os uteri also, and is attended by a purulent or muco-purulent discharge simulating gonorrhœal. It has also been observed that eczema of the external genitals may alternate with leucorrhœa, and *vice versâ*. The disease is not unfrequently excited by the irritation of the leucorrhœal discharge flowing over the external

parts. Eczema genitale, accompanied by intolerable pruritus, is not rarely met with in pregnant women. It is also excited by any cause leading to hyperæmia and venous congestion of the genital organs. A very painful and troublesome form of this local variety of eczema is not unfrequently met with in elderly women suffering from diabetes.

In men, the penis and scrotum may be affected by eczema, either separately or together. There is, however, a marked difference in the appearance which the disease presents in these parts. The penis is usually much swollen and greatly increased in size; phimosis, or paraphimosis, occasionally supervenes, but the vesicular eruption is very minute and the exudation scanty. When the scrotum is the seat of an acute attack of eczema the swelling is well marked, but the eruption is free and well developed, and accompanied by a profuse discharge, which quickly decomposes, emitting a disagreeable odour.

The parts may be quickly denuded of epidermis, and present a red, raw surface, from which exudes a thick, foetid, sticky discharge. This condition is not unfrequently met with in old men. In some cases the scrotal surface may have a red, smooth, and shining appearance, with more or less free exudation.

It has been pointed out by Hebra and others that, when the disease becomes chronic, the natural prominences of the skin are most affected, and appear, when the scrotum is tense, as irregular and fissured folds. Occasionally the disease appears in the form of dry, scaly, indurated, and fissured patches of varying extent on different parts of the scrotum, and is attended by severe pruritus. This form of the disease

often proves very rebellious to treatment, and, in my experience, it is especially obstinate when it occurs in scrofulous individuals, in persons of dissipated habits, or where there exists a constant fulness of the scrotal blood-vessels. The pustular form may affect the pubic region of both sexes (*E. pubis*).

E. Perinæale et Ani.—This may be confined to the skin around the anal aperture, or to the “fold of skin which stretches along the raphi between the genitals and the anus.” It may involve these parts, and extend backwards to the sacrum and forwards to the genital organs. The affected parts may be exuding, red, and excoriated; or dry, scaly, and rugose. Deep fissures form round the anus, whence exudes an abundant, irritating discharge. Intolerable itching accompanies this variety. *Pruritus ani* may be associated with eczema, and be mistaken for the latter disease. But it may exist, and in a very intractable form, without the least appearance of eczema in the affected parts. In severe cases it may be complicated with *prolapsus ani*. According to Hebra, *E. ani* is frequently associated with eczema of the lips, and may alternate with it. In cases of old-standing *E. ani* the skin loses its natural pigment and elasticity. It looks smooth like ivory, “more like very white parchment” than skin.

E. Crurum.—Eczema of the lower limbs generally presents a modified appearance to what it does on other parts of the body. This is owing to the different pathological conditions which obtain here to what are usually found in other regions, such as a varicose state of the veins, a persistent swelling, œdema, &c. The acute form of eczema may affect the whole leg, and

present, in its erythematous stage, an aspect resembling that of erysipelas, for which it has been not unfrequently mistaken. The disease is often found surrounding varicose and other ulcers dependent on the same cause—local hyperæmia; or caused by the irritant ointments, lotions, or other remedial applications used for healing the sores. I have seen it to follow strapping of the leg with the ordinary diachylon plaster. Ulcerations of the leg may, however, be secondary to an eczematous eruption on these parts. These ulcerations are generally very superficial, but may be of considerable extent, and are sometimes rapidly produced by the pressure of a badly applied bandage to the affected limb.

The affection may be limited to a small area, as a dry, scaly patch on the inner and lower part of the leg, just above the ankle. This may show itself in gouty persons long before any attack of gout has occurred or even been anticipated. Why eczema should so frequently manifest itself here in connection with varicose veins in preference to other parts of the extremity is probably owing to three causes—first, the thinness of the skin at this part; secondly, the greater liability to friction from boots, trousers, &c.; and, thirdly, to the part being subject to a greater degree of congestion owing to the anastomoses of the deep and superficial crural veins being less free here than in other parts of the leg.

Another favourite spot for eczema to appear is on the upper part of the front of the leg, just below or over the head of the tibia. It may affect any part of the shin, and the whole leg may be involved, as in the impetiginous variety.

In chronic cases of *E. crurum* there is present a more or less permanent hyperæmia of the cutis and sub-dermic structures, which leads to thickening, roughening, and hardening of the skin, and to increased pigmentary deposit in it. This increase of pigment imparts to the skin a dark leaden and sometimes a coppery hue. The latter may point to a syphilitic taint, but the system may be entirely free from such. In some very chronic and obstinate forms of eczema the thickening process may continue until the affected limb attains an enormous size and assumes the appearance of elephantiasis.

An eczema of the lower limbs is often associated in old or middle-aged people with heart disease or with kidney or hepatic disturbance. The condition of these organs should be carefully inquired into in all cases of this local variety of eczema, and especially so if there is œdema of the parts affected. When this symptom occurs, even in children and young people, the state of these organs demands attention.

E. Articulorum.—A favourite locality of eczema is the flexor surfaces of the joints. Several or all of these may be affected at the same time. In the latter case the joints are not all equally affected with the disease; some may be severely and others but slightly implicated.

The disease is usually symmetrical, and is attended with diminished mobility of the affected joint. All movements of the diseased parts are painful, and give rise to cracks and fissures, more or less deep, which follow the course of the natural furrows of the skin in the part affected. From these an acrid, irritating,

serous, purulent, or sanious fluid generally exudes more or less profusely.

A condition resembling ankylosis is sometimes observed in cases of long standing in which both the flexor and extensor surfaces of the joint have been invaded by the disease. As a rule, eczema attacks the flexor surfaces of the joints, and psoriasis has a predilection for their extensor aspects. In cases of eczema of the hams, Hebra observes (*loc. cit.*, p. 115) that "the patients never walk upright, but always with the knees bent at a more or less acute angle; and in the same affection of the elbows we observe a similar position of the arm and forearm, especially when the secretion has dried into crusts, or the skin itself has become considerably infiltrated by the progress of the disease."

E. Manuum, Pedum, et Digitorum.—The hands and feet are frequently affected with eczema. Either may suffer alone, or they may be simultaneously attacked, the other parts of the body being quite free from the disease. Owing to the hands being so much exposed to the air and the action of external irritants, they suffer more frequently alone from the disease than the feet. The movements of the hands cause numerous fissures, of varying depth, to form on the flexor and extensor surfaces of the phalanges, the metacarpus, and the wrist. These fissures are often well marked in the soles of the feet and in the palms of the hands, especially in the latter when the disease assumes the form described as psoriasis palmaris. The disease may be limited to the backs of the hands, the fingers, the joints, tips of the fingers, nails, or to the palms, and the corresponding parts of the feet.

Every variety of eczema, from the vesicular to the squamous, and in the severest forms, may be met with in these localities. When vesicular eczema is confined to the inner surfaces of the finger it may be mistaken for scabies. On the palms (*E. palmare*) and soles (*E. plantare*) the vesicles often attain to the size of bullæ. This is owing to the thickness of the cuticle in these parts, which does not readily yield to the pressure of the exuded fluid, and thus favours the coalescing of the vesicles. The same anatomical condition, by preventing the early bursting of the vesicles, promotes the change of their contents from a serous to a purulent fluid.

In well-marked cases of *E. manuum* the mobility of the hand is much lessened, and it is often held in a semi-bent position.

E. Unguium.—This may follow on eczema of the fingers, or may exist alone. It is often troublesome to cure owing to the difficulty of reaching the matrix.

E. Infantile is regarded by some dermatologists as a distinct form of eczema. This was first described as a variety of eczema by Sir Erasmus Wilson. He has been followed by Tilbury Fox and other authors, but the generality of dermatologists regard it as merely the acute form of eczema occurring in a child of tender years. It may, however, be remarked that the protean character of eczema can hardly be better observed than in a case of its acute form affecting an infant. Here may be seen at one and the same time almost every form, variety, and phase of this multiple disease, and these even on the face and forehead of the little sufferer. It is not uncommon to observe on one part the deeply red,

inflamed surface characteristic of *E. rubrum*, and to see flowing over another part the acrid profuse discharge of *E. madidans*; here the clustered vesicles of *E. vesiculosum*, and there the pustules of *E. impetiginosum*; on one part may be seen the thin, flat, yellow, laminar scabs pertaining to the vesicular form of eczema, and on another the thick, rough, yellowish-green or dark-coloured incrustations characteristic of the pustular variety of the affection; here a moist surface may be observed excoriated and torn by the free use of the finger-nails by the distracted infant; and there either a dry, scaly patch, the seat of active desquamation, or covered with zigzag, lozenge-shaped, or net-like cracks distinctive of *E. fendillé*. The disease may affect all parts of the body, but especially the face, scalp, buttocks, ears, axilla, and the flexor surfaces of the joints. It is often a very severe and intractable disease, especially in weak, scrofulous children during dentition. At other times it is very amenable to treatment, and very severe cases readily yield to appropriate internal and external remedies.

According to Tilbury Fox, marasmus may supervene (*loc. cit.*, p. 147), and he also observes that if the disease is not properly treated it may become very chronic and the child a pitiable object. But this condition may follow the most judicious treatment in some cases, and death even ensue when the subject is weak, scrofulous, and suffering from dentition.

Etiology.—Eczema is the most common of all cutaneous affections. The statistics quoted by M. Chambard in his article "Eczema" in the *Enc. des Sciences Médicales*, 1875, as furnished by Wilson, Anderson, Devergie, give 2598 eczematous cases out of 9042 cases treated

for diseases of the skin. It affects individuals at every period of life, from infancy to old age. Children, especially those at the breast, and old people are more liable to it than youths and adults. It rarely occurs in aged people for the first time. When it is met with in them it is usually a recurrence or a relapse. It is common among all classes of society, and "attacks alike the ill-clad, badly fed, and badly housed child of the poor" and the well-cared-for child of the rich. But scrofulous, rickety, and weakly children are more liable to it than the robust. It attacks the healthy and strong as well as the feeble and those whose constitutions have been impaired by disease and the irregularities of life. Eczema affects all temperaments, but has a predilection for the lymphatic, and is often associated with the scrofulous and gouty diathesis.

It affects both sexes, but is perhaps more commonly met with in males than females. Hebra's statistics of 6000 cases give 4000 males and 2000 females, or a proportion of 2 to 1. This view is supported by Sir E. Wilson and others. On the other hand, Cazenave, Neligan, &c., think it occurs more often in females than in males, and this, from the greater delicacy of the skin in women than in men, one would naturally suppose to be the case. Admitting that females are more susceptible to the disease than males, the difference as to its frequency in the two sexes, as stated by Hebra and others, may be accounted for by the circumstance that men are more exposed to the action of the external and other exciting causes of the disease than women.

Eczema may appear alone or be associated with internal disease. It may, according to some authorities, be congenital, but it is not contagious. A susceptible

nurse is sometimes affected by eczema through contact with the acrid eczematous secretions of the child she attends to. But any irritant applied to such a susceptible skin would produce a like result. The disease may, in certain cases, be conveyed from one individual to another through the prolonged contact of two mucous surfaces. M. Biett has known it to follow coition. Rayer mentions the case of a husband who was affected with the disease by his wife, who suffered from *E. labiorum*. Eczema appears at any season of the year, but is more frequently observed in spring and autumn. This is an old and popular opinion, and is held by Hardy, Bazin,* and other observers. Hebra, on the other hand, does not attach much importance to the influence of the seasons in the production of eczema. He says (p. 136): "But when it is asserted that the beginning of spring and the end of autumn are marked by such eruptions [eczematous], I can only regard this as an empty supposition—one, indeed, that has been applied not only to other kinds of cutaneous diseases but to almost every malady with whose real cause we are unacquainted. If any weight is to be laid upon the time of the year, it is in this respect—that an eczema, which has lasted the whole winter unaffected by any mode of treatment, has disappeared with the approach of spring, so that from my own experience I should rather look upon a severe winter or a hot summer than on spring and autumn as the season most injurious to the skin." My own experience leads me to favour the popular notion, and that supported by French as well as other writers, that the seasons influence eczematous affections. The prevalence of dry east winds in the

* *Leçons théor. et clin. sur les Affections Cutanées.*

early spring in England may partly account for the frequency of the disease with us at that season. Eczema often runs an erratic course, relapsing or improving without any assignable cause, resisting frequently treatment apparently the most appropriate, and at other times improving or disappearing for a time without the aid of active remedial measures, or yielding to the simplest treatment. It may be acute or chronic, terminating in a few weeks or lasting for years. It may be confined to a small circumscribed patch the size of a coin, or involve a large portion or the whole of the cutaneous surface. The disease is usually symmetrical, but it may occur on one side of the body only when produced by a local irritant, and may be limited to the corresponding parts of the extremities, as the palms of the hands and soles of the feet. In such cases one hand or foot generally suffers more than the other. It may appear only on one hand or foot. Sometimes it is met with in the median line of the body, as on the middle of the nose or on the front of the abdomen.

Eczema being a superficial dermatitis, a knowledge of its etiology is essential as a basis for its successful treatment.

The immediate cause of eczema is hyperæmia. Any exciting influence which is capable of producing and maintaining for a sufficient length of time a hyperæmic condition of the derma may be regarded as a cause of eczema. As hyperæmia of the skin is produced by the operation of causes within the organism as well as by external agents acting locally upon it, the influences which produce eczema may be divided into two groups—first, external causes; second, internal and constitutional ones. The external causes

which are known to excite eczema act variously in producing the result. Some of them act as chemical and others as mechanical irritants. They may operate singly or in combination, or be associated with constitutional causes. The result is the same. Their continued action produces capillary congestion of the skin, disturbs its nutrition, and lowers its vitality, and eventually develops the disease. Among the chemical irritants that are provocative of eczema may be noticed croton oil, tincture of arnica, oil of turpentine, mezereum, mustard, hellebore, cantharides, and stimulating plasters. Acids and alkalies are also common exciting causes of the disease. Arsenic, salts of morphine, tartar emetic, sulphur, lime, and mercury, when locally applied to the skin, produce eczema. The affection excited by the direct application of these substances to the skin does not generally confine itself to the immediate neighbourhood of the part to which the irritant has been applied, but extends, and may become general. Or a local eczema may, by reflected irritation, develop the disease at points distant from the original seat until the affection becomes more or less general. A variety of eczema excited by the inunction of mercury was recognised by Bateman and other authors under the name of *E. mercuriale*. It is fortunately less frequently seen now than formerly, but it differs in no respect from the ordinary form of *E. rubrum* except in the severity of the constitutional symptoms. Hebra was of opinion that eczema was never produced by the internal exhibition of mercury, but this view is not in accord with the experience of other observers. There seems to be no doubt that mercury, when administered internally, does in some

cases give rise to eczema. Various dye-stuffs, as aniline, and substances such as sugar, metallic dust, and other irritants, excite the disease in those work-people who constantly handle them. When a predisposition to eczema exists, a very slight and hardly appreciable cause is sufficient to develop it.

High temperature, whether natural or artificial, is a powerful and common exciting cause of eczema. From this results the "prickly heat" of tropical countries. The action of the sun's rays and the fierce heat of furnaces are very familiar causes of the affection. High temperature, producing violent perspiration, causes eczema, forming a variety sometimes called miliaria rubra. Excessive perspiration combined with friction produces several local varieties of the disease—as in the armpits, the groin, genitals, between the scrotum and the thigh, and under the pendant breasts of fat women. This is *E. intertrigo*. The same variety is produced by urine combined with friction, and is often seen on the groin and about the genitals of young children. A low as well as a high temperature excites the disease. Exposure to cold may either excite an eczema or the kindred disease, chilblains. Sudden change of temperature—from a high to a low one, or *vice versâ*—is a frequent cause of the disease, as when a lady leaves a heated ball-room and drives home on a cold night. Dr. Burgess* relates a good example of the effects of exposure to sudden change of temperature in the case of a gentleman who accompanied him through Switzerland, and who was suddenly attacked by eczema of the hands in a severe form while descending from the Great St. Bernard to the village of Aosta,

* *Eruptions of the Face, Head, and Hands*, p. 217.

in Italy. I have had similar experience in the same countries, and have seen eczema attack the face as well as the hands, and develop into very severe forms, with acneiform pustules, proving very obstinate to treatment. Cold winds, especially dry east winds, which often prevail in spring, are frequent exciting causes of the disease, and always aggravate it. Brine-laden winds are also provocative of eczema. As an external cause of eczema, water at various temperatures, and by various modes of application, plays an important part in the production of the malady. It follows on the packing and other local modes of application adopted at hydropathic establishments, where its appearance is erroneously designated the "crisis;" also on the use of cold, hot, Russian, or Turkish baths. Salt water, sea bathing, and sea air act as exciting causes. Water-dressings applied to wounds, and poultices, especially linseed-meal ones, frequently excite the affection in susceptible subjects; and the effects of heat and moisture are frequently observed among washerwomen. In their case, the eczema of the hands is partly due to the irritation of the soap and alkaline powders used in the process of washing, and partly to the sudden changes of temperature to which the hands are exposed. Copious draughts of cold water are also a cause of the disease. The too frequent application of cold water to the hands and face when heated and perspiring acts as an exciting cause of eczema, especially if they are not carefully wiped dry after each application. The hardness of the water doubtless assists in the effect. Individuals with delicate skins, or who have a tendency to eczema, should always use soft or rain water for ablutions and baths. The soft-

ness and purity of the water used in the treatment of eczema should also be carefully looked to. Various discharges from the nose, uterus, vagina, anus, and bladder act as exciting causes of eczema.

The effects of mechanical irritation is well observed among workmen whose hands are pressed by the tools they use, and especially if the pressure be intermittent. The pressure of a tight or badly fitting hat is sufficient to excite eczema, particularly in hot weather. As Hebra truly says: "We may observe all forms of eczema, from the squamous to the impetiginous, as the result of wearing trusses, garters, belts, ornaments such as earrings, bracelets, and any article of dress worn too tight—stays, waistbands, caps, hats, braces, &c."

Continued pressure on the ischium, as in the act of sitting, readily excites eczema in the predisposed. The various species of parasites which affect the skin, especially the pediculi and the *acarus scabiei*, with the scratching which their presence induces on the part of the sufferers, are among the chief external causes of eczema. Want of cleanliness, which interferes with the function of the skin, is also a predisposing cause of the affection.

Referring to the constitutional causes of eczema, the chief amongst them is disordered nervous function. Disordered nervous function disturbs the cutaneous circulation and interferes with the nutrition of the skin, and may thus act as a direct cause, or indirectly by lowering the vitality of the cutaneous integument, and thereby increasing its susceptibility to the operation of external irritants which determine an eczema.

This condition of the nervous system may have its origin in mal-assimilation, which again may be dependent on gastric derangement, diseases of the liver and kidneys, fevers, pregnancy, prolonged lactation, uterine disorders, painful dentition, &c. In alluding to eczema in relation to pregnancy, Hebra remarks that "it often happens that women are attacked by eczema, generally on the hands, at a definite period of their pregnancy, commonly in one of the early months, and continue to suffer from it, in spite of all remedies, until after their confinement."

Many authors as well as Hebra have observed cases of women who, during several successive pregnancies, were attacked by eczema of the hands always at the same period, so that in the later ones they could be more certain of having conceived, from the appearance of this disease, than from the suppression of the menses or the movements of the child. But it often affects the face as well as the hands in pregnancy, and exacerbations of an existing eczema are observed to take place at the period of gestation.

Disturbed nervous function may also be the result of anxiety, worry, mental strain, and shock. These causes of eczema have been particularly alluded to by Sir E. Wilson and other writers. The late Dr. Murchison, in his *Croonian Lectures on the Functional Derangements of the Liver*, published in 1874 (p. 140), says "that in many cases these cutaneous diseases [eczema, lepra, &c.] appear to arise from the functional derangement of the liver, which precedes or attends gout, although neither the patient nor any member of his family has ever suffered from the disease." The connexion of eczema and other cuta-

neous affections with hepatic derangements were pointed out by the present writer sixteen years previously,* and the same remedy (muriate of ammonia) recommended for their cure which Murchison in his lectures so highly extols.

Eczema is often associated with gout dependent on the same cause—disordered digestion, mal-assimilation, and defective excretion—or on the same diathesis. An eczematous eruption may long precede an attack of gout, and be the only manifestation of the existence of a gouty diathesis. The connexion between gout and eczema has also been recognised by Garrod, MM. Trousseau, Bazin, and others. They have observed the two affections to accompany or alternate with one another.

Among the causes of eczema may also be reckoned acids, acid fruits, shell fish, rancid oils or grease, game in high condition, sausages, herrings, and spirituous liquors, especially brandy. Hebra and others express doubts that such articles of diet excite eczema, because they themselves have known such substances to have been freely indulged in with perfect impunity from the affection. It is quite true that such articles of food may be freely partaken of by robust individuals with vigorous digestive organs without being followed by any sign of eczema whatever; but it by no means follows that the same result would arise if the like substances were indulged in by persons with weak digestive powers, and whose skin was susceptible to the disease or which had been debilitated through disturbed nervous function or other constitutional cause. In such cases the resulting

* *Lancet*, vol. ii. 1858, p. 601.

products of imperfect digestion and mal-assimilation circulating in the blood would in all probability excite the disease. The free use of cider occasions eczema. It is related by A. Todd Thomson* that a local variety of eczema prevails in Herefordshire amongst the farm servants and labourers who drink freely of cider. Eczema is occasionally a sequela of the eruptive fevers, as measles and scarlatina. It sometimes resembles the latter in its desquamative stage. That eczema depends more upon external than constitutional causes for its production is generally acknowledged; at the same time it must be admitted that a very large proportion of these constitutional or internal causes are quite unknown, and that a great many cases of eczema occur in individuals apparently in the enjoyment of good health, without the least appreciable local or constitutional cause being discoverable. Such cases would point to the existence of some peculiar idiosyncrasy or diathesis—to some innate susceptibility of the skin itself, or some inherent impressionable condition of the nervous system which renders its relation with cell-life in the cutaneous tissues liable to be easily disturbed, and thus rendering the skin susceptible to the various causes, external or internal, which excite an eczema. The latter is the view I am inclined to hold, and therefore do not consider a diathetic or other theory necessary to explain the causation of the disease. The well-known researches of Neumann, Biesiadecki, Heidenhain, Eckhard, Charcot, Weir Mitchell, and others on the relation between the nervous system and cell-proliferation and tissue change give support

* *Treatise on Diseases of the Skin*, p. 259.

to the view that eczema depends for its manifestation on some peculiar condition of the nervous system. The condition of the nervous system may, perhaps, like gout, be inherited or acquired.

How dyspepsia, lithæmia, and other disorders produce the eczema is, as Dr. Crocker observes,* open to difference of opinion. He thinks they are all instances of irritation of the alimentary canal, which reflexly irritates the nerve centres, and produces dilatation of the capillaries of the region affected. But whatever theory of their mode of action is adopted, I am of opinion that over and above their action there must be an inherent susceptibility of the nervous system for the production of the disease. Until the influence of the nervous system, central or peripheral, over the tissues and nutrition of the skin, and the exact nature of the inflammatory process itself, are determined, the mode of action of internal causes of eczema will remain a matter of theory only. A predisposition to eczema is often called an herpetic diathesis or dyscrasia. The latter term has been objected to as having no foundation in fact. In the strict meaning of the term, it cannot be said to be applicable to eczema. French writers have generally laid great stress on diathesis as a cause of the disease, It is sometimes called by them the herpetic, and sometimes the arthritic or dartsous diathesis. Few English observers hold the diathetic theory, but Jonathan Hutchinson, a very high authority, supports the French view.

If this term, "diathesis" is taken in its ordinary sense, as meaning a peculiar constitution predisposing

* *Diseases of the Skin*, p. 107.

to the development of eczema, no objection need be made to it. As Niemeyer observes: "It leaves the question undecided whether the predisposition to eczema and to other cutaneous diseases is dependent on perversion of nutrition or some other cause." That such predisposition or susceptibility to eczema exists in some individuals and not in others hardly admits of doubt. The theory of a constitutional predisposition to eczema being inherited by some individuals only, serves to explain why certain persons may be exposed to the same external influences, and suffer from similar internal or constitutional diseases which have produced eczema in others, and yet be perfectly free from the disease during the whole course of their lives. It explains why thousands of bricklayers, whose hands are constantly plastered with lime, of bakers, sugar refiners, and others, who are regularly and constantly exposed to the external exciting causes of eczema, are yet never affected with it. It also explains the immunity from an attack of eczema enjoyed by individuals who have been long sufferers from gastric and other derangements of the system; and, more than all, it accounts for the numberless cases which appear in individuals apparently in all other respects in good health, and where no known cause, external or internal, can be found to account for the appearance of the disease. These—and they are perhaps the majority—are the idiopathic examples of the disease. Dr. Pye-Smith regards eczema produced by known agents as traumatic dermatitis, and not cases of the true disease—eczema. Tilbury Fox doubts the artificial affection produced by croton oil, &c., being a true eczema.

