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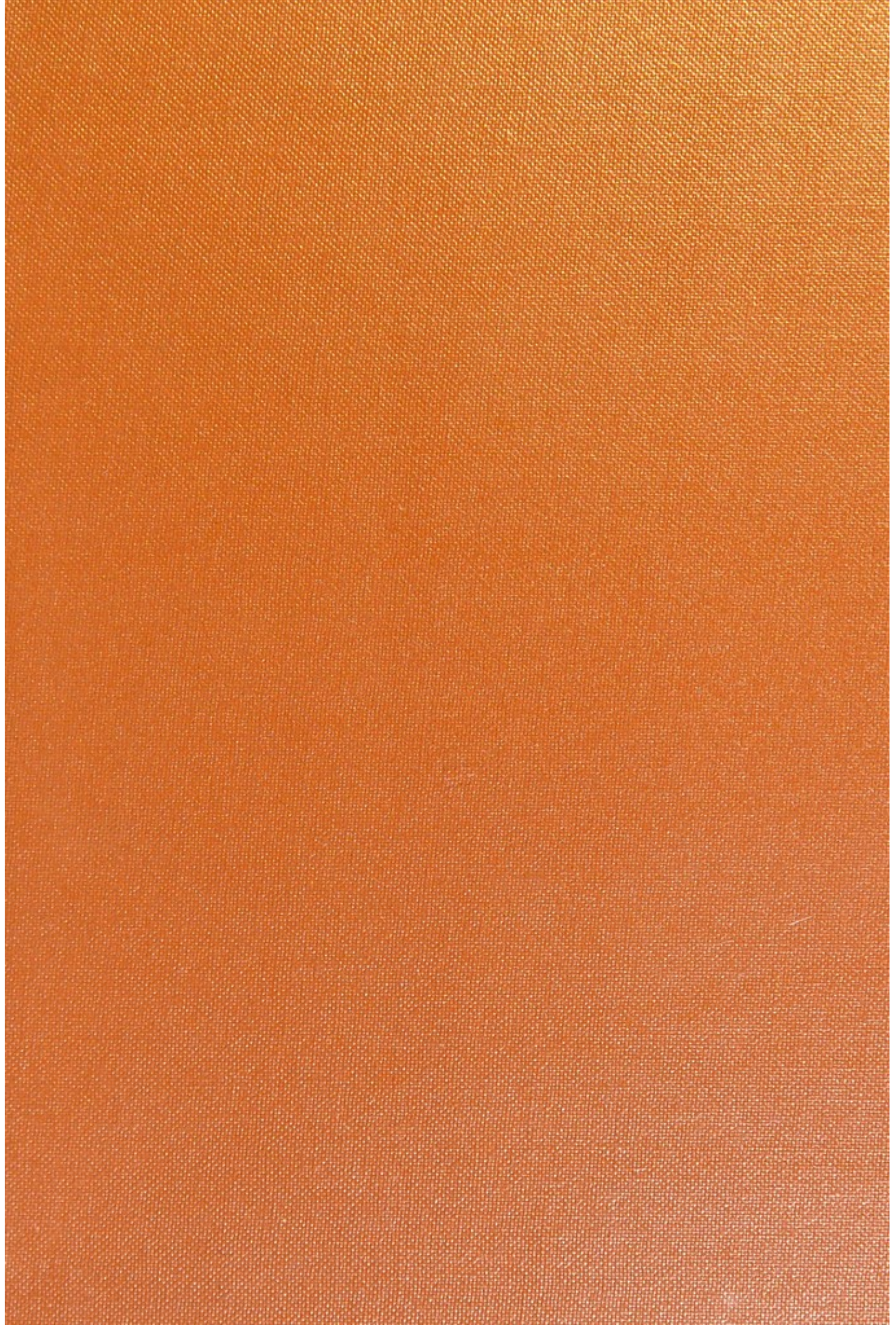
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SKIN DISEASES.

SKIN DISTANCE

SKIN DISEASES ;

THEIR

DESCRIPTION, PATHOLOGY, DIAGNOSIS,
AND TREATMENT.

WITH

A COPIOUS FORMULARY.

BY

TILBURY FOX, M.D. LOND.

SENIOR PHYSICIAN TO ST. JOHN'S HOSPITAL FOR SKIN DISEASES ; PHYSICIAN
TO THE FARRINGDON GENERAL DISPENSARY ;
AUTHOR OF "SKIN DISEASES OF PARASITIC ORIGIN," ETC.

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TO
ERASMUS WILSON, F.R.S.

*Senior Surgeon to St. John's Hospital for Skin Diseases ; Consulting Surgeon
to St. Pancras Infirmary.*

DEAR MR. WILSON,

I VENTURE to inscribe this work to you, not on account of any special merit it may possess, but because I desire to offer my humble testimony to your talent, and to acknowledge how much Science is your debtor.

For a lifetime you have almost single-handed fought the battle of British Cutaneous Medicine, and I am proud to confess how much I owe to your writings and researches.

I am,

Yours faithfully,

TILBURY FOX.

THE HISTORY OF THE

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PREFACE.

I HAVE attempted to furnish in these pages, in as compact a form as possible, the present knowledge in regard to Skin Diseases. A large amount of information lies scattered through various publications, and a collective account, such as the present, will, it is hoped, be acceptable not only to the student as a text-book to aid him in his studies and to guide him in his examinations, but also to the practitioner to help him to cure disease.

My chief aim has been condensation; consequently mode or style has been almost entirely sacrificed to matter; secondly, general principles of treatment rather than empirical data have been indicated; and thirdly, especial prominence has been given to the diagnosis of the various diseases. My own peculiar views have been obtruded as little as possible on the present occasion; while the views of others,

especially those of the leading French and German authorities, have been fairly stated.

The first Chapter (General Remarks) is a summary of the leading points in causation, frequency, classification, diagnosis, prognosis, and treatment of skin disease; from which it will appear that the same pathological laws are applicable alike to the case of the skin and the organism generally. In describing the several eruptions, Willan's arrangement, with slight modification, has been adopted; a pathological classification being at present impracticable.

In Chapter IV., Eczema, and the arguments (*pro* and *con.*) in reference to points *sub judice*, especially its vesicular nature, have received full notice; and in Chapter VII., Elephantiasis and its allies are discussed in some detail, inasmuch as they illustrate in their histories some of the most important matters in regard to the causation of Skin Diseases generally. Appended is a Formulary, containing remedies for most diseases in the form in which they have been prescribed by the most successful men of the day.

Skin Diseases strictly speaking cannot be taught; they must be learnt clinically. Plates and books are worse than useless if the descriptions they portray be not made subservient to, and constantly and critically compared with, actual disease.

I will only add a hope that soon the dermatological may take its legitimate rank in our medical schools, beside the obstetric, ophthalmic, aural, and dental departments, and not be deserted as a specialty. The Physician must be possessed of all that general medicine can teach before he can become the successful Dermatologist.

TILBURY FOX.

15, OLD CAVENDISH STREET, W.

October 1st, 1864.

I received your letter of the 10th inst. and in reply
to inform you that the same has been forwarded to
the proper authorities for their consideration. I am
sorry to hear that you are not well, and hope
that you will soon be able to resume your
usual avocations. I am, Sir, very respectfully,
Your obedient servant,
J. H. [Name]

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SKIN DISEASES.



CHAPTER I.

GENERAL REMARKS.

THE complex structure of the human skin presents a greater variety of morbid phenomena than any other part of the animal economy ; a fact which might readily be presumed from a consideration of its extent of surface, its complex anatomy, its division into layers, and from being at once the seat of the organ of touch, of sundry peculiar secretions, and of the elimination of the sensible and insensible perspiration. (Pharm. Skin Hosp.)

This quotation sums up, in general terms, the features of skin diseases. Their diversity of form is due to diversity of structure, which is again necessitated by the diversity of function which exists ; and it is the latter which characterises the skin as a diseased organ, when compared with other parts of the economy. In the first place the skin affords protection ; secondly (in consequence of its being the organ of touch and sensation), it is supplied with a delicate nervous expansion easily irritated ; in the capacity of an absorptive and secretory agent, it possesses a well-furnished and abundant circulation, exposed not only to external but also to internal ill influences,—*e. g.*, a disordered quantity or quality of blood ; lastly, in the performance of its duties as a regulator

of temperature and as a depurant, its glandular function and structure are likely to become deranged.

Now these several functions possessed by the cutaneous surface are in great measure in a state of mutual relation and dependence, so that the deviation from the healthy standard by one, is followed by that of another. This need not be the case; hence we may have the skin affected as a whole, or any one of its anatomical layers or parts solely and alone, and this is one very important practical point. The epidermic layer for instance, or the perspiratory glands, or the papillæ, &c., may be diseased without there being anything unhealthy in other parts.

Now in consequence of the varieties of aspect and of structure involved, observers have unwittingly been led away by the belief that there is something essentially *special* with regard to the pathology of cutaneous diseases. This is a manifest error. The details noticed above suffice to explain and show that *modifications* must result, but the same pathological laws are alike applicable to the diseases of the skin and organism generally. The mere fact of exposure to the external air, the evaporation or the absence of moisture, and the like, must conduce very much to the formation of scabs, and the dry and cracked state of surface which contrasts so very forcibly with disease of the mucous surfaces for instance.

The causation of skin diseases is a subject of much dispute; almost every conceivable thing has at one time or another been supposed to produce this or that local eruption. Where trivial circumstances seem to produce marked results, we must allow that the predisposed states were highly developed, and that the disease (latent) merely required a slight exciting cause to bring it into full development.

The skin is highly sensitive alike to external and internal impressions, both as regards its circulation and its nervous supply; and the causes of disease play somewhat differently upon it in different cases, and their effects are expressed in

the varied direction of certain tendencies of habit and of temperament. For example, we have functional or structural diseases. The former are very likely to be followed by the latter. The visible local changes may be the sole disease or merely the evidence of an alteration in the state of nutrition at large. I wish to call attention at the outset to one very important practical point, and it is this, that the longer a disease lasts, the more does it lose its *general* and assume a *local* character. In the early stages of diseases arising from alteration of the blood-current generally, the local changes are entirely dependent upon and in subjection to those going on in the nutrition at large; if the latter returns to a normal condition, the eruption or other local change quickly runs on to cure and health; that is to say, the local change of tissue is not such as Nature is unable to rectify by her natural conservative and restorative power; but in long-standing cases, the local nutrition gets seriously interfered with, the vitality of the part is considerably lowered (partly also in consequence of the continuance of the primary cause,—*i.e.* the state of blood). Nature becomes habituated, so to speak, to the peculiar changes that have ensued, and the recovery of a proper status is difficult; hence in long-standing cases the eruption assumes more and more the aspect of a local disease (while even the general state at large improves), in consequence of the lowered vitality of the part affected. This has a most distinct bearing upon treatment, and certainly lends support to the great efficacy of local treatment in chronic disease, so markedly insisted upon by Hebra.

In giving a general summary of the causation of skin diseases, I repeat that the cutaneous surface is predisposed to disease, in consequence of its diversity and its complexity of structure and of function; its great sensibility and exposure. The following are the influences which are regarded as most efficient in producing eruptions:—

I.

Altered States of the Blood-current.

1. Acute specific diseases (virus action).
2. The circulation of special poisons, be they medicinal substances, — *e.g.* arsenic, belladonna, copaiba, nitrate of silver; or dietetic; such as shell-fish: giving rise to urticaria, roseola, erythema.
3. Hereditary diathesis, as in ichthyosis, psoriasis, syphilis, eczema, and lichen, &c.
4. Peculiarities of diet, as in wine-drinkers, high livers, non-vegetarians, &c.
5. The tuberculous, scrofulous, and lymphatic habits, giving rise to non-specific eruption.
6. Special states of mal-nutrition, as in keloid, cancer, lupus, &c.
7. The gouty and rheumatic diatheses, as in lichen agrius.
8. Altered nutrition from various causes, as exhausted nervous power, bad living, poverty, misery.
9. The accumulation of excreta in the blood from non-excretion, suppression of natural discharges, &c.
10. Convalescence from severe and lowering diseases.

II.

External Influences, inducing Dyscrasie or acting upon a badly-nourished System.

1. Want of cleanliness.
2. Alteration of temperature.
3. Undue exposure to the sun.
4. The action of ordinary local irritants, including animal and vegetable parasites.
5. Occupation, giving rise to special causes of local irritation, as in grocers, bakers, masons, bricklayers, washerwomen, cooks, cotton-workers, firemen, &c.

III.

Climateric, in which Mal-hygiene, of all kind and degree, acts by deteriorating the System generally, and gives rise to

The Frambœsia of the West Indies.

The Spedalskhed of Norway.

The Ngerengere of New Zealand.

The Morphie of Brazil.

The Radesyge of Lapland.

The Plica of Poland.

The Pellagra of Lombardy.

The Elephantiasis Græcorum.

The Bucnemia, or Barbadoes leg.

The Aleppo evil.

The Carate of New Granada.

The Mycetoma or Fungus foot of India, Guinea-worm disease, &c. &c.

Some of the causes have been called *ephemeral*, such as in the acute specific diseases ; some *persistent*, as in lichen, psoriasis, ichthyosis, cancer, lupus, and the like. Some come into action only once in a lifetime. Some are in constant operation, others only at stated periods ; so that certain diseases are wont to appear at particular periods of life, which will be noted under the head of Age.

Upon the nature of the cause depends the *contagious* or *non-contagious* quality of any disease. It is generally held that none are contagious except such as are produced by parasites or by virus action. This is in all probability practically true. *An appearance* of contagion may be given by many diseases ; for instance, eczema or impetigo may appear to be transmitted by contact, but it is most probable that the secretions in these cases act simply as local irritants, and not by virtue of any special quality, which being introduced into the system, so alters the character of the blood as

to give rise to like disease as that from whence it was derived. Eczema and impetigo happen to be the commonest forms of disease. All local irritants tend to give rise to eczema; hence *eczema* may, by contact, give rise to *eczema*, in virtue of the action of its secretion as a local irritant, not as a specific agency. We find the evidence of contagion fail in the more uncommon forms of diseases,—*e.g.*, *rupia*, *pityriasis*, *pemphigus*, *psoriasis*, *ecthyma*. There is certainly one form of impetigo which is primary and contagious.

Even in the truly contagious class of diseases there are certain conditions necessary besides the action of the virus or the parasite. A parasite placed upon a healthy surface will not live, there must be a suitable soil present; and a virus acts much more efficiently in some than other persons. In one case the *fermentative* action is rapid and complete, and speedy death occurs; in another, the resistant power of the blood is marked, and the disease is mild. Now the explanation of this contrast is to be sought for not only in the quality of the virus but also the state of the patient's blood. There is one more point to note—There exists at times what is called the "prevailing medical constitution," or the "epidemic constitution." Certain diseases seem to occur in unusual amount, and in an unaccountable manner, at certain times. There can be no doubt that the condition of the public health is peculiarly influenced by external circumstances, and pre-disposed to the occurrence of the special disease which appears to be epidemic. In boils we have a good example. The explanation is difficult. Mr. Wilson has recently published "An Inquiry into the Relative Frequency, the Duration, and Cause of Diseases of the Skin, as deduced from the Observation of 1,000 Consecutive Cases." This gives a complete view of the matter as affecting the middle and upper but not the lower classes. The diseases occurred as follow:—Of 1,000 cases, 298 (30 per cent.) were eczema, 112 (11 per cent.) rosacea (or red rash of the face, especially in women), alphas (*psoriasis* and *lepra*) 73 (7 per cent.), acne 55 (5½ per

cent.), alopecia 50 (5 per cent.), pityriasis 43 ($4\frac{1}{2}$ per cent.), trichosis (ringworm) and scabies 39 and 37 respectively (4 per cent.), lichen, area et calvities, and syphilodermata, 30 of each (3 per cent.). Then follow erythema 17 cases, chloasma 15, furuncle and sycosis each 14, prurigo 13, lupus (in all its forms taken together) 24, herpes and scrofuloderma 11, melasma 8, impetigo, xeroderma, and nævus 6 cases of each. Then come cancer, kelis, hirsuties, of each 5 cases, urticaria 4, ecthyma 3, purpura, sudatoria, cachexia cutis, molluscum, encysted tumours, diseases of nails, canities, of each 2; and one of each of the following diseases—erysipelas, pemphigus, roseola, sty, favus, warts, atrophy of the skin, morphæa, elephantiasis, and bucnemia. Mr. Wilson further groups them together, and forms a clinical classification. Of the whole number, 526 were eczematous (eczema, rosacea, lichen, scabies, and impetigo), 146 affections of the hair and hair follicles, 73 phytodermic (vegetable parasitic), psoriatic 73; then come sebiparous affections (acne, &c.) 60, strumous 35, syphilitic 30, alterations of colour-function 27, erythematous 23, furuncular 17, nervous 13, bullous 12, &c. We may gain a very fair idea from the above figures of the general occurrence of skin diseases.

The Influence of Age is important; and as in discussing various diseases this will be specially dwelt upon, a few general remarks here will not be out of place. One of the French writers has given the following as the order in point of frequency of the various kinds of disease, in respect to age. 1. Syphilitic; 2. Strophulous; 3. Lymphatic; 4. Scrofulous; 5. Dartrous; 6. Parasitical; 7. Hæmorrhagic; 8. Cachectic; and 9. Inflammatory. The skin of children is very delicate; erythema and intertrigo easily occur. Digestive disorders are apt to be followed by little rashes of strophulous kind. Vaccination unbalances the system and predisposes to eczema, impetigo, and it may also transmit syphilis. Nursing also may give syphilis or convey a stru-

mous habit. Congenital syphilis usually shows itself before the end of the sixth week. Ichthyosis develops its true character during the first few months of life,—at birth the skin is harsh and dry. Other congenital effects of course occur at birth,—*e. g.*, albinism, nævi. During the time of dentition, erythema, eczema, lichen, impetigo, and the like, are brought about or excited. Then we come to a period at which the acute specific diseases are common, especially measles and scarlet fever. Later on, lupus, and at puberty, acne are of common occurrence; the beard appears and sycosis also, with its resemblers, impetigo sycosiforme, and *I. acniforme*. In old people prurigo, ecthyma cachecticum, pemphigus, purpura, cancer, and pruritus are common. In adult life the squamous and syphilitic diseases are observable. Scabies is a disease of frequent occurrence at every age almost, but especially in the young. The vegetable parasitic diseases occur in early life, especially in schools, and diminish in frequency with advancing age (after twenty or so). In adults herpes circinatus (*tinea-circinata*) is the most common form of disease (parasitic).

With regard to Sex.—If we sum up the number of cases occurring in males and females respectively, we shall find that skin diseases on the whole are as frequent in one as the other. Mr. Wilson in 1,000 cases noted 499 as males and 501 as females. There are certain diseases, however, which are more prevalent in one than the other sex; for instance, males are more subject to sycosis, pemphigus, psoriasis, bucnemia tropica, elephantiasis, eczema, and epithelioma. Females to acne, kelis, chromidrosis, rosacea, pityriasis, and lupus. Girls are more liable than boys to *tinea decalvans*. Women again are not exposed to the mal-action of certain trades,—*e. g.*, grocery, masonry. Women do not have sycosis. Pregnancy is accompanied by various pigmentary changes, &c.

Hereditary Tendency is exemplified especially by lepra and

psoriasis (alphos), ichthyosis, elephantiasis, syphilis, struma, and perhaps eczema and lichen. It is either *relative* or *absolute*. In the former the child comes into the world with a predisposition, a condition of organism *tending* to the exhibition of the inherited disease; in the other, it is born with the disease actually present; in the latter instance the disease is mostly incurable. It is said by those who believe in the existence of a "dartrous diathesis," that eczema, lichen, pityriasis, and psoriasis are transmissible hereditarily, and that they may interchange with each other in the transmission, eczema giving rise to lichen, &c.

Temperament.—It is said that the bilious temperament is subject to pityriasis alba and nigra, to ephelis and lentigo; the nervous to prurigo, lichen, urticaria and pruritus; the lymphatic to eczema, impetigo, intertrigo; the sanguineous to psoriasis; the gouty and dyspeptic to quasi scaly eruptions; the rheumatic to erythema nodosum; the strumous to lupus, &c. The French are fond of using the term darte and *dartrous diathesis*. The word darte has been variously used; originally it was synonymous with herpes, and applied at different times to very many dissimilars, but especially diseases of chronic character. Alibert, indeed, used it as the generic term for all classes of skin diseases, adding specific names to particularize varieties. Willan and Bateman gave the word herpes a distinct signification, which it now retains; and by the word darte, Hardy means a diathesis, of which eczema, pityriasis, lichen, and psoriasis are the components; and he defines it as follows, as inclusive of those diseases which, possessing different elementary lesions, are non-contagious, hereditary in tendency, reproducing themselves pretty constantly in the same subject, accompanied by itching, running a chronic course, and leaving behind, in progress of cure, no cicatrix nor ulceration. The subjects attacked are of fair health, the skin is dry and irritable, perspiration scanty and difficult, the ten-

dency of the eruption is to spread, or appear in several places at one time, the disease is symmetrical, and the mucous surfaces are often inflamed and implicated.

Moral Influences.—Anything which depresses the system, such as grief or the like, lowers the whole vital tone and power, and consequently allows the evolution of any disease which has a predisposition to show itself. It is seldom in action *per se*.

Mal-hygiene is one of the most important causative agencies in skin diseases. Bad living, bad dwellings, bad ventilation, bad drainage, all act by deteriorating the general health. Perhaps uncleanness is the most prolific source of ill; cleanliness acts not only by improving the general health, but by keeping in a healthy state of activity the various functions of the skin. In prisons, in workhouses, amongst galley-slaves, in emigrant ships, &c., hygienic conditions need to be enforced, to prevent, among others, diseases of the skin. Prurigo is the necessity almost of the beggar.

The Effect of Climate is important. In hot countries, a great demand is made upon the skin, and a long residence will induce a peculiar assumption of function over and above that enjoyed by the skin in cold climates. A change of residence is made. The transition takes place from the hot to a cold climate, and unless Nature compensate accurately, in the confusion which ensues, conditions favourable to the occurrence of cutaneous disease are likely to arise. The same kind of thing happens in change of season. The habits and different modes of life in the two cases must also be taken into account, but these will be noticed under the head of tubercular diseases.

All Lowering Causes tend to leave nature in an unguarded and unresisting status, which must of necessity favour the occurrence of any eruptive tendency latent in the system.

Reflex Irritation plays a most important part as a deter-

mining agency, so that uterine, renal, gastric, and especially intestinal mischief, as we shall see, act efficiently on this principle.

Occupation.—What we are sure of is this, that cooks are liable to eczema; washerwomen, grocers, bakers, bricklayers, to lichen eczematodes or lichen agrius, from the local irritation of sugar, soda, dust, &c., as the case may be; in other words, those who have to deal with irritating substances are liable to eczema; chimney-sweeps to cancer of the scrotum. A peculiar kind of wart occurs in those much engaged in making post-mortems. Butchers, graziers, &c., are subject more than others to malignant pustule; dragoons and shoemakers to eczema marginatum (Hebra); cotton-workers to urticaria, from the irritation of the fine fibres; those who handle arsenic or oxalic acid to an erythematous state of the hands. A form of papular rash has been seen in those engaged in the manufacture of Kerosene oil in America, and from the irritation of a species of leptus, in gooseberry-gatherers; the ryots in certain places in India to the mycetoma, or “fungus-foot of India,” &c. &c.; and the bare-footed natives to guinea-worm disease.

Local Irritants of all kinds produce truly local diseases; as in the pustulation from tartar emetic or croton oil, from the ranunculaceæ, the nettle, and the like, or they act as exciting causes.

Diet might be classed with reflex irritation. It may introduce a specific irritant, which acts directly on the skin, as in urticaria, or it may derange the stomach, and cause disease by reflexion. Of course, when, as in many skin diseases, the assimilation is at fault, and the local circulation deranged, indigestible matters only increase the former, and all stimulants and highly-seasoned food the latter, in addition; hence excess at table of any kind is always to be avoided in cutaneous disease. Physicians, as a rule, seem to avoid the

use of vegetables. I confess that they seem to me most material and useful adjuncts to remedial measures, in the majority of instances.

Now what general summary can one give of the occurrence of skin disease? Something as follows:—That, as regards the causation, the disease may be the expression simply of an hereditary tendency, or, this being absent, of some state of nutrition: it may be appreciable as in acute specific disease, or the circulation of some medicinal dietetic, or effete (from non-excretion) matter, or pigmentary changes, as in melano-pathia (pigment in excess in the blood); or unappreciable, as in cancer, keloid, &c. In some instances, the disease is idiopathic; in others, called into existence by some local agency; and, in this latter case, there may be apparently nothing but the local change observable to the pathological eye. Again, reflex irritation may give rise to eruption; and anything which lowers the vitality of the system generally or locally (as in uncleanness), is liable to be followed by some deviation from the normal standard of the sensitive part of the body—the skin. The why and wherefore, however, we cannot at present determine; but of one thing we are certain—that the basis of most skin eruptions is *debility*. Then it is a disputed point how this acts. Is it by producing a change in the nervous system, or the blood state? “All the functions of the animal body are so completely bound up together, that none can be suspended without the cessation of the rest. The properties of all the tissues and organs are dependent upon their regular nutrition, and a due supply of perfectly elaborated blood, &c. . . . When we enter into the penetralia of the animal system, and study those processes in which the development and maintenance of the material fabric essentially consist, we find them performed under conditions essentially the same as those which obtain in plants, and we observe that the operations of the nervous

system have but an indirect influence or control over them." The nervous system is related to animal more than vegetable life. Physiology would seem to teach that we cannot separate in man blood from nerve action, but that their operations are so mutually dependent upon each other, that any deviation from a healthy standard must be looked upon as a composite thing,—a blood *plus* a nerve,—in fact, a true nutritive change, not an absolute neurose or blood disease; at the same time the effect may find more expression *through*, be more perceptible *in*, the nervous element, on the one hand, as in pruritus, elephantiasis, anethetica, and urticaria; and, on the other hand, in the blood state, as in purpura; or in another, in that of the histological structures under the rule of these two agencies. The nerve change, in the majority of cases, is secondary. The arguments made use of to show that diseases of the skin are primarily neurotic are :—

1. The fact that disease is produced by nerve irritation; but skin diseases are in general outline markedly nutritive and structural, not functional and dynamic.
2. The case of elephantiasis, in which the nerve structure is the prime seat of disease; but this is surely due to the effusion of a peculiar blastema dependent upon a special condition of the nutritive fluid; the nerve disease is secondary.
3. The fact that burns are followed by internal disease, through the medium, it is said, of reflex action; but is not this explicable on other grounds, by the dependence of function which subsists between skin and duodenum?
4. Such experiments as those of Brown-Séquard, who found paralyzed parts became attacked by lice; but the latter were not produced by reflex action, but developed in consequence of the lowered state of the nutrition of the part.

5. The cases of herpes zoster and urticaria. In urticaria the nervous plexuses are specially implicated, and the wheals are due to nerve irritation, but the disease is not necessarily aneurose: there is something besides nerve irritation; besides, we have the clue to the disease as an actual poisoning of the blood, and the nerve disease here is only secondary. In herpes zoster, too, the nervous element predominates. If it be a neurose, why is one attack protective against a second? why does it run a definite course? why is it unassociated with ill-health? and why is it not producible by artificial irritation?

Even in the most typical form of neurosis, pruritus, there is an unhealthy state of skin, perhaps papular, which is coincident with the earliest symptoms of nerve disorder. Leaving out of account local irritation, it must be admitted, in the present state of our knowledge, that the nerve symptoms are, as a rule, secondary to a blood alteration, which, in point of occurrence, is primary. In the one case the nervous symptoms predominate, and, in the other, structural changes; but it cannot be allowed that skin diseases are, to any marked extent, *primarily neurotic*.

THE PROGNOSIS.

Skin diseases are seldom fatal, excepting, of course, acute specific diseases. When they occur as secondary manifestations implanted upon already existing disease, especially those of long-standing and in debilitated subjects, they are to be regarded according to their extent and nature as indications for grave anxiety. However, pemphigus neo-natorum, ecthyma cachecticum, rupia, pemphigus foliaceus, are most likely to be followed by fatal results. Malignant diseases, of course, have a fatal issue. The sudden retrocession of cuta-

neous eruption is generally considered a most prolific cause of serious consequences; there can be no question that the latter frequently follow the former, but the *modus operandi* of the supposed cause is uncertain.

Hereditary tendencies, especially when exhibited in a congenital phase, render the cure exceedingly difficult; in some cases, for example ichthyosis, impossible. The older the patient is before hereditary predisposition shows itself the more likely is he to get well. The presence of the scrofulous or syphilitic habit, mal-hygiene of all kinds, frequent recurrence, co-existent disorder of the mucous surfaces, such as ophthalmia, otitis, muco-enteritis, local degenerations of tissue (as in acne rosacea), the fact of a disease having become very chronic, symmetrical arrangement of the eruption, intemperate habits, dyspepsia, uterine deviations (such as leucorrhœa), dentition, old age, or very young age, all conduce to protract and render the cure difficult.

As a general rule, a prognosis is required, not as regards fatality or danger, but the difficulty of cure, and particularly the likelihood of recurrence. Lepra, psoriasis, ichthyosis, erysipelas, eczema, urticaria, and lichen, are the most likely to recur.

All parasitic diseases are curable, and this depends upon the facility with which the parasite can be attacked and destroyed. In cases of loss of hair, a cure is said to be impossible if the hair has been lost pretty suddenly; and generally, if there happen no subsequent attempt at reformation, the scalp at the same time being white, shining, tense, lowered in sensibility, and apparently with atrophied and indistinct follicles. In all cases of skin disease the earlier the patient comes under treatment the more likely is he to get rid of the cutaneous eruption; in other words, the most important point as regards speedy cure is early treatment, before the disease has had time to become localized.

DIAGNOSIS.

Under the head of causation, much has been said, which for brevity's sake must not be repeated here : the reader will refer to the remarks on age, sex, occupation, temperament, &c. The Diagnosis is made by the aid of three chief points :—

1. The general aspect and history of the disease, as to acute onset, premonition by fever, whether it be congenital or hereditary. If congenital, it will be syphilitic, ichthyosis, nævoid, or pigmentary, in all likelihood. The chief hereditary diseases are ichthyosis, eczema, lichen, psoriasis, syphilitic and strumous eruptions. The import of occupation and age has already been noted. The seat of disease is an important matter. In cases of scalp disease, you are in doubt as to a disease being psoriasis (alphos) or chronic eczema ; if it extends beyond the scalp over the forehead some little way, it is probably lepra. The parasitic diseases have as their selective seat the head. Sebaceous cysts are common on the head. Near the eye we find rodent ulcer, chromidrosis. About the nose and cheek, lupus, acne in its several forms ; on the upper lip, in the mesial line, impetigo sycosiforme ; and on the face of children, strophulus. Scabies is rare on the face ; lichen and prurigo are not uncommon. Erysipelas is also seen here. The lower lip is peculiarly the seat of epithelial cancer in old people ; the chest, of chloasma and keloid ; the outer and posterior aspects of the trunk, of lichen and prurigo ; the inner aspect, of eczema ; the lateral part of the thorax, of herpes zoster ; the chin, of sycosis ; the elbows and knees, of psoriasis. Between the fingers, and scattered over the aspect of flexion in the forearm, below the level of the mammæ in front, on the belly, above the level of the middle of the thigh, also in the seats of pressure—*e. g.*, the ischial tuberosities—and on the penis, scabies occurs. Prurigo is

generally seated above the level of the mammæ, and below the thighs. Sudamina are common beneath the clavicle. On the back of the hand (the grocer's, baker's, &c.), itch is found. On the lower limbs, over the shin in young women, erythema nodosum is common; and in the legs of old people, eczema rubrum. Limited to the palm of the hand is psoriasis palmaris syphilitica; and affecting the body generally, pityriasis rubra and pemphigus foliaceus. Such are some of the illustrative examples.

2. Secondly, the primitive elementary lesion, as it is termed, assists us materially. Cases mostly come to us when they are a week, a fortnight, or a month old: we must then go to the extending edge of the disease, and shall probably find the clue wanted. An account of elementary lesions will be given directly.

3. The secondary morbid productions, and the character of various secretions and crusts, &c. Devergie has most properly divided diseases into two grand groups,—secretory and non-secretory, and I adopt them here.

A. THE SECRETORY.—(1) Characteristic, *serosity*. This forms thin, light crusts, few in number; there is a reddish blush, and the linen is stained and stiffened. Under this head come eczema, eczema lichenoides, E. rubrum, herpes, vesicular scabies, intertrigo, and pemphigus. (2) Char., *sero-purulent fluid*, slight crusts of light yellow colour, as in eczema impetiginodes. (3) Char., *purulent fluid*, forming thickish crusts of yellow colour, including impetigo, ecthyma, furunculus, impetigo acniforme, and I. sycosiforme, sycosis, and purulent scabies. (4) Char., *sanious and purulent fluid*, as rupia and ecthyma cachecticum. (5) Char., *fatty*, as acne sebacea, seborrhœa, fatty cysts, &c. (6) Char., *pigmentary*, moles, ephelis, lentigo, chromidrosis, &c.

B. NON-SECRETORY DISEASES.—(1) Char., *redness, disappearing by pressure* (or temporary). Erythema, roseola,

acne rosacea, and the acute specific eruptions. (2) Char., *persistent redness*. Purpura. (3) Char., *redness with desquamation*, including herpes circinatus, erythema circinatum, and H. iris in a circumscribed, and pityriasis in a diffused form. (4) Char., *squamæ*, primary, (a) partial, lepra and psoriasis; (b) general, ichthyosis. (5) Char., *papules*, (a) with redness, lichen and strophulus; (b) with a black speck at their apices, prurigo. (6) Tubercula; this group may be omitted for the present.

By this test of the presence or absence of secretion much confusion may often be avoided. To take one example: I have seen eczema and psoriasis (lepra) confounded on many occasions, whereas the simple ascertaining whether or no there had been any discharge would have at once prevented error. The psoriatic eruption's history is a dry, not a moist one, like that of eczema (weeping is the popular expression for the condition). We learn much, then, from age, sex, seat of disease, character of the secondary products, hereditary tendencies, occupation, &c., and the diagnosis is settled the moment we ascertain the character of the elementary lesion. We sometimes have a difficulty in determining the exact nature of our patient's constitution. There are two habits, the scrofulous and syphilitic, which it will be well to glance at. The scrofulous, besides his general conformation and family history, exhibits with any eruptive disease (I mean severe,—*e. g.*, ulceration) a peculiar violet-coloured tint or hue of surrounding parts; there is little pain or sensibility; the progress of disease is tardy; cicatrices are common features; the disease is developed in early life; the cellular tissue is often implicated, swollen, and œdematous; the mucous surface in a state of flux or irritation; there is a torpidity about the reparative changes and the nutrition generally; and frequently caries, ophthalmia, and the like are present. In syphilis, there is a peculiar history, a peculiar copper-colour, which cannot be effaced by pressure, and which leaves

a yellow staining behind for a great while ; the eruptions are circular in form ; the scales are not well developed, they are few, grey, dry, and adherent ; there is no local irritation ; the eruption is often multiform, it is generally distributed. If crusts are present, they are thick, adherent, dark-coloured, and more or less imbricated. The ulcers are ashy-grey, dirty, covered by a greyish false membrane, with well-defined cut edges, and a copper-coloured areola. The cicatrices are circular, depressed, and at first copper-coloured. There are generally concomitants which tell a significant tale—nodes, sore-throat, nocturnal pains, mucous tubercles, &c. &c.

THERAPEUTICS.

Bearing in mind what has been said, it is easy to see that the same *principles* of treatment which are applicable to diseases of the body generally, must be adopted in reference to affections of the skin. The basis of most cutaneous eruptions is *inflammation*—that must be treated upon ordinary principles—we must not forget that, in the early states of eruptive disease, local irritation plays a very prominent part.

One of our chief aims should be to check and prevent this, adopting as much as possible a soothing plan of treatment. This does not appear to be the generally received opinion ; nay, the empiricism of modern time has an exactly opposite tendency, and it is decidedly true that many treat skin diseases by attempting to overwhelm by medicinal action the natural progress of the disease. In a *therapeutical* point of view, skin diseases divide themselves into two classes,—those which are purely local, and those which are general. Among the local, practically speaking, are parasitical, papillary, nævoid, hypertrophies of normal structures, such as molluscum, keloid, horns ; certain pigmentary changes ; chilblains,

burns, scalds, &c. Among the general are blood diseases of acute and specific character, which require mere conduction through their natural stages; others are due to various degrees of debility, demanding general tonic or alterative action, or the employment of specific remedies. In all cases special attention must be directed to the influence of diathesis; the gouty, the scrofulous, the rheumatic, the sanguineous, the syphilitic, the dartrous, &c., call for their appropriate remedies irrespective of the kind of local eruption; or, to put it in another way, the general treatment varies in the same disease according to the general aspect of the patient; all deviations from the standard of health must be rectified before or in conjunction with the employment of *special* medicines. In a large number of cases, disorders of the general health which appear to have little connection with the mischief are the exciting or determining causes. In reference to local treatment in the *general* diseases, the idea is to soothe the part at the outset, in the secretory stage, to use alkaline washes and slight astringents; in the quiescent or early chronic stage, mild stimulants, absorbents, and finally revulsives; taking care in all cases to remove crusts, scales, and such-like by poulticing, warm fomentations, or greasy applications. In the very young the health of the nurse requires attention, and it is often advisable to make the milk of the nurse the medium of medicinal action. The use of irritants is to be specially avoided in the young, whose skin is delicate. In all wet diseases (the secretory) the local remedies should be used in a liquid form; in the dry, in the form of ointment; the formation of thick crusts does not seem to be favourable to the use of ointments.

The free action of the kidneys must be carefully enforced. It is one of the most important points in treatment. In chronic diseases, dyspepsia is often present. In the secretory aspects, purgatives do good. Antiphlogistic remedies are blood-letting, emollients,—*e. g.*, the tepid bath, mucilaginous and acidulated drinks, but especially the acetates of ammonia

and potash. When we wish to preserve the eruption from being injured for fear of ulceration, as in zona, pemphigus, and rupia, we employ mucilaginous fluids,—*e. g.*, oatmeal gruel; or even absorbent powders,—*e. g.*, by copodium. Local maceration, by glycerine especially, is useful in hard, dry, cracked states,—*e. g.*, psoriasis palmaris. Irritation, if general, is allayed by tepid sponging, gelatinous and alkaline baths. Baths are useful for purposes of cleanliness, also as antiphlogistics, as soothing agencies, and as a means of employing various medicines. The anti-scrofulous remedies are cod-liver oil, iodides of iron and potassium internally, and iodide ointments, iodine baths, and the like externally. The anti-herpetic, as they are called, are typified by sulphur. The anti-nervine are quinine, alkalies, aconite and strychnine, alkaline baths. The anti-syphilitic are bichloride of mercury and iodide of potassium internally, and mercurial ointments externally. The gouty remedies are colchicum and alkalies, &c. The sanguineous, antimonial, &c. The anti-squamous remedies are arsenic internally and tar externally. I fear to add further detail on account of repetition.

CLASSIFICATION.

I shall follow Willan and Bateman's system, as being that most usually adopted, and at once the best for teaching purposes, referring the reader to my little essay on the "Classification of Skin Diseases" for fuller discussion, and for a series of tabular views of the various systems. Skin diseases exhibit certain elementary lesions, and these form the basis of Willan's system. They are as follows:—

1. *Maculae*, meaning simply discolorations or spots, are often congenital, generally limited and permanent, not elevated, and not disappearing by pressure, mostly dependent upon an excess of pigment, occasionally an alteration in the

local circulation. The seat of change is the rete mucosum and papillary layer of the derma. The chief forms are (1), pigmentary, as, in nævi, freckles, moles around the nipples in pregnancy (melasma), &c. ; (2), parasitic, due to collections of spores,—*e. g.*, chloasma ; (3), syphilitic, as in maculæ syphiliticæ, which may be general (congenital) or local,—*e. g.*, the forehead ; (4), hæmorrhagic, as in petechiæ.

2. *Erythema, Capillary Congestion, or Rash.*—It may be sole, or (usually) part of some general, disease,—*e. g.*, the exanthemata. It is simply redness produced by turgescence and hyperaction of the innermost layer of the skin, more or less bright in hue; sometimes bluish, diminishable by pressure, accompanied by constitutional disturbance and, locally, by heat, tension, and swelling, presently fading and being followed by slight desquamation ; this differs from that of other diseases in that “it only takes place once, and then at the expense of the epidermis which exists at the moment of eruption.” The colour also varies with the state of the blood and the activity of the virus, if there be one present. In the latter case there is co-existent congestion of internal organs. The rash may be punctiform (scarlatina), said to be due to papillary congestion ; circularly arranged, due to the peculiar distribution of the cutaneous nerve filament ; uniform, or irregular. Sometimes the tissues beneath become inflamed and œdematous,—this is called phlegmonous inflammation ; it is seen in erysipelas, in which exudation may occur, and uplift the cuticle into a bleb ; the redness is deep, and on section the tissues present a homogeneous appearance, being masked by the exudation ; there is much injection, serosity, and possibly sloughing. Erythema or congestion, when long continued, may be followed by hypertrophy, induration, and thickening.