Whether eczema is a blood disease—a dyscrasia—or

is dependent on disturbed nervous function or state of the nervous system, or on some peculiar inherent condition of the skin itself, is still an open question, many distinguished dermatologists and clinical physicians holding different views on the subject. But considering the influence which the nervous system has in herpes; the appearance of eczematous eruptions over the area of a cutaneous nerve, irritated or injured; the extension of eczema to a distance from the part first affected, and not by continuity or contiguity; the definite forms given to the eruption, and its usual symmetrical character, the weight of evidence seems to favour the idea that eczema is dependent on the nervous rather than the vascular system for its origin and development; on defective innervation rather than on morbid conditions of the blood.

This view of the dependence of eczema on the nervous system is further supported by the fact that the disease is generally produced by the operation of external agencies alone and in healthy individuals; and that biliary, uric, and lactic acids, urea, and other effete materials may contaminate the blood-current and circulate freely in the cutaneous capillaries without the least sign or symptom of eczema ever showing itself.

Many physicians and dermatologists hold that eczema is not a mere local affection, but is the outward expression of a constitutional disease. Hardy, Bazin, and others would regard it as the expression of the dartrous diathesis. It may, in a limited sense, be considered as the manifestation of an inward disease, as when it occurs in gout. Still, it should be regarded as a neurosis, or

tropho-neurosis, rather than as a blood disease. It is often associated with an impure and loaded state of the blood, the result of defective action of the excretory organs, of which the skin itself may be the most inert. At the same time, it is easy to understand how morbid products circulating throughout the blood-current act as exciting causes of eczema in a susceptible subject. Circulating in the capillaries of the skin, they act as irritants, and either develop an eczema or aggravate an existing one.

Eczema being an inflammatory affection of the external covering of the body, it is not unfrequently found to be associated with a similar condition of the mucous membrane. As the mucous membrane is the interior covering of the body, and is continuous with its external cutaneous envelope, it is in close pathological relation with the latter. So we find eczema accompanying and alternating with inflammatory affections of the nares and larynx, with asthma and bronchitis. This has led to the opinion that these affections of the mucous membrane are similar to the external eczematous eruption—really internal eczemas. Hardy, alluding to some of the internal diseases which accompany or follow eczema, says sometimes these different complications are developed during the course of a chronic eczematous eruption, and appear to be only an extension of it. Sometimes they alternate with the cutaneous affection, and seem to constitute a kind of re-percussion.* Dr. Greenhow, in his excellent work on "Chronic Bronchitis,"† has also recorded several interesting cases of

* Jaccoud's *Dict. de Méd. et Chir.*, p. 385.

† *On Chronic Bronchitis, especially as connected with Gout.*

bronchitis and asthma, showing the relation between these diseases and eczema. It (eczema) alternates with rheumatism and rheumatic gout, with dyspepsia, external and internal neuralgias, cystitis, leucorrhœa, and, according to Trousseau, with diarrhœa. This latter affection has been occasionally observed by Hardy, who, however, disputes the correctness of the statement made by Biett, that old eczemas are frequently accompanied by inflammatory internal phenomena. He considers that Biett, being of the school of Broussais, found gastritis in everything.

However, modern observers will perhaps agree with the great French dermatologist, Biett, rather than with the equally celebrated Hardy, that old chronic eczemas may be accompanied by, or alternate with, a certain degree of inflammatory action in the stomach and intestines. In a case of extensive and long-standing eczema, till lately under my own care, such phenomena frequently occurred, and without any assignable cause, and sometimes were so severe as to threaten a fatal result. Many dermatologists, however, consider, when an internal affection arises in the course of an eczema, or appears on the cessation or disappears on the invasion of an eczematous eruption, that it is merely a coincidence—that the whole phenomena are due to the operation of some specific cause, as cold.

Eczema is sometimes complicated with acneiform pustules and boils, and in debilitated constitutions with enlarged glands in the axilla, neck, and other parts of the body. Its connexion with hæmorrhoids and varicose veins of the leg is very frequently observed—in the latter, when of old standing, leading to increased

pigmentation, to hardening and thickening of the skin, and occasionally to a condition of it approaching to that of elephantiasis.

The relationship between eczema and the gouty diathesis has already been alluded to. The affection is also intimately associated with the lymphatic diathesis. Its leading tendency is to favour abundant serous exudation and the development of the vesicular variety of eczema.

Besides the gouty and lymphatic diathesis with which eczema is frequently found associated, there is also the strumous or scrofulous diathesis. This diathesis exercises a modifying or controlling influence over the eczematous inflammation, and its tendency is generally to the production of the pustular or impetiginous form of the disease. Tilbury Fox considers that "the leading peculiarity of this variety is the tendency there is to the formation of pus, and that from the outset of the disease; and this not from the intensity of the inflammatory action, for the pus formation is not in direct ratio to the severity of the local disease." On the other hand, Hebra does not admit that this diathesis modifies eczema, far less produces it, and so must deny the existence of a scrofulous form of eczema, though admitting its occurrence in scrofulous patients.

No one denies the occurrence of eczema in scrofulous subjects. But the question is, Does the strumous diathesis exert any modifying influence whatever in eczema, or determine in any way the variety of eczema which will appear on the skin of a strumous subject?

The experience of most observers goes to show that it does, and that the pustular variety is associated with the strumous diathesis, although it may be admitted that, as

Hebra contends, such an eczema will be similar to what occurs in individuals entirely free from scrofula. But in these cases it may be assumed that the intensity of the inflammation, low vitality, or some unknown constitutional state of the patients has favoured the development of pustular instead of a vesicular eczema.

The strumous diathesis also renders strumous children more liable to eczema than those who are entirely free from the constitutional taint of scrofula. Although, as Tilbury Fox remarks, the scrofulous diathesis is less marked in middle-aged and old people than it is in children, still it exists and modifies eczema in them as well as in the young, and its existence should be taken into account in the treatment of eczema affecting such patients. In addition to the pyogenic tendency pertaining to the strumous diathesis, it also has a tendency to the formation of uric acid in the system. Should this accumulate in the blood on account of defective action of the excretory organs or of the skin itself, its circulation in the cutaneous capillaries may excite an eczema or aggravate and prolong an existing one. The state of the liver and kidneys should therefore be carefully attended to in all cases of strumous eczema.

The influence which syphilis has in modifying eczema is not well understood. Neither Diday nor Lancéreaux allude to syphilitic eczema, though they describe syphilitic herpes—ecthyma, roseola, &c. An eczematous-like eruption may appear in the course of syphilis. Tilbury Fox states that he had never seen a case of syphilitic eczema, but admits that *eczema* may occur in a syphilitic subject. He does not, however, describe its form or variety. It is probable that such an eczema assumes the impetiginous form.

Different opinions are held by dermatologists as to the hereditary nature of eczema. Many regard it as hereditary, whilst Hebra and others are opposed to this view. Crocker thinks heredity has slight claims to be considered as a cause of the disease. The following are Tilbury Fox's views on the point:—"But, on the whole, I do not think that, as far as clinical observation goes at present, one can refuse, especially in cases where two or three or more members of a family are affected by eczema, and there is a history of the same disease in the parents, to allow that father or mother may have really handed down the affection to son or daughter." These cases would be considered by Hebra to prove that eczema in parents does not exclude its occurrence in their children. Hereditary disease is not invariably transmitted from parent to offspring. It may miss a generation and appear in the following one. It is well known that peculiarities of local form, as the nose or hand, of habits of thought and tricks of manner, may be handed down from parent to child, or even be transmitted to distant descendants without appearing in the intermediate ones. And this may partly explain the absence of a family history in some cases of eczema. As an additional proof of the heredity of eczema I have frequently observed it show itself in a manner, so far as I know, that has not been mentioned by medical authors—viz., to appear in the same variety and local form of the disease in members of the same family, as two brothers suffering from eczema of the upper lip, beard, or other part of the face, and even at the same time. I have also frequently observed a mother and daughter suffering from the same variety of eczema, and at a different or at the same time, the disease affecting the

scalp in both, or being behind the ears. It was thought by Tilbury Fox that eczematous subjects as a rule are thin, pale, and ill-nourished. This is the general condition of hospital and dispensary patients suffering from eczema, but amongst eczematous patients treated in private practice a great many will be found whose bodies are fairly well nourished, and in the case of ladies there may be a tendency to *embonpoint*. This is sometimes seen in those of lymphatic temperament or of gouty habit. The above-named author holds that the skin of eczematous subjects is always irritable and dry. As a general rule this is so, so far as dryness is concerned, but there are many exceptions to it. Crocker observes that dryness favours the occurrence of eczema, and is well exemplified in the case of ichthyotic patients, but he "would hesitate to say that the skin excretions are deficient in the majority of eczematous patients."

Prognosis.—Eczema is often an exceedingly troublesome, painful, and tedious, rather than a grave disease. It rarely imperils life unless when it involves an extensive tract of the cutaneous surface in young, weakly subjects or in old, debilitated individuals, or when it is associated with some internal disease. The natural tendency of eczema is to terminate in cure. It may in the acute form terminate in a few weeks, but it generally runs a chronic course, and may continue many weeks, months, or years. Eczema has a great tendency to relapse, although this is not so marked as in some other skin affections, as psoriasis. The relapses may be frequent, or occur at long intervals. Eczema may attack an individual only once, but where a predisposition to it exists it frequently returns, and may be excited by the slightest irritation, or arise or relapse without any

appreciable cause being discovered. In this way it may distress a patient for many years or during the greater part of his life, now disappearing and again returning with redoubled force, being influenced by the seasons, by variations of temperature, by bodily conditions and mental states, and, at length, becoming associated with internal disease, "contributes secondarily to the loss of life."

Frequent returns of eczema are observed in persons of gouty or rheumatic gouty habits, or scrofulous constitution and lymphatic temperament, or who suffer from dyspepsia, or liver, kidney, and other internal affections.

There is a difference between the various forms of eczema, both in regard to their tendency to return and their resistance to treatment. Eczema of the scalp in young children is often very rebellious to treatment, but, when cured, it does not show the same tendency to return as *E. impetiginosum* occurring in adults, which may reappear many times, and on the slightest irritation. Locality influences the course of eczema. When seated on the lips, the eyelids, or round the anus, it is often very tedious to cure. It is especially obstinate to treatment when it occurs on the fingers.

In these cases, the natural movements in the affected parts contribute to the difficulty of cure. The itching, sometimes intolerable, which attends eczema occasionally gives rise to disagreeable symptoms, as disturbed sleep, loss of appetite, nervous exhaustion, or cerebral disturbance, and in young susceptible subjects convulsions may result. In forming a prognosis of eczema, its locality, variety, cause, and history must be taken into account, as well as the constitution, general health, habits, temperament, and age of the individual.

When the cause is an external one, and its action

can be avoided and the constitution of the patient is good, a favourable opinion may be given. The disease is easily cured in such cases. On the contrary, when eczema occurs in persons of broken-down constitution or who are suffering from some internal disease, or when it arises idiopathically, as it were, even in otherwise healthy individuals, the prognosis should be more guarded.

It is a popular as well as a professional belief, that the rapid driving in of an eczematous eruption or the cure of an old-standing eczema is attended with danger. Some leading dermatologists assert that there is no foundation in fact for such belief. Hebra says "that if some physicians, like Niemeyer, have not the courage to treat an eczema locally when an obstinate ophthalmia, a chronic dyspepsia, or any other important disorder has disappeared since its occurrence, because such eczemas 'are apparently vicarious to the former disease,'"* he would by no means encourage them to do so, and asserts that every attack of eczema may, and should, be cured as quickly and as well as possible, and that not the slightest injury will ever result. He does not, however, state whether any of the cases treated by himself were well-recognised vicarious ones—whether they had frequently alternated with bronchitis or any other internal disease. Niemeyer's unwillingness to undertake the cure of chronic eczema was confined to cases where this alternation seemed established and to cases of moist eczema faciei et capitis in young children. Hebra's statement, that the healing of an old-established eczema never leads to other maladies, will not be indorsed by all dermatologists. With regard to the rapid cure or driving in of eczema he is quite sceptical that it ever takes place. He says: "I am unfortunately obliged

* *Loc. cit.*, p. 123.

to confess my ignorance of any remedy which can produce such a sudden and rapid cure; that it has been my most ardent wish, the stimulus of all my studies, to cure chronic cutaneous diseases as quickly as possible, and yet, to my sincere sorrow, I have never succeeded, in spite of all possible means, internal and external, in curing such a disease suddenly, or even quickly."

Hebra and some other dermatologists doubt the fact of a metastasis or alternation of eczema with bronchial and other diseases, and consider that the appearance of such disorders with the cessation of eczema is a mere coincidence—the result of fever or some other cause.

When a case of chronic eczema presents itself in an individual of advanced age or of weak constitution and impaired health, and is known to be substitutive for bronchitis, severe dyspepsia, or other internal disease, palliative rather than energetic local treatment should be adopted, as the arrest of the eczema might lead to the development of the substitutive internal malady, and serious results follow.

And in the case of moist eczema of the scalp occurring during dentition, or in young children of scrofulous diathesis, of weakly constitution, and nervous temperament, or who are predisposed to bronchial or cerebral disease, active local treatment, with the view of rapidly drying up the secretion, should be deprecated. So many cases, where fatal or serious results have followed the injudicious applications to the head and face of infants for the speedy removal of the often disfiguring eczema, have come under my own observation as to satisfy me of the danger of quickly suppressing an eczematous eruption during the period of dentition in such children. The cure is sometimes under-

taken by the medical attendant at the pressing impertunity of the mother, who is annoyed at or over-sensitive as to the appearance which the disease presents. Moist eczema of the scalp in such circumstances should no more be quickly suppressed than the often attendant diarrhœa. This, when moderate, renders dentition less painful and less dangerous. The rational plan of treatment for both moist eczema capitis and the diarrhœa in such children during dentition is to lessen, not suppress, the eczematous or intestinal discharge, and to allay irritation.

With these exceptions, I agree with the generality of modern dermatologists that no unpleasant or serious results follow the cure, whether slow or rapid, of any form of eczema.

Many French and other physicians recommend the application of issues, blisters, and other forms of counter-irritation to some part of the body after the cure of an old-standing eczema—a practice but rarely followed now, in this country at least, unless when the eczema has alternated with some internal disease.

In such cases a moderate *derivative* plan may be advantageously adopted.

Anatomical Seat of Eczema.—Different opinions are held by dermatologists as to the seat of eczema. Biett, having regard to the redness which characterises the affection, placed it in the superficial layer of the derma, the vascular membrane of Eichorn, whilst Cazenave modifies the opinion of his master, Biett, and considers the sudoriparous ducts to be the seat of the affection.

Hardy opposes the opinion of Cazenave, on the ground that the serous exudation of eczema, which

stains and stiffens the linen, has not any resemblance to sweat, and that squamous eczema could not be explained on the hypothesis of the disease being seated in the sudoriparous ducts or glands. He thinks its seat is the deep mucous layer of the epidermis (*corps muqueuse*) charged with the secretion of the epidermis.* M. Bazin controverts the views of Hardy, and says that his hypothesis is based on an anatomical error—that the deep mucous layer of the epidermis (*corps muqueuse*) has no such function as the secretion of the superficial epidermic layer, as the epidermic cells are formed by exhalation from the papillary capillaries. The serous eczematous secretion contains pus globules, plastic lymph, and other ordinary products of inflammatory action. He agrees with Cazenave that the primitive seat of eczema is the sudoriparous ducts, but adds, that in a short time the secreted liquid spreads upon the skin and irritates all “le réseau papillaire,” which soon participates in the inflammation. M. Baudôt indorses Bazin’s views.

The following explanation of the anatomy of eczema is from the work of Crocker (p. 109):—“In papular eczema the inflammation is in circumscribed portions of the skin, and Robinson (of New York) says it is primarily confined to the follicles, especially the hair follicles, while in other forms it is more or less diffuse. In acute eczema the changes are chiefly and primarily in the papillary layer, and afterwards in the

* Hardy in his latest work (*loc. cit.*) observes “that many of the elements of the skin are simultaneously affected in eczema, and that the sudoriparous glands, the papillæ, the ‘réseau vasculaire superficiel,’ and the part of the skin charged with the secretion of the epidermis, are affected by the same inflammatory process.”

epidermis. The papillæ are swollen in all directions, the vesicles dilated, the connective-tissue corpuscles increased in size and number, and the fibrous bundles swollen by imbibition and compressed, these changes giving strong evidence of serous exudation.

“ Biesiadecki lays stress chiefly on connective-tissue cell proliferation as the source of the cell infiltration of the papillary layer and rete, but they are now admitted to be chiefly emigrant cells. The rete cells themselves are elongated and almost thread-like where the vesicles are large, and the vesicles are formed in the upper part of the rete or just beneath the horny layer by the serum from the vessels making its way between the cells and raising up the horny layer. Besides the serum, they contain loose rete cells, and some of these swell from imbibition, rupture, and impart the gummy character to the vesicular contents (Robinson).

“ In chronic *eczema rubrum* ” Robinson says that “ the rete in the lowest layers is so altered that the lower border is badly defined from the corium. The rete cells are separated and mixed with round cells from the vessels and with proliferated rete cells, while the upper border is very irregular from the loss of the horny layer, of which, at most, there are only fragments, consisting of nucleated cells.

“ In chronic *E. squamosum* there is proliferation and desquamation of the horny layer, while the rete is unchanged, the corium and the papillæ are infiltrated with round cells, the vessels are dilated, and, in short, there are all the usual changes of a less active inflammation.” The works of Rindfleisch, Neumann, and Biesiadecki may be consulted on this subject.

Sir Erasmus Wilson gives an interesting sketch of

the superficial cutaneous capillary plexuses in his R.C.S. lectures on cutaneous disease (1875), which explains the diversity of appearance which eczema in its early stages often presents. He observes: "Whatever may be its extent, our attention is instantly directed to the fact of a diversity of appearance in the eruption, which is due to structure; we detect the pores and the interporous surface, or, as the pores are the mouths of follicles, we may say the follicles and the interfollicular surface. This is an important distinction. If you examine a piece of infected skin under the microscope you will see in the interfollicular space the capillary plexus is spread out superficially. Around the follicles the capillary plexus is placed at right angles to the interfollicular plexus; hence congestion of these plexuses must necessarily present some diversity of character. They may be distended separately or together, in the one instance giving rise to a uniform redness, in the other to a punctated redness. Hence in the case of hyperæmia of the superficial plexus the increase of bulk or swelling will be uniform, whereas in a similar condition of the follicular plexus there will be an uplifting of the lip of the follicle, forming a conical prominence, or, in dermatological language, a papule or pimple." Vesicles may appear on the lip or round the orifice of the follicle instead of a papule, but there is no reason why they should not also occupy the interfollicular spaces, as a vesicle is merely the uplifted epidermis, depending for its existence and size on the strength of the epidermic layers on the one hand and the quantity of exudation on the other.

Cazenave considered the minute points of ulceration

which a raw eczematous surface often presents to be the microscopical openings of the follicles altered by the disease. They are regarded by others as occupying the bases of former vesicles.

Diagnosis.—The diagnosis of eczema is generally easy, but it may be very difficult in the absence of discharge and of one or other of the primary pathological lesions. The early vesicular stage of eczema is but rarely seen by the physician, and this partly accounts for the difference of opinion held by dermatologists as to the relative frequency of this form of the disease. When the peculiar discharge which stiffens linen is present, or where there is a distinct history of its having been present in a chronic case, the diagnosis is at once made.

The discharge is not only diagnostic, but pathognomonic of the disease. But it may never have been present, as in the dry, scaly, and some papular forms of eczema. Its absence, however, is no proof that the disease is not an eczema, and in a case of old standing the patient may have forgotten that the surface was once moist and exuding until, as Tilbury Fox remarks, he has been closely questioned on the point by the physician, when he recollects that at the beginning it did discharge. It is important in old chronic cases to ask the question if the diseased surface has ever discharged, oozed, or “been moist.”

The diseases for which it may be mistaken are herpes, erythema, erysipelas, psoriasis, scabies, sycosis, lupus erythematosus, seborrhœa, pemphigus foliaceus, lichen ruber, the pustular and papular syphilides, and scarlatina.

Herpes.—From herpes it is distinguished at its commencement by the smallness of the vesicles and

their irregular grouping in ill-defined patches; by its irregular course, and the presence of burning pain and itching.

It is only in the early or papular stage of eczema that it can be mistaken for erythema papulatum. In this the eruption commonly makes its appearance first on the backs of the hands or on the feet, and consists of irregular, rounded, isolated spots, varying in size from a pin's head to a pea, flattened, with well-defined margins, and of a deep-red or purplish colour; whereas the eruption of eczema may first show itself on any part of the body, and the hands and feet may remain free from attack throughout the whole duration of the disease. The papules are not isolated, but are grouped together in irregular red patches, beyond whose ill-defined margins numerous scattered red points or papules are to be seen. The smooth, uniform surface and well-defined margin of the raised red patch of erythema diffusa sufficiently distinguish it from eczema.

Erysipelas.—Eczema may be mistaken for erysipelas in the early stage of its acute form, especially when the face and head are affected, and there is great swelling and tension of the parts affected, consequent on a profuse exudation into the subcutaneous cellular tissue instead of on the free surface of the skin.

The same mistake may be made when acute eczema attacks the lower extremities, especially in gouty or gouty-rheumatic individuals. Here there may be pronounced redness, great swelling and tension, without any vesicular eruption or exudation on the free surface of the skin. The chief points of

distinction between the two diseases are the following:—In erysipelas the eruption is preceded by well-marked rigors, and is accompanied by severe feverish symptoms, as high temperature and disturbed cerebral function. The pain is greater, and the swelling and tension are generally more marked than in eczema, and the erysipelatous patch presents a smooth, shining, red surface with a well-defined margin, beyond which numerous scattered red points or papules are not observed, as in eczema. Vesicles and bullæ may be present in both diseases—generally bullæ or large blebs are more common in severe cases of erysipelas than eczema—and vesicles in the latter. Eczema may accompany or follow erysipelas.

Psoriasis.—*E. squamosum* is the only variety of eczema which can be confounded with psoriasis. The following are the chief points of difference between them:

1. Psoriasis generally attacks the elbow-joint and the anterior aspect of the leg just below the patella—parts very rarely affected with eczema.

2. Psoriasis rarely appears at the line of junction of the mucous membranes with the skin which is a favourite seat of eczema.

3. The thickening of the scaly patches in psoriasis takes place at their edges; in eczema at the centre of the patches, their edges running into or being flush with the healthy skin.

4. There is a greater abundance of scales in psoriasis than in eczema, and they have not generally the same silvery whiteness in the latter as in the former affection.

5. The patches of eczema are redder, generally more slightly infiltrated, and the scales more minute than in psoriasis.

6. There is generally a greater degree of itchiness attending eczema than psoriasis.

7. A moist stage may have preceded scaly eczema, but never psoriasis.

Scabies.—Eczema is not unfrequently associated with scabies, excited by the irritation of the means used to cure it, as sulphur; or by the acarus or itch animal; or by the scratchings of the patient to allay the itching set up by the movements of the little creature within its burrow; and it may remain long after the cure of scabies has been effected.

No particular harm results if an eczema is mistaken for erythema, psoriasis, or any other non-contagious affection; but it is a serious matter when a non-contagious disease like eczema is mistaken for a contagious one, such as scabies, and especially if this should happen in the case of a young pupil belonging to a large private boarding or public school. In such a case the reverse mistake—that of confounding scabies with eczema—would be attended with the most unpleasant results. The chief points of difference between the two diseases are the following:

1. Locality: the most common seat of scabies being on the front of the trunk, on the flexor surface of the wrist, on the hands and feet, and especially between the fingers and toes, which are not the most favourite localities of eczema.

2. The papulæ and vesicles of scabies are scattered and isolated, not irregularly grouped together, or touching each other as in eczema.

3. The vesicles, bullæ, and pustules are generally larger in scabies than in eczema.

4. Pustules are common to both affections, but

a profuse number of pustules on the hands or feet of young subjects, or on the buttocks of adults who follow a sedentary employment, point very distinctly to scabies.

5. The chief distinguishing points of difference between the two diseases are the presence of the burrows and the discovery of the acarus.

Sycosis.—Pustular eczema is the only variety of the disease which can be confounded with sycosis; and when it is confined to the hairy parts of the face in adult males, it may be very easily mistaken for this affection.

Pustular eczema is attended with greater inflammation, a more profuse discharge, and a more abundant incrustation, than sycosis, while the itchiness generally so troublesome in the former affection is either absent or but slightly present in the latter. On the removal of the crusts in sycosis, no *red, moist, excoriated surfaces are observed*, as is the case in eczema, and which are so characteristic of the latter affection.

Lupus erythematosus may be confounded with dry, scaly eczema. Erythematous lupus rarely makes its appearance before puberty; is most frequently observed between the age of twenty and forty years, and more frequently in women than men.

It may be distinguished from dry, scaly eczema of the face by its history, chronicity, slight itchiness, and its characteristic white scars. According to Cazenave, who was one of the earliest, if not the first, to describe lupus erythematosus, "The incrustations of ulcerated lupus might be mistaken for the scabs of impetigo (*E. impetiginosum*); but the latter are yellow-coloured, prominent, rough, and seldom ad-

herent; those of lupus are brown, thick, and very tenacious; besides, the cicatrices accompanying lupus, and the ulcers which appear when the incrustations are removed, are decisive characters of that disease."