3. *Papules* are little solid elevations of the skin produced by the effusion of plastic matter into the derma, attended by itching. They are palish or white, flesh-coloured or dull red, with no appreciable surrounding congestion as a rule, lasting a

variable time and then disappearing by resorption and slight desquamation. Some assert them to be enlarged nervous papillæ (Cazenave); others, congested and erected follicles. The skin generally is thickened by a gradual deposition, more or less marked, of plastic matter. The pruritus induces the patient to scratch, in which case the points of the papules are torn off, and in the early stage the slightest oozing takes place, but this quickly dries into fine white scales; in other instances a drop of blood exudes, and dries into a little black crust, as in prurigo. Papular disease is chronic, the papules may be grouped together; it may be associated with great irritability of the skin (urticaria), and is seen mostly on the outer aspect of the limbs, the back of the hand, and the trunk. All ages are liable to be attacked by it. There is little general disturbance. In prurigo, the skin loses its elasticity, yet is thickened; and little, broad, flat, palish elevations are observed, very frequently having a knotted feel, which are due to an exaggeration of the little areas enclosed by the natural furrows of the skin; these are the "broad papules," giving the skin an urticated aspect.

4. *Vesicles* are generally of the size of pins'-heads, sometimes larger and flattened as in herpes, sometimes small and acuminate as in scabies; they persist a few hours, when their contents become turbid, at length opaque, then disappear by resorption (herpes), or, the cell-wall rupturing, scabs are formed by the desiccation of the fluid. This takes place at an early period if the cuticle be thin and the disease acute. On the hands the vesicles are often very persistent, in consequence of the thickness of the cuticle. After rupture, little superficial ulcerations remain awhile. Vesicles are not seated at the orifices of the sweat-glands, but are new formations. Vesicular disease is not specially seen on any part; it extends by the centrifugal growth of vesicles, is attended by itching, a varying amount of general irritation, and local congestion. Vesicles are solitary and scattered (scabies), aggre-

gated but not confluent (herpes), confluent and aggregated (eczema), occur in successive crops: their contents are in very asthenic cases albuminous, generally fibrinous, with a false membrane at their lower part. Hæmatin, pyoid, granular, and mucous corpuscles, lymph and fatty matter are also found. The reaction may be acid (sudamina and pemphigus), or alkaline (miliaria).

5. *Blebs*, as before observed, are simply large vesicles. They vary in size from that of a pea to that of a shilling, usually reaching the latter from the former in a few hours, and they are seated upon an erythematous base, generally associated with ill-health, coming on without premonition. In consequence of their rapid formation and the resistance offered by the cuticle, the bleb is tense and full, but absorption soon produces more or less flaccidity, the contents become opaque, sometimes sanious and bloody (rupia), and being discharged dry into crusts of yellowish or blackish hue, but sometimes of a raised conical form (rupia); beneath the crusts the surface is raw, red, and more or less dirty. Sometimes at the bottom of a bleb is found a disc of plastic matter, and the raw surface may take on a morbid action and secrete a thick tenacious fluid and even pus. Bullæ are solitary, or multiple, confluent, or isolated; often periodic in old people. Blebs may be formed by the coalescence of vesicles as in eczema of the fingers, but these are linear elevations rather than circular cuticular elevations. In erysipelas, blebs are common. About the hands and feet of infants, they are regarded as syphilitic.

6. *Pustules*.—These occur as one of the commonest forms of elementary lesion, allied somewhat to vesicles, but possess a more or less indurated and inflamed base and purulent contents. Their seat is sub-epidermic. A pustule is generally defined as “an elevation of the epidermis consequent on the presence of pus.” Now it not unfrequently happens that in consequence of a reparative action set up in

the vesicle, pus is produced upon its dermal base, and mingling with the serum, constitutes a sero-purulent and subsequently a purulent or pustular vesicle. In such a case it is necessary to remember that a true pustule contains pus from the first moment of its formation, and by this circumstance is essentially distinguished from a vesicle (Wilson). In many cases of so-called co-existence of vesicles and pustules, the disease is rather *puriform* than *purulent*. The crusts resulting from pustules are thicker, larger, and broader than those derived from vesicles. Pus is rarely if ever removed by absorption, but finds its way to the exterior. There are three kinds of pustules,—*psudracious*, which are small, hard, and pointed, with a slight areola; *phlyzacious*, large, raised, vivid red, with an indurated and inflamed base, giving rise to large thick scabs; the term *achores* was applied to pustules occurring on the hairy scalp, subsequently it has been restricted to the so-called pustules, or rather cups of favus. Pustules may be sub-cutaneous; a hard induration, of angry or livid hue, is felt, and on section is seen to contain pus. A modification of the pustule is the furuncle, or boil. It differs in no particular except that the sub-cutaneous cellular tissue takes part in the inflammation, and may be more or less destroyed; when this is the case, it is discharged in the form of the well-known “core;”—according to some, the core is a new formation (exudation). Boils are accompanied by heat, swelling, tension, throbbing pain, general malaise, perhaps fever, and commence as little red hardened points, which increase in size, and become pustular at the apex; they are generally multiple. The cellular tissue may be extensively involved and slough, the boil large, the tissues much swollen and brawny, whilst several openings give exit to the discharge, and cores can be seen at each aperture; then the disease is called “carbuncle,” and when gangrenous inflammation sets in, “malignant pustule.”

7. *Squamæ, or Scales*, are found as primary or secondary

products of disease; in the former they are simply altered epithelial cells, either produced by augmented formation or hypertrophic growth. They are thin, fine, branny, opalescent; or thick, hard, dry, whitish, more or less opaque, rarely of a dark aspect, collected together in an imbricated manner (psoriasis), with a more or less hypertrophical state of the papillary layer of the derma; or thrown off as soon as produced (pityriasis), or with only slight aggregation, perhaps forming a thin layer. The scales are produced in great abundance and with rapidity, but, histologically speaking, are not so perfectly formed as in the normal condition. In some cases they become granular, and even fatty. There is no effusion of fluid in the primary form of disease, except rarely as a secondary result from inflammation, but the skin generally is somewhat infiltrated and thickened, often very dry, the papillæ being more or less hypertrophied; and the disease is accompanied by itching, slight redness beneath the scales, and in old-standing cases by cracking and fissuring of the diseased part, as in psoriasis, producing a dull white, and compact cracked dry surface. Scales are, moreover, produced in the *secondary* stages of other diseases, forming not distinctive but accidental features, as in scarlatina, roseola, lichen, eczema in its later periods, in cases of local irritation; for instance, herpes circinatus and chloasma (in the latter the peculiar light brown tint is characteristic). Crusts, of course, which might be called scales, are formed by the desiccation of the contents of vesicles, pustules, blebs, &c. As generally understood, squamæ or scales are simply altered epithelial scales, and if removed are quickly reproduced.

Furfuraceous desquamation is the term applied to the forms of disease in which fine branny scales are thrown off.

8. *Tubercula or Tubercules*, in contradistinction to tubercles of a phthisical nature. This term is the very worst in the literature of skin diseases. Willan defined it to be "a small hard superficial tumour, circumscribed and permanent, or

separating partially." Degenerations would be a better name. Tubercula includes very many different kinds of disease—verruca or (papillary) warts, phyma (a boil), molluscum and acne (glandular), lupus, elephantiasis, frambœsia, &c., structural alterations. Hardy defines tubercula somewhat as follows:—Little globular tumours, firm or soft, containing no fluid, formed deeply in the substance of the skin, at times disappearing by an insensible absorption, at others ulcerating, with prior softening, accompanied by loss of substance more or less deep and extensive. If one uses the word degenerations, we recognize two grand divisions,—*homologous*, including elephantiasis, keloid, frambœsia; *heterologous*, cancer, lupus, epithelioma, cancroïd; the latter commencing as hard nodules on the derma proper, and having as their especial features, the tendency to enlarge, spread, and ulcerate, with decline of the general health. The tubercles formed by these degenerations are solitary (cancer), or multiple (frambœsia), at first often sub-cutaneous, the skin being apparently natural but soon becoming irritated, interfered with as to nutrition, hence swollen, congested, softened, and at length ulcerated, when, in the majority of cases, out sprouts the diseased mass beneath. This occurs in elephantiasis, frambœsia, cancer, epithelioma, in lupus, rarely in keloid. The surface then presents a variable aspect; it may be clean and studded with quasi gelatinous little prominences (cancroïd), or foul and exuding a dirty fluid (cancer), or scabbed in various degree (lupus). The loss of substance increases either superficially or deeply; one part may heal whilst the other ulcerates, as in the varieties of lupus. The edge may be undermined and everted (cancer), or inverted, thickened, rounded off as in lupus; and there may be more or less infiltration of the textures beyond the boundary-line of the sore (as in cancer), or congestion and œdema.

Degenerations are chronic in character, often hereditary; and in some cases the loss of substance is rather

an eating out (as in lupus) than a true ulceration. In the malignant forms there is pain, the discharge is offensive, and the edges are everted, undermined, and there is glandular enlargement. I append the following summary as applicable here. It is after Rokitansky, and the quotations are in his words :—

ADVENTITIOUS GROWTHS.

A. New growths of cellular tissue.

a. “Soft wart-like growths attached by a pedicle,—*e.g.*, molluscum simplex. The saccular dilatations of the corium are occupied by some cellular tissue at various stages of its development. They occasionally also contain fat.”

β. Fleshy excrescences on the nose (bottle nose), “luxuriant growth of corium and of cellular tissue.”

γ. Condylomata.

Soft or firm, broad, pointed, pediculated or not, and at apex “like a mulberry, a cauliflower, or a cock’s comb.” “They are composed of an investing layer of epithelium and of newly-formed cellular tissue, and they originate in the corium, where their points, which, as is well known, are the more unmanageable part, take deep root” (Simon). Of the same nature are pian of tropical climates, radesyge, &c.

B. Fatty tumours—usually congenital—one or several round, globular excrescences, truncated and pedunculated generally. Consisting of “a prolongation of cutis enclosing some fatty tissue, which seems like a protruded lobule of sub-cutaneous fat; for at the base or neck of the excrescence it is continuous by a sort of pedicle with the general subcutaneous adipose stratum.”

The epidermis covering them is sometimes dark-coloured and contains pigment (*nævus lipomatodes* of Walther), and unnatural hair often grows upon them.

C. Fibroid tissue, as in *cicatrix*—*elephantiasis*, after repeated inflammations,—*e. g.*, *erythema*.

D. Keloid consists of “a fibroid callus, and with that appearance its external *cicatrix*-like aspect corresponds.” Keloid may be “a simple hardness or callosity of the skin, either flat, somewhat raised, or depressed, and white, pale, or rosy-coloured; or it may be cord-like; in either case it terminates in white or red elevated lines or processes (the spider-like pimple of Warren), and is of inconsiderable extent.” There is generally one tumour and it rarely ulcerated.

E. Anomalous bony substance. Rare. Calcareous growths in scars are seen occasionally.

F. *Teleangiectasis* (is the vascular *nævus*). Congenital generally; red, blue, and tinted (moles), tumours like strawberries, which may be erectile. Cancer may complicate it. “A network of enlarged capillary vessels, embedded in a delicate and partly undeveloped cellular tissue.”

G. Cysts. Their origin is from the sebaceous glands very frequently, and they form in cellular tissue and are associated with *cholesteatoma*.

Some regard these elementary lesions as playing a very subordinate part in the determination of diseases. Hardy remarks, one is forced to acknowledge that the same malady presents sometimes vesicles, sometimes pustules, and sometimes papules; for example, in *itch*. He allows that it is easy at the onset of disease to recognize these lesions as separate existences; difficult at a later stage. Gilbert wrote that “it has been said that the papular, vesicular, and pustular forms, admitted as the basis of a classification of cutaneous diseases

into separate and distinct orders, were incorrectly regarded as constant, and that a vesicle is frequently transformed into a bulla, a mere redness into a papule or pustule, so that the distinctions founded upon these considerations were arbitrary and illusory." He then, after giving examples, adds: "But what do these examples, which we might easily multiply, prove? Nothing; except that there is nothing absolute in nature, and particularly in morbid nature. It suffices that these elementary forms, which serve to guide us in diagnosis, should be plain, and decided, and constant, in order that we may be able to recognize them in an immense majority of cases, and arrive by their means at a correct determination of the species."

It is by the aid of these elementary lesions that we must at present classify skin diseases. Several elementary lesions may co-exist, as is often the case; but that does not prove identity.

The most common co-existences are vesicles and papules, as in scabies; papules and wheals, as in lichen urticatus; wheals and blotches, as in purpura urticans; papules and pustules; in scabies again.

The types which Willan's arrangement portrays are absolutely true to life, must ever remain as so many guides; and, in their general significance, are the unchangeable elements in the teaching of skin pathology.

The causes which may modify elementary lesions are:—

1. *Abortive development*; for example, the vesicular stage of eczema may not be reached, and the disease simulate an erythema.
2. *Secondary changes*.—The characteristic lesions may be very ephemeral, and external influences may alter the original character.
3. *Concomitance of other disease*; for example, a papular may complicate a vesicular disease, and so on.

THE SYSTEM OF WILLAN AND BATEMAN.

- Order 1. *Papulæ*, including strophulus, lichen, prurigo.
 Order 2. *Squamæ*, including lepra, pityriasis, psoriasis, ichthyosis.
 Order 3. *Exanthemata*, including rubeola, roseola, scarlatina, purpura, urticaria, erythema.
 Order 4. *Bullæ*, including erysipelas, pompholix, pemphigus.
 Order 5. *Pustulæ*, including Impetigo, variola, porrigo, scabies, ecthyma.
 Order 6. *Vesiculæ*, including varicella, rupia, vaccinia, miliaria, herpes.
 Order 7. *Tuberculæ*, including phyma, sycosis, verruca, lupus, elephantiasis, vitiligo, molluscum, acne, frambæsia.
 Order 8. *Maculæ*, including ephelis, spilus, nævus.

This is now untenable in its details. We may, therefore, adopt a modification of it as follows :—

1. Acute specific eruptions (contagious).
2. Erythematous (non-contagious), including erythema, roseola, rosalia, and urticaria.
3. Papular; lichen, strophulus, and prurigo.
4. Vesicular; eczema, herpes, miliaria, sudamina; *sub-order*, *bullæ*; rupia, and pemphigus.
5. Pustular; ecthyma, impetigo; *sub-order*, *furunculi*, including boils, carbuncle, and malignant pustule.
6. Squamous; pityriasis, psoriasis, and ichthyosis.
7. Tubercular or degenerations; (a) *homologous products*, elephantiasis, frambæsia, keloid; (b) *heterologous products*, epithelioma, cancer, cancroïd, rodent ulcer (all malignant), and lupus (strumous).

8. Modifications of existing structures ; (a) papillary, *e. g.* warts, corns, &c. (b) of the vascular supply, *e. g.* purpura and nævus. (c) nerve supply, *e. g.* pruritus, &c. (d) of colour or maculæ ; ephelis, lentigo, and other pigmentary changes. (e) glands, of the perspiratory ; or the sebaceous, *e. g.* excessive secretion, *steorrhœa*, *ichthyosis sebacea*, and with retention in addition, as in acne, molluscum, cornua, &c.
9. Parasitic ; (a) vegetable or dermatophytic, as in favus, tinea tonsurans, tinea decalvans (alopecia), plica Polonica, herpes circinatus, sycosis, chloasma, pityriasis versicolor, and the fungus-foot of India. (b) Animal or dermatozoic, as in scabies, prurigo, and pruritus from pediculi, the pulex (flea), the chigoe, the bug ; and eczema, impetigo, &c., from the pediculus capitis, &c.

Syphilis is a modifying agency, and does not warrant the formation of a separate class.

For further detail I must refer the reader to my little work "On the Classification of Skin Diseases," in which will be found a series of comparative tables, illustrating the systems of Alibert, Willan and Bateman, with Dr. Gull's modification, Mr. Erasmus Wilson, Startin, Cazenave, Buchanan, Hebra, Hardy, and a mixed form of my own, based especially upon scientific considerations.

CHAPTER II.

THE ERUPTIONS OF ACUTE SPECIFIC DISEASES.

THESE need not be dwelt upon very fully, but at the same time it will be useful and convenient to give a short summary of the eruptions themselves, closely following the excellent description given by Erasmus Wilson.

VARIOLA, OR SMALL-POX.—The skin affection is characterized by the appearance (after three or four days' ailment) of bright red hard acuminate points, which, passing through the stages of vesicular and pustular inflammation, arrive at their maturity on the eighth day of eruption, when they scab into a dry brown mass, which becomes detached in from twelve to twenty days, leaving behind permanent cicatrices or "pits." Small-pox is often preceded, *quoad* its local state, by more or less erythema, which subsides on the appearance of the vari. Small-pox is *discrete* (pustules scattered); *coherent*, eruption plentiful; *vari*, "closely packed side by side but still distinct;" *confluent*, when they run together; *modified*, if succeeding to a prior attack or inoculation (this is the same as varioloid, and probably varicella is merely a slighter form); the disease is also primary or secondary, as regards the number of attacks. Variola sine variolis is the name given to the febrile attacks which are unattended by eruption. It is necessary to note that the mucous surfaces are affected in like manner. Small-pox is, by universal consent, divided into five stages,—incubation (5—20 days), invasion (2 or 3 days), eruption, suppuration, desiccation.

The "*Period of Eruption*."—Eruption makes its appearance on the third day after the first appearance of constitutional disturbance, and travels over the entire body within a

day, when the general condition is greatly relieved. The spots show first on the face about the forehead, and thence extend to trunk and limbs. These spots are, in the very outset, small papules, red, hard, pointed, more or less closely packed or scattered, affording a good guide as to whether the disease will be confluent or not; if the skin be very red and erythematous, probably the case will assume the confluent form. On the second day the papules get transformed into vesicles; but if these be punctured, nothing escapes: on the third day, umbilication commences as a central depression, which becomes more marked every day, *pari passu* with suppuration; the pustules are "whitish and surrounded by an inflamed areola" (fourth day); if the contents of the pustule are now turned out, a little "disc" of dirty plastic matter, presenting an umbilicated shape and attached to the cutis beneath, will be noticed. In the confluent form these changes are not distinctly seen. It is not at all unusual to observe the confluent in one, the discrete form in another part of the same subject. The papillary stage then lasts one day, the remaining four are passed till the next stage,—that of *Suppuration* or *Maturation*, takes place. The onset of this is observed about the end of the fifth or beginning of the sixth day of eruption. The contents of the umbilicated vesicle soften down into pus, the umbilication diminishes with enlargement of the base of the pustule, and a yellow colour replaces the white; the contents are the same plastic disc and pus. Maturation, as it is called, is "complete on the eighth day of eruption;" between the eighth and eleventh day *secondary fever* sets in, when the stage of *Desiccation* is reached. This is the period of recovery or resolution, when the local and general symptoms subside, the scabbing dries, and the discharge ceases, the crusts fall off in the next three or four days (fifteenth day), exposing raw red surfaces, which desquamate, and by-and-by contract and leave behind red-looking marks, which gradually fade and assume the well-known aspect of small-pox marks. When small-pox is

produced by inoculation there are some differences. On the third day the puncture is inflamed, it is itchy, and surrounded by a little blush of redness, the spot too is slightly indurated; on the fourth or fifth day the central point acuminates, and a little coming vesicle is seen; on the sixth day there is an early state of pustule, and it is umbilicated; seventh day, a pustule (inflamed) is formed with an inflamed areola; ninth to tenth day, maturation takes place, umbilication goes; twelve to fifteen days, desiccation takes place; twenty to twenty-five days, scab falls off: the disease is rarely confluent.

MODIFIED VARIOLA, VARIOLOID, OR VARICELLA.—There are two well-marked forms in external aspect, though they are by no means always dissociated; they are—

1. The pustular form, or modified small-pox, properly so called.
2. The vesicular form, or chicken-pox.

There are differences of opinion as to whether these have any relation. Now, in epidemics of all kinds we find, while some of the patients have the disease, whatever that may be, in its fullest developed condition, others, owing to certain counteracting influences, exhibit what may be termed minor degrees, or abortive forms even. This is true of small-pox. The distinction of varicella (vesicular), modified small-pox (varioid), and variola are well marked in the extreme degrees of either disease, but they shade the one into the other by insensible stages. At times you meet with cases which may be called either variola or varioid,—indeed it is not uncommon to observe the vesicular in conjunction with the umbilicated form; at other times the eruption is simply papular and scarcely reaches the vesicular stage, and is traceable to the action of the small-pox poison. Varicella may be regarded as small-pox modified by vaccination; it is able to give small-pox to a sound person by infection. The varieties

of varioloid may be either papular, vesicular, or pustular, as follows, after Mr. Wilson :—

1. Papular varicella.
2. Vesicular varicella.
3. Pustular varicella }
 - A. Umbilicated pustular varicella.
 - B. Globular.
 - C. Conical.
4. Varicella sine varicella,—febrile disturbance without eruption.

The *Papular Varicella* is a rare form *per se*; it is called horn-pox. It is often more or less associated with the other varieties. The symptoms are almost *nil*; they may consist in slight febricula, pains in limb, loss of appetite, headache. The local symptoms consist in the production of red points, which subsequently become elevated and feel hard to the touch. Instead of running on to vesiculation, the spots gradually fade and die away.

Vesicular Varicella is ushered in by mild fever, headache, malaise, thirst, quick pulse, &c., followed in one to three days by the appearance on the face, chest, and back, of small oval or round reddish spots, with red bases, which become vesicular the following day (2nd). On the third day the vesicle has enlarged, the contents are getting opaque, and the vesicle is flattening. On the fourth day they shrivel. On the sixth day they desiccate, with the formation of brownish scabs, and pucker in towards the centre. The scabs fall off about the eighth or tenth day of eruption, leaving red stains but no depressions. The eruption is composed of successive crops, which may prolong the disease for ten to twenty days, and is often mixed with papular varicella. Vesicles are often seen on the scalp. The vesicles also assume a variety of forms; they may be round or oval, flattened or not, or even umbilicated.

Pustular Varicella.—The premonitory state often ap-

proaches that of small-pox. The eruption appears on the third or fourth day on the face, trunk, and limbs, just as in small-pox; small red hard points show themselves, which are papular on the second day, vesicular on the third; on the fourth *umbilicated* and enlarged with turbid contents; on the fifth and sixth day suppuration is perfected; on the seventh day desiccation; from the eighth to the twelfth day the scabs fall, the crops are successive, scars are left, but are not, or very slightly, permanent. The spots may be large, non-umbilicated, and conical (*varicella coniformis*),—this is *swine-pox*; or globular (*v. globularis*), called *hives*. All these varieties are more or less associated. They last from one to two weeks or so.

Causation, i. e. Relation to Small-pox.—Varicella is produced by the same cause as variola. It complicates, antecedes, or follows epidemic variola. It may give rise by infection or inoculation to variola.

Diagnosis.—In some instances it will be impossible to say from the premonitory symptoms (which give one an idea of coming variola) what kind and amount of eruption will be found. You may have very high fever with very little subsequent local mischief. Nor in the early stage of eruption is it always an easy matter to determine the exact nature of the case. In a person who has never been vaccinated, the severity of the general symptoms, the presence of erythema, or a goodly number of commencing vari, will assuredly tell the tale of commencing variola. If the eruption occurs at the outset elsewhere than on the face, it is varicella no doubt.

Varicella, generally speaking, is distinguished from small-pox by—

1. Less severity of general symptoms.
2. The shortness of the course of the eruption.
3. The absence of secondary fever.

4. The characters of the eruption ; often oval, non-umbilicated, areola and induration less, thin scabs, and absence of pitting.
5. Appearance often on the back first.
6. Eruption successive, and thus prolonged a good time.

The several varieties of varioloid are constantly mixed up together.

VACCINIA, OR COW-POX.—This does not come within the scope of the present work ; a full and complete account of it may be found in the "Transactions of the Provincial Medical Association," vol. x. p. 216, by Mr. Ceeley. It may be noted simply here, that the vaccinia (casual), as it is called, which results from the communication from the teats and udder of the cow, is seen on the sixth to tenth day after inoculation, on the backs of the hands, between the fingers, and on the face. The eruption is characterized by the appearance of red, pointed, hard papulæ, which go through the usual small-pox stages of vesiculation, pustulation, umbilication, and desiccation, leaving behind pitting of the surface.

INOCULATED VACCINIA, OR VACCINATION.—The vaccine virus is, as we all know, introduced into the system by means of punctures or scratches. On the third day there is seen a slight red point if a puncture, or a red edge if a scratch, has been made ; the part is also elevated. On the fourth day these signs have augmented ; the *papular stage* is attained ; there is local irritation ; the edges of the wound are everted, thickened, inflamed, hot, with a commencing blush of redness around. This phase may subside into a normal state of things ; on the fifth day the epidermis is raised into a vesicle, which is decided on the sixth day, when it is of a whitish colour, round or roundish, and with commencing umbilication. It attains its full size on the eighth day (fifth of eruption) ; it is distended, flattened, whitish, and surrounded by a red areola, and more or less induration ; the parts around now become irritated, tense, brawny ; the glands enlarge ;

the blush of inflammation extends oftentimes to the shoulder, or down the arm itself. On the ninth day the umbilication is lost, and the pox is getting pustular. If the vesicle is punctured, around the edge especially, a transparent fluid exudes. On the eleventh day, the red areolar inflammation begins to subside; the contents are pustular, and the stage of desiccation commences. Up to this period, the vaccine vesicle is chambered, so to speak, into separate cells; they now open the one into the other, and form one large pustule; the desiccation advances from the centre in the next few days (12th, 13th, 14th) towards the circumference; the crust dries also, so that a dark, hard, dry, shrivelled scab remains; the redness has in great measure gone, but there is a lividity about the vesicle; the crust separates from the seventeenth to the twenty-fifth day, leaving behind cicatrices, at first of dark colour, which are permanent. Mr. Wilson, who is so excessively clear and definite in all his descriptions touching variola, recapitulates thus:—

First two or three days, *incubation*; 4th, *papular*; 5th to 8th, *vesicular* (umbilication); 8th day, *areola*; 9th to 11th, *pustular*, umbilication lost, areola enlarged; 15th to 17th, period of *separation*.

The disease does not always run a regular course; it may prove abortive at any period. In performing vaccination, the following rules should be attended to:—

1. Get lymph from a perfectly-formed vesicle; and
2. Obtain it on the eighth day, before the areola is formed; and
3. From a healthy child.
4. Vaccinate in several distinct places; the more vesicles produced by vaccination, the greater is the protective power.
5. Use scarification with a lancet as the method.
6. Do not vaccinate "too many from the same arm."

7. Do not use matter taken from the adult, or in one who has been vaccinated before.
8. Two months is the most suitable age for operation.
9. The desirability of re-vaccination depends upon the degree of exposure (probable), the existence of an epidemic, the number of cicatrices, and their degree of visibility and extent.
10. Be very careful not to use the vaccine matter which has been taken from any member of a family in which syphilis has occurred.
11. Use lymph pretty recently taken.

There are certain *secondary* eruptions which follow the operation of vaccination worth a passing notice. They are included under the term *vaccinella*, or false cow-pox.

In some instances, it is the development, at a latish period of the disease, of vesicles, which are seen on the body surface generally; some of the vesicles may be so large as to be entitled to the name *bullæ*. The truth is, the eruption may be delayed in its appearance, or it may arrive at a certain degree of development, and subside, without any areola or inflammation, or the pustular condition is not so well developed, or becomes petechial. All these irregular forms are ranked under the term *vaccinella*, and deserve remembrance *quoad* diagnosis.

TYPHUS RASH.—This consists of two component parts :—

1. A sub-cutaneous mottling, of a more or less livid hue, and diffused generally over the body.

2. Petechiæ, small, about the size of pins' heads, scattered all over the body, and showing out from the mottling; at first these are slightly raised, and their colour increases gradually in intensity; they do not fade by pressure, except slightly, in the very early stages. The eruption of typhus is not prolonged by successive crops. It makes its appearance between the fifth and eighth day of disease, and disappears a

few days before convalescence. It is often accompanied by sudamina. The more the quantity of eruption, the more grave the prognosis.

TYPHOID RASH is characterized by the appearance, between the eighth and twelfth day of disease, of rose-coloured elevated spots, about a line or so in diameter, on the belly, back of hands, arm, chest, back (especially if kept warm). These spots fade by the pressure of the finger, are isolated, feel rather hard, and appear in successive crops, each rose-spot lasting three or four days, when it fades gradually. The more the spots, the more favourable the prognosis. They are said to be absent in about a quarter of all cases. Sudamina, under the clavicles especially, often co-exist with rose-spots.

RUBEOLA (MEASLES), OR MORBILLI.—About the fourth day of premonition the eruption appears, first on the face, especially the forehead, then on the chest and limbs; it reaches its height in the former situation in about two days, when it begins to fade. These changes are a little later on the other parts of the body. The eruption lasts altogether about four or five days, and leaves behind sometimes little, at other times a marked amount of desquamation, perhaps a good deal of mottling or red staining, especially if the circulation has been inactive. The rash has peculiar features: it is of a dullish red colour, and forms *little crescentic* or *semilunar* patches of variable size, affected by the pressure of the finger, and separated by natural skin. These patches are generally seen to be made up of little red dots or points, which are regarded as the enlarged and congested papillæ of the skin: hence, under these circumstances, the rash is truly punctiform; but, in other cases, the congestion may be more intense, and the skin about the papillæ generally affected, so that the separate points run together; then the rash is an uniform blush, so to speak, or rather the aspect of the patch is uniform. The colour also may be

livid if the blood state is bad. The crescentic form is supposed to be due to the peculiarity in the distribution of the cutaneous filaments of the nerves. The whole mucous surfaces are also affected, as may be seen in the palate, &c.

Diagnosis.—The characteristic points are the crescentic form, with intervals of normal skin; dull red colour of eruption, which appears on the third or fourth day; the presence of catarrh of the mucous surfaces, especially in the form of *coryza*.

In Scarlatina the colour is bright red, and the rash is uniform, not crescentic; it appears also on the second day; the skin is very pungent and dry; there is sore throat, the tongue is raw at the tip, or slightly furred, with red points peeping through to the surface: there is no *coryza*.

In Roseola the patches are scattered, circular in form, not made up of crescentic portions, with intermediate healthy skin; the colour is bright, and there is an entire absence of general symptoms, and *coryza*, &c.

Dr. Babington brought to the notice of the Epidemiological Society, on the 2nd of May, 1864, the description of an anomalous form of measles which had been observed during the prevalence of an epidemic in London. By some it was thought to be lichen urticatus. It is papular, and closely resembles measles; but the rash is not general, not crescentic; the papules are not seen on the limbs as a rule. It is an idiopathic form, and occurs in patches like lichen circumscriptus somewhat, but is clearly an active form of disease, and of a deep hue. There is considerable constitutional disturbance, no sore throat. It is called by Dr. Babington *rubeola notha* (bastard measles). The medical journals thus report the matter:—*Rubeola notha* is a compound of *roseola annulata*, abortive measles, various erythemata following acute diseases,—*e. g.*, diphtheria and rosalia.

In the American "Journal of Medical Sciences," July, 1862, is a paper by Dr. Salisbury on "The Influence of the Fungi of Wheat-Straw on the Human System, and the Origin of Camp-Measles," and, perhaps, of measles generally. Dr. Salisbury records many facts to show that the inoculation of the system with the elements of the fungus of wheat-straw gives rise to the development of a disease which differs in nothing from measles. He says that this is the origin of camp-measles, from sleeping on damp "mouldy" straw. He also produced it artificially by inoculation, and suggests that the origin of measles is to be sought for in some such manner. Dr. H. Kennedy ("Dublin Quarterly Journal of Medical Science," February, 1863), gives a case in confirmation. Dr. Salisbury observes also, that measles were not known till 1518 (Rayer) in the New World; and this was the date at which wheat and small grains were introduced into the New World; and measles are most prevalent in cold weather,—in other words, at the time straw beds are disturbed and thrashed. If there be anything in this view, the agency possibly must be a poison generated by the mouldy straw, of which the fungus is an evidence.

SCARLATINA.—On the second day of illness the rash appears on the neck and face, and is made up of small red dots, which crowd together, forming patches of various sizes and extent; after a while the whole surface becomes of an uniform hue; on the third day, the eruption is seen on the body generally, the upper extremities, and the mucous surfaces visible to the eye; on the fourth day, the lower limbs are scarlet, the surface is hot, dry, and harsh; the eruption, which may be called a general efflorescence of boiled-lobster colour, is most marked on the third to the fourth day, and it is generally more intense in colour towards evening, especially in the loins and flexures of joints. On the trunk it is often "patchy." It fades on the fifth day—first on the face, desquamation setting in about the eighth or ninth day.

The Diagnosis between scarlatina and rubeola is the only one that requires notice.

In scarlatina the rash appears on the second day, in measles on the fourth, after the first onset of symptoms. In scarlatina, the rash is bright red (boiled-lobster colour); it is not crescentic, and it is uniform or not patchy, with intervals of normal integument. In rubeola, the rash is dull red, in little crescentic patches, with intermediate lines of healthy skin. The skin in scarlatina is very dry, harsh, and pungent. In measles this is not so marked, nor is the subsequent desquamation so distinct and characteristic. In measles the changes in the mucous membranes are accompanied by secretion; we have coryza, suffusion of conjunctivæ — in scarlatina, the mucous surfaces are red, dry, ulcerated; there is also sore throat of marked kind,—this is absent in rubeola. The aspect of the tongue is characteristic in scarlatina, and the pulse is very rapid and irritable.

ERYSIPELAS.—The history of erysipelas belongs to the domain of the general physician, and to skin pathology only to a slight extent, in so far as those evidences of the blood alteration produced by its poison are shown to the naked eye. It is an acute diffused inflammation, ushered in by constitutional symptoms, and exhibiting itself locally by the presence of heat, tension, smarting or burning, over a surface disposed to vesicate; with a tendency to spread rapidly in extent, with more or less implication of the subcutaneous cellular tissue and the formation of abscess or gangrene of the latter. The constitutional symptoms are, a general feeling of illness, depression, rigors especially, with alternate heats, thirst, quick pulse, loss of appetite, sometimes wandering or delirium, nausea, with pain at the pit of the stomach, and a white furred tongue, febrile urine, &c. It is usual to make two types of erysipelas. One in which the inflammatory action is sthenic, in which the general symptoms are not grave, and in which the structures, though perhaps exten-

sively, are not very deeply implicated; this is *E. simplex*. The other, in which the general state is grave, the structures are deeply (and extensively) affected; abscess, sloughing and gangrene, are frequent; the virus is of intense quality and the blood state bad. This is *E. phlegmonodes*. The two divisional forms are merely degrees of one and the same state, chiefly influenced by two things—the quality of the virus and the state of the patient's health.

E. simplex.—In this form of disease, the inflammatory action has its seat in the derma, and, perhaps, more or less of the cellular tissue beneath. The general symptoms are those before described. The local symptoms follow quickly or in two or three days, and commence as a burning or smarting sensation, followed by a feeling of tension; the surface then looks puffy, dry, and slightly glazed, shining, the edges of the patch look raised, the part is tender and hot. In two or three days, during which time the redness and swelling have increased, blebs may form, of various sizes and shapes; these burst and dry into scabs; in five, six, or seven days convalescence sets in, the local changes abate in severity, and a yellow stain is left behind, with more or less peeling off of the cuticle. Several varieties have been described, according to seat, aspect, and character of course. Thus we have,—(a) *E. erraticum*, *E. metastaticum*; (b) *E. miliare*, *E. phlyctenodes*, *E. œdematodes*; (c) *E. faciei*, *E. capitis*, &c. &c.

The most usual situation is the face (of course I am speaking of idiopathic erysipelas); it generally shows itself at the side of the nose, often at its root, quickly spreading, with great swelling of the parts, favoured by the large amount of lax cellular tissue,—*e. g.*, about the eyes, lips, cheeks, and ears. The disease may extend to the mucous surfaces. The constitutional symptoms are often marked by depression, delirium, restlessness, headache, &c. Erysipelas of the scalp is usually traumatic; it may be slight or very extensive, the whole scalp may be undermined, puffy, and infiltrated by pus

generally, or in the form of local abscess, the cellular tissue of the scalp sloughs, and the bone gets denuded and exposed; brain symptoms are often developed.

Erysipelas of the breast is common in women who are out of health, from, it is said, over-distension of the milk-ducts, which is probably only a predisponent. The breast looks red; it is tender, hot, and swollen; then feels brawny, pits on pressure, gives a good deal of pain, is accompanied by depression of the vital powers, and terminates mostly in abscess and sloughing of the cellular tissue; the glands in the axillæ often participate in the disease. Erysipelas of the vulva often attacks the vulvæ of lying-in women, especially primiparæ. In children, erysipelas, commencing at the umbilicus, is often seen; in hospitals particularly it leads to abscess and sloughing, and often death. When the scrotum is attacked, the swelling is sometimes enormous; it is produced by the rapid pouring out of serum into the interstices of the cellular tissue. Some call it "acute inflammatory œdema," or, when it runs on quickly to the formation of pus, "acute purulent œdema." Erysipelas of the lower limbs is a form which betokens a bad state of general health, and demands attentive consideration as to treatment.

Erysipelas has been observed to disappear from one, and make its appearance suddenly in two or more places in succession, or to "wander" over a large extent of surface; in such instances it has been styled *erraticum*. The disease is not very deep, but very obstinate of cure; and often seasonal, or periodic. The face is its selective seat.

E. metastaticum speaks for itself. The mischief falls upon some internal organ, coincident with the disappearance of the external blush. It is probable, however, that the gravity of the symptoms in such a case is due to the extension of the erysipelas by direct continuity.

E. miliare and *E. phlyctenodes* are degrees of one and the same aspect; in the former, the blebs are small, in the latter,

large. Generally speaking, erysipelas presents bullæ at the early period of its course; they mostly give exit to a transparent fluid, and scabs form. In other instances, the disease is peculiar in its great amount of swelling, due rather to a difference in the seat of the mischief; for while the evidences of the implication of the skin are marked but slightly, the cellular tissue is noticed to be much more affected than in ordinary cases. The skin at the seat of disease pits easily on pressure (is œdematous), and preserves the impress made for a considerable time. This is the *E. œdematodes* of authors, and is met with especially on the lower limbs of debilitated persons; it is also seen on the penis and scrotum.

E. phlegmonodes is, so to speak, the inflammatory form. The general symptoms of invasion are severe, fever runs high, rigors are severe, delirium is not rare, typhoid symptoms often set in, and the patient is in considerable danger, or death may ensue. The characteristic of the local disease is the great exception of the occurrence of resolution. The part attacked is painful, hot, tender, swollen, very red; in a day or two it becomes softish, rigors and throbbing pain announce the occurrence of suppuration, which may be very extensive; the cellular tissue, the fasciæ, the intermuscular septa all partake in the diseased action; the blush has gone, or nearly so, but the swelling has increased. The contained pus is mostly mixed with blood and portions of cellular tissue. In this variety, a change takes place for better or for worse about the fifth or sixth day. In some cases, where the virus is of bad quality, or the patient's health is markedly bad, the sloughing and destruction of the cellular tissue may be extensive and marked: this is the *E. gangrenosum*. The constitutional symptoms are markedly severe, the inflamed part becomes dark-coloured, blebs appear, filled with bloody fluid, the general aspect of the limb is ecchymotic, and it feels tense at first, then boggy, puffy, and at length gives way; dirty matter exudes, the structures slough, the fasciæ and cellular

tissue mortify, and the patient sinks, or recovers with great difficulty, the local mischief taxing all the powers to their utmost for the process of repair.

Traumatic erysipelas is very common; it is seen in the intemperate, or mal-hygiened, and in hospitals frequently as an epidemic. Erysipelas is most common in spring and autumn.

Diagnosis.—Erysipelas can scarcely be confounded with any disease, with the exception of erythema; but the general symptoms, the tense, shining, smarting blush, and the implication of the cellular tissue, are not observed in erythema.

Various causes have been assigned to erysipelas; all we know is this, that it is due to a special poison, which attacks those whose resistant power is weakened either by mental or bodily ailment, or external agencies.

The Prognosis.—The case is grave if the general symptoms indicate high fever, with subsequent prostration; if the patient be old; if it occur on the lower limbs; if it be seated at the scalp; if there be diffuse abscess with depression; if the surface assumes a livid aspect, and present phlyctenæ; if there be much vomiting and delirium; if it be phlegmonous variety, when phlebitis ensues, and if it be metastatic or erratic.

Treatment.—In treating erysipelas, we must always look ahead, and calculate, to the best of our ability, the probable effect of depression that will be produced by the virus itself and the formation of abscess, and the amount of demand that will be made by the reparative process. And we can often do this. If rigors are severe, if there be high fever, and if the local symptoms are equally marked, then not only will the present excitation produce a marked subsequent diminution of vital power, but abscess and destruction of tissue will probably be more or less extensive. Then if the patient be out of health, if he be surrounded by bad hygiene, and especially if he be of good or advanced age, then we must husband all

the resources we can for coming wants. Then, first of all, we must try and subdue or cut short the severe onset of the disease by frequent salines, with perhaps an excess of ammonia, remembering to give due and proper attention to the correction of all deviations from a healthy state of secretions. A sharp purge will be essential. The moment the fever is mitigated, and especially if the pulse flag, or any sign of depression appear, we must stimulate freely, and give full nourishment. It is best to give a little good food and stimulant *frequently*, rather than a large amount occasionally—beef-tea, brandy, wine, &c., every half-hour or hour, in severe cases, with bark and acids or ammonia. By attempting to “nurse” the patient in the strictest sense of the word, should the worse cases be treated generally, our object being to anticipate a failure of power. Locally, warm fomentations; keep the part covered up in cotton wool; open abscesses early; always relieve “tension” by excision, if it threaten to “strangulate” the circulation; keep the part warm, raised, and perfectly clean.

In the minor or ordinary cases, this plan of treatment is not required. Attend to secretions; give salines, if needed, or bark and alkali or acid, according to circumstances. Tincture of steel in frequently-repeated doses, \mathfrak{m} xx.—xxx. to \mathfrak{z} j., every one or two hours; and apply locally cotton wool, warm lead lotion, warm belladonna lotion, nitrate of silver; relieve tension, and exclude the part from the influence of the air.