Seborrhœa.—Eczema may be mistaken for seborrhœa (steatorrhœa). Steatorrhœa sicca is generally confined to the hairy parts of the scalp; is more frequently seen in women than men; and is distinguished from dry, scaly eczema of the scalp (*E. capitis*) by the absence or slight degree of itching, by its non-extension to the parts bordering on the hair, and the freedom of the glands of the neck from disease, which generally accompany *E. capitis*. When seborrhœa assumes the form of pityriasis capitis, it is distinguished from *E. capitis* by the rapid falling off of the hair or loss by combing, and the great profusion of fine white, glistening scales.

Pemphigus Foliaceus.—Eczema could only be mistaken for pemphigus foliaceus when it occurs as a universal *E. rubrum*. According to Dr. Crocker, in the former disease the crusts are mainly epithelial and of large size, while in eczema they are chiefly composed of dried exudation and not often large. The presence of the large flaccid bullæ of *P. foliaceus* solves the doubt.

Lichen Ruber.—This, unlike eczema, is uncommon before middle age. The papules of lichen ruber acuminatus, when discrete, may be mistaken for the eczematous papules; but the former never change into vesicles or pustules like the latter, and itching is not so troublesome as in eczema.

Syphilides.—The papular syphilides resemble papular eczema. Their occurrence as secondary symptoms along with other syphilitic lesions, and the

history of infection, will generally suffice to establish a diagnosis, which will be aided by the characteristic grouping of the brownish-red papules, in threes or fours, and the slight degree of itching present.

Scarlatina resembles general eczema in the desquamative stage. The characteristic sore throat and history will settle the diagnosis.

Treatment.—There is considerable difference of opinion among dermatologists and clinical physicians as to the best mode of treating eczema. Some believe in the superiority of constitutional to local treatment, and trust in a great measure to internal medication to effect a cure. While others, influenced by Hebra's teaching, subordinate internal to direct treatment, and rely chiefly on the judicious employment of external remedies to accomplish the same object. That Hebra greatly underrated the importance of constitutional, if he did not overrate the value of direct, treatment in eczema, will now be generally admitted by most dermatologists. His singular disapproval of cod-liver oil in eczema shows to what extent he carried his opposition to internal treatment in that affection, and also shows how even a man of genius may be led away by his theory or practice so as to overlook entirely a fundamental axiom in therapeutics—viz., to treat the system as well as the disease; the clear appreciation of which fact, and acting on it, is the secret of success in the cure of eczema as well as of other diseases. The views of Wilson are more in accord with the general practice now adopted by English and American physicians in the treatment of eczema. He observes "that the treatment of eczema must be constitutional as well

as local; in a very few instances of chronic eczema, when all participation with the original cause has ceased, local treatment alone may be sufficient, but such cases are exceptional." When no fresh symmetrical eruptions make their appearance, the internal conditions which determined and kept up the eczema may be considered to have been removed, and that the disease is then purely a local one; but it does not follow that this is to be treated by direct remedies alone. These may suffice, but the cure may be hastened by special internal treatment, as by arsenic.

It is by the skilful combination of appropriate constitutional and local remedies and their judicious administration, that the most satisfactory results will be obtained. Eczema is essentially an inflammatory affection, and the remedial measures must be selected with the view of subduing the local inflammation in the primary and chronic stage, as well as remedying as far as possible the existing abnormal conditions of the system which have caused, aggravated, or prolonged the affection.

Local remedies modify the condition and nutrition of the diseased parts, whilst the internal agents employed influence the nutritive function of the organism, and by their combined local and constitutional effects a cure is accomplished. But external applications—as tar, bichloride of mercury, &c.—by being absorbed into the blood, act also constitutionally, and thus the affected part is doubly acted on, directly and indirectly, through the system. Functional derangements of the digestive organs, of the liver, kidneys, and uterus, are the most frequent abnormal conditions of the system which are found associated

with eczema. These derangements must be rectified by appropriate treatment before any satisfactory progress will be made in the cure of the affection. It will be equally necessary to attend to the condition of the nervous system, which, in my opinion, is directly and primarily concerned in developing the phenomena of eczema. Nerve nutrition must be specially attended to; all irritability of the nervous system must be soothed, and its tone and vigour promoted. The constitutional state of the patient—whether rickety or strumous, gouty, rheumatic, anæmic, &c.—should be taken into account, and relieved by suitable remedies.

The diseases with which eczema is found to alternate—as asthma, bronchitis, leucorrhœa, diarrhœa, &c.—will require their special treatment, besides that directed to the cure of the affection. If the above views regarding eczema be correct, it follows that no stereotyped routine plan of treatment, internal or external, can be laid down. There is no specific for eczema. The treatment must be eclectic rather than empirical. Every case must be treated on its own merits; and internal, special, and direct remedies be selected, adapted to the conditions of age, the diathetic proclivities, and general health of the patient; and the form, situation, extent, and stage of the affection.

An important part of the treatment of eczema is the dietetic. In many cases it is perhaps the most important, as in gouty patients and young children. All errors of diet, injurious modes of living, and faulty hygienic conditions should be corrected and avoided. Malt and alcoholic liquors, as a rule, should not be taken. They excite the circulation, evoke itching, and aggravate the disease. But to elderly people, or

those accustomed to wine or spirits, a little whisky without sugar, and the lighter wines (as claret, hock, dry sherry, &c.), may often be prescribed with advantage. While the diet should be plain, nourishing, and unstimulating, it should be varied, so as not to pall on the appetite and disturb the digestive and assimilative functions. Milk is held by some authorities, as Hutchinson, to be objectionable in eczema. There are individuals with whom milk disagrees; but where no such idiosyncrasy exists, it will generally be found to be a suitable article of diet. Good cow's milk is better than the condensed Swiss or other substitutes, which contain an excess of sugar. Fresh fish, beef, mutton, chicken, game (not high), should form part of the dietary; but salt dried fish, shellfish (as mussels), ham, over-ripe cheese, sausages, highly seasoned dishes, and such like, should be scrupulously avoided. Farinaceous substances and well-cooked fresh vegetables (as cauliflower, broccoli, asparagus, spinach, green peas, haricots, and similar articles) are suitable. Potatoes should be taken sparingly or omitted; and carrots, parsnips, and such-like articles should be avoided. Fresh ripe fruit may be taken, with the exception of strawberries and bananas, which sometimes evoke an erythematous eruption. Sweets are objectionable. Cocoa and chocolate are to be preferred to coffee. The importance of pure soft water for drinking and dietetic purposes cannot be too strongly insisted on. When this cannot be had, filtered rain-water may be used as a beverage, or Apollinaris or other table water. The meals should be spare rather than full, as the latter tend to oppress the stomach and exhilarate the circulation.

The old rule as applied to eating, "little and often," may sometimes be followed with advantage. Sea air, unless in the case of young strumous subjects, seldom agrees with eczematous patients. The pure bracing air of inland or mountain districts is better suited to them. Exposure to the cold, dry, irritating east or north-east winds should be avoided. While no routine plan of treating eczema can be laid down, there is, however, nothing specific in the pathology of the disease. The eczematous inflammation is similar in all respects to that which takes place in other parts of the body, and should be treated on general principles and in the ordinary way. In the early stages of the mild forms of eczema, very little constitutional treatment will be required beyond the exhibition of cooling drinks, alkalies and mild saline purgatives, with restricted diet, the disuse of alcoholic stimulants, rest, and the removal and avoidance of the exciting cause. In some cases there may be an extensive eczematous eruption without any corresponding constitutional disturbance, calling for different treatment than is indicated above. But in the more acute inflammatory forms (as *E. rubrum*, &c.) occurring in young subjects, and when the febrile symptoms are very severe, more energetic antiphlogistic treatment is required. Blood-letting, general and local, once so common in the treatment of inflammatory affections and in the acute stage of eczema, is now obsolete. In such cases, substitutes for venesection, as aconite or its alkaloid, or antimony, should be had recourse to, along with alkalies and saline purgatives, to cut short the febrile attack, and subdue the cutaneous inflammation, care being taken not to

carry the depressant treatment too far, lest debility, which in one form or another is linked with eczema, be thereby increased. But antimony in small doses is often useful in the chronic as well as in the acute stage of eczema. It may be combined with carbonate of ammonia when debility is present. When there exists a gouty or rheumatic state of the system, colchicum, quinine, salicylate of soda, in addition to the saline aperients and alkaline carbonates, should be prescribed. Aconite may sometimes be advantageously combined with quinine and other antipyretic remedies; and belladonna, so useful in erysipelatous and catarrhal forms of inflammation, is of great service in allaying the distressing symptoms of acute and subacute eczema. Its well-known action on the sudoriparous glands and the mucous membranes of the air passages would lead to the supposition that, by its influence on the terminal fibrils of the nerves supplying the cutaneous arterioles, the secretion or exudation of serous fluid into the papillary layer would be checked, with relief to the tingling, smarting, or itching of the affected part.

When the febrile symptoms have been subdued, tonic or special treatment should then be had recourse to, and attention directed to the remedying of any existing functional disturbance or abnormal condition of the abdominal or pelvic organs or of the nervous system. The treatment for both the febrile state and the accompanying disease may be combined from the first. Defective digestion and assimilation may sometimes be best corrected by saline or drastic purgatives and alkalies, with vegetable tonics or preparations of iron; and in other cases by hydrochloric,

nitric, phosphoric, or other mineral acids, with bitter infusions, and with or without iron. The mildest ferruginous preparations should be used at first, as the lactate, citrate, or vinum ferri; and afterwards the stronger and more astringent ones. Functional derangements of the liver are best relieved by alkalies, especially bicarbonate of soda or potash, or benzoate of ammonia; along with bitter infusions, as gentian, cascarilla, quassia, hydrastis, strychnine, &c. Sometimes the mineral acids, especially the nitro-hydrochloric, with vegetable tonics, answer better than alkalies in restoring the liver to healthy functional activity. Quinine and preparations of iron, according to Murchison and other authorities, are not suitable in many cases of functional disturbance of the liver, especially in those leading to lithiasis, even when debility is present. When there is torpidity of the liver with constipation, blue pill with aloes, colocynth, podophyllin, or other hepatic stimulant, should be given at bedtime, and early on the following morning a dose of saline cathartic mixture, or one or other of the natural purgative mineral waters. The night pill may often be advantageously combined with belladonna, strychnine, or physostigma. Iridin has been recommended in eczema. Its power as an hepatic stimulant is now generally recognised. It may be administered alone, or in combination with similar resins, as euonymin, leptandrin, &c., to relieve hepatic congestion, and promote a healthy action of the bowels. In some cases of eczema, when great debility and depression of the nervous system exist, along with disturbed hepatic function, phosphorus alone, or combined with strychnine or some mild preparation of

iron or zinc, is of great service in relieving these conditions, and it also exerts a curative influence over the disease. In congested and other states of the liver, iodine, bromide and iodide of potassium, and especially chloride of ammonium, are the best remedies to be employed, both for the relief of the hepatic symptoms and the cure of the affection. The chloride of ammonium may be given along with alkalies or acids, with some simple bitter. The best medium for its exhibition is liq. taraxici, to which may be added tinct. zingiber. or tolu.

Particular attention should be paid to the state of the kidneys, and the urine should be carefully examined at the commencement and during the course of treatment. The existing kidney disorder may be remedied by alkalies and other diuretics, by acids and general tonics. A certain degree of dropsy or œdema is often seen in eczematous cases, especially in eczema of the lower extremities, and is associated with kidney or cardiac trouble, which is relieved by bicarbonate or acetate of potash and digitalis, with or without the addition of the infusion of buchu, squills, or scoparius. Uterine disturbances are generally relieved by the bromides and iodides, along with anodynes, ferruginous and vegetable tonics. Cases of anæmia and debility are sometimes best treated with arsenic in combination with iron, as the citrate, lactate, the phosphates, tinct. of the chloride, and strychnine and other tonics, especially quinine, cinchona, and calumba. When there is much nervous depression present, the bromides may be beneficially combined with some of the above-named remedies. In chlorotic cases, manganese, in combination with some ferruginous preparation and

arsenic, will be found of great service. The febrile symptoms having been subdued, and all existing functional disturbance of internal organs having been corrected, and any constitutional disorder rectified as far as possible, should the eczema still continue the special or internal treatment should then be commenced, the external treatment having been from the first attended to. But in many cases there may be no appreciable functional disturbance of internal organs or defective constitutional states to relieve, so that the internal treatment may be begun as soon as the febrile excitement has subsided. Amongst internal remedies for the cure of eczema arsenic has long held a prominent, if not the chief, place. It is considered by some dermatologists as a specific in eczema; but it cannot be so regarded in the strict meaning of the term, although it acts in some cases like a specific. On the other hand, successful dermatologists, like A. Todd Thomson, never had recourse to it in the treatment of eczema; and M. Gibert considers that, as a remedy in skin diseases, its virtues have been over-rated; while Hebra says (*loc. cit.*, p. 143), "I cannot even concede to arsenic the undefined blood-purifying and eczema-curing powers which are attributed to it by English and French physicians;" and "thinks it is only the undesirable plan of combining internal and external medication in cases of eczema which has led to the erroneous doctrine of the great value of arsenical preparations in this disease."

There is a fashion in medicine, and some practitioners of the present day doubt the curative power of arsenic in eczema, and others think, if it ever does good, it is by its action as a nerve-tonic. That arsenic,

when given in medicinal doses, powerfully influences the nutritive process in the mucous membrane and the skin, and also influences epidermic formation, is well known, and it is now largely used in the treatment of diseases of these structures. It is said to clear the complexion of the Styrian peasants, who eat it; and the glossy coat given to horses by its use is a fact generally known. It is an alterative, an assimilative, and nerve tonic; it promotes "constructive metamorphosis," and through these properties it effects the cure of the disease. If given in the acute stage of eczema it aggravates the symptoms by promoting cell-proliferation, but is a most valuable remedy in the chronic, and especially in the scaly, forms of the disease.

There is considerable divergence of opinion among dermatologists and clinical physicians as to the best form, dose, and time for administering arsenic. Some prefer the solid form of the agent—arsenious acid; others, one or other of its solutions—Fowler's, Pearson's, Bielt's, or De Valangan's. The former of these solutions is the one in most general use in this country, but Trousseau, Hardy, and other celebrated French physicians prefer Pearsons, or the arseniate of soda solution, and Bateman highly approved of De Valangan's acid preparation. This is said to be less likely to cause gastric or intestinal irritation than the alkaline solutions, which may be owing to the small quantity of arsenic contained in it. The solid form—arsenious acid—is preferred by many practitioners. This, in combination with sulphuret of antimony, was successfully used by Dr. Wickham in the treatment of skin affections. Whatever preparation of arsenic is selected by the young practitioner, he should chiefly

confine his attention to it, in order to become thoroughly familiar with its therapeutical and physiological action, and be able to regulate the dose and mode of administration to suit the age, constitution, and idiosyncrasy of the patient. Arsenic is recommended by some authors to be given in small and gradually increasing doses, while others, like Hunt, advise Fowler's solution to be given in moderately full doses, as 5 minims, but deprecate any increase. Sir Erasmus Wilson advises liq. arsenicalis to be given in 2- or 3-minim doses. As a rule, 5-minim doses, taken three times a day, is safe to give, and sufficient to obtain the full curative influence of the drug; but large doses of 10 or 15 minims three times a day have been prescribed with success. But such large doses are not generally needed. As many patients are highly susceptible to the influence of arsenic, and whose idiosyncrasy may be wholly unknown to the prescriber; it is, in many cases, safer to begin an arsenical course tentatively, by giving the preparation in 2-minim doses three times a day, and gradually increasing the dose to 5 or 8 minims, beyond which it will seldom be necessary to go. In some rare cases, where great tolerance of the remedy exists, it may be requisite to give it in full doses, carefully watching the effect; and so soon as the physiological action of the drug is established, as inflammation of the tarsi, to reduce the dose to the ordinary 5 minims.

The curative effects of arsenic, however, may be secured without any manifestation of its physiological action. Some authors recommend arsenic to be given generally before meals, but the more common and better practice is to give it either with or after food.

In some cases of eczema accompanied by atonic or irritative dyspepsia, by debility or chronic gastric catarrh, it is often best exhibited in small doses before meals. As much of the success attending the use of arsenic in the cure of eczema depends on the mode of its administration, it will be useful to quote the views of Mr. Hunt on the subject, as a guide to those who have not had much experience in so potent an agent, and who may be chary in pushing it to the extent required to obtain its full curative effects. He perhaps had as large an experience in the use of arsenic in skin affections as any practitioner. He recommends 5-minim doses of Fowler's solution to be taken regularly three times a day, in a little water or mild beverage with or after meals. When the conjunctivæ become inflamed he advises the dose to be reduced, but the remedy not to be altogether abandoned. And he recommends the arsenical course to be continued in reduced doses for as many months after the final disappearance of the disease equivalent to the number of years it had previously existed.

He attributes the failure of arsenic as an internal remedy for skin disease to one or more of the following sources :

1. The syphilitic character of the cutaneous disease being often overlooked.
2. Being given in the inflammatory stage.
3. Being taken on an empty stomach, and its use abandoned on account of the gastric irritation it is said to excite.
4. Too large doses and at intervals too distant to obtain the full benefit of the medicine.

Lastly, nearly all writers give it in gradually in-

creasing doses. This is a common and most serious error. If after fourteen days no effect is produced the dose may be increased one-fifth once or twice a month.

This is a very good method of giving arsenic, and has been extensively and successfully adopted by many practitioners. But it may be often modified to advantage to suit individual cases. When arsenic acts too strongly and its use has to be discontinued for a time, Cazenave recommends *tinctura cantharidis* to be given during the interval. Iodide of potash or simple stomachic remedies may be used instead of *tinctura cantharidis*. It is always advisable in resuming the use of arsenic to begin with the smallest dose. The arsenical solutions may be combined with alkalies or acids, with other alteratives, as iodine, iodide of potassium, or mercury, as the perchloride, or in the form of Donovan's solution, or with ferruginous or vegetable tonics. Sometimes it is advantageous to change the preparation, or to give it in a pill form instead of in solution.

When arsenious acid, iodide of arsenic, or other solid preparations of the drug are prescribed, great care should be taken in the making up of the pills. If they are carelessly prepared, severe gastric symptoms are apt to follow their use, owing to the imperfect distribution of the active ingredients throughout the pill-mass, permitting a large or toxic dose of the drug to be taken. It is often useful to add *pulv. pip. nig.* or other aromatics to the ingredients of pill. Fowler's solution, with or without alkalies and aromatics, is the best form for children, who are very tolerant of arsenic. To infants and very young children it may be given in

1-or 2-minim doses ; but a child of five years may require the dose of an adult. According to Ringer, girls require larger doses than boys. Generally, arsenic may be given to children in the earlier as well as in the later stages of eczema ; and no preliminary treatment is usually needed before its exhibition, beyond a mild calomel or other purge, and the correction of acidity and irritation in the *prima via*. Arsenic may be employed hypodermically.

Sulphur is a very old and popular remedy in the treatment of eczema, ranking, according to some authorities, next to arsenic as a curative agent in the affection. Its virtues have in many cases been exaggerated, and its indiscriminate use in the treatment of eczema has brought it into disrepute with many practitioners. It should never be given in the acute stage of the disease. Its use should be confined to chronic cases, and especially to those of long standing ; but it is by no means adapted to every chronic case. According to my experience, sulphur and the sulphurous waters are most useful in old chronic cases occurring in individuals of lymphatic temperament, or who suffer from chronic rheumatism or chronic hepatic or gastric derangements. Hebra had no confidence whatever in their utility. On the other hand. Cazenave considered "they were principally useful when the disease is of long standing, confined to the lower extremities, and of a violet colour ;" and Hardy observes, " While arsenic is the best therapeutical agent in cases of simple eczema, of lichen and chronic impetigo, sulphur is given when a constant furfuraceous desquamation indicates the passage of acute eczema into chronic pityriasis. In this variety he thinks sulphur

succeeds better than arsenic, and recommends that the treatment by sulphur should be continued some time after the disappearance of the disease."*

Sulphur may be given in milk or combined with magnesia, bitartrate or tartrate of potash, or confection of senna. A good form for it in old rheumatic subjects is the "Chelsea Pensioner." The best sulphurous waters are those of Harrogate, Enghein, Aix-la-Chapelle, St. Gervais, and Barèges. The natural alkaline waters best adapted for the treatment of chronic eczema in gouty, rheumatic, and dyspeptic subjects are Vals, Ems, Vichy, Plombières, Bath, Buxton, and Cheltenham. When saline purgative waters are required, Pullna, Carlsbad, and Friedrichshall will be found serviceable; the latter containing so much common salt is less useful than the others. The bromo-iodide water of Woodhall, Lincolnshire, is useful in scrofulous cases. For anæmic cases the ferruginous saline waters will be required, as those of Spa, Aix-la-Chapelle, Harrogate, and Tunbridge Wells.

Mercury has been long employed, both internally and externally, in the treatment of eczema. The perchloride is the best form for internal use. One sixteenth of a grain or smaller doses of it may be given three times a day. It will be found very efficacious in chronic and obstinate forms of the affection, and especially in cases where the diseased parts are thickened by the interstitial deposit of the products of inflammation. It may be given along with bark to weak and debilitated subjects, or be combined with arsenic, iodide of potash, antimony, perchloride of iron, &c. The value of the perchloride of mercury is not confined to the treatment of eczema complicated with

* *Edinburgh Medical Journal*, p. 575, 1865.

syphilis, as some authors think ; but is of great service in many local and obstinate forms of the affection, where there is no evidence of the patient's system being tainted with the syphilitic virus. Calomel and hydrarg. c. creta are good forms for children. The former is used by Unna. The green iodide of mercury was a favourite preparation with Neligan. He thinks that in the chronic stage of eczema a mild mercurial course is often singularly efficacious, especially when the mercury is combined with iodine and alkalies. His formula is the following :

R Iodidi hydrargyri viridis	gr. iv
Hydrargyri c. creta	gr. xij
Carbonatis sodæ siccati	gr. xij
Pulveris myrrhæ	gr. vj.

Mucilaginis quantum sufficit ut fiant pilulæ duodecim. One
to be taken three times daily.

No practitioner of the present time would dream of pushing mercury in the treatment of eczema or impetigo to the extent it was formerly the practice to do in the cure of disease. But used moderately and with care it is a safe and valuable alterative in the cure of obstinate eczema. Iodine and its preparations, especially the iodide of potassium, have been found very valuable agents in the treatment of eczematous affections. The latter remedy has been strongly recommended by Hardy. According to Niemeyer, the iodide was employed with brilliant success by Veiel in eczema. He, like Hebra, attached great value to the direct treatment of the affection ; but, unlike him, appreciated also the importance of internal treatment. Iodine was highly praised by Neligan. In persons of delicate constitution, or if

debility was present, he gave the iodide along with some tonic decoction, as in the following prescription :

R Iodidi potassii gr. viij
 Decoct. ulmi (corticis recentis) . . . fl. ℥xij
 Decoct. dulcamaræ fl. ℥iv. Mix.
 A wineglassful to be taken every night at bedtime.

It may be often given advantageously with alkalies combined with some preparation of iron, as the citrate ; and with or without tonics, as calumba, strychnine, &c. ; or with arsenic, perchloride of mercury, &c. An excellent and elegant form of administering iodine with arsenic is that devised by Neligan, which he terms an iodureted solution of the iodide of potassium and arsenic. The formula for this is as follows :

R Liquoris arsenicalis ℥ lxxx
 Iodidi potassii gr. xxj
 Iodini puri gr. iv
 Syrupi florum aurantii fl. ℥ij. Solve.

Forty minims of it at first may be given in simple water or in some infusion or decoction as individual circumstances may indicate, and the dose gradually increased to eighty minims.

The iodide of arsenic is a convenient and useful form in which to administer these two powerful agents in the solid state. Iodine combined with iron may be given as a pill, or in the well-known preparation, the syr. ferri iodidi, which is a most invaluable remedy when the disease is associated with scrofula.

Antimony has been long known as an internal remedy for the cure of eczema, but, like mercury, was formerly much more employed than it is at the present time, although some recent authors, like Unna, Malcolm Morris, Crocker, &c., advise its use. It is a very valuable remedy in certain chronic forms of the disease,

and especially when occurring in rheumatic subjects. It is particularly useful when the disease relapses frequently to the acute form. In such cases it may be supposed that the inflammatory action in the affected part has never been completely subdued, or that the condition of the system upon which the disease depends, has not been sufficiently modified. In a paper by Mr. Mead, on the treatment of eczema, which appeared in the January number of the *Edinburgh Medical Journal* for 1865, he highly commends the use of antimony.

He also advises its combination with bichloride of mercury, and to be given in some demulcent mixture, as decoction of sarsaparilla or dulcamara. It was thought by the late Dr. Billing that antimony had some specific influence over the minute capillaries which rendered it so valuable a remedy in the treatment of inflammatory affections. It should be given in small doses, one-eighth, tenth, twelfth, or twentieth of a grain three times a day. It may be combined with alkalies or tonics, or with ammonia if debility is present.