ERYTHEMATOUS DISEASES.

Erythema (a blush of redness), the least and typical form of inflammation of the skin, is characterized by the appearance of *rose-coloured* slightly raised patches, diffused or circumscribed, of varying size, rarely exceeding, however, three or four inches (generally less); the redness disappears

at once by the pressure of the finger, but returns instantly on its removal; it is accompanied by slight swelling, heat, and itching, and ends in furfuraceous desquamation with slight staining. The general symptoms are slight: mild fever, headache, quick pulse; they may be nil.

The varieties arrange themselves into three groups (after Hardy):—

1. Those purely local.
2. Those accompanied by general symptoms, simulating acute febrile diseases.
3. Those secondary to or symptomatic of other diseases.

GROUP I.—The varieties are *erythema simplex*, produced by irritants of all kinds, frictions, stings, heat, the contact of acrid fluids, plasters, medicinal inunctions, and stimulating applications of all kinds. Chilblains are an example. This form is a very insignificant disease; there is simply redness, which is affected by pressure, slight heat, and perhaps itching; in many cases the disease becomes chronic. *Erythema intertrigo*, produced by the friction of two folds of delicate skin, especially in fat persons and children, is seen in the groin, axilla, neck; sometimes the irritation set up causes the exudation of a fluid, whose acidity increases the local mischief, and presently an offensive raw surface is produced, giving out a muciform or puriform fluid (the *erythema purifluens* of Devergie). The same disease is seen about the prepuce and the vulva. Intertrigo is particularly seen in lymphatic subjects. It simulates eczema; but the origin is evidently from the friction of two surfaces, in fat people; the secretion is not that of eczema,—it is thin, muciform, stains but does not stiffen linen. Hardy correctly describes the disease produced by the inunction of mercurial ointment, as a vesiculo-pustular erythema; in which, upon red patches, little vesicles (or puriform vesicles) appear, quickly rupture, desiccate, and leave behind the erythema, whose surface

desquamates, the disease going altogether in a week or ten days. It differs from eczema, especially in its acute course, and most particularly in the aspect of its secretion, which is clear, slightly plastic, not viscid, coloured, not stiffening linen on drying, as in eczema.

GROUP II. Diseases of acute aspect and accompanied by general symptoms.—In these the eruption is the evidence of some peculiar blood state of an inflammatory tendency. There is pyrexia of greater or less degree, malaise, quick pulse, headache, and the like, but nothing special, for a few days prior to the local development. According to the aspect and character of the latter, the following varieties have been made: *E. papulatum*, *tuberculatum* (*tuberosum*), *nodosum*, *fugax*, *scarlatiniforme*, *marginatum*, *circinatum*. The first three are probably merely stages of one and the same thing. *E. papulatum*—general symptoms are malaise, slight pyrexia, loss of appetite, disorder of *prima viæ*, rheumatic pains, especially about the joints, loss of spirits. Local: small red spots, varying in size from a pin's-head to a split pea, rose-coloured, at first not raised, presently getting papular and of more vivid colour, becoming paler on pressure, in two or three days assuming a bluish tint, and gradually fading with desquamation. These spots may be separate or aggregated, or even circinate, forming patches of variable extent. Their especial seats are the backs of the hands, the arms, neck, and breast. The little patches are often slightly painful; the disease lasts about three weeks, and may be associated with sub-acute rheumatism: it is most common in young people. *E. papulatum* appears to be a common form of disease amongst the Turkish soldiers. (*Vide* Hubsch. *Gaz. Méd. d'Orient*, ii. 11, Feb. 1859, and Schmidt's *Jahrb.*, vol. ci. p. 180.) *E. tuberculatum* is a more developed degree of, and often conjoined with, the last variety; the base (erythema) is the same, the papular elevations are larger and occur about the lower extremities. The erythematous blush, vivid at the

outset and accompanied by a tingling and local heat, soon assumes a bluish tint, and gradually fades away with slight desquamation; the edge is generally well defined. The general symptoms are marked; there is fever, furred tongue, great languor, rigors, and subsequent debility. It is, as Mr. Wilson most correctly remarks, frequently met with (in general practice) in female servants who undergo a change of living in the transference from the country to the London kitchens (scullery-maids). *E. nodosum* is a more marked stage of the last noticed; the spots are larger,—as large as a nut or walnut, oval, even attaining a diameter of two or three inches, the long diameter being in the majority of cases parallel to that of the limb; they are generally seated on the anterior aspect of the leg, rarely on the arm, or above the knee. The swelling is raised, slightly hard and painful, evidently accompanied by tumefaction of the cellular tissue; the redness, at first vivid, but not so defined or limited as in *E. papulatum*, presently becomes purplish at the circumference and paler in the central part, dying away like an ecchymosis. The patch also softens and often simulates fluctuation, but it is said *never suppurates*. Chorea and rheumatism are associates. It is uncommon after the age of twenty, and appears to be connected in some way with adolescence. It is generally accompanied by pyrexia and rheumatic pains. Hardy states that it may become chronic in consequence of the existence of a scrofulous habit; the spots may soften and ulcerate, producing sores like syphilitic ones, but with a history of *E. nodosum*. In the *Boston Medical and Surgical Journal*, April 17, 1856, p. 189, Dr. Durkee, under the head of *E. tuberculatum et œdematosum*, has described a disease consisting of little tubercular elevations, vesicating at their apices, then flattening, the skin meanwhile showing a “shrivelled or collapsed condition of cuticle.” The *E. excentricum* of Bielt is *Lupus erythematodes*.

Hardy describes an *E. scarlatiniforme* which commences by

pyrexia for a couple of days, followed by a red punctiform rash about the neck, flexures, trunk, and thighs, pretty generally diffused, fading in twenty-four to forty-eight hours, with slight desquamation, without throat disease, liable to return, and lasting five or six days. It is in all probability the rosalia. Hyoscyamus, belladonna, and copaiba give rise to erythemata, accompanied by itching, heat, and slight desquamation; copaiba produces a more or less general redness, which may be partial, especially about the hands and face, with much itching quasi-œdematous swelling, accompanied by fever and gastric irritation, lasting five, six, seven, or more days, then fading away. In irritable habits, in those who are suffering from any digestive or assimilative derangement (especially in females),—*e. g.*, dyspepsia, muco-enteritis, uterine, hepatic, or renal disease of sub-acute character, red patches of diffused form are noticed about the face, neck, arms, or breast: *these quickly disappear*, either to appear again in the same or different spots. The erythematous patch is red, but tender, fading, and desquamating, and accompanied by more or less pyrexia. This is the *E. fugax* of authors. The peculiar shape and mode of origin and increase of erythema have given rise to the varieties *E. circinatum* and *marginatum*. When the disease is bounded by a well-defined and distinct margin, which is often papular or somewhat raised, it is generally seen on the trunk in persons of good or advanced age. In the later stages the boundary edge of course is less marked than in the early stage, and as Willan stated, may shade off into the surrounding part. There is generally a good deal of fever and stomach disturbance; sometimes the erythema takes the form of a ring, the centre, at first perhaps red, quickly becoming pale, increasing in diameter *pari passu* with the enlarging circumferential redness: it occurs chiefly on the trunk, and has been named *E. circinatum*.

GROUP III.—Erythemata, secondary to, or symptomatic of, other diseases, including two or three minor conditions.

Acute diseases, especially at the time of convalescence, often exhibit a slight access of febrile disturbance, and after a little itching and local heat, red patches appear about the limbs, thighs, the buttocks, the neck, and face. They vary in size from that of a pea to that of the palm of the hand. They are vivid red, last a few days, and then fade with desquamation. This is frequently an accompaniment of thrush. Sometimes the surface is elevated so as to give the appearance of a nipple, and hence it has been called erythema mamellé (Alibert). The exanthem of cholera is of the same character.

In œdematous parts (mostly seen in the leg), the distension of the skin is followed by a blush of erythema of greater or less extent. This is called *E. lœve*; it is merely a super-addition to the dropsy. It is not uncommon in cases of Bright's disease, on other parts of the body, when anasarca. The skin may discharge, slough, and become gangrenous. Bed-sores commence by an erythema (paratrimma). The pressure caused by constant lying when the system has lost much of its power and vitality, as in fevers and other grave diseases, is the cause of the erythema, the pustulation and subsequent sloughing constituting bed-sores.

Under the name of *acrodynia* was described an epidemic form of disease which occurred in Paris in 1828-9. The erythema was only the manifestation of the general blood state or epidemic constitution. The general symptoms were pains, malaise, anorexia, febrile movement, vomiting, diarrhœa, swelling of the face, and injection of the eyes, with the development locally, especially about the hands and feet (the palmar and plantar aspects), of vivid red patches of erythema, extending sometimes to the arms and legs; the colour presently changed to a very dark ecchymotic hue, and extended, more or less generally, over the body, neck, and face. The epidermis peeled off in flakes; furuncles, papules, pustules, and bullæ sometimes forming; a discharge took place and dried into thick crusts; a good deal of pain and swelling accompanied these changes, with a certain degree of

numbness of the limbs. The symptoms varied somewhat in different cases. Generally the disease became chronic, lasting several weeks or months; and frequently recurred. It appeared to be favoured by a bad state of the general health. In pellagra a similar dark erythema is brought out by the action of the sun. I have seen also on several occasions a species of erythema which is not described in books that I am aware of. It occurs about especially the back and sides of the hands and fingers in those out of health. The skin becomes red, in little circular spots, from which the epidermis peels off by a centrifugal death as it were, leaving behind a red dry surface, marked by circular ridges of what appear to be normal papillæ. The places are many, the disease is chronic and requires no treatment. It looks simply like the death of the epidermis, beneath which is seen the reddened derma marked by circular ridges of prominent papillæ. It is not erythema circinatum; it is more like a superficial acrodynia.

Prognosis is never grave. Erythema when it becomes chronic is a source of great discomfort; in the more marked forms the disease lasts two or three weeks. In *E. læve* and *E. paratrimma*, the prognosis is that of the general malady present.

Diagnosis.—Erythema is known by its *superficial character*; the redness disappearing by pressure; by the peculiar change in the colour of the circumference of the patch, the absence of marked itching, heat or tension, or burning, its general circumscription, little tendency to spread, patchiness, but slight elevation. Erysipelas differs in the shiny, hot, burning, tense, blushy swelling, the rigors at the onset, the tendency to spread, and the implication of the cellular tissue, the deep (non-rosy) hue. Urticaria is known from erythema by the peculiar stinging sensation; the presence of wheals, which go and come in a wondrously capricious and sudden

manner; by the irritability of the skin, easily detected with the nail or slight friction.

Roseola is something like *E. papulatum*, but the general symptoms are especially pyrexial in the former, rheumatic rather in the latter; the eruption of roseola is rosy or pink and of a defined character, often punctate; erythema is generally a partial, not a general affection like roseola; the latter often assumes the aspect of measles (false measles). *E. marginatum* and *circinatum* are said to be distinguished (especially the latter) from herpes *circinatum* by the presence of vesicles in the latter, in which the erythema is very transient, and furfuraceous desquamation subsequent to actual or abortive formation of vesicles very distinct, but the diagnosis can only be settled by the microscope. *E. læve* and *E. fugax* speak for themselves, the former being associated with dropsy. *E. papulatum* may resemble lichen urticatus; but in the latter the papules entirely put into the background the slight erythema; the papules are large and often pruriginous; the skin is irritable, with a sense of heat and stinging; and a tendency to the formation of wheals is apparent. The skin generally is dry and harsh. *E. papulatum* assumes a bluish tint after a few days; it is seen on the back of the hands, arms, and neck especially,—not on the body so much as lichen urticatus, and it is not truly papular *ab origine*. *E. tuberculatum* and *E. nodosum* can scarcely be mistaken; the oval, tense, red, subsequently softish feel, pale centre, and livid circumference, are absolutely distinctive of the latter.

Erythema is a dry disease, except in the form of intertrigo, which may resemble eczema; but the latter is essentially a vesicular disease. Its secretion is viscid, stiffens linen, dries into distinct yellow crusts. Intertrigo is seen to be produced by the friction of folds of skin in fat subjects, and possesses no crusts, but a sickly peculiar odour.

Treatment.—In the local erythemata we must simply

remove all irritants, have especial regard to cleanliness, and merely apply soothing agencies,—*e. g.*, to prevent dryness or friction, &c., zinc ointment, or glycerine and rose-water, Liniment: aquæ calcis or fine starch, or lycopodium powders; avoid poultices, and internally give aperients. In intertrigo we adopt the same plan of treatment in mild cases. Sometimes it becomes a troublesome disease, with sour acrid discharge increasing the excoriation: this generally depends upon some internal derangement, whose type is muc-enteritis. In these cases, alteratives and chlorate of potash internally are of service, particular attention being paid to diet; such food as corn flour, maizena, and the like, must be forbidden, and proper nutritive substitutes,—*e. g.*, Hard's food employed in conjunction with milk. Then locally, zinc ointment, bismuth powder or lotions, simple sulphur ointment, grs. v.—x. to ʒj., weak zinc lotions, and lastly, if chronic, sulphur baths and astringent tonics, such as bark; syrup of iodide of iron and cod-liver oil are also called for.

In the erythemata dependent upon general causes we have to remember the effect of ingesta, that a gouty or rheumatic habit, disordered menstrual function, dentition, delicacy of skin, and lymphatic temperament, are present in greater or less degree. We are careful to give an unstimulating diet, to forbid spirits, wine, and beer, to clear out the bowels, and in the early stage to adopt a saline régime, tepid sponging with emollient baths. Tonics are generally demanded; if there be any distinct rheumatic symptoms, we must increase the renal secretions, get the liver to act by aperients, and then give colchicum (in acute cases) and iodide of potassium with bark. In *E. nodosum*, aloes and iron in combination are very useful in the fat, bloated, full-coloured but flabby and stunted lymphatic subjects often affected (servants). Locally, do nothing.

In all cases, we should watch for the earliest opportunity for the exhibition of tonics. If there appear to be an overloaded yet anæmiated state of system, we may combine

(saline) aperients with preparations of iron; and any neuralgic tendency is met with quinine.

Bed-sores are best treated by attempting to "harden" the skin in the early state by spirit applications, removing pressure as much as possible, in latter stages, by pads, cushions, and water-beds; and using charcoal poultices or soap plaster spread on soft leather to the sores. For chilblains, equal parts of turpentine and tincture of aconite or belladonna, and soap liniment, together with tonic treatment, iron, quinine, and cod-liver oil, is the best.

It is perhaps as well to mention here that Hebra, in a case of erythema occurring in pneumonia, in which the patient died, found, on section of the rash after death, that it was produced by a *hæmorrhagic exudation*: this is important, because it shows the specific aspect of true erythema.

URTICARIA is a pyrexial non-contagious disease, so called from the local manifestation being like that produced by the sting of the *urtica* or nettle. The general symptoms are those of pyrexia, with more or less irritation of the mucous tracts, pain at epigastrium, &c.; subsequently a blush appears, and upon this arise wheals, "which are hard, circumscribed elevations usually round, discrete or confluent, varying in size from two lines to an inch or more, often whiter than the rest of the skin, at other times rose-coloured, frequently surrounded by a red areola, accompanied by itching and heat, of short duration, but sometimes reappearing at intervals more or less distinct." No doubt the nervous filaments of the skin have much to do with the production of wheals—their sudden appearance and disappearance can be brought about by no other agency; they are supposed by Dr. Gull to be produced by a contraction of the muscular tissues of the derma; for two scratches made side by side, when the wheals are produced, became approximated; while stretching the skin, the application of chloroform and ice caused their disappearance.

The skin generally is very irritable, and the wheals may easily be produced at will: all ages and parts of the body are liable to it; it is more frequent in spring than summer, and may be intermittent or periodic. Bateman made six varieties, divisible into two divisions: *acute*, including the febrilis and conferta; and *chronic*, U. perstans, evanida, subcutanea, and tuberosa. The two acute varieties are degrees only of one and the same thing, and do not deserve separation. When the skin generally is much swollen, the wheals smaller but more closely packed, coalescing (conferted), it is named conferta, the itching and tingling being severe. We may therefore make one acute form, U. simplex or febrilis: this generally arises from the taking of some article of diet or particular medicine; hence it has been called *ab ingestis*; it may not so arise, however. U. febrilis may take the aspect of a febrile disease; there may be quick pulse, hot skin, pain in limbs, headache, and generally pains over the region of the stomach, with vomiting or nausea; then quickly occurs a tingling heat with erythematous patches, upon and from which wheals come and go, in a characteristic manner; the tingling and itching are very bad at night, increased by all warmth, and the taking of heated fluids, &c. The skin is always irritable, and wheals easily arise by irritation; the disease lasts seven, eight, or ten days, and generally the presence of stomach irritation and appearance of wheals alternate; presently the blush fades away with more or less desquamation. There may be more or less swelling of the cellular tissue (secondary). It is seen in children oftentimes during dentition. When produced by ingesta, the disease may take apparently a very grave aspect; the patient seems poisoned, there is high fever, vomiting, headache, quick pulse, delirium, the mucous surfaces being hot, irritable tingling, the conjunctivæ implicated; presently the face rapidly swells, so that the countenance is completely masked; the ears, nose, eyes, and lips are swollen; hot tingling; the mucous membrane of the larynx is evidently affected; the swelling speedily subsides and travels to the body and

trunk, and this very rapidly, accompanied by intolerable itching, the formation of wheals, and alleviation of the general symptoms.

The chronic forms may result from the acute, or develop out of a state of tolerable health, and without apparent cause. When the wheals are of pretty long continuance, the disease is called *perstans*. The concomitants are the same as in the other forms. In other cases the wheals are small and very fugitive; the skin is irritable and the itching intense. This is *U. evanida*: there is not much fever present, but it is, like the *U. perstans*, a chronic disease, but more so than the latter. Dr. Gull names *U. evanida*, factitious urticaria (Guy's Hospital Report, vol. v. p. 88, 1859), because it is easily produced by mechanical irritation, and is not idiopathic (as the rule).

In persons broken in health, especially by intemperance, the urticated patches are raised, in consequence of the implication of the subcutaneous cellular tissue, in patches about the size of a nut or walnut; they show themselves on the limbs, and possess the especial feature of urticaria; viz., their quick appearance and disappearance, or intermittence: it is called *U. tuberosa*. In some cases there is swelling and apparent œdema of the cellular tissue,—now here, now there; but the wheals are more or less scarce and occasional. The redness, the heat, the tingling, and swelling remain; and it is only the accidental appearance of the wheal that discloses the true nature of this variety, called *U. subcutanea* (Willan) or *œdematosa* (Hardy). Even here capriciousness is marked; the œdema goes quickly.

Etiology.—The cutaneous nervous system is evidently very impressionable. This is called idiosyncrasy by some. Such being the case, all irritants will bring out the disease, be it direct, *e. g.* friction, heat, cold, the nettle, the hairs of cetaceous larvæ (Dr. Barker, Ranking Retrospect, vol. xxxiii., 1861), or reflex irritation, *e. g.* pulmonary, gastric, uterine.

and renal irritation, mental anxiety, moral emotions of all kinds. The eatables, &c. likely to give rise to urticaria are fish, especially when spawning, it is said,—*e. g.* mussels, lobsters, crabs, prawns, oysters, &c.; pork, highly-seasoned foods, fruit, *e. g.* raspberries, strawberries, mushrooms, cucumbers, coffee, liquors, seltzer water; certain medicines, *e. g.* valerian, chimaphila umbellata, copaiba (?) In some way or another, disorder of the digestive functions is a most prolific source of urticaria; then delicate skins, and females during change of season, are particularly liable to be attacked.

Prognosis.—Urticaria has no gravity about it. Acute attacks (*ab ingestis*) are of short duration. Chronic urticaria is abominably troublesome. The intermittent form is very obstinate. All depends upon our ascertaining the cause of irritation (direct or indirect) present.

Diagnosis.—Urticaria ought not to be mistaken for any other disease. Its sudden and capricious character, the tingling sensation, the presence of wheals, gastric disturbance, and irritability of skin, are absolutely diagnostic. I have seen it mistaken for scarlatinal rash; but the error was soon detected by irritating the skin and the appearance of wheals. The evanescent character of the wheals distinguishes urticaria from the erythemata; and in the instance of lichen urticatus, there are pruriginous papules and few wheals, the eruption is of smaller size, feels hard and more persistent; the disease is really a compound of lichen and urticaria. It is the capricious evanescent character which distinguishes urticaria. *U. tuberosa* wants the regular and persistent course, the lividity, the soft feel, the oval shape of erythema nodosum.

Treatment.—Urticaria *ab ingestis*. Avoid the article of diet, &c., which appears to give rise to it. Excite vomiting by what is incomparably the best drug,—*ipecacuanha*; then give free aperients and effervescing salines; cut off all animal

food and spirituous fluids for a few days; let the diet be light (milk), and, if necessary, give the mineral acids and bitters, when the acute symptoms go. Locally, use tepid sponging or mild alkaline (soda or potash), or gelatinous baths. If teething appear to excite the disease, lance the gums, if requisite; see to the action of the kidneys, and use gentle laxatives.

In chronic urticaria, the care of the physician, not the specialist, is needed. We must scrutinize carefully every function of our patient, with the view of ascertaining in what way excretion is at fault, or what cause of reflex irritation exists. Any tendency to pyrexia we correct in the usual way. Clear out the bowels, remove congestions of liver, or dyspepsia; alter gouty tendencies; avoid stimulants, shell-fish, extremes of cold and heat; use vegetable rather than animal diet; prescribe for gastric disturbance the preparation of magnesia, soda, pepsin, calumba, prussic acid, &c., according to circumstances. If the menstrual function is at fault, rectify it. In constipation, aloes is here useful. In some cases the patient seems pretty well generally, but the digestive power, though a clean tongue be present, is weak. In these cases the mineral acids, with bitters, are of service. If pyrosis is present, use bismuth freely, with alkalies.

The disease may be intermittent; if so, give quinine. Arsenic has been recommended in chronic cases, and with great confidence, especially in periodic instances. In many cases we may be able to detect some distinct morbid condition. A not unfrequent cause is, probably, deficient action of the urinary organs, and among other things, irritation about the neck of the bladder or rectum: in the former case, decoction of *triticum repens* is useful. Locally, in chronic cases, alkaline lotions, weak vinegar, camphor ointments, bichloride of mercury lotion, gr. i.—ij. to ʒj.; almond emulsion, prussic acid, or cyanide of potassium lotion, glycerine, lead lotion, bran tea, acetate of ammonia lotion, are serviceable in allaying the itching. In severe cases, the vapour and hot-air

or the sulphur bath may be tried. It seems to me that the renal secretion requires particular attention in urticaria. In some cases acid baths avail.

ROSEOLA (rose or summer rash) is a non-contagious yet febrile disease, characterized by the appearance of small rose-coloured bright spots, not raised much above the level of the surrounding part, variously shaped, occurring over various parts of the body, the hue becoming rather duller as the disease advances, the surface desquamating somewhat in its decline, and accompanied during its course with heat and a sensation of itching or tingling, not preceded by any marked catarrhal symptoms, but often by slight redness of the mucous surface of the palate and fauces. It bears a close resemblance to erythema. Willan made seven varieties; Wilson, 12; divisible as follows into two groups: *Idiopathic*,—*R. infantilis*, *æstiva*, *autumnalis*, *annulata*, *punctata*. *Symptomatic*,—*R. variolosa*, *vaccinia*, *miliaris*, *rheumatica*, *arthrica*, *cholERICA*, *febris continuæ*. We see here that roseola is wont to occur as an accidental phenomenon in the course of acute diseases; it is then symptomatic; in other cases, it is the sole primary disease. Devergie remarks that *R. annulata* is erythema circinatum, and asks if roseola miliaris be not a variety of miliary fever? Why the distinction into roseola of the spring and autumn, it being only one of colour, the autumnalis being darker? Why make species just because roseola occurs under different conditions, as in rheumatism, cholera, vaccinia, and variola? We must, however, describe the varieties briefly.

Idiopathic Group.—Roseola infantilis is seen in infants, and resembles measles; it runs an irregular course as regards precursory symptoms (which vary in degree), and in the extent, degree, and seat of eruption. Now, it is pretty general but patchy, now, limited to the arm, or the neck, or trunk; the rose-blushes often come and go for several days capriciously, and are accompanied by local heat and itching,

which are often marked at night. The catarrhal symptoms of measles are absent. The patches are about half an inch or so in diameter. The redness generally lasts a dozen or more hours. *R. æstiva* appears, as its name signifies, in the summer-time, after slight pyrexia and much local itching; the rose-rash appears on the face, neck, arms, travelling then over the body; the mucous surfaces are affected, and the disease may put on the aspect of scarlet fever; the rash is unattended by desquamation on disappearance (about the third or fourth day), but leaves a darkish stain. Sometimes the rash is very uncertain and irregular in occurrence, and then the disease is prolonged in duration. It may be partial only, but always has the roseate hue. The same eruption occurs in the autumn, generally in children, on the arms and legs, in the form of circular blushes, about half an inch in diameter, but of a dark hue. This is the *R. autumnalis*. When the disease assumes the form of rings, and this is generally observed about the buttocks, thighs, and abdomen, developed from little rose spots, and enclosing presently a healthy circle of skin, an inch or so in diameter, the variety *R. annulata* is present. The concomitant symptoms are the same as those of the *R. æstiva*. Mr. Wilson describes a variety under the term *R. punctata*, in consequence of the punctated aspect of the rash. It appears to be pretty general, with fever and catarrhal symptoms, according to description (*vide* Mr. Wilson's work, pp. 137-8): is it a form of measles?

The Symptomatic Group contains species which are merely erythemata developed during the course of acute diseases, generally appearing about the arms, breast, and face, then travelling over the body, on the second day (ninth after inoculation). It is said to be of favourable augury if roseate, grave import if dusky. *R. vaccinia* co-exists with the formation of the vaccine vesicle, and is accompanied by slight fever. It commences around and from the seat of the

vaccination. In cases of fevers, about the tenth day or so, and indeed whenever the weather is hot or perspiration free, a number of minute scattered vesicles are likely to be developed about the clavicles, chest, and neck; this is miliaria. It is often accompanied by a rosy blush, and to this state of things the name *R. miliaris* has been given. It is the *R. febrilis* of others. So in acute rheumatism and gout, the rose rash has been termed *R. rheumatica*. Under the head of *Roseola febris continuæ*, Erasmus Wilson includes the mulberry mottling of typhus, the rose spots of typhoid, and the petechiæ of relapsing fever.

R. cholERICA was described by Rayer. The changes which the cutaneous circulation undergoes in that disease, predispose very decidedly to the occurrence of eruption (during the stage of reaction), and it is probable that this varies in different instances. It may be a roseola (Rayer, Babington, and Romberg), and is then seen about the hands, arms, neck, breast, abdomen, and limbs; in other instances, the so-called exanthem of cholera is a "pustular redness," or miliaria, or herpes Zoster, or *E. tuberosum*, or presents the aspect of rubeola or urticaria (MM. Briquet and Mignot). It is more frequent in males than females (Thorne, *Medical Times and Gazette*, p. 97. 1850). Roseola may attack the same person repeatedly.

Very little is known as to causation. The varieties above named have little right to the distinctive appellations. The causes, according to some, are legion—heat, cold, ingesta, irritation of delicate skin, gout, change of season, acidity, &c.

The Prognosis offers no point of gravity or interest.

The Diagnosis.—It is likely to be confounded with rubeola, scarlatina, urticaria, erythema. In reference to it as contrasted with rubeola and erythema, Devergie makes some excellent remarks. He says the roseolous eruption always occupies a surface of the body more or less extensive, com-

mening frequently about the breast or abdomen, or upper limbs; and generally the surface is studded with many little confluent rose spots, between which the healthy skin is visible: the spots are largest about the breast, smallest on the limbs; oftentimes, the surface is dotted over with rose spots. From rubeola especially it is known by the absence of catarrhal symptoms, coryza, &c.; the want of relation between the febrile symptoms and the amount of eruption; the absence of epidemic influence; the irregular character of the eruption: it is not crescentic, not uniform, not dark; but irregular, rosy, and often commencing about the breast or arms instead of the face: by the circular shape, irregular course, and frequent limitation to one locality.

In erythema, the shapes of the patches, giving rise to *E. papulatum*, *E. marginatum*, and *E. nodosum*, are peculiar; the colour is not rosy; the blush at the edge becomes purplish; the red blushes are less numerous, more diffuse; the general symptoms are rheumatic, and less acute.

In scarlatina, the aspect of the disease is graver; the fever is marked, the throat is bad, the tongue is peculiar; the skin harsh, dry; the rash general, punctiform, boiled-lobster like. The progress is more uniform, and it can be traced to contagious or epidemic influence.

In urticaria, the diagnosis is at once settled by the discovery or production of a wheal, and the peculiar stinging character of the local irritation, with the capricious character of the eruption.

Treatment consists, so far as general measures are concerned, in giving salines, aperients, laxatives, &c., and treating any special symptoms. Locally, in removing all causes of irritation,—*e. g.*, irritated and tender gums, by lancing; acidity of stomach, by magnesia, soda, or lime-water; intestinal irritation, by “alteratives,” such as grey powder, rhubarb, and subsequent tonics, keeping up the warmth of the surface, and, if possible, bringing on perspiration. On no

account is it advisable to apply cold to the surface. In the symptomatic varieties, the treatment is that of the primary disease.

In roseola annulata a tonic plan is often useful; and if it become chronic, acids, change of air, and alkaline or sulphur baths, are advisable. It may depend apparently upon uterine leucorrhœa.

ROSALIA is a disease which stands midway between roseola and scarlatina. Dr. Copland described it under the head of roseola. Dr. Richardson described it to the Epidemiological Society, Nov. 3, 1862. Some regard it as a form of measles. The disease commences with febricula, and a hot dry skin, like scarlatina, followed by the appearance of a rash, which, as far as I have seen it, is vivid red, uniform, and generally distributed; the mucous surfaces are affected, the conjunctivæ are suffused, the palate and mucous surface of the mouth more or less reddened. The alimentary tract suffers chiefly; the "surface eruption both of the skin and mucous membrane is due to the loss of the controlling influence of nerve over blood current." It does not give rise to kidney disease, and to little, if any, desquamation. Dr. Richardson appears to consider its prime seat the alimentary canal, and the efficient agency a non-volatile acid in the blood. It differs from scarlatina in the fact that the tonsils are not inflamed, the disease being mild, non-contagious apparently, in having a somewhat irregular course, and in not leading to kidney disease or desquamation; from rubeola, by the non-crescentic eruption, the absence of coryza, &c. Rosalia and erythema scarlatiniforme are probably the same. The term "anomalous exanthem" has been applied to those undefined varieties of eruptive which simulate the acute specific diseases,—*e. g.*, rosalia, rubeola notha, &c.

CHAPTER III.

PAPULAR DISEASES.

THREE diseases are included under this head: Strophulus, Lichen, and Prurigo: the latter is essentially a disease of old, the first of young, age.

LICHEN, when acute, commences with febrile symptoms; the acute form is not common; the disease is essentially chronic and non-contagious, characterized by the appearance of little papules, about the size of millet-seeds, slightly red, or of the same colour as that of the skin, distinct from though close to each other, at other times closely grouped. The former distribution is often seen on the inner, the latter on the outer aspect of the limbs; the papules feel hard and cannot be removed by pressure; if they are scratched, a little clear fluid may ooze out. The skin generally is dry and thickened; there is considerable itching; and, in some cases, an inflammatory change is set up, and then slight discharge occurs, which concretes "in some way intermediate between squamæ and crusts." In ordinary cases the papules remain *in statu quo* until their disappearance, and the scales which form upon them are dry, very fine, and greyish. The disease has a great tendency to recur, to chronicity, to be complicated by other forms of disease, and to spread from one region to another. Its seat may be limited, or absolutely general; it exhibits, however, a predilection for the back of the forearms and hands, the lateral parts of the neck, and the face. Some think lichen merely a stage of eczema (especially Hebra and Hardy): this will be noticed under the head of Eczema.

Lichen is usually divided into the following species: simplex, gyratus, circumscriptus, agrius, pilaris, lividus, tro-

picus, and urticatus. It appears to me that the best division is that of simple, and mixed or composite.

To the former belong modifications of one and the same disease; viz., simplex, circumscriptus, gyratus, agrius, pilaris, tropicus (acute); and to the latter, *L. urticatus* (urticaria and lichen), *lividus* (lichen and purpura), *L. eczematodes* (eczema and lichen). *Lichen simplex* is often seen in the summer, sometimes recurring in the same person several times; the papules are red, smallish, and more or less pointed, lasting a week or so, and followed up by the development of others; it is usually seen on the back of the hand, the outer aspect of the forearm, the neck, and the thighs: there is a good deal of itching. This form may last for weeks and months. The disappearance of the papules gives rise to a little desquamation. The skin generally is dry, thickened. When the papules are collected together into little round or roundish elevated patches, the disease is called *L. circumscriptus*; the border is well defined and papular, the surface elevated, rough and dry to the feel; its area increases by circumferential enlargement, and its centre presently clears somewhat; there are generally several circles, and their most usual situation is the back of the forearm; at other times the back of the hand or calf may be affected. The patches after a while get more or less scaly, or inflamed and cracked, simulating eczema, or in consequence of the centre healing, assume a circinate form; but the history, absence of moisture, and the dry red base of derma, are distinctive. When several patches run together and form bands, as it were, the disease is named *Lichen gyratus* (Bielt): this is nothing more than the coalescence of several circles of lichen circumscriptus. *Lichen agrius* differs from the above in the presence of secretion, and hence approaches eczema; but it is, as its name implies, an acute inflamed lichen. It commences with fever, more or less marked, headache, pains in the limbs, stomach derangement, and the like; some of which may be absent. The local manifestation consists

of clustered or closely packed red papulæ, accompanied by intense itching and burning, causing the patient to scratch violently; this in its turn sets up additional irritation, the torn and excoriated papulæ are inflamed, and exude an ichorous fluid; the whole patch thickens, fissures, and becomes covered over with thin scales. Vesicles and pustules may even form: hence we have an inflamed, raised, reddened, excoriated, fissured patch, the seat of intense and often intolerable itching and burning, made worse by stimulation of all kinds, especially the warmth of bed. The disease either subsides or increases by the development of fresh crops of papulæ. The inflammation is observed to be secondary. Lichen agrius may also arise by inflammation of the chronic stage of any of the other forms of lichen, not primarily as an acute form. The acute stage is about ten or fifteen days in duration, the chronic weeks or months: this variety of lichen is observed about the back, neck, legs, arms, and shoulders: it constitutes one aspect of grocers', bricklayers', and bakers' itch. Sometimes the hair-follicles become involved, and papules are developed around their orifices, the hairs piercing the papular elevation: this is called *Lichen pilaris*. Such a state of things is not uncommon in chronic eruptions,—*e. g.*, eczema; the hair-follicles become involved and prominent, giving exit to hairs and raised into papular elevations. The papules of lichen are new formations, the term lichen pilaris is the very worst in the whole nomenclature of skin diseases: there is no such thing in reality. If the hair-follicle is involved, then is it not lichen; but lichenous papulæ may be developed near the openings of the follicles, yet not deserve the term lichen pilaris, which is correctly regarded by Devergie and Hardy especially as a pityriasis pilaris. *Lichen tropicus* (or prickly heat) is acute lichen, produced by heat, and seen especially in hot climates; it is characterized by the appearance of a very crop of aggregated papules of vivid red colour upon the legs, arms, breast, neck, and body, rarely on the face except the forehead; miliary vesicles are often present, the itching is

intense and of a prickly character; they last a day or two, and are succeeded by slight scaliness; the papulæ are in size about that of pins'-heads. I have seen many examples of this disease, especially in children in the summer time, and it appears to me to be more of the nature of an acute miliaria (with abortive vesicles) than a lichen; and this seems evident from the fact, that occasionally some of the so-called papules pustulate; indeed, with a magnifying-glass, they mostly appear to be vesicular.

Lichen urticatus is simply lichen complicated by urticaria, described especially by Bateman, confined to children, and of special obstinacy. It is generally described as resembling the bite of bugs, but more properly as consisting of papulæ, which are larger than usual, surrounded by redness, and intermingled with wheals here and there. In consequence of the scratching, the points of the papules are torn off and a little dark speck appears, so that the papules are more or less pruriginous. In other instances the papules themselves are a compromise, as it were, between the two forms of eruption; there are smallish, white, fugacious elevations in conjunction with an irritable itchy skin; and generally pruriginous papulæ are present. The disease, it is highly important to observe, may attack the feet. In other instances the papula is developed out of an urticated spot; so that in all instances we may trace the composite character of this variety of lichen. The warmth of the bed is particularly distressing in augmenting the itching. When the disease lasts some time, the surface is thickened, dirty, so to speak, and dry. It is common in the middle months of the year (summer and late spring).

Lichen lividus is lichen in conjunction with purpuric spots. It is seen in those of ill-health, in the intemperate and badly-fed, especially about the legs, where gravitation comes into play. The irritation of the papulæ suffices to cause a little hæmorrhagic effusion, and this may take place

at the exact seat of the formation of papulæ, or elsewhere : hence we may have as separate existences, hard, livid, flattened papules ; or ordinary papules with purpuric spots,—a mixed, not a confused eruption. *Lichen eczematodes* is the name given to the combination of eczema and lichen, and will be discussed under the head of Eczema lichenoides. Many think that lichen agrius is the same disease, but it appears to me to be different. A lichen inflamed simply, is lichen agrius,—a lichen plus eczema, where two distinct diseases are mixed, is eczema lichenoides : or lichen eczematodes, according to the predominance of eczema or lichen. The difference between the two is this—in lichen agrius it is *simple*, whilst in eczema lichenoides (lichen eczematodes) it is *eczematous* inflammation superadded to lichen : the latter is surely different from the former. If we do not care to be very strict, we might include lichen agrius and lichen eczematodes under the one term eczema lichenoides, or lichen eczematodes.

Hebra, including the usual forms of lichen under the head of eczema papulatum, describes under the term lichen sudativus, two forms of disease,—lichen scrofulosus and lichen ruber. The former accompanies the manifestations of scrofula, such as lupus, caries, inflammation of the bones, &c. It is peculiar to the young, occurring between the ages of 15 and 25, being made up of little knots, white or yellow, which are found to be seated at the hair-follicles, and composed of epithelial cells ; on removing a little knot, the follicle is seen with a distinctly enlarged orifice and a slight redness around it. The papules are always grouped in circles or quasi-circles, are indolent in course, do not itch much, and occur on the trunk, breast, belly, back, and rarely the extremities. Other changes are soon observed ; on the healthy parts acne-like spots, which pustulate and subside, leaving little marks behind ; other parts desquamate. Its description allies it to pityriasis pilaris. It is cured by cod-liver oil. Lichen ruber simulates psoriasis. It is characterized by the appearance of little *red* papules, which are not

grouped in the early stage but distinct, not generally dispersed, and are found on parts only of the surface—often the extremities. Fresh crops appear, and presently these run together and produce red infiltrated and scaly patches, scattered over the surface, which is rough, papulated, red, and fissured; the nails thicken and become brittle. In some cases itching is troublesome. There are never any excoriations. Death often results from marasmus, adds Hebra.

Prognosis is not grave. Lichen circumscriptus and lichen agrius are often very obstinate, so is so-called lichen pilaris and lichen occurring on the face. As a rule, the simple forms get well, with proper treatment, in two or three weeks.

Causation is supposed primarily to be due to the existence of a peculiar (dartrous) diathesis, but of which we know little. Lichen appears to be most apparent in the nervous temperament in summer time. It attacks all ages, and is evoked by local and reflex irritation, by a deficiency of alkali in the system; irregularities; mental, physical, alimentative, &c.; hereditary tendency; certain occupations,—*e. g.*, cooks, bakers, grocers, bricklayers, &c.; by hot climates. Similarly in this as in other diseases,—a predisposition to disease shows itself by tangible evidence whenever any determining cause unbalances the resistant power of the system.

Diagnosis.—There are some difficulties here. The chief points to remember in regard to lichen are the dry and thickened state of the skin, the presence of papules, which are always to be found, if in patches, at the extending edge of disease, their hard feel to the touch and the tingling or itchiness. Lichen simplex and scabies may be confounded. In scabies, besides papules there are vesicles, often pustules, and the papules are not so closely aggregated; the eruption also is in the line of flexion, not, as in lichen, in that of extension,—*e. g.*, lichen is seen chiefly on the outer aspect of the arm; it may occur on the back of the hands and fingers,

but it is rarely interdigital. Lichen never, except in its urticated variety, occurs in the feet; it is common on the face; scabies is not. In the latter we find the characteristic vesicle and sillon; then the disease is contagious and easily removed by sulphur treatment. It is also seen in the seats of pressure, rarely above the level of the mamma, and not associated with the peculiar dry, harsh, thickened state of skin as lichen. Lichen urticatus closely resembles scabies, but the eruption differs in the evanescent character of some of the spots (urticaria), in the absence of vesicles, of pustules, &c.; in its presence, oftentimes, about the face, and its general absence from the feet; for it is very probable that when it attacks the feet, *L. urticatus* is complicated by scabies. In the chronic condition, the papular aspect of the rash, with the peculiar hard solid feet, and brownish aspect of the papulæ, will at once be distinctive. Prurigo may simulate lichen, but prurigo is associated with an unhealthy, relaxed, muddy, dirty state of the skin,—flabby is the word; the papules (which are pale) are fewer in number, and each is marked at its apex with a dark black speck, dried blood, effused as the result of scratching. The skin is not thickened and dry, as in lichen, nor is there any attempt at scaliness, as in lichen, nor aggregation of papules into patches or groups. Prurigo is essentially a disease of advanced age; pediculi are mostly present, and there is often a peculiar urticated state of skin, seen very markedly on the back and chest, produced by an exaggeration of the spaces inclosed by the normal furrows. Prurigo is not common about the face; the sensation is one of formication, and is altogether out of proportion to the local disease, whilst pediculi may frequently be detected in the folds of the linen. Lichen agrius resembles eczema, but the latter occurs in delicate and thin, not in harsh dry skins; again, the history and edge of the patch point to the existence of papules; then the patch is much thicker and harsher than in eczema, and wants the thick yellow crusts: the latter in lichen are thin, pretty few, and “flimsy.”