Cantharides was at one time highly extolled as a cure for eczema. In the hands of Biett it proved a valuable agent in the cure of many very obstinate forms of the disease. Cazenave and others testify to the great success attained by Biett in the cure of eczema by means of this potent agent. It was also highly praised by Devergie in the treatment of the intractable forms—eczema lichenoides. It is well deserving a trial in the rebellious chronic forms of local eczema, and especially when the disease occurs in women at the climacteric period, or who suffer from

uterine trouble ; and in individuals of low tone, or who suffer from nervous exhaustion.

Alkalies and their carbonates, particularly the carbonate of ammonia, are favourite remedies with many practitioners in the treatment of eczema, and often render valuable aid when the disease is associated with dyspepsia, or with a gouty or rheumatic state of the system.

Hardy doubted the efficacy of alkalies in the treatment of eczema, but admitted "that they modify advantageously the disordered digestion, and often facilitate the cure of the disease." Devergie, Cazenave, and Bazin obtained good results in the treatment of eczema by alkalies ; and the latter authority "employs the alkaline treatment in all cases of eczema, which he attributes to arthritis."

Liq. potassæ is often of use in the scaly form of the disease. But the use of alkalies requires caution, as their prolonged employment exhausts the system and does harm. The chloride of ammonium, as has been already stated, was first pointed out by me, in 1858, as an effective remedy for scaly affections. It is especially suited to chronic and dry or moist scaly forms of the disease occurring in individuals of dissipated habits, or who are suffering from sluggish or congested liver. It has often succeeded in my hands in curing very intractable forms of the disease, after other remedies had failed.

The mineral acids are of great service in the treatment of eczema, both in the early stages as refrigerants, and in the latter stages as alteratives. Nitric acid is especially useful when the eczematous discharge on the cutaneous surface is profuse. It may

be given to children in the early stage of eczema, in the form of lemonade. To adults suffering from debility, A. T. Thomson recommended the mineral acids to be administered according to the following formula :

℞ Acidi nitrici diluti	℥x
Acidi hydrochlorici diluti	℥viiij
Tinct. serpentariæ	f. ʒj
Tinct. opii	℥x
Decocti cinchonæ flavæ	f. ʒjss. Mix.

Fiat haustus ter quotidie sumendus.

Some prefer the sulphuric acid to the nitric, but, as a rule, the nitric or nitro-muriatic is preferable. To get the full curative effects of the acids, some practitioners give them in large doses. Tilbury Fox, following Bateman, recommends the nitric acid to be taken in large doses, from 30 to 40 drops, with bark or iron. The acids may be variously combined with salines, vegetable tonics, ferruginous, arsenical, and other preparations, to suit individual peculiarities.

Cod-liver oil is an invaluable remedy in eczema occurring in weak, scrofulous children, or in debilitated adults or old people. It may be given alone or along with bitter infusions, syr. ferri iodidi, or arsenical solutions. It is very useful also as an external application in eczema.

Preparations of tar and carbolic acid have been employed with some success in the treatment of eczema ; but my experience of them is not sufficiently large to enable me to confirm this favourable opinion of their curative virtues. Externally used, they are very useful in the chronic forms of the disease. Perhaps, in the future, when the action of micro-organisms on the human system is better understood,

these remedies may be more extensively used than they are at present in the internal treatment of eczema.

Jaborandi has been recommended in eczema, and has been successfully employed by Jamieson in the dry, papular forms of the disease. He uses hypodermic injections of the nitrate of pilocarpin, varying from one-sixth to one-third of a grain in each, twice daily.

The tincture of gelsemium is a favourite remedy with some authors. It is useful sometimes in the pruriginous forms of the affection. Dr. Bulkley thinks when it is given in doses of ten drops, repeated and increased, it is often of great service in relieving itching, but it is not well borne by every one. My own experience of gelsemium has been disappointing.

Turpentine, as an internal remedy for eczema, is favourably spoken of by Dr. Crocker, who says he has found it to act most satisfactorily in obstinate cases, and without the aid of external remedies—one proof at least of the value of internal treatment. Its disagreeable odour, and its unpleasant action on the bladder in many cases, will operate against its ever being a popular remedy in eczema.

The sulphide of calcium is employed by many dermatologists as an internal remedy in eczema. It is one of the six agents recommended by Unna for eczema in children. He gives it in the following form:

℞ Calcii sulphid. pur.	. . . . .	0.1
Glycerini exsicc.	. . . . .	40.0
Liq. ammon. anisat. (G. Ph.)	. . . . .	1-0. M. D. S.

One, two, or three teaspoonfuls daily.

Innumerable decoctions and infusions of herbs have been popular remedies for ages for the cure of eczema. According to Niemeyer, he has often prescribed Zittmann's decoction, which is certainly a curious and multifarious compound.

The belief in the influence of the bitter or demulcent decoctions over eczema and other skin diseases, is not very great among the generality of practitioners of the present day. Their use is in a great measure confined to herbalists. Perhaps their reputed virtues in eczema depend more on the diluent than the medicinal properties of the infusions. Still some of them, as *dulcamara*, *ulmi*, *saponaria*, *scabiosa arvensis*, *gallium aperina*, *viola tricolor*, &c., are of use in the cure of eczema, and also render service as mediums for the exhibition of more powerful agents.

Purging, more or less free, forms an important part of the treatment of acute eczema, and especially when the exudation is profuse; and a moderate and regular action of the bowels is also useful in the latter stages, and in all forms of the affection.

Cathartics given in the early stages of eczema, by promoting free alvine evacuations, reduce, as is well known, the body temperature, lower the blood pressure, and by derivative action from the skin lessen the cutaneous hyperæmia, thereby checking inflammatory action, and diminishing exudation into the papillary layer of the derma. But their other important use in the treatment of the disease is perhaps not so well known or appreciated—viz., that of eliminating morbid, effete products from the blood, either directly or indirectly, by relieving a congested liver or kidney, and thus enabling these organs to actively perform

their emunctory functions, and thus lessening the eliminative activity of the skin, giving to it a certain degree of physiological rest, so essential to the recovery of an inflamed organ and its restoration to a healthy condition. The saline cathartics have been generally preferred to the drastic ones in the treatment of eczema, and amongst them the sulphate of magnesia, from its lightness on the stomach, solubility, prompt action, and its range of combination with other remedies, has been usually selected. It may be given along with effervescing salines during the day, or in the early morning alone or combined with the effervescing citrate of magnesia. A pleasant and effective mode of giving it, is that combined with Rochelle salts, bicarbonate of potash, or soda and tartaric or citric acid, in an effervescing state. Tinct. aurantii, or zingiber., may be added. The combination with other salines increases its action. In some cases the old form of black draught is very serviceable, or the ordinary white mixture, with or without colchicum, in loaded and gouty states of the system.

In other cases, when there is debility and gastric disturbance present, the combination of the sulphate with some of the vegetable tonics will be of great benefit in improving the appetite, restoring the tone of the stomach, and keeping up a gentle action of the bowels, as in the following mixture :

℞ Sulphas magnesiæ	ʒij
Sp. ammon. aromat.	ʒiij
Tinct. zingib.	ʒss
Infus. calumbæ	ʒviij

Two table-spoonfuls to be taken twice or thrice daily.

Quassia, cascarilla, cinchona, nux vomica, or other

tonics, may be substituted for calumba, or combined with it and tinct. capsicum.

There are many cases of eczema occurring in adults, and especially in the debilitated and anæmic, when the sulphate is best given along with some preparation of iron, quinine, or other tonic, which, whilst promoting its action on the intestines, prevents exhaustion. The sulphate of iron is the one most commonly used, as in the following formula, or some modification of it:

R Sulph. ferri	gr. x-xx
Magnes. sulph.	ʒij-ʒj
Acid. sulph. dil.	ʒij
Sp. chloroform.	ʒij-ʒss
Aq. menth. pip.	ad ʒviij

Sum. ʒj omne mane vel bis quotidie.

Calumba, quinine, strychnine, or other tonics can be added, if desired. But this, or similar combinations with sulphate of iron in solution, has generally in my experience disagreed with patients, causing nausea or sickness, and leading to the discontinuance of the mixture. In my own practice I have found the tincture of the perchloride to answer better. This preparation of iron seems to have a specific action on the nervous centres, as well as a controlling power over cutaneous inflammation. Its curative action in scarlatina, erysipelas, and other exanthemata, is now well established, and it will be found to render good service in the treatment of eczema. It may be given according to the subjoined formula,

or be variously combined with other salines, as sulphate of soda :

R Tinct. ferri perchlor.	ʒij
Sulph. magnes.	ʒij-ʒss
Sp. chloroform.	ʒiij
Glycerini	ʒij
Infus. quass.	ʒviij
Sum. ʒj ter in die vel omne mane.	

Nitric, hydrochloric, nitro-hydrochloric, sulphuric, or phosphoric acid, with other vegetable tonics, may be added to the above.

The sulphate of soda is an excellent substitute for Epsom salts, and is superior to it when the patient suffers from a congested or sluggish liver. It may be combined with the sulphate of iron, with or without acids, and any suitable vegetable tonic; or it may, along with the sulphate of iron, be combined with alkalies, as carbonate of soda, or potash and tartaric or citric acid, forming an alkaline instead of an acid ferruginous mixture. The salt may also be given with advantage along with sodæ et potassæ tart. Rochelle salt is itself a good substitute for sulphate of magnesia, and is preferred by many practitioners to it. Good results are obtained from it, whether it is exhibited alone in a morning draught, or in combination with other purgatives. Its diuretic properties render it a very valuable remedy in rheumatic states of the system, or when the urine is loaded. It may be combined with alkalies along with bitter infusions, and be substituted for Epsom salts in the black draught. The phosphate of soda, although not now much used, is a useful purgative in eczema, and may, on account of its slight taste, be readily given to children. It is particularly useful in the rickety and

scrofulous. The imported natural purgative mineral waters are now extensively used, instead of the ordinary salines or patent saline aperients of the druggists, in the treatment of eczema. The chief of these are the Pullna, Carlsbad, Friedrichshall, and Hunyadi Janos. The Friedrichshall, containing so much common salt, is not so suitable in eczema. According to my experience the Pullna has, as a rule, answered best, especially in cases of eczema occurring in middle-aged people suffering from dyspepsia, with constipation and sluggish liver.

Aloes or aloine, on account of its tonic and aperient properties, is in a certain class of cases to be preferred to saline purgatives in the treatment of eczema, especially when the patient suffers from atonic dyspepsia with intestinal inertia. It may be given along with some preparation of iron, in the pill form. The compound decoction is a good preparation, and may be given to children. Other vegetable purgatives are also used according to the fancy of the prescriber, as rhubarb, leptandrin, euonymin, podophyllin, iridin, &c. The various preparations of senna have been much used by many physicians in the treatment of the disease. Hardy preferred senna to saline purgatives, and recommended an infusion of wild pansy and senna. He advises it to be taken in doses sufficient to produce three or four watery stools a day, increasing or diminishing the dose accordingly. He had never observed any unpleasant results follow its exhibition, even when it was continued for a considerable period. It was his opinion that purging was beneficial during the continuance of the exudation. He thought that the saline cathartics were likely to aggravate the disease by their ingredients being absorbed into the

blood and so irritating the cutaneous nerves; and in private practice he prescribed the natural aperient saline waters, as Friedrichshall. But these contain ingredients similar to those of the saline aperients in general use. Besides the large quantity of chloride of sodium which the Friedrichshall water contains, should make it the least desirable saline aperient to prescribe regularly in eczema.

The syrup and confection of senna are agreeable forms in which to administer the drug. The latter in combination with sulphur, or with carbonate of iron as recommended by Greaves in constipation, is an excellent remedy. His formula is the following:

R. Electuarii sennæ ℥ij
 Bitartratis potassæ ℥ss
 Carbonatis ferri ℥ij

Liq. zingiberis quantum sufficit ut fiat electuarium. A small teaspoonful to be taken in the middle of the day and at bedtime.

He generally added about two drachms of sulphur to the electuary, but omitted it at the end of a week if needed.

The compound liquorice powder (German) and the fluid extract of cascara sagrada, are favourite remedies with some practitioners.

Jamieson has found them useful where gentle and continued action of the bowels is desired; a grain of powdered capsicum added to each drachm, he says, increases its action.

The following is recommended by Crocker as an aperient for infants:—Liquid extract of cascara 2 to 5 minims, tincture of belladonna 2 minims, and compound infusion of orange 2 drachms.

Local Treatment.—The external treatment of

eczema in all its forms and stages demands the most careful consideration. In many cases it is even of more importance than internal treatment. Minute attention to details is essential to success. Great care and judgment are required, not only in selecting the appropriate remedy, but in determining its strength and mode of application, for the particular case; and this is specially important in the treatment of acute and subacute eczema. Time and rest are important elements in the cure of the disease. If a large portion of the cutaneous surface is affected, rest and the recumbent position should be enjoined; when the eczema is confined to the forearm, hand, or the leg, the latter should be rested on a couch or stool, and the former supported by a folded handkerchief or a broad soft ribbon suspended from the shoulders. Physiological rest is well known to be an important factor in the recovery of an inflamed limb or joint, but perhaps it is not sufficiently attended to in the treatment of eczema.

Irritability is a marked feature of the disease, and the acutely sensitive, inflamed skin of an eczematous patient is readily irritated, and by applications apparently of the most innocuous kind; hence the necessity of protecting the inflamed surface from atmospheric and every source of irritation, and of using sedative remedies. Great harm is often done both in the acute and subacute stage of eczema by the use of improper applications, or by applications being used of too great a strength, which irritate the inflamed surface and aggravate the symptoms, converting, as Hardy observes, an otherwise mild and limited eczema, susceptible of easy cure, into an inveterate wide-spreading one, which

may prove very rebellious to treatment. This is not unfrequently the case in the use of anti-pruritic remedies, when by increasing instead of diminishing their strength to produce the desired effect, and by using an application, eminently soothing in the papular form of the disease, to a case of vesicular eczema, intense irritation is set up, with an aggravation of all the symptoms, which prolongs the duration of the disease. It is not, however, always easy to say what kind of local application will best suit a particular case. Sometimes the most simple one will soothe the irritable, inflamed, tender surface and allay the itching, as a starch poultice or fresh warm oil or lard, when highly recommended remedies have been of no avail. Another peculiarity of eczema is that a remedy which has afforded great relief to the distressing symptoms, acting almost magically, will utterly fail to do so and under apparently similar conditions in the same case, and in other cases of the same kind will be of no use whatever, or do harm. The employment of soothing remedies must then, in many cases, be tentative: if they allay the painful sensation and itching, to be continued; if they irritate, to be at once discarded. Thus it may happen that several external remedies have to be tried in acute eczema before a suitable one is found. The essential qualities which direct applications should possess, are, in the case of water, purity and softness; in that of powders, perfect levigation and the absence of all gritty, rough particles; and as to oils, lard and other unctuous substances, freshness and freedom from rancidity. Butyric and other acids formed by the decomposition of fatty matter, are excessively irritating to an eczematous skin. Tempe-

perature influences the remedial powers of soothing applications. Sometimes the same remedy applied hot or tepid will soothe an irritable surface which it failed to do when used cold, and *vice versâ*.

In order that the full curative virtues of remedial agents may be obtained, they must be brought into immediate contact with the diseased surface and maintained there, and hence the necessity that all crusts and scales should be removed and a clean surface for the application of the medicaments be obtained. The incrustations may be removed by the free application to them of fresh lard or butter, or by being thoroughly soaked with hot water and glycerine, or warm olive or almond oil may be poured over them and afterwards covered over with strips of flannel well saturated with the oil. These should be kept closely applied, and renewed until the crusts are softened and admit of easy removal by means of the finger-nail, a spatula, paper-knife, comb, &c. A very good plan is, after the crusts have been well soaked with the glycerine, water, or oil, to apply a warm linseed-meal poultice saturated with oil over all. This to be repeated if necessary. If the crusts are on the body or limbs, bathing them well with a warm alkaline or glycerine solution, followed by a warm or vapour bath, and supplemented, if needed, by the application of a warm, well-oiled linseed-meal poultice, will suffice for their removal. A well-made bread poultice is safer than a linseed one, which is apt to irritate. Poultices not to be used too much. The use of thin india-rubber bands, loosely fitting skull-caps, &c., is a good plan for the removal of crusts. These act as poultices, and when worn a few days the crusts are sufficiently softened to be easily removed.

Scales are easily got rid of by the free use of soft soap or glycerine soap and warm water.

When the affected parts have been freed from crusts and scales, they should be sponged over with a cleansing liquid, or be well douched with soft tepid or cold water to remove all *débris*, and afterwards be carefully dried, not rubbed, with a soft cloth. The curative dressing should then be instantly applied.

There are various cleansing liquids in use, such as thin, well-made, strained oatmeal gruel, yelk of egg and water, a weak solution of carbonate or biborate of soda (ʒj to the pint of mallow decoction), or a combination of the egg and soda solution. Many dermatologists object to the use of alkaline or other solution for the removal of old ointment dressings, and recommend these to be simply wiped off before the application of the new. This answers very well in many cases. Still a cleansing liquid is needed to remove the old dressing which, if left on, becomes rancid and irritates instead. The infusion of *Quillaia* bark makes a good cleansing liquid for greasy surfaces.

Too frequent washing or bathing of the diseased parts in the early stage is injurious, especially in the vesicular and erythematous forms of the affection. It causes the eruption to spread, and when the new epidermic covering is forming, frequent washing does harm by macerating and washing away the newly formed, delicate membrane, and so prolongs the disease. When soothing or astringent ointments are used they should be spread thickly on strips of old linen, or lint (the woolly side), which should be accurately applied to the diseased surface and kept in position by a bandage, mask, cap, or other suitable appliance. When this cannot be done,

the ointment should be smeared over the parts or applied by means of a soft brush. When the nostril or auditory meatus is the seat of the disease, the ointment may be applied to their surface by means of a soft camel-hair pencil, or be smeared thickly over a dossil of lint, which should be introduced into the passage. Unna's salve muslins may be used instead of lint or linen. Stimulating ointments, as the mercurial, are generally well rubbed in to the diseased part until the surface appears almost dry, which should afterwards be covered with a protective salve. Lotions, unless drying ones, are applied in various ways—sometimes by sponging or bathing frequently the affected part with them, or by means of strips of old linen or lint applied to the affected parts, and kept constantly wet, never being allowed to become dry, and used with or without impermeable coverings according to the object in view.

Sometimes it is of advantage to use a lotion during the day and an ointment at night, but in such cases it is proper that the diseased parts shall be well cleansed and softly dried, never rubbed before the application of the lotion or ointment. For, as Abernethy, in his *Lectures on Surgery* (p. 139), forcibly expresses it, "a wet surface cannot be greased, nor can one that is anointed be acted on by watery secretions." Drying lotions are best applied by means of a large camel-hair pencil or brush, or a piece of soft sponge. The lotion should be well shaken up and then poured in to a shallow vessel, as a saucer, and afterwards applied. It should be used frequently, four or six times or oftener in the day, so as to keep the tender, inflamed parts constantly covered, and by its powdery deposit protect the surface from the irritation of the air.

The dressing should be removed twice daily by the aid of poppy or other decoction.

Absorbent or protective powders are to be dusted freely over the diseased surface by means of a dredger, powder-bag, &c. The dusting should be frequently repeated so as to keep the parts entirely covered. Dressing to be removed twice daily, and the parts well cleansed and dried before the renewal of the application.

In some cases, where the exudation is slight, the powdery dressing may be left undisturbed for several days, when the healing goes rapidly on under the artificial covering.

Liniments are best applied by means of strips of lint thoroughly soaked with them, and accurately applied to the diseased surface and kept in close contact with it. Liniments should be used warm when a large extent of surface has to be covered. This prevents a chill.

Tarry oils may be poured over the affected part, as on the scalp, or be well rubbed in with a stiff brush or piece of flannel. Tinctures may be painted on the diseased part, as liq. carbon is detergens, &c. When a strong caustic solution of caustic potash is to be used, it is well to have water and a little acetic acid in readiness to apply instantly to the part treated, to lessen the pain of the application or limit its effect.

Pastes are applied in the same way as ointments.

Gelatine preparations, after being made liquid, are painted on the diseased surface with a stiff brush, and covered over with a thin coating of absorbent cotton-wool.

Eczema being both an acute and chronic inflammatory disease, the object of local treatment is to allay

or arrest the inflammation in the primary stage conduct the disease on to the scaly or healing stage, and to cure the affection, as quickly as possible, and with the least amount of suffering to the patient. In many cases depending on a local cause, the disease may be cut short or aborted if seen at the commencement and properly treated. But in acute cases, associated with constitutional conditions, however much local remedies may moderate the inflammatory symptoms, they will rarely arrest the disease, which will go on to the exuding stage. Here, however, they do help to carry the disease quickly through its stages and prevent the prolongation of the chronic one, and thus cure the eczema. Local treatment also checks the infiltration of the dermic and sub-dermic tissues with the products of inflammation, which is so marked a feature in old chronic cases and adds to the difficulty of their cure.

The various stages and forms of eczema demand their special treatment.

In the early and exuding stages soothing and astringent remedies are needed, and in the later and chronic stage stimulating and alterative ones are the rule. But chronic eczema may revert to the acute form, when stimulating applications are to be left off, and a soothing, sedative plan of treatment is to be adopted and continued until the inflammatory symptoms have been entirely subdued, when recourse may be had to stimulating or other remedies. As a general rule, so long as pain or inflammation of an acute form exists, sedatives are to be sedulously used. It sometimes happens that in subacute conditions, which appear to linger, the disease may be cut short and a cure obtained by the application of a mild pre-

paration of tar, as liq. carbon. detergens, or carbolic acid. But such applications must be carefully watched, as they are often followed by a fresh outburst of the disease or an aggravation of all the symptoms. This may often arise in the course of pustular eczema if too early stimulation is used.

The forms of eczema may be more or less mixed in a particular case, or at a particular period, as the vesico-papular, or pustular, or all three in different proportions, and will require special treatment. Although eczema is described as having three stages—acute, subacute, and chronic—there is no well-defined line of demarcation between them. The chronic stage may be considered to have set in when squamation begins.

An endless variety of external remedies have been recommended in the treatment of eczema. I will confine my observations to those which, in my own experience, I have found most beneficial, and those which recognised authorities have recommended in the cure of the disease.

One of the most soothing remedies in the primary stage of eczema, and an important remedial agent in the chronic stage, is pure soft water at various temperatures. Hard water must never be used. If naturally soft, rain, or distilled water cannot be had, that to be used should first be rendered soft by boiling, and then allowed to cool, or, when boiling, should be poured over bran, bruised almonds, rice, or maize flour. Water so prepared may be used cold or tepid. In some cases warm applications afford most relief, and are more grateful to the patient's feelings. Cold water is more sedative, and may be rendered more so by the vessel

containing it being placed in a jar of ice. This should never be added to the water, as it may contain impurities and irritate. Water may be used in the same way as directed for lotions. If the affected part be the arm or lower extremity, the application of strips of wet linen or a bandage will give support and relieve the swelling. These should be kept constantly moist. It is important to confine the water dressings to the diseased surface, and that the lint compresses or bandage should be evenly applied. Water so used exercises a wonderful controlling power over cutaneous inflammation, and is often the best means to employ in acute eczema, and will also be found most serviceable in itching and chronic forms of the affection. Emollient decoctions and infusions generally, such as of althæa, common mallow, poppy-heads, ulmi, sassafras medulla, or almond emulsion, much diluted or with equal parts of warm water and new milk, and solutions made with starch or similar substances, are frequently of great service in the early stages of eczema. These decoctions and solutions may be used cold or warm, and in a similar manner to lotions. To any of the decoctions a little laudanum or camphor may be added when pain or irritation is severe.

Bathing the inflamed parts with new milk and warm water, or warm milk with lime or barley-water, has often a very soothing effect. Fresh cream and buttermilk are also popular remedies. The infusion of digitalis is a favourite external application with some authors when the inflammation is severe, and the decoction recommended by Bateman is valuable in such conditions. It is composed of marshmallow, poppy-heads, and digitalis. The fluid extract of

Grindelia robusta— \mathfrak{zj} to \mathfrak{ziv} or \mathfrak{zviiij} of water—forms a good lotion.

Poultices made of starch or rice, or flour, white bread, &c., with mallow or poppy decoction, are very soothing when applied to an irritable, inflamed, eczematous surface. They may be used cold or warm, according to indications. They should not be used in the vesicular stage, unless the vesicles have already burst or have been abraded; but they may be used in the pustular form of the disease at an early period, and are often very sedative.

A variety of protective, soothing, and astringent powders are used in the treatment of eczema, such as powdered starch, finely sifted maize, bean or rice flour, powdered orris-root, lycopodium, white peat, kaolin, oxide, pure carbonate, and oleate of zinc, white fuller's-earth, talc, French chalk, nitrate of bismuth, carbonate of lead, powdered camphor, boracic acid, &c. Such applications are best adapted to exuding eczema. A powder much used is one recommended by Hebra—viz., \mathfrak{R} *zinci oxidi, pulv. aluminis plumosi, pulv. rad. iridis floris, āā* \mathfrak{zj} ; *pulv. amyli, z̄ij. M.* Kaposi advises the following:—Oxide of zinc, \mathfrak{zj} ; subnitrate of bismuth, $\bar{āā}$ grammes 5; ceruse, 2.50; powdered Venetian talc, 50. Dr. Duhring uses a dusting powder composed of powdered starch, \mathfrak{zvj} ; oxide of zinc, \mathfrak{zjss} ; and camphor, \mathfrak{zss} . As an absorbent powder for excoriated surfaces, Tilbury Fox recommends the following:—Powdered maize, \mathfrak{ziv} ; oxide of zinc, \mathfrak{zj} ; calamine, \mathfrak{zss} . When there is much burning heat of surface the addition of camphor to the powder is useful, as in Duhring's formula, which is similar to Anderson's well-known one.