Chronic eczema never gives rise to such a thickened condition as lichen. Lichen circumscriptus with its papules ought not to be confounded with the vesicular or furfuraceous herpes circinatus, in which a parasite is found; nor with psoriasis, which is devoid entirely of papulæ, and possesses the peculiar white imbricated scales, and as its selective seats, the points of the elbows and knees. It is important to remember that scabies may be complicated with lichen, or the latter may be set up as the result of irritation of scabies. I have seen this state of things on several occasions in the hot season,—the irritation of a few scabious spots bringing out an acute general lichen.

Treatment is essentially a soothing and alkaline one. We must remember that we have to deal with a profound alteration of the skin generally. Acute cases call for salines, aperients, tepid bathing, and unstimulating diet. Hardy places the treatment of the chronic forms of lichen in a very clear light. He says, at the commencement we must employ preparatory treatment by a general and local use of emollients,—*e. g.*, tepid baths; to which may be added bran, flour, gelatine, size, and the like; together with saline and mucilaginous drinks. In the form *L. agrius*, poultices are to be used. Having carefully criticized the state of the secretions, we must produce “a modification of the economy and of the skin” by local and general measures. Bielt recommended alkaline baths and bicarbonate of soda internally; and the beneficial effects of this plan have been confirmed by most observers. As regards the simpler degrees of lichen, Hardy prefers vapour and alkaline baths alternately. Arsenic and cantharides are the remedies which Hardy recommends in the severer cases, and locally he uses, to allay itching, cyanide of potassium ointment, in the proportion of 3 grains to 1 oz. of lard; oxide of zinc 4 or 8 parts, camphor 2 or 4 parts, and axunge 30 parts, in lichen circumscriptus; and calomel 1 part, tannin 2 or 3 parts, and axunge 30 parts, in

lichen agrius, and with Devergie and Alibert, the free use of nitrate of silver in the obstinate deep-seated forms. In addition Hardy counsels the alkaline and sulphuro-alkaline waters,—*e. g.*, Vichy and Plombières among the former, and those of St. Gervais, D'Uriage, and Pyrenees among the latter. Mr. Wilson states that lichen agrius is associated with the gouty and rheumatic diathesis. If we detect any sign of this kind, a course of colchicum with acetate of potash does immense good. Lichen lividus requires a special tonic treatment with acid and bark, lichen urticatus, a soothing plan with aperients, antiphlogistics, sedatives, tepid bathing, emollient unctions, and subsequently mild stimulants.

The plan to be adopted appears to me as follows:—First of all subdue all inflammatory action, and allay local irritation by emollients; then scrutinize your patient's health; see if he be of lymphatic, nervous, or sanguine temperament; if inclined to be strumous; and have regard to this in general treatment. See that he is not doing too much head or hand work; remove him from all occupations which tend to produce the disease, correct any digestive or other malady, be very careful to insure a proper action of the kidneys, and try to bring back the skin from its harsh and dry aspect: this latter is to be effected by the hot-vapour, not the hot-air bath, so as to induce natural perspiration and softness. One object subsequently is to cause nature to remove the deposit in the skin, most especially evidenced by the formation of the papules. In lichen simplex, alkalies appear to suffice. This state may be due to a weakened power in assimilation; if so, acids and bitters, with acid baths, do good. In lichen circumscriptus, the disease tends to localize itself; and if alkalies, subsequently absorbents and slight stimulants fail, we must set up another action by irritants,—*e. g.*, blistering, caustic, iodide of mercury ointment. As minor agencies, tincture of iodine, iodide of sulphur ointment, and sulphur, are good. In lichen agrius, of early date, soothing remedies

should always be adopted, and *maceration* acts beneficially; glycerine is the best agent to effect this, subsequently oxide of zinc lotion 2 drachms to 6 oz. of fluid; tar and alcohol (equal parts); and, in the chronic stage, revulsions are demanded. Sulphur baths may be used in inveterate cases; local vapour baths, by means of a pipe connected with a steam supply-pipe, do much good. In very chronic cases, especially having a tendency to become eczematous, arsenic is very servicable as an internal remedy.

Note.—A form of papular disease is described in the American "Journal of Medical Science," for January, 1863, by Dr. H. Allen, produced by the manipulation of Kerosene oil. (*Vide* Ranking, vol. xxv. 1862.)

STROPHULUS (the red gum, tooth-rash, white gum, or red gown), a papular rash observed in children, is looked upon usually as the lichen of infants. It is a disease of acutish aspect, characterized by the appearance on the most exposed parts, the face especially, but also the neck, arms, and limbs, of successive crops of little white or red, irregularly dispersed or slightly aggregated, acuminate papules, intermingled with more or less erythema. The papules vary in size from pins'-heads to small millet-seeds; are attended with itching, sometimes slight moisture, and desquamation. There are several varieties, as follows, according to Willan:—*S. intertinctus*,—papules vivid red, seen about cheeks, forearm, and back of hands; especially characterized by the intermixture of red blushes (erythema), intertinctured, in fact. It occurs in young infants under three months, generally, and lasts from two to four weeks. When the papules are numerous and closely packed—confluent—the name *S. confertus* is used. There is less erythema here; the papules are paler, the disease is of longer duration than the last, and a recurrence is likely. This variety occurs about the period of dentition, and in a chronic state is often limited to a few patches, which run through a slow course, and leave the skin harsh and dry.

It is also most common on the arm, and in an exaggerated (dry, cracked, exfoliating) phase is met with on the thigh. When the disease consists of small ephemeral patches, made up of about a dozen (more or less) papules, the skin being red, hot, itchy, approaching the aspect of urticaria, it is called *S. volaticus*, and is observed about the arms and cheeks. The papules are sometimes small and perfectly white, with the slightest areola of redness; this is *S. albidus* (it affects the face and neck); if the papules are large and white, *S. candidus* (this affects the limbs by preference). The above varieties are included by Hardy under the term *S. simplex*, in contradistinction to a complicated or mixed form, in which the characters of strophulus and prurigo are intermingled, and described by Bazin under the name *scrofulide bouton-neuse bénigne*. Hardy calls it *strophulus pruriginosus*; according to whom, it is characterized by the presence over the body, of papules, generally discrete, and not confluent; some have the same colour as that of the skin, others are red; it is now and then complicated by erythematous patches. Itching is very severe, particularly at night, so as to excite determined scratching. Most of the papules are covered with little yellow crusts, the result of a slight exudation; but many exhibit a black point at their apex, as in prurigo; indeed, the disease is a compound of strophulous and pruriginous papules. In consequence of the local irritation, pustules (small or ecthymatous) may be developed. This form of disease affects chiefly the upper part of the body, the arms, and the chest; rarely the thighs and legs; oftentimes the face. It is generally confounded with prurigo; it is often very chronic, and rare after 20.

The Causes.—Strophulus is essentially a disease of young life. It is said to arise from acidity, bad milk, teething, heat, change of season, uncleanliness, local irritation of all kinds, an aphthous state of blood. *S. pruriginosus* occurs in the badly fed, badly clothed, &c., in hot weather.

Diagnosis.—In strophulus the papules have an exanthematous aspect, which is very significant. As a rule, they are not so dry and harsh as those of lichen, and the disease occurs peculiarly in infants; it is not accompanied by a harsh state of skin, by crackings, or the formation of crusts; it is more intermitting in its aspect than lichen. *S. pruriginosus* is recognized by the presence of strophulous and pruriginous papules together. In lichen, the papules are generally closely aggregated, and there is the peculiar aspect of the skin; besides, the disease is seated on the outer aspect of the limb, and the pruriginous papules are wanting. Scabies puts on a very close resemblance when pustules are present, as the result of irritation, to *S. pruriginosus*; but the history of scabies is not papular, but vesicular: it affects the legs and feet; commences in children often about the buttocks; presents the characteristic vesicle and cuniculus; does not attack the face, as in *S. pruriginosus*. Scabies is not usually pruriginous; if so, it is chiefly about the abdomen. It is the early history which clears up the doubt, for the ecthymatous pustules are the result in both cases of irritation,—in one the strophulus, in the other the scabies; and hence must bear much resemblance. If these secondary manifestations are absent, the diagnosis offers no difficulty.

Treatment.—In simple strophulus, observe cleanliness, avoid the use of soap; let the child have proper food; see to the state of health of the nurse; remove local irritation,—*e. g.*, that of teething, hot clothing (flannel); cure any aphthous state; correct acidity, and give gentle aperients; use locally tepid sponging, spirit or alkaline lotions. A very useful one is, carbonate of soda 20 grains, rose-water 6 ounces, with 2 drachms of glycerine. Almond emulsion, lime-water, and mild sulphur ointment may be also used. In the pruriginous form of strophulus, we must place the patient under the most favourable hygiene; give him good food, good air, plenty of washing; and internally, iron, cod-liver oil, and

quinine, or chlorate of potash. In chronic cases, the vapour or sulphur baths are most efficacious.

PRURIGO is a papular disease, more especially of advanced life. It is characterized by (*a*) a peculiar unhealthy, thickened, but yet flabby state of skin; (*b*) the presence of papules, which are not prominent, but flattened more or less, disseminated, and showing at the summit of each a black speck, caused by the drying of a drop of blood, which is effused in consequence of (*c*) intense pruritus, which is increased by heat of all kinds, the warmth of the clothes, and is generally described as a creeping sensation, such as would be caused by a multitude of insects. Now in consequence of the irritation and subsequent scratching, secondary eruptions (erythema, pustules, and ulcerations) are likely to occur; and a peculiar *quasi*-urtication is frequently seen, produced by an exaggeration of the little areas of skin inclosed by the natural furrows. These are the broad papulæ of prurigo. In addition, the skin becomes more or less pigmented in chronic cases. Prurigo may be partial or general; it occurs generally about the back and outer aspect of the limbs; about the shoulders, but not much upon the belly; is often localized to the arms or genital organs. The pruritus may cause sleeplessness, loss of appetite and strength, and a condition of general discomfort and misery. The basis of prurigo is evidently an ill-nourished state of skin. Romberg believes the papulæ to be secondary formations, the result of the pruritus: hence the disease, according to this authority, is an hyperæsthesia. Barensprung, on the other hand, thinks it primarily an affection of the papillæ, the pruritus being secondary. Having regard to the fact that hyperæsthesia and the formation of papules are not by any means closely related, that prurigo occurs in bad-nourished subjects, in scabies, in strophulus, and lichen, it seems clear that the pruritus is the result of an unhealthy state of skin, not a pure neurose, and the papules are determined in their formation by the local irritation; the

effusion of blood upon their apices being a sufficient evidence of the badly-nutritioned derma. English authorities generally divide prurigo into general and local varieties. The former contains *P. mitis*, *P. formicans*, and *P. senilis*; the latter, *P. podicis*, *scroti*, *pudendalis*. Hardy makes three groups: (1) According to the intensity—*P. mitis* and *formicans* (including *senilis*); (2) according to cause—in scabies (*P. de la Gale*), in conjunction with *strophulus*, in conjunction with the presence of *pediculi*, *P. pédiculaire* (*morbus pedicularis*); (3) according to seat—*P. podicis*, *scroti*, *muliebris*. In some cases, the papules are not well marked, and are few: this is the case with the local varieties. Under these circumstances, the disease is often called *pruritus*; and Devergie has divided prurigo into two groups—(1) With papules, including *P. mitis*, *senilis*, *formicans*, *pedicularis*; (2) without papules,—*P. general*, *P. local*, including *podicis*, *pudendalis*, *scroti*, *plantaris*. These facts will show much in regard to the disease.

P. mitis is the least degree of prurigo, and occurs especially in spring and summer, about the back, outer aspect of the limbs and shoulders under the clavicles, and the legs and thighs, especially their outer aspect; sometimes on the face: the duration varies from two or three weeks to months: it is the form which occurs in early life. The papules are few and excoriated; the skin after a while somewhat thickened and muddy: it is often associated with, or brought on by, uncleanness and deficient action of the skin.

P. formicans attacks elderly people, and is a more severe form of disease in every way, the chief peculiarity being, that the *pruritus* is similar to that produced by the creeping of innumerable insects over the skin; insomnia is very distressing, the papules are larger, often paler and more numerous, but flattened. It is liable to recur, and it is especially obstinate. Besides the formicant sensations, a burning fiery feeling is frequently experienced. The scratching gives

rise to pustules and slight ulcerations, and the skin is thickened and discoloured. The eruption itself is pretty general. When the disease occurs in the aged, it is called *P. senilis*; and this is often associated with the presence of pediculi. The primary changes in the skin and secondary eruptions are most marked in this species. The subcutaneous cellular tissue becomes inflamed and œdematous.

Local Varieties.—In these the papules are not very numerous, but the pruritus is terrible oftentimes. *P. podicis* is seen about the anus, chiefly of adults, and is sometimes produced by the irritation of ascarides: it attacks sedentary people, or those who suffer from hæmorrhoids; papulæ of characteristic aspect are seen, the skin gets thickened, and in consequence of the contiguity to the mucous surface, gives out a moist discharge. *P. scroti* is the same disease in another situation. In consequence of the moist secretion and excoriation, an eczema is simulated. In *P. pudendalis* the redness of the mucous surfaces of the vulvæ and vagina is accompanied by paroxysmal pruritus of burning and distressing kind; the parts swell, the surface discharges, and the acidity of the fluid causes redness (intertrigo) of the surface outside the passage; nymphomania is induced, and occasionally papules are detected.

Besides these varieties, there are some mixed forms of disease. Prurigo often complicates scabies; in which case the papulæ of prurigo are noticed, scattered over the forearm, the abdomen, and thighs,—not on the face: this may be called scabies pruriginosa. *Strophulus pruriginosus* has been described. In senile prurigo, as before noticed, pediculi are very common, and have been looked upon as the true cause of disease: some doubt exists upon this point. Many regard the pediculi as accidental, and believe that the state of nutrition is favourable to their production, and they in turn only act as an additional source of irritation. It seems pretty clear

that in prurigo pedicularis, the papulæ are especially visible above the level of the nipples, about the clavicles, on the fore part of the chest, and that there are more distinct scratchings, in the shape of black lines or streaks; indeed these latter seem in some degree to replace the papules. There can be no doubt that if pediculi do not originate, they are most efficient in prolonging the disease; for if they be destroyed, the patient frequently gets rapidly well. The pediculi are most surely found in the folds of linen about the armpits.

Causation.—All ages are affected by prurigo, but the advanced by far the most. Prurigo is mostly seen among the lower orders. Neglect of cleanliness, moral depression, change of season, bad living, bad clothing, bad food, and such-like, are peculiarly predisposing. Amongst other excitants are pregnancy, local irritation, the free use of stimulants; the basis of the disease being a tendency to hyperæsthesia.

Prognosis.—If pediculi are the cause, if the patient be young, and the itching moderate, the skin not much disorganized, the cure is easy. In old people, with severe symptoms, the disease is very obstinate, and leads to great misery,—insomnia and depression.

Diagnosis.—Prurigo is known by the peculiar dark aspect of the papulæ at their apices, their dissemination on the outer and posterior aspects of the limbs and back; by the peculiar pruritus, the unhealthy, flaccid, dirty state of skin, and the uniformity of the eruption. In lichen, the papulæ are light-coloured, there is no true pruritus, and it occurs on the inner aspect of the limbs, &c.; there is no “urtication,” the surface is not withered, but dry, thickened, harsh, not flaccid. In scabies, the eruption is multiform, seated about the interdigital spaces, on the front parts of the arm and body; the skin is apparently healthy, there is no burning pruritus; it does not occur on the face as the rule, but

frequently on the seats of pressure, especially the tuberosities of the ischium, and exhibits the characteristic vesicle and furrow; prurigo in addition occurs not only on the outer aspect of the limbs, but also generally above the level of the nipple-line and below the upper part of the thigh; scabies, on the other hand, is seen mostly between these two lines of demarcation. In prurigo, pediculi are detected.

Prurigo may, however, complicate, as we have seen, *strophulus* (in young people), and scabies especially; then the disease bears a mixed aspect. The local varieties may resemble eczema, but there is no history of vesicles, no crusts; the seat is unusual, and the pruritus and occasional discovery of papules are sufficient to diagnose the nature of the case. I may mention here that a pruriginous affection is stated to be transmissible from poultry to man, and is said to be due to the *sarcoptes mutans*. In poultry the disease is seen about the claws, comb, and beak, and in the form of little whitish lines around the base of the comb, which are scaly, brownish beneath, presently furrowed; and at the extremities of the ridges the little insect is found.—(*Revue Médicale*, July, 1859, and *Dublin Hospital Gazette*, Sept. 15, 1859.) In some cases of prurigo a crop of ecchymatous pustules and little ulcers are seen, and the disease resembles bad itch of old standing, but entirely lacks the history of the latter.

Treatment.—Authors write down for our use the most empirical treatment. Firstly, prurigo is not an inflammatory disease in its origin or essence. Secondly, the skin generally is evidently in a state of decided mal-nutrition, as evidenced by the ecchymotic state of papules, &c. Thirdly, the most distinct local feature is hyperæsthesia, or a morbid sensibility or irritation of the derma: hence the indications are to subdue the latter, and improve the general condition of the system. In the first instance we must caution the patient

to avoid stimulating foods and drinks, and condiments; attend to his secretions especially. The free action of the liver and kidneys when in abeyance, must be accelerated. If possible, give change of air, better living; but most of all enjoin the use of baths and religious cleanliness. Baths are not only useful as media for applying anti-pruritic remedies, but also to bring back, to coax out, to force the skin to its natural function. For this purpose nothing succeeds so well as the hot-vapour bath, gradually increased in temperature, and used two or three times a week. Any gouty tendency should be corrected, and the patient must be placed upon a tonic plan, by acids, bitters, iron, quinine, and cod-liver oil. The bowels must be opened freely. In obstinate cases, arsenic or strychnine is of service. In old people a good generous diet is demanded. Whenever ecthymatous complications are present, it is a sign for the exhibition of antilymphatic or antiscrofulous remedies, especially cod-liver oil. The local measures are antipruritic and revulsive. The object is to allay the pruritus and gradually stimulate the skin; or, if need be, set up an antagonistic action to that of the disease. First of all we must annihilate special local irritation,—*e. g.*, pediculi by sulphur, staphisagria, or ammonio-chloride of mercury ointments. Then we combine various sedatives with the baths; in the simpler cases, size, bran, carbonate of soda suffice; in others, sub-carbonate of potash, opium, belladonna; or use lotions of alum, chloroform, almond emulsion, lead lotion, glycerine and zinc, or ointments of tar, prussic acid, calomel, &c. For general stimulation the Harrogate bath, sulphur and cinnabar fumigations, are desirable.

Hebra and Malmsten recommend the use of cod-liver oil internally and externally. Hebra uses as an outward application equal parts of tar and cod-liver oil.

In some instances opium internally alone does good. In scabies prurignosa treat the scabies first of all.

In the local varieties, leeching, emollients, mercurial

fumigations, black wash, and opiate lotions, are the best remedies. To sum up—

1. Regular bathing with tepid water ; the vapour bath.
2. Alkaline baths,—*e. g.*, 4 ounces of carbonate of soda, or 1 to 2 ounces of carbonate of potash. In the later stages sulphur baths, mercurial fumigations, &c.
3. Astringent and sedative lotions. Among the former, alum half an ounce to a pint, oxide of zinc 2 drachms to a pint, sulphuret of potassium a drachm to a pint of water, lead lotion, bismuth 2 drachms to a pint, acetate of lead, dilute nitric acid 2 drachms to a pint. Amongst the latter are bichloride of mercury 2 grains to half a pint of fluid, cyanide of potassium 20 grains to a pint of almond emulsion, camphor, borax and opium, chloroform lotion, glycerine and watery extract of opium, the *lotio belladonnæ* (Startin), extract of aconite 4 drachms to two ounces of cerate.
4. Good diet and hygiene.
5. Destroy pediculi by ung. hyd. ammon. chlor., &c. &c.
6. In complicated cases treat the primary disease,—*e. g.*, in scabies pruriginosa, treat the scabies.
7. Adopt a tonic plan of treatment altogether, and, if need be, allay irritation by opiates exhibited internally. (*Vide* formulary for further details.)

CHAPTER IV.

VESICULAR DISEASES.

VESICULAR diseases are characterized by the presence of vesicles (see Elementary Lesions), and include herpes, eczema, sudamina, and miliaria, and under the *sub-order*, *bullæ*, pemphigus, and rupia.