A very good application in irritable exuding eczema is one composed of equal parts of oxide of zinc, French chalk, and powdered potato starch; or the following: bismuth nitrate, white fuller's-earth, āā ʒss; carbonate of lead, ʒij; powdered starch and orris-root, āā ʒj. Mix. To either of these powdered camphor, or 10 minims of ess. oil of bitter almonds, may be added to allay heat or itching. Bismuth may be used alone, and in some cases, when the exudation is slight, it may be left on without being disturbed for several days. The powdered oleate of zinc (Shoemaker's), with one or more parts of starch, is one of the best applications. It adheres to the skin, and forms an excellent protective to it. Well-powdered boracic acid, with one to four or more parts of starch or French chalk, is a good protective and antiseptic dusting powder. It may be combined with the oleate of zinc or other substances mentioned above. Creasote, carbolic acid, and similar substances may be added to dusting powders; but such applications should not be used until the disease is verging on the chronic stage. In the primary stage the simplest applications—as powdered starch, lycopodium, &c.—are often the best and least irritant. An extemporaneous mixture of these bland agents, with one or more of the mineral substances already alluded to, may be formed to suit the requirements of particular cases.

The neutral unguents, fats and oils, are excellent soothing and protective agents, and play an important part in the treatment of eczema: as benzoated and prepared lard, spermaceti, rumex, and simple ointment (B.P.), Galen's and cucumber cerate, mutton suet, beef marrow, white vaseline, lanolin, with one-

third of olive or almond oil, cod-liver oil, fresh olive and almond oil, &c. An excellent cooling and protective ointment is one recommended by Bulkley; it also forms a good basis for compound ointments. It is composed as follows:—℞ Aquæ rosarum, ol. amygdal., āā 10.0; ceræ albæ, cetacei, 1.0. This is similar to Neligan's ointment. It contains more oil and less water than cold cream. Solutions of glycerine are soothing applications—as a solution of one part of glycerine with two, four, or more parts of rose or elder-flower water, with or without a few minims of essential oil of almonds. The use of oils and fatty substances in the treatment of skin diseases is of ancient date. They may be used alone, but they are generally used as the basis for special medicaments. Although such neutral substances are generally soothing when applied to an inflamed surface, they sometimes have the reverse effect. Any kind of greasy application, however fresh and pure it may be, to the skin of certain eczematous subjects, irritates or singularly disagrees. In such cases lotions instead of ointments should be employed. Lotions being cleanly and easily applied, are favourite forms with many physicians in the treatment of eczema, and are preferred to ointments. Perhaps it may be stated, as a general rule, that lotions are best adapted to the papular forms and exuding stage, and ointments to the chronic stage of the disease, and in summer are more agreeable than ointments. Weak lead lotion is often of great service in the early stage of acute eczema; but it must be very weak, otherwise it may prove irritating instead of soothing. Half a drachm to a drachm of liq. plumbi subacetatis to a pint of poppy or mallow

decoction will make a lotion sufficiently strong to be used. Sometimes a weaker one than this is required. It may be used cold or warm, as already directed. If the latter, which according to my experience is the best, the wet lint or bandage should be covered over with oil-silk, gutta-percha, or some other impervious tissue, or with a well-larded piece of thin linen, which is less heating than the above-named coverings. The lead lotion will rarely fail, when continuously applied, to check the inflammation and soothe the inflamed surface; and it may be continued till the scaly stage, when a zinc or mild mercurial ointment may be used to complete the cure. When the inflammatory symptoms are severe, with profuse exudation, the following lotion will be found most serviceable—viz., one to four drachms of liq. plumbi subacetatis to eight ounces of elder-flower or slippery-elm* water, mallow or poppy decoction, and two drachms of glycerine. This is soothing, sedative, and mildly astringent; it allays inflammation, cools and soothes the inflamed irritable surface, and lessens the discharge. The latter effect is probably due as much to the alkaline reaction of the lead as to its astringent properties.

The sedative and astringent qualities of lead renders it well adapted as a remedy in the exuding stage of the disease, and few applications more relieve the irritability of an inflamed surface than a well-made warm bread-and-water poultice to which a little of the above lotion has been added. The lotion should be kept continuously applied to the affected surface. When irritation or itching is severe, equal parts of cherry-laurel or camphor water and poppy or other demul-

* The inner bark of *Ulmus fulva*.

cent decoction should be used with the lead solution, to which two or three drachms of laudanum may be added. A stronger lead lotion than the above is sometimes more effective in allaying the inflammation and relieving the distressing symptoms, as the following, liq. plumbi subacetatis, ℥iij-℥j; glycerini, ℥jss; aquæ florum sambuci vel aquæ lauro-cerasi, ℥iv. This is well adapted to cases where there is much heat of surface, with itching and free exudation. Chloroform, dilute hydrocyanic acid, or sp. camph. may be added if needed. Prussic acid is a good adjunct to a lead lotion.

But much stronger lead lotions than these have been recommended and successfully used in the treatment of eczema. Ringer recommends one consisting of two ounces of the solution of the subacetate of lead, two ounces of glycerine, and four of water. This, he says, is very useful in diffused eczema without weeping, but with excessive itching or tingling. A lotion of such strength is well fitted for the chronic local forms, as E. vulvæ, E. ani, &c. The following will often be found soothing in papular eczema—viz., ℥xx to ℥j of the solution of the subacetate of lead, ℥j to ℥ij of liq. carb. detergens, ℥jss of glycerine, and ℥viiij of distilled water. Solutions of the acetate and lactate of lead are favourite forms with some dermatologists. The latter is most useful when the exudation is profuse. A good formula for an extemporaneous lactate is given by Dr. Crocker—viz., solution of the subacetate of lead, ℥j; fresh milk, ℥ij; shake well together in a bottle. The glycerole of the acetate diluted with distilled water, one to four or eight, is a valuable application in inflamed exuding eczema; it may be diluted with glycerine

instead of water, but this may prove irritating. When a lead lotion is of proper strength and continuously applied, it will rarely fail to subdue the inflammation and check the discharge in acute and subacute eczema, and hasten the cure of the disease. Dilute hydrocyanic acid is one of the best adjuncts to a lead lotion in irritable inflamed conditions. The following compound lead lotion will be found at once cooling, soothing, astringent, and drying :

R Sol. subacet. plumbi	ʒj-ʒiv
Bismuthi nitratis	ʒij
Calaminæ (pur.)	ʒij-ʒss
Glycerini	ʒjss
Aquæ calcis,	
Aquæ florum sambuci, āā	ʒiv. Mix.

A lead and borax lotion—viz., ʒj of liq. plumbi, ʒj-ʒij of borax, ʒjss of glycerine, and four ounces of cherry-laurel and the same of orange-flower water, is very useful in papular and irritable forms of eczema. Camphor or rectified spirit may be added to the above, which increases its soothing qualities.

The preparations of zinc, the oxide and carbonate, are generally preferred as ingredients in soothing astringent lotions. Tilbury Fox and Startin give very good formulæ for their use. The former recommends, in *E. rubrum*, the following—viz., about half an ounce to an ounce each of oxide of zinc and finely levigated calamine, with two drachms of glycerine, and from six to eight ounces of rose or lime water. If glycerine irritates, almond emulsion should be used instead. This, with equal parts of lime, or cherry-laurel water and the oxide and calamine ingredients, forms an excellent soothing astringent application.

Chalk is a good addition to a zinc lotion, and is often used, as in the following or similar formula :

R Pulv. calaminæ prep.	. . . . .	ʒj	
Cretæ prepar.	. . . . .	ʒj-ʒij	
Acidi hydrocyan. dil.	. . . . .	ʒss	
Glycerini	. . . . .	ʒij-ʒiv	
Liq. calcis	. . . . .	ʒiij	
Aq. florum sambuci	. . . . .	ad ʒviij.	Mix.*

Very soothing and astringent.

The quantities of the absorbent and astringent ingredients in such lotions will, of course, be varied according to the existing conditions of the surface to be treated, and ten to twenty grains of oxide of zinc and the same or double the quantity of calamine to the ounce of rose water will often be sufficient.

These lotions are best adapted to those forms of eczema affecting the exposed parts of the body, as the face in papular eczema, and when the discharge is slight. It is often an advantage to add ʒss to ʒj of rectified spirit to one of the above lotions, and when they are used in the moist scaly stage of the disease the addition of ʒj of liq. carbon. detergens, or some other tarry preparation, or sulphur, will be found of service. Liq. plumbi is a good adjunct to a zinc lotion.

A little salicylic or boracic acid is a good addition to a drying lotion, as it prevents the discharge that may accumulate under the dressing from putrefying and so irritating the tender surface beneath. Bismuth alone, or with borax, lead, or prepared chalk with glycerine and poppy decoction, or lime and elder-flower water, forms an excellent sedative astringent lotion ; and lime water with equal parts of almond emulsion, elder-flower

* Startin.

or orange-flower water and glycerine, often proves a very soothing anti-pruritic application. Black or yellow wash is useful in allaying itching. White of Boston's treatment of acute and subacute eczema is highly recommended by many dermatologists. This consists of black wash of full strength or diluted with equal parts of lime water, being applied by means of a sponge or a piece of cloth to the affected parts for fifteen minutes at a time, and at intervals of four or six hours or so, allowing the powder to remain on, and then a little zinc ointment to be smeared over the surface. Dr. Duhring treats many cases of acute eczema in this way. Alkaline lotions are also of great service in the treatment of eczema, and are and have been much favoured by many dermatologists of repute. When of proper strength they allay the itching and irritation, and check the discharge by virtue of the law that alkalies increase the acid, but diminish the alkaline, secretion of glands. The eczematous fluid being alkaline, the application of an alkaline solution to the inflamed parts lessens the secretion into the papillary layer and rete, and thus diminishes the exudation on the surface of the skin. Alkaline lotions are sedative and healing when used weak. From two scruples to two drachms of bicarbonate of soda or potash to a pint of rose or elder-flower water, or poppy decoction with two drachms to half an ounce of glycerine will generally form a suitable lotion. Sometimes a weaker one answers better when parts are very irritable. The solution may be used cold or warm, and applied in the same way as directed for applications of water, &c. The alkaline lotions are most suitable to cases where the discharge is profuse, acrid, and irritating. Neligan

advised the diseased surface to be sponged over with a weak alkaline solution (bicarbonate of soda) before the renewal of any application, whatever its nature might be. He thought this contributed greatly to the cure of the affection. A borax lotion, \mathfrak{zj} - \mathfrak{zij} to the pint of mallow or other demulcent decoction, will also answer the same purpose, and the two may be combined together. Cyanide of potassium $\mathfrak{ʒj}$ - \mathfrak{zj} , and liq. potassæ \mathfrak{zj} - \mathfrak{zij} to the pint of elder-flower or rose water are useful applications when irritation and itching are extreme. The cyanide of potassium lotion to be kept in a dark place and used with care. Lotions of borax alone, $\mathfrak{ʒss}$ - \mathfrak{zij} , or combined, as stated above, with soda or with lead, oxide of zinc, alum, bismuth, salicylic or hydrocyanic acid, &c., with glycerine, and $\mathfrak{ʒviiij}$ of elder flower water or other soothing liquid, renders great service in the treatment of eczema, and especially in its pruriginous forms. Sp. vini rect. is an excellent adjunct to borax lotion or to any anti-pruritic remedy. A very good formula for borax along with other remedies is given by Tilbury Fox—viz., Borax $\mathfrak{ʒij}$, oxide of zinc \mathfrak{zij} , solution of subacetate of lead \mathfrak{zj} , lime water $\mathfrak{ʒvj}$ - $\mathfrak{ʒviiij}$. Mix. Many of the above remedies may be used in the form of glyceroles, Squire's glycerole of lead, bismuth, borax, &c. They are best adapted to an advanced or chronic stage when they can be painted over the affected surface, but they may be advantageously used in the more active stage by being diluted with distilled water (1-7) to the strength required.

When the surface is excoriated, glycerine should be used very much diluted or avoided, as it sometimes irritates. It is not a good ingredient in ointments in pustular eczema, as it only adds to the discharge.

Liniments are soothing applications in the early stages of eczema, and especially where a large tract of the cutaneous integument is affected, and the surface is raw, irritable, and excoriated. They should then be applied warm. In many cases they answer better than other applications, being very soothing and forming a perfect protective covering to the tender inflamed part. A very soothing and healing liniment is the well-known one made with equal parts of lime water and fresh olive, almond, or cod-liver oil. Oxide of zinc, bismuth, calamine, chalk, &c., may be mixed with the liniment. The following is serviceable:—Bismuth, ℥j; pure carbonate of zinc, ℥ss-℥j; salicylic acid, gr. x; lime water and olive oil, of each, ℥j. Mix. Or, Prepared calamine, ℥ij; oxide of zinc, ℥ss; lime water and olive oil, of each ℥j. Biett's formula is an excellent one in the inflamed papular form of the disease—viz., Extract of belladonna, ℥ij; lime water, oil of sweet almonds, āā ℥iv; carbolic acid, thymol, and such like antiseptics may be combined with the liniment. One part of white paint to two or more parts of olive or other oil is an excellent application when the surface affected is of limited extent. The paint should be made with olive, not linseed, oil. Applications partaking of the nature of a liniment, as Fraser's zinc cream, are soothing and effective. The sedative astringents, as carbonate of lead, preparations of zinc, bismuth, &c., may be suspended in olive or almond oil, and be freely applied to the affected parts by means of a feather or soft camel-hair brush, or by strips of lint or salve muslin well soaked with the preparation and accurately applied to the diseased surface. From ℥ss-℥j of pure calamine or ox. zinc to the ounce of oil to be

used. Dr. Thin's boracic ointment may be made to resemble a cream. It is composed of a saturated solution of boracic acid in glycerine or olive oil and white wax. This is useful when inflammation is severe and to correct offensive discharges.

Soothing astringent ointments are much used in the treatment of eczema. One of the most soothing and protective is the benzoated zinc ointment introduced by Wilson. Bell's formula is a good one.

The addition of grs. v to xv of the acetate of lead and grs. v to grs. x of powdered camphor to the ℥j of Wilson's ointment, forms an excellent application, when the affected parts are hot and painful. In moist eczema, accompanied by much smarting and troublesome itching, the following ointment will be found extremely useful, viz. :

℞ Liq. plumb. subacetatis	℥ss-℥j
Oleatis zinci	℥j
Acidi salicylici	gr. x
Pulv. camphoræ	gr. v
Ung. benzoini,	
Vaselini (albi), āā	℥ss. Mix.

Cucumber or Galen's cerate may be substituted for the lard and vaseline. Hydrocyanic acid, chloroform, or balsam of Peru may be added to zinc ointment when the itching is intense. The carbonate of zinc cerate of the U.S. Pharmacopœia, either alone or combined with equal parts of benzoated oxide or oleate of zinc ointment, is a most useful remedy. The compound cerate of lead and the cerate of the acetate are good cooling ointments, and are very useful when the parts are much inflamed, hot and excoriated. An ointment composed of grs. iv of carbonate of lead or

acetate of zinc to the ounce of cold cream (French Codex) was highly recommended by Neligan in the inflammatory stage of eczema. To allay tingling or itching he advised two minims of prussic acid to be added to the zinc ointment, and six minims of chloroform to the lead one.

The proportion of the lead and zinc prescribed is very small, but weak ointments often soothe where stronger ones only irritate. The quantity of the active ingredient in soothing astringent ointments must vary with the varying conditions of the parts to be treated. The stereotyped formula of the most eminent dermatologist will, in other hands, fail to cure—unless the condition of the affected parts are duly considered. When there is not much exudation, and the affected parts are hot, irritable and swollen, few applications give more relief than the compound lead ointment of the old London Pharmacopœia, softened a little with oil or vaseline, or the litharge ointment recommended by Hebra. A. T. Thomson gives a good recipe for a lead ointment which resembles Hebra's—viz., Lead plaster, two parts; almond oil one and a half part. He also recommends another excellent one—viz., one drachm of bicarbonate of soda, half an ounce of olive oil, and one ounce of compound lead plaster.

Lead ointments are very ancient remedies for skin diseases, and were much favoured by Pearson and the older dermatologists in the treatment of eczema. Pearson's ointment consisted of lead plaster, wax, and oil. There is an objection to the use of lead plasters owing to their tendency to cause a temporary staining of the skin. But when applied to the covered parts of the body this inconvenience need not be taken into

account. Kaposi modified Hebra's ointment, which is really an oleate, and is the same as the ung. diachyli of the London Skin Hospital. This is made of equal parts of lead plaster and vaseline. Unna gives a good formula for a lead ointment, viz.:

R Lithargyri	50.0
Aceti	80.0
M. Coq. ad consistentiam pastæ,	
Adde oleo lini	10.0 M.

The oleates of lead, zinc, and bismuth form excellent soothing astringent ointments. The oleate of zinc (ʒj-ʒij to the ʒj of vaseline) makes an excellent application when the parts are denuded, hot, inflamed, or exuding. It may be combined with the oleate of lead, or salicylic, or carbolic acid, as in the following:

R Oleatis zinci	ʒj-ʒij
Acidi salicylici	gr. x
Ol. ess. amygd. amaræ	ʒij
Glycerini	ʒss
Ung. benzoini	ad ʒj. Mix.

A very good formula for a zinc or bismuth and oleic acid ointment is one by Dr. Bulkley:

R Ox. zinci	ʒj
Acidi oleici	ʒij
Ung. petrolei	ʒij + ʒij
Ceræ alb.	ʒvj
Ol. rosæ	gr. vj. Mix.

Rub up the bismuth or zinc with the oleic acid and let it stand for two hours; place in a water bath, add the vaseline and wax, and when dissolved stir until cool and add oil of roses. Bismuth and boracic acid (ʒss-ʒj) to the ounce of cold cream or vaseline form good soothing and astringent ointments. The addition of

sp. vin. rect., acidi carbolici, or a tarry oil in very small quantities to a soothing ointment, is often of service. Dr. Duhring has treated many cases of eczema (sub-acute) with thymol. Like tar and other substances, this is stimulating when used in full strength, but sedative when used much diluted, as grs. v to grs. xx to the ounce.

In the chronic stage of eczema, more powerful astringent lotions and ointments are employed and stimulating applications must be had recourse to. Solutions of sulphate of zinc, acetate and nitrate of lead, alum, borax, boracic acid, tannin, hamamelis, &c., will be serviceable. In chronic scaly eczema of the scalp, the boracic lotion is often useful, such as the following:—℞ Acidi boracic., ʒj to ʒij; glycerini, ʒjss; sp. vin. rect., ʒiij; aqua flor. sambucæ, ad ʒviiij. Mix. The following is a good and agreeable lotion: one scruple of sulphate of zinc, one drachm of borax, one drachm and a half of alum, half an ounce of glycerine, and seven and a half ounces of rose or elder-flower water. Several glyceroles are employed at this stage and with benefit, as the glyceroles of tannin, acetate of lead, bismuth, aloes, borax, &c. These may be painted on the diseased part or used diluted with sp. vin. rect. or distilled water. The glyceroles may be used singly or be variously combined together. The zinc and other substances mentioned above may be used as ointments. Although eczema may be cured by lead, zinc, tannin, and other similar remedies, the more general practice is to employ mercurial preparations to complete the cure. The bichloride of mercury, in the proportion of grs. ij to ʒviiij of distilled rose or elder-

flower water or almond emulsion, forms a most effective lotion for the annoying itching in chronic eczema and for the cure of the disease. One to two drachms of dilute prussic acid may be added to it. This makes a powerful anti-pruritic application. Hardy recommended the bichloride to be combined with distilled water in the proportion of one to a thousand or twelve-hundred parts. For the relief of intense pruritus Trousseau advises grs. xij to the pint. The strength recommended by Niemeyer is one to two grains to the ounce of distilled water. This to be pencilled over the affected part twice daily. But strong solutions of corrosive sublimate should only be used to patches of limited extent, and should not be employed when the parts are excoriated and abraded. Black and yellow wash are valuable curative and anti-pruritic remedies, and various preparations of mercury are used in the form of ointments—as calomel, white and red precipitates, nitrate and yellow oxide, iodides and oleates, &c. Many practitioners rely chiefly on calomel ointment (ʒj to ʒj prepared lard or white vaseline) for the relief of the intolerable itching which generally accompanies chronic eczema, and the cure of the disease. Both Niemeyer and Hardy trusted in a great measure to mercurial preparations to complete the cure of eczema when it had reached the chronic stage, and were most successful in their treatment. The white precipitate and calomel were, as they are with others, their favourite preparations. But Hardy prescribed the calomel in comparatively small quantities, grs. v-x to the ʒj of lard; while Niemeyer used the white precipitate ointment of the same strength as the B.P., or ʒj to the ʒj. He also relates the cure of very obstinate

cases of eczema by its means, and also its extensive use without the supervention of any untoward constitutional symptoms. The small quantity of the precipitate to the ounce as prescribed by Hardy and others, would tend to support the opinion expressed by Rayer and endorsed by Hebra and others, "that the good effects of ointments composed of zinc and calomel doubtless depends to a great extent upon the fat which they contain, for their active ingredients are often very small." But that small quantity may be sufficient to arrest morbid action, promote interstitial absorption and excite the part to healthy action, and so cure the disease; results which would not follow the use of fatty substances alone in such conditions; therefore I am disposed to attribute the greatest share of the result to the active ingredient, so far at least as mercurial preparations are concerned. But lard, oils, and glycerine cream (Kaposi's) are most useful as lubricants, softening the rough, hard skin.

Five to twenty or more grains of white precipitate to seven drachms of benzoated zinc or lead ointment, and one of white vaseline, forms a good application at the beginning of the chronic stage of eczema. An ointment of grs. x to grs. xx of well-levigated yellow oxide of mercury, and ℥j of benzoated lard, or ℥vij of lanolin and ℥j of olive oil, is a valuable remedy in the chronic scaly forms of eczema, and especially when it affects the scalp. The oxide should be reduced to the finest degree of levigation before it is mixed with the excipient. The red precipitate of the same strength and carefully prepared as the above, is a favourite application with many dermatologists in chronic eczema. The nitrate of mercury ointment diluted

with prepared lard or vaseline, one to six or seven, is most useful in scaly eczema. Other preparations of mercury, as the oleate, 1 to 2 per cent. or more to the ℥j of prepared lard, and the iodides, grs. x-xx of the proto-iodide, and grs. v-xv of biniodide, to the ℥j of lard are most useful in limited patches of old standing.

The mercurial preparations may be advantageously combined together, as calomel or white precipitate with citrine ointment, and also with other remedial agents. A modified form of compound lead and mercury ointment much used at the Skin Hospital, Stamford Street, for the treatment of chronic eczema of the scalp, is given by Liveing—viz., acetate of lead gr. x, zinc ointment ℥ij, calomel ointment ℥j, nitrate of mercury ointment grs. xx, vaseline to ℥j; a stronger one may be employed. Another good formula for the same affection is the following:

R Bisulphuret of mercury	gr. vj
Red precipitate	gr. vj
Creasote	℥ ij
Lard or vaseline	℥j *

The sulphate of zinc alone or combined with the oxide is useful in the scaly forms of the disease.

An ointment of grs. xv to xx of nitrate of lead to the ounce of prepared lard or vaseline, is very serviceable in chronic eczema of the scalp or nipples. It may be combined with the nitrate of mercury ointment.

Sulphur, as an external application in chronic eczema, is a very old and popular remedy, but its power is variously estimated by different authors. Hardy extols its virtues, while others, as Tilbury Fox, give it only qualified praise; and many dermatologists

* Skin Hospital.

use it very sparingly and chiefly in the impetiginous forms affecting the hairy parts of the face.

Hardy's formula is eight to ten grains of flowers of sulphur to one ounce of the excipient. He thinks sulphur as well as mercurial ointments are more efficacious in proportion as the diseased parts are more atonic and the subject is of a scrofulous temperament, in whom it is necessary to excite and accelerate the reaction, always slow to be produced and ready to disappear. In my experience the best results have been obtained by the use of sulphur, and especially the iodide, or when combined with carbonate of potash, in patients of a cold, sluggish, lymphatic temperament, in the scaly and impetiginous forms of the disease, particularly that affecting the hands and the bearded part of the face. The iodide of sulphur, grs. x to grs. xx and an ounce of prepared lard, will form an effective ointment for the latter. The iodide of lead ointment of the same strength as the above is an excellent application in the scaly and chronic impetiginous forms of eczema.

Iodol and iodoform are of great service in the treatment of eczema, and especially in the pustular variety. They may be used as pigments with zinc, &c., or ointments. The disagreeable odour of iodoform may be disguised by balsam of Peru. It may be used as a lotion. Dr. Crocker's formula for iodoform or iodol ointment in pustular eczema of the scalp is grs. v to ℥j of vaseline or lard. Reynolds recommends the following in subacute eczema — viz., ℞ Pulv. iodoform., gr. x-xx; zinci ox., ℥j; ung. aq. rosa vel petrolati, ℥j. Mix.* Balsam of Peru has long

* *Chicago Medical Journal*, March 1884.

held its place as a remedy in eczema, and especially in its pruriginous forms. It may be used alone, and has been found curative in old-established cases, and its value for the relief of pruritu and the itching attending chronic eczema, is well known. It may be added to other ointments, as lead, zinc, mercury, or tar ones, or be used as a lotion.

Tarry preparations are very efficacious remedies in the dry, scaly, papular, and fissured (*E. fendillé*) varieties of eczema, and for the relief of the itching. They are best adapted to cases where the infiltration is slight.

Tar is a very ancient and popular remedy in the cure of eczema and other pruriginous diseases. The doctrine of Galen, which ascribed all diseases of the skin to an *acrimonia sanguinis*, led, as it is well known, to the neglect of this and other local remedies for cutaneous affections. Tar was forgotten for centuries, and it is only in comparatively recent times that its virtues as a curative agent in skin disease have been fully recognised. According to Hebra, Bateman and Wilkinson in England, Rayer, Cazenave, Girout, Gilbert, Devergie, and Bazin in France, and Hertwig, Kreig, Otto, Cless, Veiel, and himself, in Germany, have been instrumental in showing the remarkable efficacy of tar in the treatment of skin diseases, and which has doubtless led to its revival as a therapeutical agent. Dr. Billing, in his practical work, *The First Principles of Medicine*, p. 667, relates the case of an old woman in the Borough, who in 1815 had great celebrity for curing ringworm and other diseases of the scalp by means of a tar and grease ointment. Tarry preparations should not, as

a rule, be used until the exudation has ceased, or till the disease has approached the scaly condition, otherwise they will do harm, and may convert, by their over-stimulating property, a chronic into an acute attack of the disease. Sometimes a vesicular or acneiform eruption follows on their application, and symptoms of severe gastric intestinal and kidney irritation are sometimes observed to supervene on the application of tar to a large extent of diseased surface. To prevent the occurrence of these manifestations of the physiological action of tar, or to modify the symptoms, if they should occur, it is recommended to give diuretics, and especially acetate of potash, when tar is so applied. As the effect of a tarry application cannot always be known beforehand, it is always a safe plan to make a tentative trial of it first. This is best done by applying it at first to a small portion only of the affected part. If this application is well borne and with relief to the itching, and no sensation of tension or pain and no swelling of the part with increased heat and exudation supervene, the remedy may then be freely applied to the diseased surface. Should the application be followed by any of these symptoms, the treatment should be at once abandoned. Although tar, in one form or another, is now considered by many practitioners as the remedy, *par excellence*, for the cure of the pruriginous forms of chronic eczema, it is also a very efficacious remedy in cases where the pruritic element is not at all marked; and it may occasionally be used with advantage to cut short an attack which threatens to become chronic. There are several varieties of empyreumatic oils obtained by the dry distillation of different kinds

of wood—as the oleum fagi, oleum cadinum, and oleum rusci, and that made from coal-tar, &c.—which are used in the treatment of skin diseases. They are very much alike in their nature, and have a similar action when applied to a diseased surface, but they differ in colour and pungency of odour. Common tar, although quite as effective as any of the others, is objectionable on account of its dark colour. Some authorities prefer the oil of cade, others the birch oil, on account of its light colour and agreeable odour, and its being less irritating. These preparations can be used alone, or be combined in varying proportions with lard and other fatty substances to form ointments, with alcoholic solutions of soft soap, and with rectified spirit to form an alcoholic solution or tincture. Wright's liq. carbonis detergens is a well-known alcoholic solution. The tarry preparations may be combined with glycerine, as glyceroles, and with various oils to form liniments, or added to ointments of zinc, white precipitate, &c. The tar ointment of the British Pharmacopœia answers very well in some cases, but is a nasty application. A more agreeable ointment is one composed of 1 to 4 drachms of cade oil or birch oil, and 1 ounce of benzoated lard with 10 minims of essential oil of bitter almonds. One drachm of the oxide of zinc added to this forms an excellent application in scaly chronic cases. The zinc moderates the stimulating qualities of the tar. Alcoholic solutions of the tarry preparations, or those made with rectified spirit and potash soap (sp. saponatus kalinus of Hebra) are very effective and convenient forms for application. Niemeyer recommends picis liquidi, saponis viridi, āā ℥ss, alcohol ℥j. The following is a

very good application :—℞ Saponis viridi, sp. vini rect., ol. rusci, āa ℥j, ol. amygdal. ess. ℥x. Mix. These quantities may be varied as required. The liquor picis alkalinus of Bulkley is a good preparation. It is composed as follows :—℞ Picis liquidi, ℥ij; potassæ causticæ, ℥j; aquæ destillatæ, ℥v. Mix. To be used diluted. It may be used as a lotion or ointment. Diluted from ten or twenty times it acts as a sedative in acute conditions; in full strength anti-pruritic, and stimulating in chronic cases. When tarry preparations are used alone, they should not be merely smeared over the diseased part, but be thoroughly rubbed in by means of a pretty stiff brush once or twice daily. Devergie thought the oil of cade was more effective when well applied only every third day. The tarry oil may be applied frequently until the diseased surface is completely and thickly covered with it. The dressing should be left undisturbed. After the tarry incrustations have fallen off, if the surface looks redder and still itches, it should first be cleansed with thin gruel or egg solution, and afterwards covered over again in the same manner with the tar; and this process should be repeated until the cure is completed. The tarry surface should be well dusted over with lycopodium or similar substance, and then covered with a piece of soft lint. This prevents the tar being rubbed off by the parts opposed to the diseased surface.

On account of the dark colour of tarry preparations, their use is often objected to, especially by ladies, when the disease is situated on an exposed part of the body.

Kindred preparations to tar have been much employed, as white creasote, carbolic acid, &c. This latter is

thought by many observers not to have maintained its early reputation in the cure of skin diseases. This is the fate of many new remedies. That carbolic acid is not equal to the tarry preparations in the cure of eczema and for the relief of itching, may be conceded, yet it is a very reliable antipruritic in eczema, and especially in the papular form. It often fails to give relief to the distressing pruritis and to cure the disease, by being used in too weak a form. Still a weak solution should always be tried first before a strong one is used, and the effect watched. In cases of long standing, very strong solutions may often be used with advantage, as Hebra's concentrated one, in which water is omitted. The following is the formula :

R Acidi carbolici	5ij
Glycerini,	
Ætheris, āā	3j
Sp. vin. rect.	3vj. Mix.

A lotion of this strength is not caustic, and the author observes that he has often observed its value in cases of *E. squamosum* or *E. rubrum* affecting the face. Kaposi recommends a solution of carbolic acid of the strength of 1 — 200 as an effective anti-pruritic. The following is the formula :

R Acidi carbolici	1 part
Sp. vin. rect.	150 parts
Tinct. lavandulæ,	
Eau de Cologne, āā	25 „
Glycerini	2.50. Mix.

Useful in papular eczema. The affected parts are to be well bathed or dabbed with the lotion and then quickly covered over with a protective or other ointment.

There is a good formula for a carbolic lotion by Kilian

—viz., Acidi carbolicī, ℥j ; glycerini pur., ℥jss ; sp. vin. rect., ℥iv ; aq. ad ℥viiij. Mix. Useful in the squamose stage. But the strength of a carbolic lotion must vary, and the composition of it also, according to indications of treatment. It is often advantageous to prescribe the acid along with ointments.

Thymol may often be substituted for carbolic acid. Pure colourless creasote may be substituted for tar, especially in *E. faciei* or *E. manuum*. It may be used as an ointment, ʒi minims to the ounce, or as a lotion with glycerine and proof spirits, or added to ointments. It may be added to the spirituous solution of soap, or to kaolin, ℥xv to ℥j (Marshall), to form a dusting powder. Ichthyol is highly recommended by Unna of Hamburg as a remedy in eczema. It may be used as a lotion or emulsion or ointment, and of a strength from 5 to 50 per cent. He commences with a strong preparation and gradually reduces it. Ichthyol has a very disagreeable odour, which will always limit its employment. It has the power of lessening cutaneous hyperæmia, and is useful in the erythematous and scaly form of the disease. A 2 to 5 per cent. ointment with lanolin will be found serviceable. Ichthyol forms one of Unna's salve muslins, which is a good and effective mode of applying it. Naphthol has a similar therapeutic action to tar. It may be applied as an ointment (1 to 5 per cent.), or as an alcoholic solution (2 to 10 per cent.). It may be combined like tar with sulphur, zinc, or other ointments—as *R Naphtholi, sulphur. præ. āā 5.0, ung. zinci benz. 100.0. Mix (Unna)*. Used in indolent eczema. Resorcin has been much used by Cattani and others in the treatment of eczema, and especially in the impetiginous or scaly variety

affecting the scalp. One to two parts of resorcin to 100 parts of vaseline forms a good application in such cases. The resorcin should be dissolved in alcohol before being mixed with the excipient.

A few applications of this causes the crusts to dry up and disappear, leaving a rosy spot behind. Cattani believes that resorcin has a special affinity for epithelial tissue of the skin, improving its nutrition, modifying new formations, and destroying pathological new cells.* Its application may be followed by a severe attack of erythema. It may be combined with lead, zinc, sulphur, and other ointments, salicylic acid, iodoform, &c., and it forms the active ingredient in Ihle's paste, which is a valuable application in chronic scaly E. capitis.

Goa powder, or its active principle chrysarobin, is useful in old psoriasis-like patches of eczema. Its application is apt to be followed by a sharp attack of erythema. These preparations also stain the linen and skin. The powder may be applied to the eczematous surface, moistened with vinegar, or used as an ointment with vaseline (1 grs.—10 to 50), chrysarobin grs. 10—20 to the ounce of lanolin or prepared lard may be used. In old, dry, scaly patches of limited extent, Auspitz, traumaticin application may be used. Cashew-nut and chaulmoogra oil ointments are sometimes used in chronic cases, and phytolacca in very obstinate ones.

Pastes have of late years been introduced by Unna and others for the application of remedial agents to the skin. Those made with kaolin or amyli and vaseline or glycerine are intended to take the place of ointments.

One of the best known is Lassar's, which consists of zinci oxidi, amyli, āā ʒij; vaselini, ʒss; acidi salycilici

* *Journal Cutaneous Disease*, Dec. 1886.

10 grs. Misce leniter terenda fiat pasta. This can be applied to all parts of the body except the palmar and plantar surface of the hands and feet and eyelids. Unna's lead paste is a good application. His formula is as follows :*

R Amyli	10.0
Lithargyri	30.0
Glycerini	30.0
Aceti	60.0
M. coque ad	80.0

Stimulating remedies, as carbolic and salicylic acid, resorcin, &c., may be applied in this way. Ihle's resorcin paste consists of resorcin gr. x, lanolin, vaseline, ox. zinc, pulv. amyli, āā ʒij. Mix.

Unna also employs gum and dextrine pastes. His zinc and gum paste one is a valuable one :—R Zinci oxidi, amyli, glycerini, muc., gum. arab., āā 25.0. Useful in eczema of nipples.†

These pastes, according to Dr. Crocker, are of limited application, as they must be freshly made, and to obtain the best results Dr. Hardaway found that the physician must himself see to the application, as in the patient's hands they were not easily manageable.

Medicated gelatine, introduced by Pick of Prague as a substitute for ointment in the treatment of some skin diseases, is a valuable invention. Unna has simplified Pick's method, and his modifications of the latter's preparations are distinct improvements.

One of his most useful glycerine jellies is the following :

R Zinci oxidi,	
Gelatini, āā	10.0
Aq. destill.,	
Glycerini, āā	40.0 Mix.

* *Ekzem in Kindersalter*, Berlin, 1884.

† *Ibid.*

Another is the addition of 2 per cent. of sulpho-ichthyolate of ammonia (natri-sulpho-ichthyol) to the above. Before using, the jelly to be liquefied and then to be painted on the affected surface with a stiff brush and covered over with a "thin film of absorbent cotton-wool," or similar substance. The result, as Jamieson observes, "is a closely adherent pliant covering, which can be applied to a large area, is readily removed by bathing with water, and easily re-applied. When there is much oozing, the above author advises this to be lessened by the application of a boracic starch poultice for a day or so longer, and then the jelly to be used. Other means, of course, may be adopted instead of boracic acid. The gelatine jellies are only applicable to the latter stage of eczema. They may be applied to almost any part of the body, and whilst protecting the surface from atmospheric irritation they keep the medicament in constant contact with it.

Auspitz's plan of treating psoriasis with chrysarobin or pyrogallic acid is a great improvement on Pick's. This consists of one part of pure gutta-percha dissolved in ten parts of chloroform, then 10 per cent. of chrysarobin or pyrogallic acid is mixed in, and the emulsion painted on with a stiff brush. Dr. Crocker recommends the above, or Besnier's modification—viz., 10 per cent. chrysarobin in chloroform is painted on and then varnished over with traumaticin. This or Auspitz's plan is adapted to small, old, dry, scaly patches of eczema. White of Boston's plan of treating subacute eczema with black wash has already been alluded to. A method of treating locally chronic eczema, and which is often serviceable, is that lately introduced by Beissel of Aix-la-Chapelle, which consists in the application of

a one in ten solution of permanganate of potash to the afflicted surface from which the scales or crusts have been carefully removed by the aid of a cleansing liquid and properly dried. The solution is to be painted on, and the painting is to be repeated once or twice daily until a "black scale of the thickness of a sheet of paper forms over the eczematous spot." This mode of treatment, owing to the blackness produced, is limited to the covered parts of the body.

The hypodermic treatment of old chronic cases with much dermic and sub-dermic thickening, has been recommended. It may in some cases be attended with success, but I have had no experience of it. Electricity, as a local and general stimulant, is useful in cases accompanied with nervous debility. Its use restores the tone of the weakened tissues, and thus aids in the cure of the disease.

For the removal of the infiltration and thickening of the skin which attends chronic eczema, great reliance is to be placed in soft soap (potash) and preparations of caustic potash. Since Hebra showed the great value of the soap treatment in eczema, his example has been largely followed everywhere, but in no country, perhaps, has its use been more general than in England, where the soap treatment of scabies had been long in vogue, and which gave Pfeuffer the idea to extend that treatment (the English method) to psoriasis and other skin diseases. Hebra simply modified Pfeuffer's method.

It is curious that the soap treatment of skin disease should at first have been an English method, and afterwards be considered as a German one.

The soft potash or "green soap," or the alcoholic

solution of it, may be used. This may consist of two parts of soap to one of alcohol, to which may be added spirit of lavender or any other agreeable essence (*spiritus saponatus kalinus*), Hebra; or a weaker solution may be used, especially if the diseased surface is extensive or the infiltration but slight, as one ounce of soft soap, half an ounce of rectified spirit, and an ounce and a half of distilled water, adding to this a little oil of rosemary, roses, &c.

The soap to be employed "should be quite pure, of a greenish colour, perfectly homogeneous, of a syrupy consistence, and free from rancidity and gritty matter." A solution of it in *sp. vini rect.* should have no residuum.

There is a great deal of potash soap sold by druggists that is very impure and imperfectly made, and which is totally unfit for use. The soap, or its solution, should be thoroughly rubbed into the diseased parts once or twice daily. In general it may be allowed to dry on the eruption, or if the epidermic covering is very thick, with much infiltration into and thickening of the corium and sub-dermic tissues, a thin layer of soap should be spread on a piece of lint or flannel and applied to the diseased surface. This should be changed twice a day, and the part should be well bathed with cold or tepid water, to remove all the *débris* of exudation and macerated epidermis before the removal of the application.

The usual way of applying soap is by placing a bit of it, about the size of a walnut, upon a piece of flannel, and rubbing it well into the eczematous surface, "pressing firmly all the time," and dipping it from time to time in water, as Hebra

says, to make a lather. The application should be renewed daily or twice a day, and be continued for several days—three to six; and then suspended for two or three days, the diseased surface being covered during the suspension with a thin layer of soap, as directed above. At the end of this period, should the affected part still remain itchy and infiltrated, and the surface be very red, punctured, and exuding, the treatment should be renewed and continued till these conditions disappear and a cure is effected.

Instead of this mode of procedure, the eczematous patch may be dried after each rubbing in of the soap, and then covered with lint soaked in olive, almond, or cod-liver oil, or with litharge, zinc, or other soothing ointment, as a protective covering and to aid in the cure; the part being cleansed and dried before the application of the ointment.

When considerable excoriations follow the application of the soap, its use should be discontinued till they are healed, using the above or similar remedies the while. Besides the partial and direct application of the soap, it may, in cases of general or universal eczema, be rubbed over the whole body, and the patient afterwards be wrapped in blankets, after the plan of Pfeuffer. The soap treatment is not now so extensively adopted as formerly, owing to the discovery of other and equally effective and more agreeable modes of treating chronic eczema. Still it is a good plan when the disease is confined to the lower limbs, palms, &c., and is of limited extent. When the eczematous patch is small, but is extremely itchy, infiltrated, thickened and hardened,

and in obstinate cases which have resisted the tar, soap, or other modes of treatment, the application of caustic potash solution should be had recourse to. A solution of two to five grains to the ounce of distilled water is generally sufficiently strong to use. But more concentrated solutions are often required, as $\zeta\text{ss}-\zeta\text{j}$ of caustic potash to ζj of water; or ζj of the caustic to ζiij of water—Hebra's *ultimum refugium*.

The weak solutions may be applied daily, or twice a day; and if the pain caused by the application is severe, the solution should be speedily washed off with cold or tepid water. The solution is best applied by means of a large or charpie brush and then well rubbed in with a piece of flannel dipped in water, until a good lather is made, and the red points appear on the diseased surface. The part may be covered with a wet compress, or ointment or oil. The oily application prevents the skin from becoming brittle, which is apt to follow the application of caustic potash when used alone. The strong solutions of the caustic should only be applied by the medical attendant himself, and only once a week. The strong concentrated solution should be applied quickly and evenly over the affected surface with a large or charpie brush, and the part should be immediately bathed with cold water, and afterwards covered over with cold compresses to allay the intense pain which usually follows the application. The water-dressing should be continued for a week or so, and until the raw places, caused by the caustic application, have healed. Then the application is to be applied again, and the process is to be repeated at

the end of every week, until the itching and exudation have ceased and no more red minute points appear on the surface of the affected part. An application of the strength of Hebra's solution rarely fails to cure an obstinate form of limited eczema, but the pain it occasions is often so overpowering that many patients refuse to allow a second application of it, and sometimes a patient never returns to consult the prescriber again.

I have seen the most satisfactory results from the application of liq. potassæ. It does not cause so much pain as the concentrated solutions just alluded to, and its repetition is rarely objected to by patients. Other caustic remedies are also of service, as chloride of zinc, nitrate of silver, iodine, &c. These may be used instead of caustic potash in similar chronic forms of eczema.

Preparations of iodine and mercury are extremely useful when there is much inflammatory thickening of the affected parts. By their stimulating and alterative properties they exert a powerful influence over the disease, rousing the activity of the absorbents and stimulating the diseased parts to healthy action. The tincture of iodine may be brushed twice daily over the eczematous patch, or a solution of grs. v of corrosive sublimate to the ounce of water. The red or yellow iodides of mercury ointment will answer remarkably well.

Strong solutions of nitrate of silver, grs. xx-ʒss to the ʒj of water, render good service in chronic cases of eczema; and when the disease is of very limited extent with much thickening of the skin, pencilling the slightly moistened surface over with the solid

nitrate is often followed by good results. Many English, and most of the French, dermatologists condemn the use of caustic preparations in eczema. But when these remedies are properly applied, there is no doubt whatever of their very great utility in the treatment of obstinate chronic forms of the disease. Blistering the affected part is a favourite and effective mode of dealing with an old eczematous patch, and is one of the best means of causing a chronic eczema to revert to the subacute form, which is necessary to a cure of the affection.

Cazenave recommended blistering in chronic impetigo, and it was a favourite mode of Professor Syme of treating an old callous ulcer; by which means the inflammatory thickening of the skin surrounding the ulcer and preventing its healing was got rid of, and the diseased parts were also stimulated to healthy action.

Blistering may be effected by many different means. The best plan is the application of acetum cantharidis, liquor epipasticus, or Brown's cantharidin plaster cut into small pieces, to the diseased surface. The part should afterwards be dressed with zinc, salicylic, or a mild white precipitate ointment. Tilbury Fox did not favour the use of caustic applications and blistering in the treatment of eczema. He remarks (p. 195): "Some dermatologists use potassa fusa, iodide of mercury, or iodine, to cases of chronic eczema with much thickening. But I do not recommend these; and we must remember that we may lose our patient very readily if we use very violent measures [a very sensible remark]. I do not for this reason very much like blistering. Mr. Gay tells me, however, that in

his hands it has proved most beneficial ; and he is not singular, I am aware, in his experience." He, like many other distinguished dermatologists, obtained success in the treatment of eczema by the skilful use of milder remedies, and these should, as a rule, be first tried before recourse is had to more heroic ones. For the removal of thickened epidermis, Unna's method of applying salicylic acid muslin plaster is a very effective one and easily carried out. The plaster is to be applied every two or three days to the affected part. In a short time the whole of the thickened epidermis may be removed, peeling off like pieces of paper. The denuded surface is then to be dressed with some soothing healing ointment.

Bandages of india-rubber, or thin sheets, or gloves of same material, may be used. These protect the surface from external irritants, and by preventing evaporation cause the thickened cuticle to be constantly acted on by the exhaled fluids, which soften it and admit of its being easily removed.

Dr. Crocker recommends the constant application of a pancreatic emulsion on lint to the affected part. He says this disintegrates the cuticle, and much facilitates its removal. Papain, pepsin, and similar preparations have been used for the removal of the thickened cuticle.

Anti-pruritic Remedies.—These are of signal value in the treatment of eczema, and in all stages and varieties of the disease, but more especially in the papular form of the affection. This, when it occurs in young children, may often be checked at an early period by the application of appropriate anti-pruritics, which allay the intense itching, and consequently prevent the scratching which its presence evokes.

Tar and its preparations are reliable anti-pruritic remedies in the chronic stage, when they act as stimulants; but they may often be employed with advantage as sedatives at an earlier period of the disease, by being used very weak—as \mathfrak{mij} to \mathfrak{to} \mathfrak{mv} of oil of cade to an ounce of lead or zinc ointment; or \mathfrak{mx} to $\mathfrak{3j}$ of tincture of tar or liq. picis alkalinus or tar-water to a zinc or calamine lotion. Liq. carbon. detergens being an alcoholic solution of tar, can be used in the same way, as an adjunct to ointments or lotions. From $\mathfrak{3j}$ to $\mathfrak{3ij}$ with glycerine in $\mathfrak{3viiij}$ of water, is about the proper strength to use in subacute conditions. Proof spirit may be added. Carbolic acid is one of the most reliable anti-pruritics we have, and is invaluable in the treatment of papular eczema. It is stimulating or sedative, according to the strength used. As a sedative and for the relief of pruritus in the early period of papular eczema, it may be used in the proportion of one part to two or five hundred of water. It is best combined with rectified or other spirit, as in Kaposi's formula, already given. A little glycerine ($\mathfrak{3j}$ – $\mathfrak{3ij}$ to $\mathfrak{3viiij}$) should be used.

Terebene and menthol are sometimes employed as anti-pruritics in the chronic stage of eczema.

The alkaline carbonates in solution are much used as anti-pruritics in the early stage of eczema, formulas for which have been already given.

Borax is a good anti-pruritic.

The following is Startin's formula for its use, along with carbonate of ammonia:— \mathfrak{R} Borax, carbonate of ammonia, \mathfrak{aa} $\mathfrak{3jss}$, glycerine $\mathfrak{3j}$, dilute hydrocyanic acid $\mathfrak{3ij}$, water $\mathfrak{3xvj}$. Mix. To be used diluted one to four times.

Salicylic acid is a good anti-pruritic, and may be used alone or combined with borax or other remedies.

Hydrocyanic acid is a valuable sedative anti-pruritic, and is especially useful in the vesicular and pustular forms of eczema. It may be used as a lotion (ʒj-ʒij to pint of elder-flower water), or added to lead, zinc, or other ointments—ʒv-ʒx to the ʒj. It is an excellent adjunct to a borax or lead lotion, and is often combined with corrosive sublimate in the treatment of pruritic chronic eczema, as in the following well-known formula:—R Acidi hydrocyanici dil., ʒj; hydrarg. perchlor., gr. j; emul. amygdal. amar., ʒvj. It was extensively employed by Plumbe in impetigo. He thought it possessed great curative as well as anti-pruritic power in this affection, and prescribed it of the strength of ʒiij to ʒviij of distilled water and ʒss of sp. vin. rect. His practice and mode of application has been followed by Burgess and many others. Used in the strength stated, Plumbe did not observe any untoward results to follow. It is perhaps not so reliable an anti-pruritic as carbolic acid in papular eczema, but is superior to it in the early stages of the other forms, and when used in combination with lead, as in the following formula, it contributes greatly to the soothing of the irritable inflamed surface, the arrest of the inflammation, and cure of the disease:—R Liq. plumbi sub., ʒj-ʒij; acidi hydrocyan. dil., ʒj; glycerini, ʒss; aquæ flor. sambuci, vel aquæ destillatæ, ʒviij.

Chloroform is sometimes employed as an anti-pruritic in eczema, more often in pruritus. It was highly recommended by Neligan. He advised ʒiv or ʒv to be added to the ounce of zinc or lead ointments or cold cream. It may also be added to a lead, borax,

or mercurial lotion, ℞xx-℞xxv to ℥vj. A little smarting often follows on its first application, which soon subsides, leaving the parts soothed and comfortable. I have found it most serviceable in irritable papular eczema, when used along with proof spirit, one part to three, and sopped or sponged over the affected surface.

Rectified spirit, sulphuric ether, eau de Cologne, and similar alcoholic preparations are much used as anti-pruritics. They are also employed as mediums for the application of carbolic acid and other agents, and add to the pruritic power of these. Sp. vin. rect. used alone, often allays the itching in papular eczema, and it is an excellent addition to a zinc, lead, borax, or other soothing astringent lotion.

Hamamelis (witch-hazel) has been found useful as a lotion in pruritic eczema, and, according to some authorities, it has been used successfully in *crusta lacteæ*. The tincture may be added to lotions or combined with ointments.

Camphor has been long employed as a soothing agent in eczema. It may be added to dusting powders, to relieve the burning heat in acute eczema, or to soothing and astringent ointments (℞v-℞x to the ℥j), or to stimulating ones. It may be used in solution, as camphor water. This, with liq. plumbi forms a good cooling lotion in inflamed conditions. The spirit of camphor may be added to a zinc or other sedative astringent lotion. It forms a valuable soothing application when combined with chloral hydrate in equal parts. This usually causes a certain degree of smarting at first. The addition of powdered starch to camphor and chloral forms a good paste,

which is easily applied to the pruritic surface, as the following:—R Pulv. camphoræ, chloral hydr., āā ʒj. Rub together until liquid, and incorporate with pulv. amyli, ʒj-ʒij. Keep tightly closed in a wide-mouthed bottle. To be well rubbed in with the hand (Bulkley). Instead of powdered starch, Galen's cerate or benzoated lard may be used, and a little of the ointment may be smeared gently over the affected surface. *Rhus toxicodendron* has been recommended as an anti-pruritic in chronic eczema. Condyl's fluid is sometimes useful as an anti-pruritic in chronic eczema. It may be diluted or applied the full strength.

Baths, both simple and medicated, are of great service in the treatment of eczema, especially in the second and chronic stage. As a rule, warm or vapour baths are not advisable in the early stage of eczema, as they tend to increase the hyperæmia and do harm. But in the subacute and scaly forms of the disease they may be employed with advantage. The vapour bath should be used at a low temperature (85° to 95° F.); and the cold douche bath was highly recommended by Hebra in chronic eczema. Wet-packing is useful for the removal of scales and relief of itching. Emollient baths are of the highest value in all erythematous, pruritic, and scaly conditions. The proportion of the emollient substances used, to twenty or thirty gallons of water, in University College Hospital baths, as given by Tilbury Fox, is as follows: (1) bran, 2 lb. to 6 lb.; (2) potato starch, 1 lb.; (3) gelatine, 1 lb. to 3 lb.; (4) linseed, 5 lb. to 7 lb.; (5) marshmallow, 4 lb.; (6) size, 2 lb. to 4 lb. Alkaline baths are made with bicarbonate of soda ʒij to ʒx, carbonate of potash ʒij to ʒiv, borax ʒiij to the

same quantity of water. The alkaline and emollient baths may be combined together. Useful in inflamed, irritable, and exuding eczema.

Sulphurous baths may be used in old chronic scaly eczema, and are often of service in suitable cases. Oil-packing is useful in highly inflammatory and irritable conditions. It is a good plan to anoint the body quickly with fresh olive or almond oil as soon as it is dried on coming out of a warm, alkaline, or other bath. This is protective.

Various medicated soaps are recommended in the treatment of Eczema—as tar, carbolic, salicylic, &c. They are useful as adjuvants and for cleansing purposes in the scaly forms of the affection.

GENERAL SUMMARY
OF
LOCAL TREATMENT OF THE VARIOUS
FORMS AND VARIETIES OF ECZEMA.

E. Vesiculosum.—In the primary stage of eczema simplex depending on a local cause, as heat, irritant dyes, &c., the exciting cause is to be removed or avoided and the affected parts are to be bathed with a soothing liquid, then dried with a soft cloth and quickly covered over with one or other of the dusting powders to completely exclude the air; or the zinc and calamine lotion or bismuth lotion may be used instead.

If the parts are hot, swollen, and exuding, the constant application of the lead and mallow lotion will answer better. This may be used hot or cold, and if pain or itching is severe, laudanum, camphor, or dilute prussic acid may be added to it. One or other of these lotions is to be continued till the period of squamation, when the application of an oleate of zinc, or lead and vaseline ointment, will generally suffice to effect a cure, which may often be hastened by the addition of a few grains of calomel or white precipitate or carbolic acid, or ℥j of liq. carbon. detergens to the ounce of salve.

The erythematous form of eczema may be treated similarly. The constant application of the calamine, or compound lead and calamine, lotion in the early stage of the disease will always be of service, and sometimes cut it short. If there is pain, bathing the affected surface with poppy decoction before each renewal of the dusting powder will do good. When itching is troublesome, rectified spirit, tincture of camphor, or carbolic acid may be added to the lotion.

Sometimes a soothing astringent ointment suits better than lotions, as Wilson's benzoated zinc ointment, or the lead and calamine one, to which carbolic acid or thymol may be added. In the latter stage boracic acid, white precipitate, with or without a little tarry oil or carbolic acid, will generally suffice to effect a cure.

Papular Eczema.—The constant application of a lead, zinc, or bismuth lotion at the commencement of an attack will always moderate the severity of the inflammatory symptoms, and not unfrequently abort the disease. The itching is the most troublesome factor in this form of eczema and demands special remedies. Weak preparations of tar (as ℥j of liq. carbon. detergens to ℥vj or ℥viij of distilled water), carbolic acid, and similar agents used in chronic eczema, are here of signal service, and may be used at an early period of the disease. Spirit of wine and ethers are also useful, and it is an advantage to employ these along with carbolic acid, as in Kaposi's formula. This is to be well sponged or sopped over the affected part when itching is troublesome; the part to be afterwards covered with a protective salve. The weak carbolic acid solution with

glycerine often answers well. The borax and lead lotion is useful in this variety.

In the chronic stage the stronger tar and similar preparations are to be employed, as the oil of cade ointment or a spirituous solution of tar, Hebra's carbolic acid lotion, Wright's detergent, with equal parts of alcohol, &c.

Impetigo.—In the early stage, soothing applications are alone admissible. The affected parts may be bathed with one of the soothing demulcent decoctions, and these are most soothing when used warm; then the parts are to be softly dried and the pustular eruption smeared freely over with cold cream, benzoated lard, vaseline, or other neutral and protective unguents; or a starch or bread poultice may be used, and which is made more sedative by the addition of a little lead lotion with laudanum or tinct. conii.

Some dermatologists advise that no therapeutic means be used till the disease has reached the squamous period, especially if the disease affects the bearded parts of the face. The great object of treatment is to soothe the inflamed surface and carry the disease quickly on to the squamous stage, and then by the application of astringent and other remedies to complete the cure. The plan above described will often succeed, or a very weak ointment of carbonate of soda, grs. v to ℥j of cold cream, or the same quantity of acetate of lead, or one composed of grs. ij-v of iodol or iodoform to the ounce of cold cream or cucumber cerate, may be used night and morning; and after the pustular element has ceased, the application of an oleate of lead, zinc, or tannin ointment, or a mild mercurial one, will generally suffice to complete the cure. Tarry prepara-

tions and sulphur are often of use, and may be combined together. The bisulphuret of mercury, as in the formula given, is a good remedy in the chronic scaly stage, especially when the disease is seated on the scalp. When the disease affects the bearded part of the face, after the crusts have been removed and the part shaved, the application of diachylon, oleate or benzoated oxide of zinc, or dilute citrine ointment, give the best results. Hardy's formula for the latter is a very good one—viz., 30 grams of cold cream or rose ointment, 2 to 4 grams of dilute citrine ointment, and 20 to 50 centigrams of camphor. A good plan is White's—that is, to bathe the parts with black wash and afterwards apply oleate of zinc or other ointment.

E. rubrum.—This acute inflammatory form requires the most careful attention and the avoidance of everything likely to irritate and do harm. The most soothing applications only should be used and their effect attentively watched. If the parts are much inflamed and accompanied with burning heat and painful tension, they should be bathed with soothing demulcent infusion—mallow, poppy, or Bateman's, with carbonate of soda—and afterwards covered with a pledget of lint moistened with cold, soft, prepared water, or with the cold infusion; this to be kept constantly wet, and never allowed to become warm or dry. Sometimes hot fomentations will be more sedative than cold, and are more usually grateful to the patient's feelings. The weak acetate of lead lotion continuously applied in the same way will generally give great relief, and especially when used warm. In some cases the use of dusting powders or drying lotions will answer best.

When inflammation is severe and there is much

discharge, the lactate or acetate of lead or the compound lead lotion will be of the greatest value. One or other of these to be constantly applied till the period of squamation, when the employment of the oleate of zinc, lead, or bismuth ointment, or calomel, or white precipitate ointment with or without the addition of a preparation of tar or similar agents, will in general complete the cure. Care to be observed in the use of tar and its compounds and analogous remedies.

E. squamosum.—The stimulating and penetrating applications are to be used here. The benzoated zinc ointment with liq. carb. detergens (ʒj to ʒj) will often suffice for the milder forms, or boracic and carbolic acid, tannin, sulph. zinc, and mild mercurial ointments, may be used. In the more obstinate forms the stronger mercurial preparation, as the oleate or red precipitate, tar, caustic potash, soap, resorcin, blistering, &c., will be required.

E. fendillé.—The best application is the ol. rusci or cade. It should be well rubbed in with a stiff brush twice a day. Between each application a soft protective salve should be applied to the diseased surface.

TREATMENT OF LOCAL FORMS OF ECZEMA.

E. capitis.—When this occurs in children the hair should be cut short with a sharp pair of scissors, and it should be kept short during the continuance of the disease. This facilitates the more effective application of certain remedies, as the tarry preparations, to the affected parts. Cutting off the hair, however, is not an essential procedure, and in the case of men and

women the hair need not be interfered with, although some authorities recommend it to be cut short. Shaving the head is unnecessary, unless in very old chronic cases, when it is desirable to blister or apply tincture of iodine or similar remedies to the diseased surface.

The crusts should be removed by the means already mentioned. Their removal, when entangled amongst the long hair of women, may be easily effected by the liberal use of warm oil, and the frequent sponging of them with a warm, weak solution of carbonate of soda and glycerine. When they have been softened and loosened by these means, they are readily removed by the careful use of the comb. After removal of the crusts the scalp should be well washed with soft potash soap, or bathed with one or other of the cleansing liquids already alluded to, and afterwards it should be well douched with cold or tepid water, to remove all débris of diseased or other products, and subsequently dried. The parts should then be dressed twice daily with one of the following ointments: Carbonate of lead, grs. x-xx to ʒj; the compound acetate of lead and benzoated zinc; or the oleate of zinc. In the case of children this should be applied and kept on in the way already directed. Should the flannel or other appliance used to maintain the dressing in constant contact with the affected parts keep the scalp too hot, thereby increasing the congestion of the skin, they should be dispensed with, and the ointment be frequently smeared over the diseased surface, or applied by means of a soft brush. When the disease has advanced to the squamous stage, grs. v-x of white precipitate or calomel may be added to the ointment, which will often suffice to complete

the cure. Sometimes the white precipitate calomel or nitrate of mercury ointments, used alone or in combination, answer better; and if the disease appears to linger, the addition of carbolic acid, thymol, or similar agents, to the mercurial ointment, will be of advantage, as in the following formula: grs. v to grs. xv of white precipitate, ℥ss-℥j of nitrate of mercury ointment, grs. x of carbolic acid, or grs. x of thymol, or ℥x oil of cade, ℥ij of oil of bitter almonds, and ℥j of benzoated lard. Sometimes the carbonate of soda or potash ointment, with or without borax, answers better than lead or zinc ointments. These should be applied in the usual way. Camphor, chloroform, hydrocyanic acid, oil of bitter almonds, &c., may be added to them, if required. The alkaline ointments are valuable applications both in the vesicular and impetiginous varieties of the disease; but in some cases all sorts of ointments and greasy applications disagree, when recourse should be had to lotions. The drying lotions should not be used, as they give a disagreeable appearance to the hair. Lotions of carbonate of soda, potash, or borax are useful in the exuding stage of the disease. Liq. carbon. detergens, carbolic and boracic acids, form good lotions in the latter stages. The following is an excellent application in irritable forms of the affection:—℞ Boracis, ℥j; liq. plumbi diacet., ℥jss; sp. camphoræ, ℥jss; glycerini, ℥ij; dec. althææ, ad ℥vij. Mix. When the hair is cut short, strips of lint, wet with the lotion, should be applied to the affected part, and covered with some impermeable tissue or greasy cloth. The application of nitrate of silver solution is useful in restraining exudation, and carrying the disease on to the dry and

scaly stage. In acute pustular E. capitis, only the very mildest and most soothing remedies should be used. The free application of pure fresh almond or olive oil, or Galen's cerate, to the pustular eruption, is often the best treatment to be adopted in the early irritable stage. A very weak ointment of carbonate of soda, grs. v to $\bar{3}j$; of liq. plumbi, $\mathfrak{m}x$ to $\bar{3}j$; or of iodoform, grs. iv-vj to $\bar{3}j$, or similar pus-destroyers—may be used. To allay irritation it may be necessary to bathe the parts occasionally with one of the soothing alkaline decoctions already named, or to apply a starch or bread poultice, sprinkled with a little liq. plumbi diacet. or laudanum. When the disease has advanced to the squamous stage, astringent applications should be used, as the stronger lead, oxide of zinc, and tannin ointments. The latter is an excellent remedy, and is a favourite with many practitioners. At this stage the application of an ethereal solution of nitrate of silver (grs. x- $\bar{3}j$) to the diseased surface, twice daily, is attended with good results, and the glycerole of tannin, of full strength or diluted, may be applied in the same way. These means, or the use of mild mercurial ointments, will generally succeed in curing the disease. Scaly eczema of the scalp, which may have persisted from the commencement, is best treated with a mild tarry preparation, as liq. carbon. detergens with lead, as a lotion, or with zinc, as in the following:— \mathfrak{R} Liq. carbon. detergens, $\bar{3}j$ - $\bar{3}ij$; zinci oxidi, $\bar{3}j$; camphoræ, grs. x; ungu. benzoinatum, $\bar{3}j$. In the more chronic and obstinate forms of the affection the oleate of mercury, red precipitate, and especially the yellow oxide of mercury ointments, will be found most valuable remedies. Nitrate of lead alone, or com-

bined with the nitrate of mercury ointment, in the proportion of grs. x-xv of the former to ʒss-ʒj of the latter to the ounce of prepared lard or lanolin is a serviceable remedy in these cases. Boracic acid ointment and resorcin have been successfully used in chronic eczema capitis. The latter may be combined with iodoform and salicylic acid, grs. x of each to the ounce of the excipient. Ihle's paste is a good remedy in such cases. Great reliance is to be placed in the preparations of tar and the spirituous solution of soap in the treatment of chronic forms of the disease. Hebra's tinct. saponis viridis cum pice, Niemeyer's alkaline spirituous solution of tar, or the liq. picis alkalinus, will, if properly applied, generally effect a cure. Tarry preparations are better applied in the liquid form than in ointments to the scalp, and are more easily removed. Sometimes a combination of tar with a mercurial preparation will be more effective than when either is used alone. One to four drachms of ol. rusci or cadinum to ʒj of white precipitate or calomel ointment, forms an extremely valuable remedy in obstinate cases. The application of tincture of iodine to the old dry patches of E. capitis is often of use. In many cases of long standing, blistering the affected part with liq. epipasticus or other vesicant, is an excellent plan and often effects a cure. Epilation may be required in some cases. It is easily performed, and facilitates the cure.

E. faciei.—In the acute stage, one of the soothing decoctions or infusions already mentioned should be used along with one or other of the dusting powders. If the disease assumes the erythematous or papular form, the constant application of the lead and

mallow lotion, or the oxide of zinc and calamine, or other astringent lotion, to the affected part will generally be attended with good results, and will sometimes cut short the attack. The same remedies will be useful in the vesicular variety of the disease, and will, if properly and continuously applied, conduct the case quickly to the healing or scaly stage.

If the disease has reached the stage of incrustation when first seen by the medical attendant, the crusts having been removed, and the part cleansed and dried as directed, the diseased surface should be dressed twice daily with the oleate of zinc, Wilson's ointment, the compound lead, zinc and bismuth, or boracic acid ointment. When there is much heat or itching present, the following ointment will be found useful :

R	Liq. plumbi subacetat.	. . . . .	ʒss
	Zinci carbon. pur.	. . . . .	grs. xv-xxx
	Pulvis camphoræ	. . . . .	gr. v-x
	Ol. amygdal. amar.	. . . . .	ʒ ij
	Ung. benzoin., cerati cucumi vel Galeni	ʒj.	Mix.

The ointment to be applied as directed and kept in close apposition with the diseased surface. The use of one or other of the above ointments may be followed in the latter stage of the disease by the employment of white precipitate, calomel, or other mercurial preparation, to which a little carbolic acid, thymol, or one of the tarry oils may require to be added to complete the cure.

Alkaline lotions often answer better than ointments, and especially the weak solution of caustic potash (ʒj to the pint of poppy or mallow decoction), in the impetiginous form of the affection. When the affected

parts, are excoriated, exuding and itchy, Fraser's zinc cream is an excellent application. It is made by adding oxide of zinc (ʒss) to wax and oil whilst cooling in making cold cream, and subsequently incorporating with it borax (ʒss) dissolved in ʒijss of rose, orange-flower or other medicated water.

The linimentum calcis, made with fresh olive oil, used alone or combined with oxide of zinc, calamine, bismuth, or chalk, is a good application in such conditions. It is protective, soothing, and healing. The glyceroles of lead and bismuth are valuable applications in subacute and chronic states. The former is the most sedative. It may require to be diluted with distilled water, 1 to 4, or according to the condition of the affected part. It may be added to cold cream or benzoated lard (ʒj to ʒj) to form an ointment, which should be applied to the parts in the usual way. Tannin in solution alone, or combined with sulph. zinc. and sp. vin. rect., as in the following formula, is a good remedy in the chronic stage when astringents are needed:—R Tannin, ʒij; sulphate of zinc, gr. xx; glycerine, ʒiij; rose or orange-flower water, ad ʒviij. Mix. It may be used as an ointment (ʒj to ʒj) or a glycerole. Pyrogallic acid, grs. x to the ʒj of prepared lard or vaseline, is a favourite remedy with many authorities in the treatment of chronic eczema of the face. Solutions of corrosive sublimate are very useful in this disease. A very strong solution (grs. ij to ʒj) should only be applied to limited patches, and be carefully pencilled over them two or three times a day. The diseased surfaces should be properly prepared, by cleansing and drying, before the application of the corrosive solution.

Few remedies give better results in this local affection when the disease is of very limited area, and the affected parts are infiltrated, exuding, and itchy, than the solution of caustic potash, as recommended by Anderson (፬j-፮ss to the ፮j), applied twice daily in the way already described. The tarry oils are also useful in this form of eczema, but are objectionable on account of their colour. Carbolic acid or Wright's detergent may be used instead. A solution of carbolic acid of the strength recommended by Hebra, and used twice daily, or the use of the spirituous solution of soap, will often effect a cure in chronic cases accompanied with thickening and itching of the affected parts. The application of the acid requires careful watching, as the skin of the face is easily irritated.

When E. faciei occurs in infants, it is not enough to cover the face with a mask or other appliance, and muffle the hands, and clip the finger-nails short. The arms should be kept fixed by the side of the body, or held by a proper light surgical apparatus which would prevent the child from reaching the face with his hands and scratching, and often tearing the inflamed surface. Hebra, while pointing out the evils of scratching, very inconsiderately, in my opinion, advises the child suffering from E. faciei to be left free to scratch *ad libitum*. In all cases, whether in children or adults, scratching is a great cause of aggravating the disease, and should, if possible, be avoided. The desire to scratch is often irresistible, and the pleasure it momentarily gives in the relief of the pruritus is followed by pain or smarting and the aggravation of all the symptoms, rendering often useless the most appropriate means of treatment. Two

things, according to my experience, are necessary to the complete and speedy cure of *E. faciei*; the first is the prevention of scratching or rubbing, and the second is the constant application of the remedy to the diseased parts to the complete exclusion of air; and one cannot help thinking that much of the want of success in the treatment of *E. faciei* and other forms of eczema is sometimes, if not often, to be attributed to the act of scratching and the exposure of the diseased parts to atmospheric irritation, rather than to the remedy employed or mode of treatment adopted.

The effect of exposure of the cutaneous surface, when in a state of congestion, to the atmosphere, is often observed in a varicose ulcerated leg which has for some time been enveloped with soap or diachylon plaster. The diseased member under its protective covering may be perfectly easy, no pruritic sensation being felt by the patient; but no sooner is the plaster removed and the affected parts exposed to the air, than itching, more or less intense, is experienced, accompanied with an eager desire of the patient to scratch the parts.

In removing the protective covering or dressing from an inflamed eczematous surface this atmospheric effect should be remembered. The affected parts should be instantly washed with the alkaline or other anti-pruritic or cleansing solution, and subsequently softly dried, and afterwards to be quickly dressed in the usual way. The new dressing should always be ready to be applied before the old one is removed. When using a drying lotion or dusting powder to the face of children, care should be observed to remove any hard cake which is formed by the drying up of the

dressing, and to re-apply quickly the lotion or powder to the exposed surface. This prevents irritation.

Eczema of the hairy parts of the face is to be treated similarly to *E. capitis*; soothing applications only to be used in the acute stage. The beard should be clipped close, and the crusts removed in the usual way. A very good plan to effect this and soothe the inflamed surface is to apply a well-made bread poultice, moistened with weak lead lotion and a little laudanum or belladonna, to the affected part. This should be frequently changed, and between each renewal of it the diseased surface should be freely sponged with warm or tepid poppy or other decoctions, or with the weak alkaline and glycerine solution. When the crusts and scales have been removed, the diseased parts should be dressed twice daily with the carbonate of potash or oleate of zinc ointment, which should be bound on the parts; or the lead lotion, with laudanum or belladonna, may be used during the day, and an ointment composed of grs. x of bicarbonate of soda and the same quantity of bicarbonate of potash to the ounce of vaseline or cold cream at night. This should be freely smeared over the diseased parts. Vaseline alone is very useful when freely applied at night to the diseased surface. It relieves the itching, prevents the drying up of the exudation and the formation of scabs. It keeps the inflamed parts cool, and prevents them from becoming dry and hot, conditions which give rise to itching, burning heat, and other disagreeable sensations. In the subacute and chronic stage, shaving the beard daily should be practised, and then brown citrine ointment well rubbed into the affected parts two or three times daily, will often effect a cure.

It is sometimes an advantage to combine it with white precipitate, lead or zinc ointments, or with linimentum calcis (ʒij to the ʒj). Good results are often obtained in very obstinate cases by the use of the oleate of mercury ointment. The yellow oxide of mercury ointment is also a most valuable remedy in such cases, and so are especially the iodide of sulphur and iodide of lead ointments. Lanolin forms the best excipient for ointments in this affection. Sulphur alone, or combined with bicarbonate of soda, potash or lead ointment (grs. x to the ʒj) is sometimes useful, or a modification of Wilkinson's ointment. But this and all other irritant or stimulating applications must never be used until the disease has reached the chronic scaly stage, and even then their use may be followed by a renewal of the inflammation and the eruption of fresh pustules. This specially applies to tarry preparations.

Epilation should be early performed. It facilitates the cure and prevents the formation of bald patches, which sometimes remain permanently after the cure of the disease. Puncturing the pustules is recommended; and scooping out the diseased contents is advised by some authorities.

E. narium.—The incrustations should be softened by the frequent drawing up of the vapour of hot water into the nostrils, the use of the warm douche, and the introduction into the nares of a dossil of soft lint or other substances, thickly smeared with soft lead ointment or well soaked in warm oil. When the softened crusts have been carefully removed, a dossil of lint, smeared over with bismuth or benzoated zinc ointment, should be introduced into the nostrils, or it may be

applied to the affected part by means of a soft camel-hair brush. This may be repeated twice or thrice daily, and before each dressing the nares should be well douched with tepid alkaline solution or poppy decoction, and subsequently dried by means of a soft, dry dossil of lint.

Afterwards, the use of white precipitate or yellow oxide of mercury ointment will generally complete the cure. Lotions sometimes answer better than ointments. They can be easily applied with a camel-hair brush. The solution of corrosive sublimate, carbolic acid, permanganate of potash, and especially the nitrate of silver, are of great service in the treatment of the chronic forms of the affection. The glyceroles of aloes and tannin are also good remedies, and have been successfully used by many practitioners.

E. tarsi, tinea, or Ophthalmia tarsi.—Great attention to cleanliness and the careful removal of the small incrustations which form on the edges of the eyelids are important points to be attended to in the treatment of this often troublesome affection. The crusts having been removed, the parts should be well bathed with warm or tepid water, and afterwards one of the following lotions should be often used:—*R* Liq. plumbi diacetatis, ℥j; acetatis zinci, grs. viij; extr. belladonnæ, ℥j, vel atropia, gr. j; glycerini, ℥ij; aq. destillatæ ad ℥viiij. *Mix.*—*R* Aluminis, ℥j; zinci sulphatis, grs. viij; glycerini, ℥ij; aq. flor. aurantii ad ℥viiij; or Mackenzie's bichloride of mercury lotion. The lead lotion should not be used if phlyctenular ophthalmia accompanies the tarsal eczema. The lotion may be used tepid. At bedtime a little vaseline, calomel, or dilute citrine ointment should be applied to edges of the eyelids. The eyelids should be well bathed every morning with warm water or

weak alkaline and glycerine solution to soften the glutinous exudation which causes their edges to adhere together. This procedure allows the eyelids to be separated without injury to the eyelashes or irritating the disease. Whilst using the lotion, touching the edges of the eyelids with a ten-grain solution of nitrate of silver every day or every second day greatly assists the cure. When the eczema extends to the eyelids and cheeks the following lotion is useful:—*R* Liq. plumbi subacetatis, ℥j; boracis, ℥j; glycerini, ℥ij; aquæ flor. aurantii ℥viii; mix. The yellow oxide (grs. x to the ℥j) and the oleate of mercury ointments are most effective remedies in the chronic and obstinate forms of the disease. When the eyelashes are very long, it is advisable to cut them short, which favours the removal of the incrustations and aids the treatment. Epilation is sometimes necessary, and materially assists in the cure of this often obstinate and disfiguring disease. Surgical interference may be required to remedy some of the resulting effects of long continued *E. tarsi*. In general, the use of the yellow oxide of mercury ointment, touching occasionally the ulcerated edges of the eyelids with a solution of caustic potash (℥j-℥j) or with nitrate of silver points, and sometimes when there is much thickening of the tarsal edges in old chronic cases, by carefully applying to their outer surface tincture of iodine, or pencilling them over with solid nitrate of silver, will often be followed by a cure. The treatment of eczema of the eyebrows is similar to that for *E. tarsi*.

E. aurium.—In the early exuding stages the ears should be frequently bathed with the poppy or other decoction, dried and then well covered with dusting

powder, or a soothing absorbent lotion of lead or zinc may be used. Crusts should be removed in the usual way, and when they form in the auditory passage, warm oil should be poured into the meatus. Their removal may be aided by gently injecting into the meatus the warm alkaline and glycerine solution. This should be repeated till the passage is quite clear of all débris. Afterwards dilute nitrate of mercury ointment $\mathfrak{z}\text{ij}$ to the ounce of prepared lard or vaseline, or white precipitate ointment (gr. v to the $\mathfrak{z}\text{j}$) to which gr. x of carbolic acid may be added. The ointment should be applied twice daily by means of a camel's hair brush. In very chronic cases solution of caustic potash (gr. $\text{x}-\mathfrak{z}\text{j}$ to the $\mathfrak{z}\text{j}$), a solution of nitrate of silver (gr. $\text{x}-\mathfrak{z}\text{j}$), or a strong solution of carbolic acid or bichloride of mercury (gr. $4-\mathfrak{z}\text{j}$), should be carefully pencilled over the affected surface of the meatus. When the disease extends to the membrana tympani, great care is required in the application of the above remedies.

In some cases, where there is much swelling of the meatus, the frequent injection of tepid solutions of lead or sulphate of zinc with glycerine answers better than ointments. A weak solution of permanganate of potash is useful when there is an offensive discharge. If an ointment is used it should be smeared over a dossil of lint and introduced into the meatus, the pressure of which may assist in lessening the swelling and counteract the tendency to narrowing of the passage. Zinc ointment or paste, Hebra's or other lead ointments, may be used in eczema of the auricle. The soap and tar treatment and the use of the stronger preparations of mercury are all beneficial in chronic

and obstinate forms of the affection, whether seated on the ear or behind it.

E. mammæ.—Whether the disease is confined to the nipples or to the surface of the breast or involves both, the compound lead and zinc lotion with belladonna and glycerine will be useful. In the chronic stage white precipitate, grs., x, or calomel, ℥j, to the ounce of benzoated oxide of zinc ointment, is a good application; or the calomel ointment with balsam of Peru (ʒj to ʒj) may be used instead.

The glyceroles of lead, zinc, bismuth, tannin, or aloes will be found of service.

A mixture of the compound tincture of benzoin and glycerine is said by Stillé to be an effective remedy for cracked nipples. It is useful in eczema of the nipples, and may be rendered still more so by the addition of a little bismuth or borax to it. The nitrate of lead ointment (grs. x–xv to ʒj), or a lotion consisting of grs. x of nitrate of lead, ʒij of glycerine, and ʒvj of cherry-laurel water, will be found very useful in chronic eczema of the nipples when they are fissured and irritable. Solutions of nitrate of silver, corrosive sublimate, and caustic potash are of special service in obstinate forms of this affection involving the nipples. The soap and tar treatment may be had recourse to in very chronic cases affecting the surface of the breast; and the stronger preparations of mercury, as the yellow oxide, oleate or iodide, will be found useful in very rebellious cases.

It is advisable to stop the functional activity of the breast if the patient is suckling. The physiological rest of the organ contributes to the cure of the disease,

whether it be seated on the surface of the breast or confined to the nipples. If the patient is suckling, care should be taken to use remedies only which will not affect the child. The nipple should be well cleansed and softly dried before the application of the child, and afterwards be dressed with zinc or other paste.

E. umbilici.—The general treatment to be pursued is similar to that for eczema of nipples. It is a good plan to keep the remedial agent constantly applied to the affected part by means of a well-adjusted bandage round the abdomen. The strong nitrate of silver or caustic potash solution will be of use; and a tannin ointment is of service.

E. genitalium.—In acute cases affecting the male tepid sitz baths, the frequent sponging of the diseased parts with weak alkaline solution, or demulcent soothing decoctions, followed by the free use of dusting powder, will afford relief. If there is a profuse discharge the carbonate of soda or potash lotion, or the compound lead and zinc one, should be used. The parts should be frequently sponged over with one or other of these, and afterwards rags moistened with the lotion should be applied to the affected surface and be kept always moist. Some light impervious covering may be placed over the dressing and a suspender worn.

It sometimes answers better to sponge the parts freely with one of these lotions, and after they have been softly dried to dust them well over with the oleate of zinc, bismuth, or other absorbent powder, or one of the drying lotions may be used. The lead and vaseline, or Wilson's ointment, or one of the zinc pastes may be advantageously used; and lotions of

alum, sulphate of zinc, tannin, and carbolic acid will be found serviceable in chronic conditions. For the relief of the itching, Bulkley's plan of applying a handkerchief wrung out of hot water to the parts for fifteen minutes or so, and then applying the dressing quickly, will often succeed in procuring the patient a good night's rest; or the application of a mustard-leaf to the lumbar region, as advised by Crocker, will often answer better. The application of black or yellow wash and afterwards a zinc or lead ointment, will be beneficial in irritable conditions. Ihle's paste often acts well in irritable eczema of the genitals. This should be smeared over the surface of the scrotum after it has been well bathed with a warm poppy or mallow decoction and dried. In the more obstinate forms and cases of long standing the soap, salicylic, caustic potash, or tar treatment should be adopted. If tar is used, the tarry surface should be well covered over with lycopodium, or a piece of lint (well powdered) placed between the scrotum and adjacent parts of the thigh. The ointments of oleate of mercury and yellow oxide, or iodide of mercury, are of great value in the obstinate forms of eczema affecting the scrotum. When using these remedies it is always an advantage to have the diseased parts well washed with the *sp. saponis viridis* between each application.

E. genitalium of Females.—Very great attention to cleanliness is required in these cases. The frequent use of sitz baths, to which infusion of bran, a little gelatine and carbonate of soda or borax have been added, are generally of great service. The weak alkaline or lead and zinc lotions should be freely

used, and if there is much pruritus a borax lotion with hydrocyanic acid will often afford great relief, or the lead and liquor carbonis detergens lotion may be used.

In the chronic stage much reliance is to be placed in mercury preparations, especially the calomel and nitrate of mercury ointments. The latter diluted with equal parts of cod-liver oil and freely applied to the affected parts, often gives great relief to the intolerable itching. The addition of ℥j of balsam of Peru and grs. x of carbolic acid to the ℥j of calomel ointment, aids its curative and anti-pruritic qualities.

When the pruritus is distressing and the affected parts are free from abrasions, a five-per-cent. solution of oleate of mercury in oleic acid, and adding one-eighth part of ether as recommended by Marshall for pruritus pudendi, will afford relief. It may be applied by means of a camel-hair pencil. A little morphia or belladonna may be added if desired. Fresh cod-liver oil freely applied to the affected surface, often allays the pruritus. It is rendered more effective by the addition of carbolic acid, one part to 20 or 40. Strong solutions of nitrate of silver and hydrocyanic acid are often the only effective applications for the relief of the intolerable itching which attends this affection. Solutions of these agents frequently fail to afford the relief required by reason of their being too weak. The same may be said of carbolic acid and chloroform. In eczema of the cervix uteri and vulva, accompanied with severe pruritus, Simpson, by brushing the affected surface often with hydrocyanic acid (the strength of that of the Edinburgh Pharmacopœia) obtained frequently good

results.* The application of undiluted Condyl's fluid to the eczematous surface will sometimes allay the itching. Cyanide of potassium, benzoated oxide of zinc ointment with calomel and camphor, strong solutions of acetate of lead, borax, or bichloride of mercury, with or without hydrocyanic acid, morphia, or other sedatives, are valuable remedies in the cure of this affection, and generally relieve the distressing itching, smarting, or other disagreeable sensations. According to Ashwell and others, some benefit is derived from the use of tar-water sitz baths in pruritus of the labia, and also from a lotion of balsam of Peru. He also states that black wash and opium is sometimes very efficacious in eczema of the labia.

The following lotion has been recommended by Bartholow in pruritus pudendi, which will also be found useful in chronic eczema of these parts:—R Hydrarg. bichloride 1 part, alum 20 parts, starch 100 parts, and water 2500 parts. Meigs' lotion for pruritus vulvæ will be often of service in the obstinate forms of this affection—viz., R Borax, ʒss; sulphate of morphia, gr. vj; rose water, ʒviiij. The lotion recommended by Dr. West for pruritus vulvæ is similar to the above. He substitutes the hydrochlorate of morphia for the sulphate. It would not be always safe to use a lotion containing so large a quantity of morphia. Graily Hewitt has found a mixture of one part of chloroform to six of almond oil to succeed better in allaying pruritus of the vulva than the weaker mixture recommended by Scanzoni. The substitution of cod-liver oil for almond oil is an advantage. The following is A. Todd Thomson's for-

* *Obstetric Works*, by Priestley, vol. i. p. 97.

mula for pruritus :—R Liq. ammon. acet., ℥ij ; acidi hydrocyanici, dil. ℥j ; tinct. digitalis, ℥iij ; aquæ rosæ, ℥iij. Mix.

E. ani.—This is often a very troublesome affection and difficult of cure, in consequence of its position and the irritation to which it is subjected. It is frequently a constitutional rather than a local disease, depending on an inactive state of the liver, constipated bowels, congestion of the hæmorrhoidal veins, intestinal worms, a gouty habit of body, &c. ; and these disorders and constitutional conditions must be specially attended to and remedied, otherwise local treatment will be of little avail. Minute attention to cleanliness forms an important point in the treatment of this affection. In the acute stage the affected parts should be frequently sponged over with the alkaline, borax, or lead solution, cold or warm ; and after being carefully dried, should be well covered over with powdered starch and bismuth, or lycopodium powder. In chronic cases the part should be well washed twice daily with yellow or soft soap, and afterwards dressed with calomel and benzoated zinc ointment, or with one of the tarry oils, alone or diluted with cod-liver oil, or in combination with one of the mercurial preparations, the ointment to be spread on lint and bound on the part. Oil of cade, with zinc ointment, is one of the most useful applications. The iodide of sulphur ointment, alone or combined, with ol. rusci, is a valuable remedy in old obstinate cases. Should ointments disagree, strong solutions of lead with hydrocyanic acid and camphor ; or alum, sulphate of zinc, carbolic and boracic acid, should be used. A strong solution of nitrate of

silver (℞j-ʒj to the ʒj), freely applied to the diseased surface, often affords the most relief to the intolerable itching. The pruritus may occur at any time of the day, and especially after over-indulgence at table, coming from the cold air into a warm room, or after violent exercise; but it is often most distressing at night when the patient has got warm in bed, rendering him perfectly miserable, sleepless, and exhausted.

A solution of corrosive sublimate, as the following, is often serviceable in allaying the intense pruritus and in the cure of the affection:—℞ Hydrarg. bichloridi, grs. ij; boracis, ʒij; acidi hydrocyanici dil., ʒiij; ex. belladonnæ, ʒij; glycerini, ʒjss; sp. vin. rect. ʒss.; aqua floræ aurantii ad ʒviij. Mix. Allingham has found the following very effective in pruritus ani, which, from his description, seems to be the same as E. ani:—℞ Sodæ biboratis, ʒij; morphiæ hydrochlor., grs. xv; acid. hydrocyanici dil., ʒss; glycerini, ʒij; aq. ad ʒviij. Mix. Dab the part frequently.* If the parts are much abraded, a lotion of this strength should not be used.

E. intertrigo.—When this affects the scrotum and adjacent parts of the thigh in young children, it is easily cured by careful attention to the cleanliness of the affected parts and by frequently bathing them with tepid or warm mallow or poppy decoction, or weak lead lotion, then lightly drying them and dusting them with lycopodium, violet, or bismuth powder. A piece of soft lint, dry or oiled, should be inserted between the opposing surfaces. The alkaline, borax, lead, or sulphate of zinc lotions may be used when the affection occurs in adults, and in chronic cases the free use of

* *Diseases of the Rectum*, p. 216.

soft soap, followed by the use of a white precipitate, oleate of mercury, or sulphur and alkaline ointment, will generally effect a cure. The intertrigo occurring in other parts of the body should be treated in a similar manner.

E. crurum.—In eczema of the legs, after the removal of the scabs by the usual means, and the affected parts having been thoroughly cleansed by the free use of the tepid douche and subsequently properly dried, they should be dressed with the compound lead, Hebra's or Thomson's compound lead and potash ointment.

The ointment should be spread evenly over strips of soft linen, and these should be accurately applied to the diseased surface and be kept in position by a well-adjusted bandage from the toes to the knee. The dressing should be changed twice daily. This plan often succeeds. But my experience of the treatment of eczema affecting the lower extremities, and especially when connected with varicose veins, is in complete accord with Chapman and others, that better results are obtained by the use of lotions than ointments, and especially in cases when the exudation is profuse. The alkaline, borax, zinc, and particularly the lead, lotion, with or without laudanum, belladonna, or other sedative, will be found most serviceable. Strips of linen, well moistened with the lotion, should be carefully and evenly applied to the affected parts. The strips should be long enough to go round the limb, and may be applied like a many-tailed bandage from toes to knee. The rags should be kept constantly wet. The lotion may be used warm. It is an advantage to place a well-adjusted bandage over the linen or muslin rags. Chapman recommends Goulard's lead lotion to be used.

If desired, oil-silk or other impervious covering may be placed over the bandage. When the disease is of limited extent, the linen strips should only be applied over the affected surface and a little beyond its margin, but the cotton roller should be applied to the whole limb in the usual manner. The repeated moistening with the warm lotion in this case should be confined to that portion of the bandage covering the area of the eczema. The rags or lint should be changed once or twice daily and the parts be well bathed with the weak alkaline lotion, poppy decoction, or with equal parts of new milk and warm alkaline solution. When varicose or other ulcerations accompany eczema of the legs, the ulcers should first be dressed in the ordinary way with the sulphate of zinc or nitrate acid lotion, solution of nitrate of silver or chloride of zinc, iodoform, &c., and then the linen strips and bandage should be applied and kept wet with one of the lotions as directed.

The plan so successfully adopted by Lister of treating eczema and ulcers of the leg with boracic acid is an excellent one, and may be often confidently followed. A mixture of white paint and cod-liver oil is a very good remedy, and answers well in many cases. Great benefit is often derived by the free application of the nitrate of silver solution to the whole of the eczematous surface in irritable exuding conditions. In cases of old standing where the skin is much thickened, infiltrated, and itchy, the soft soap and tar treatment should be adopted. Careful and well-adjusted bandaging is an essential point in the treatment of eczema of the leg, and especially if it is complicated with ulcers or a varicose condition of the veins. Pressure properly applied by means of a cotton or thin flannel roller to

every part of the affected member, greatly aids the remedial agents used by promoting intestinal absorption and relieving congestion. Careless bandaging, on the other hand, often causes ulcerations to form rapidly on the eczematous surface and sometimes to a considerable extent. They are in general superficial, and usually heal soon under appropriate treatment.

Eczema of the leg may be the result of an existing ulcer depending on varicose veins or other causes, and it is sometimes produced by the means used to heal the ulcer. In varicose eczema of the leg, the glycerole of lead is an excellent application. The oleate of zinc ointment with carbolic and salicylic acid will be of great service in such cases. When there is much swelling or œdema of the affected limb, the condition of the heart, liver, and kidneys should be carefully inquired into and attended to. Diuretics are often of special service, especially the acetate of potash, alone or combined with broom, squills, and digitalis. The iodide of potash is also a valuable remedy in such conditions. It may be given along with the acetate. Sometimes an india-rubber bandage applied to the leg has seemed to me to be useful in cases of old-standing eczema accompanied with much thickening of the affected parts, and the soap and tar treatment will be found useful in similar conditions.

E. manuum, pedum, et digitorum.—In the papular form of eczema affecting the hands and accompanied with itching, the lead and borax lotion with hydrocyanic acid and glycerine will be found serviceable. When confined to the back of the hands and fingers, and the affected parts are hot, itchy, exuding and fissured, the use of Fraser's zinc cream or the following ointment:—

℞ Liq. plumbi subacetatis, ʒss ; ox. zinci puri, ʒss ; sodæ biboratis, ℥j ; pulv. camph., gr. v ; acid. hydrocyanic. dil. ℥x ; ungu. sambuci, ʒj. Mix—will be useful.

In chronic cases of the impetiginous variety, iodide of sulphur ointment is a most effective remedy. In the dry papular and scaly forms the soap, caustic potash, or tar treatment should be adopted. The oil of cade and yellow oxide of mercury ointment is also a useful remedy in cases of old standing. When the fingers are affected, dressing them with Hebra's, Thomson's, or other litharge ointment is a successful mode of treatment. The ointment should be spread on narrow strips of lint or soft linen rags, which should be accurately applied to each finger. The dressing should be changed once or twice daily to admit of the diseased products being removed and the parts well cleansed.

Calomel or oxide of zinc ointment, applied in a similar way, also answers very well.

The occasional application of a solution of nitrate of silver or caustic potash to the diseased surface, greatly contributes to the cure of the affection. Where the disease is confined to the palm of the hand and approaches to the condition of psoriasis, with much thickening and hardening of the skin, the caustic potash solution or the alkaline and spirituous solution of tar should be used. What I have found most successful in this form of eczema is an ointment composed of ʒij of ol. rusci, ʒj of nitrate of mercury ointment, and ʒiv of vaseline or prepared lard, and the daily use of soft potash soap. The oleate and iodide of mercury ointments are useful in obstinate cases. Sometimes blistering the affected surface is the most effectual plan of treatment in such cases. This can be repeated

if necessary, and the surface dressed with zinc, salicylic, or other ointments in the intervals.

Good results have been obtained in chronic *E. palmare*, accompanied with much thickening of the cuticle, by enveloping the hands in gloves made of india-rubber or similar material. Pancreatic emulsion is recommended by Crocker for the removal of the thickened epidermis. The simplest and most effective plan to accomplish the same end is by means of Unna's salicylic acid plaster, as already described. After the removal of the epidermic covering the affected parts should be dressed twice daily with oleate of lead, zinc, or other soothing ointment, with or without salicylic acid. The treatment of eczema affecting the feet and toes is similar to that for the hands and fingers.

E. articulorum.—Eczema of the flexor surface of the joints is generally best treated by the use of one or other of the lead ointments. The ointments should be spread thickly and evenly on strips of lint or soft linen, which should be accurately applied to the diseased parts and kept in position by a few turns of a linen or flannel bandage. In severe cases affecting the flexor surface of the knee and neighbouring parts, I have found a splint applied to the extensor surface of the limb, so as to confine its movements, to be of very great service. The tar and soap treatment and mercurial ointments, with the use of nitrate of silver solution, may be required in some cases.

E. unguium.—Eczema of the nails is often a troublesome affection. The salicylic, mercurial, and tar ointments will be of service, and the oleate of tin is highly recommended by Shoemaker of the strength of \mathfrak{v} to the \mathfrak{zj} .

E. infantile.—In this variety of the disease, the most important part of the treatment is the dietetic. Over, as well as irregular, feeding of the child should be prevented. Good fresh milk and farinaceous food should form the chief articles of diet.

Great attention is to be paid to the condition of the digestive organs and the bowels, especially during the dentition period. The attendant disorder, if any, and the constitutional state of the patient, will require careful attention.

Soothing remedies will be needed in the early stages of the affection; and in the later ones, arsenic, with cod-liver oil, iodine, iron (especially the phosphates), and vegetable tonics, will generally suffice to accomplish the cure.

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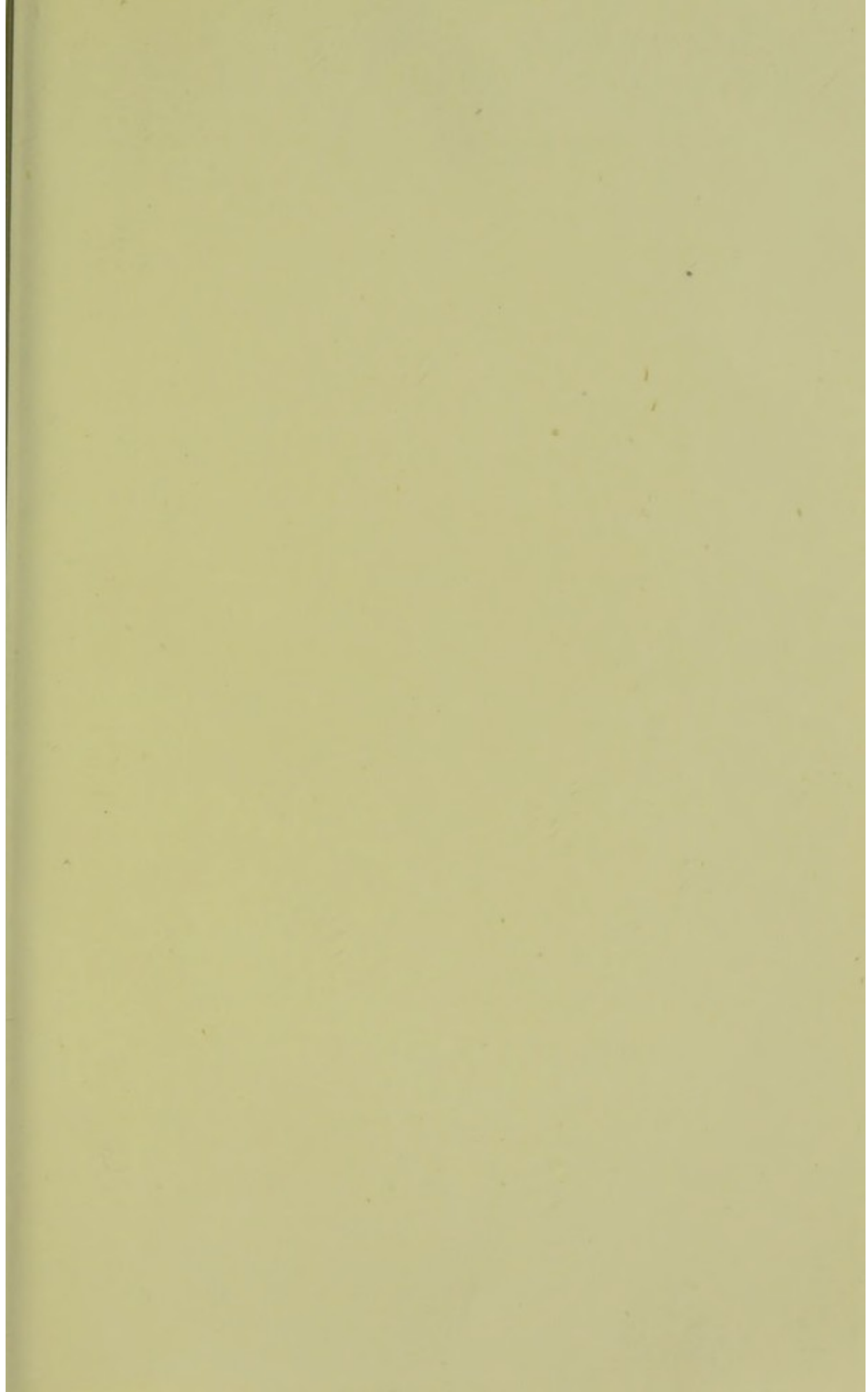
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