Some other diseases assume the vesicular form,—*e. g.*, varicella and scabies; but these rank—the one under the head of acute specific, the other that of parasitic diseases.

ECZEMA.

We must consider this disease a little in detail, for much uncertainty and confusion exist in regard to it at the present time. First of all, I propose to give a short description of eczema according to the precise and rigorous teaching of Willan, and then to add a brief *résumé* of the opinions and teachings of English and foreign writers. Eczema, according to Willan and generally received notion, is an acute inflammatory disease, characterized especially by an eruption of small closely-packed vesicles (with more or less superficial redness of the skin), which quickly bursting, present a very superficial excoriation, and pour out a serous fluid, drying into crusts of moderate thickness and lightish yellow colour. The distinctive mark of this disease is then the vesicle, which is nothing more than the upraising of the superficial layer of the skin by serous fluid. The vesicles appear in successive crops, and prolong the disease for an indefinite time. The general symptoms are not often of marked aspect; there may be pyrexia, headache, malaise, &c. The subjects attacked have a lymphatic aspect. Eczema is the most common of all skin diseases; it has great tendency to spread and to recur, and its acute is particularly apt to pass into a chronic state. The mucous surfaces often take on an inflammatory

action, which is only another evidence of the general infection; in fact, it may be looked upon as an eczema of the mucous surface. According to the Willanist, there are three chief varieties,—Eczema simplex, *E. rubrum*, and *E. impetiginodes*; besides local varieties.

E. simplex, called by Willan *E. solare*, because it is often brought out into existence in consequence of the action of the sun's rays, is the typical form. It is also produced by irritants of all kinds. In the hot season the patient complains of fever, a "heated state of blood," headache, and the like; presently, on the exposed parts, especially the face, arms, neck, and the back of the hands, little clustering vesicles appear, in conjunction with erythema. This is *E. simplex*; the contents of the vesicles presently get milky, the vesicles burst, and slight yellowish crusts are formed. The duration of the disease varies very considerably. It is often short, often long, according to the amount and degree of successive crops of vesicles.

E. rubrum is the inflammatory form; the general symptoms are often severe, the headache, fever, thirst, and foulness of tongue, are decided; locally the part is "hot, tumefied, red, and shining," and upon this vesicles, which may require the use of a lens to detect satisfactorily, form, fill, and become confluent. Speedily they burst, give exit to their contents, which desiccate, and give rise to yellow or brownish scabs; the secretion is ichorous in character and causes considerable irritation to the surface around, with which it comes in contact. The whole patch becomes excoriated, the burning pain is often very severe, and the disease spreads. It is generally observed about the flexures of the body, in the thigh, the groin, the elbow, the axillæ, and about the wrists; sometimes it is partial only, or runs more or less over the general area of the body. *E. rubrum* varies in degree; when it is very severe, the amount of discharge is large, the crusts are thicker, the surface is more inflamed,

excoriated to a high degree, and the general condition unhappy. The transition from the simplex to the inflamed eczema is not difficult. In eczema, even though it be very chronic, there is no such amount of thickening as in chronic lichen, and *E. rubrum* is most apt to become chronic. In old people *E. rubrum* is mostly seen in the lower extremities, and is the starting-point of many of the ulcers of the legs.

E. impetiginodes is a pustulo-vesicular disease, a mixture or compromise between eczema and impetigo. The general symptoms are much those of *E. rubrum*; there is also, locally, a good deal of inflammatory heat and redness; the vesicles which appear contain a serosity, which is speedily mixed with purulent secretion. The discharge and subsequent drying of this tenacious fluid forms irregular greenish-yellow thick scabs and crusts, beneath which is a red and hot surface: this form of eczema is very common (35 per cent.), and is not as a rule general but local, confined oftentimes to the face or head. It is looked upon as an eczema developed in a pyogenic habit.

In infants all things are ready and favourable to the occurrence of eczema; there is mal-assimilation, a delicate skin, acridity of secretion, the perfect and easy action of irritants, &c.; and so we see eczema developed in its most marked condition. It may be partial or general; at one time (but this is not common), possessing the character of *E. simplex*, more commonly those of *E. rubrum* or *E. impetiginodes*. It is very persistent, the local symptoms are often severe, *quoad* heat, itching, discharge, crusting, and excoriation. The discharge varies much; now it is clear, now viscid, now purulent, now milky: hence the names *tinea granulata*, *crusta lactea*, *impetigo larvalis*, and the like. The disease in infants attacks by preference the face, scalp, the neighbourhood of the joints, the ears, &c.; and in consequence of the irritation, the great discharge, and the mal-assimilation, it is no wonder that the child wastes, becomes pale, flabby, and unhealthy; the glands suffer and become irritated; secondarily, abscesses may result, and the disease remain *in*

statu quo, or subside into a chronicity of many years' duration. *E. infantile* is regarded as a distinct variety; but in accepting the name we must be most careful to remember that it is one and the same disease with the ordinary forms of eczema. Now any of the varieties of eczema already described may become chronic. Here the discharge decreases in amount, the surface thickens somewhat, excoriates itself more or less, and from the fissured surface still an ichor is given out. The dry, cracked, oozy, fissured state is the *E. fendillé* of the French. The later stage, in which the discharge is almost absent, and the surface covered over by thin greyish or yellow scales, has been called psoriasis, or, in a later stage, when there is little more than desquamation, pityriasis. It appears to me that both these denominations are likely to mislead. To call chronic eczema psoriasis (though correct historically) or pityriasis, must inevitably confuse. By pityriasis and psoriasis we understand not stages of a moist, but primary forms of dry disease.

Local Varieties.—*E. capitis* is the eczema *par excellence* of children, seen during dentition in scrofulous children; it frequently assumes the impetiginous aspect; at other times the early stage is acute, as in *E. rubrum*. This is replaced by one in which oftentimes the whole scalp is reddish, puffy, tender, moist, with a slight serous or sero-purulent secretion, and covered here and there with thin flimsy yellow crusts. The nutrition of the scalp is interfered with, *ergo* the hair is ill-formed, in little abundance; in other words, a partial alopecia is the effect. If there be any hair, it gets matted together in various degrees. The aspect of the secretion, now light-coloured and viscid, now purulent, now dried into scales, has given rise to the terms *tinea granulata*, *porrigo asbestina*, *tinea furfuracea*, &c. *E. faciei* has nothing special to notice, except that it occurs about the forehead, cheeks, and chin particularly, and very often exhibits the aspect of all the varieties of eczema in one and the same subject.

E. aurium is a form seen in old people, oftentimes as well, however, in the young. The ear is greatly swollen and tender, the vesicles are large, filled with honey-like fluid, and the scales are quasi-gelatinous, and yellowish. If chronic, the disease leads to an hypertrophied condition of the ear generally, which is difficult oftentimes to rectify. *E. mammæ* is caused by the irritation of sucking in the female sex. It is also caused by scabies, and it is said to be almost "diagnostic." It is most usually seen during lactation in fat persons. *E. manus* is produced oftentimes by the sun's rays; it is especially characterized by the aspect of its vesicles; for, in consequence of the skin being thicker here than in most places, the vesicles do not burst so quickly, but are very persistent and durable, often coalescing and forming little bullæ. The aspect of *E. manus*, when it occurs at the back of the hand, is that of *E. rubrum*, and is said to be identical with lichen agrius, and to constitute grocers' itch; but, as before remarked, lichen and eczema often occur together. This form of disease may occur in the shape of scattered flattened vesicles between the fingers, and simulate scabies very closely; but the vesicles are, amongst other things, flattened, not acuminate, and are not only seen in the "forks" of the fingers, but along their sides, even to their very points. Eczema is wont to occur about the genital organs (*E. genitale*), implicating the mucous surfaces, and producing free secretion and intolerable itching.

There are some special varieties that must be noticed. *E. fendillé* of the French (*E. rimosum* of others) is seen about the legs, forearm, and thighs, and is said to be characterized by a cracked, fissured, and red-raw surface, exuding a serous fluid: it is a fissured eczema. It may be a secondary form of disease certainly; that is to say, the chronic stage of any eczema may assume this aspect, in which case the fissures heal, fresh ones form, and the disease may be prolonged for an almost indefinite time. It is supposed that it may be a primary form of disease, simply preceded by erythema, there

being no vesicles. This is improbable. The great probability is, that the vesicles are abortive or very temporary; but, certainly, if they do not actually exist, *potentially* they are present. When eczema occurs in little round circles like pieces of money, it is called *E. nummulaire*, especially described by Devergie. He states that there are generally four or five patches, and that the disease is most difficult of cure. It is seen on the upper extremities chiefly, and its surface is not raised at the edge, but thins off into the parts around, unlike herpes, there are local redness, itching, and serous secretion,—*E. unisquamosum* was described by Lievain. It is seen at the root of the nose, has an acutish onset, an inflamed surface is left, and this becomes covered over with a single lamellar crust, formed by the dried secretion; in a short time this falls, to be replaced by another. Is it not a form of erythematous lupus? *E. marginatum* is described by Hebra as occurring in the inner part of the thigh in those in whom friction and moisture come into play; consequently in dragoons and shoemakers *par excellence*. The disease extends by a centrifugal increase; there is a good deal of itching, and the surface is red, scaly, and slightly exudative. I have seen it produced by the irritation of pediculi, and in fat subjects by exercise, especially much walking in hot weather. There is nothing special in the disease. Intertrigo must not be confounded with it.

Eczema, like every other cutaneous affection, may be complicated by some other form of eruption, especially lichen; hence we have an eczema lichenoides (or lichen eczematodes), in which the characters of the two are blended—the vesicles, the discharge stiffening the linen, the yellow crusts of eczema, with the papules, the thickening and dryness of the skin generally, toning each other down to a blended aspect.

Of late years, much difference of opinion has made itself a voice among English and foreign writers. In the English school, Erasmus Wilson is the pre-eminent representative. He writes, at page 71 of the last edition of his work, in

reference to the elementary lesions :—" We are not surprised at finding that they are mutually convertible ; that an erythema, for example, may become a lichen by the development of pimples, an eczema by the evolution of vesicles, or an impetigo by the production of pustules. In the same manner, the pimples of lichen having subsided, the lymph or ichor of eczema being dried up, and the pus of impetigo exfoliated in crusts, there may remain behind a chronic erythema, to which another term—namely, *psoriasis*—has been applied. Therefore, in essential nature, erythema, lichen, eczema, impetigo, and psoriasis, are simply modified manifestations of inflammation of the skin, corresponding with recognized stages of common inflammation." The case of scabies, and the co-existence of different forms of eruption, are regarded by Mr. Wilson as arguments in support. We turn to the French school, and we find there the admission of a peculiar diathesis, the *dartrous*, including as subdivisions (different expression of that diathesis) the diseases pityriasis, lichen, eczema, and psoriasis. Hardy defines the dartrous diathesis as follows :—" Nous appellerons *dartres* des affections de la peau à lésions élémentaires différentes, non-contagieuses, se transmettant souvent par voie d'hérédité, se reproduisant d'une manière presque constante, présentant pour symptôme principal des démangeaisons toujours disposées à envahir de nouvelles régions, à marche habituellement chronique, et dont la guérison a lieu sans cicatrices, bien qu'elles s'accompagnent souvent d'ulcérations." The chief features are the hereditary transmission, recurrence, and the great tendency to spread from one to another part. The general surface is dry, and perspiration sluggish ; the disease is mostly symmetrical, and affects a good amount of surface in different parts at one time ; that is to say, it is rarely of limited extent ; itching is a marked feature, and the mucous surfaces are also implicated (muco-enteritis). The course of the *dartres* is chronic essentially ; the cure is difficult. There can be no questioning the fact that the four diseases placed by Hardy

under the head of *dartres* present a family likeness; but it is not so certain that they are identical in nature. Hardy defines eczema to be an affection characterized at its outset by the development of vesicles or vesico-pustules, which are small and clustered, or by cracks (frayings) of the epidermis, which give exit to a serous or sero-purulent secretion, which concretes into crusts, the disease terminating by a scaly desquamation of the epidermis. Hardy, Devergie, and others, recognize as the most important point in eczema, the division into three stages,—the first, or inflammatory; the second, or secretory; and the third, or scaly. In the first we have the disease developed in its diagnostic garb,—the erythema plus the vesicles or vesico-pustules. In the second, the vesicles have burst, and cover over with yellow crusts, superficial, ulcerating, and exudative surfaces. In the third, the crusts have cleared away, and the surface is covered by scales, which approach in character those of the normal epidermis. Most of the French adopt the divisions of eczema given by Willan. Hardy makes the following arrangement:—

1. Varieties according to aspect — (a) *E. simplex*, (b) *E. rubrum*, (c) *E. fendillé*, (d) *Eczema impetigo*, including the ordinary varieties of impetigo, and impetigo acniforme and *I. sycosiforme* (for which see *Impetigo*).
2. Varieties according to configuration—(a) *E. figuratum* (*impetigo figurata*), (b) *E. nummulaire*, and (c) *Impetigo sparsa* and *eczema diffusum*.
3. Varieties according to seat — (a) *E. pilaris*, (b) *E. capitis*, (c) *faciei*, (d) *mammæ*, (e) *palpebralis*, (f) *genitalium*, (g) *manus et pedis*, before described.

The French, then, do not go so far as Erasmus Wilson, but include four diseases (*pityriasis*, *psoriasis*, *eczema*, *lichen*) under a single class-term,—*dartres*, and make *impetigo* a stage of *eczema*. The German dermatologists, however, upset

altogether previous authorities; and we may take Hebra as the representative of the German school. His fourth class of skin disease is entitled *exudative diseases*; two subdivisions are then made,—into diseases with an acute, and diseases with a chronic course; and Group 2 of the latter class is called pruriginous, including eczema, scabies, and prurigo. Eczema itself is again subdivided into five sub-classes or varieties:—(1) Eczema squamosum (pityriasis rubra), (2) E. papulatum (lichen, in fact), (3) E. vesiculosum (the E. solare of Willan), (4) E. rubrum seu madidans, (5) E. impetigo seu crustosum. Hence Hebra makes pityriasis, lichen, eczema, and impetigo, stages the one of the other. Dr. McCaul Anderson has lately discussed the subject in his work on eczema, and he places on paper, in the clearest manner, the fundamental point of importance, viz., the nature of the lesion of eczema. Hebra, Hardy, and he state as plainly as can be stated that the elementary lesion of eczema is not necessarily a vesicle,—nay, it may be an erythema, a papule, a vesicle, a pustule, or even a fissure; and upon this opinion Drs. Anderson and A. B. Buchanan have founded another classification of eczema, as follows:—(1) E. erythematodes; (2) E. papulatum (including lichen simplex and prurigo); (3) E. vesiculosum (the E. simplex of authors); (4) E. pustulosum, or E. impetiginodes (impetigo included); (5) E. rimosum (the E. fendillé of the French). The tendency, then, of modern teaching is clear; it is to upset the doctrine of Willan, and to deny *in toto* that eczema is essentially a vesicular disease: more than this, it asks us to alter the original, or at least accepted, view of eczema, and give it a meaning wholly different and a wider applicability. It appears to me that no case so clearly exhibits the failing that is likely to arise from confining the attention to the study of special departments of medicine. He who would become a successful dermatologist, must be a thorough physician; and it is by the light of medicine as a whole, and the inferences derivable from an enlarged view of pathology, that we must hope to arrive at a

satisfactory solution. Dr. Anderson has enumerated four features as characteristic of eczema,—*the infiltration of the skin, exudation on the surface, the formation of crusts, and itching*; but these are assuredly not peculiar to eczema; herpes and ecthyma, for instance, possess them. I must refer my readers to a little work of mine, “On the Classification of Skin Diseases,” published this year, for a distinct examination of the question, containing a series of comparative tables of different divisions and definitions of eczema. Here I am only concerned with one great question, the all-essential one, however,—What is the elementary lesion of eczema? Is there a disease whose peculiar character is vesicular? In spite of all that has been said or written, it appears to me that eczema is essentially and entirely vesicular. The arguments that have been used against the distinct nature of eczema are—

1. That furnished by the history of scabies. Erasmus Wilson, Hebra, and others, say that in scabies; papules, vesicles, and pustules are the result of one and the same cause; that in a family one person will have one form, another a second, and another a third form, particularly developed; or there will be a varying co-existence,—now papules and erythema, now pustules and vesicles. But the eruption of scabies is dependent upon a local cause, which is *unequally* distributed; in eczema the eruption is brought about by a *blood alteration*, minus the inequality of local irritation.

2. Artificial experiment,—*e. g.*, the friction of croton oil, which is adduced by Hebra in support of his views, is open to the same objection. The two things do not fulfil the conditions under which such a disease as eczema is developed. If you rub in croton oil to the skin of a healthy person, the effect will rapidly disappear; there is no condition of system which tends to *prolong* the disease. In eczema a local irritant may evoke the eruption; the action of the local irritant may be removed and yet the disease increases, takes

a hold upon the system, and is very difficult of cure. What is the cause of this prolongation? It must be some peculiar state of nutrition of which the eruption is the full evidence, and which must be regarded as the real essential disease. Simple local inflammation cannot explain the matter. Scabies and croton oil frictions are merely the excitants of eruption, calling forth a different elementary lesion, according to the degree of irritation and the state of the patient's health; neither show that one is a stage or different form of another lesion.

3. The co-existence of papules, pustules, and vesicles in disease is thought to show their identity; but then mutual interchange of characters is required to establish the latter; otherwise the disease strophulus pruriginosus, scabies pruriginosa, lichen urticatus, eczema hepiforme (Devergie), purpura urticans, &c., mean that strophulus and prurigo, scabies and prurigo, lichen and urticaria, eczema and herpes, purpura and urticaria, &c., are severally identical diseases. Co-existence to a marked extent may imply close relationship, but decidedly not identity.

4. The developmental changes. It is said an erythema becomes vesicular, or papular, &c., or a papule becomes a pustule; but this has as yet never been proved. The basis of most skin diseases is redness or erythema; but then erythema is perceptibly different in many cases. If not actually, it is potentially different. I hold that the redness of simple erythema and that of eczema or herpes are not the same; for example, it is rosy in roseola, in is bluish-tinted in ordinary erythema, &c. Again, it may be very extensive, and yet no vesicles or papules form; though the general symptoms be severe, and *vice versâ*. Again, the tendency is not the same. The erythemata which are related to the papules of E. papulatum, the patches of E. nodosum, the vesicles of herpes, the papules of lichen, cannot be the same, as the result shows. The erythema of an eczema is peculiar in being followed by the formation of small clustered vesicles,

which contain a peculiar secretion, not seen in any case of simple erythema with secretion (intertrigo).

5. If vesicles, papules, pustules be a more expressed form than erythema, why do not the general symptoms bear some definite and comparative relation?

Having very briefly considered the arguments against, I pass to those for the existence of a truly vesicular disease—eczema. In the first place, taking a liberal view of matters, diseases are peculiarized by retaining the impression of their elementary types. It is so of erythema (nodosum or papulatum), of lichen, of prurigo, of pemphigus, of psoriasis, of herpes, of ecthyma, &c.,—examples of the different orders of skin disease. Why is eczema an exception, at the same time that it is the commonest form of eruption? Secondly, the elementary lesions have never been seen to be produced the one from the other—the papule from the vesicle, or, *vice versâ*, the pustule from the papule, &c. Nay, more, their nature is different. If pathology teaches anything, it is this, that a vesicle is merely the upraising of the cuticle by serosity; the papule is a new formation from the deposition of special plastic exudation, at first of course liquid;—that the pustule is a primary formation. The vesicle may really contain pus; but it is sero-purulent, not primarily purulent. Thirdly, it is clear that to take a mere stage, and on a partial view to make it a distinct disease is an error. If we wish to recognize eczema, we must scrutinize its history altogether. Fourthly, see the contrasts of four of the supposed identical diseases.

Prurigo.—(a) The amount of eruption is out of proportion to the symptoms; (b) the skin is unhealthy, muddy, thickened, but flabby, and often “urticated;” (c) there is a tendency to the effusion of blood, as evidenced by the characteristic feature of the papules; (d) hyperæsthesia is marked; (e) there is no antecedent erythema as a rule.

Lichen (a) is essentially a dry disease; (b) the skin is

thickened, harsh, dry; (c) itching is not often severe; (d) the papules are new formations.

Pityriasis (a) is essentially a rapid and too free production of epidermic scales; (b) erythema is not necessarily present; (c) it is a primary form of disease.

Eczema (a) is essentially a moist or secretory disease; (b) the skin, though often dry, is fine, delicate, irritable, but not discoloured nor thickened; (c) vesicles are present; (d) the secretion stiffens linen, and dries into peculiar yellow crusts.

Such is the contrast. The real conclusions seem to be this, that eczema is distinguished from its supposed allies essentially by its being a secretory disease; that the secretion is peculiar in its character, best described as stiffening linen, and drying into light yellow crusts; that the outpouring of this secretion in the first instance is connected with the formation of vesicles; but that the latter may be rapidly produced, or imperfectly developed, or may quickly burst after their appearance; and hence also often overlooked. But we cannot refuse to admit that the tendency in all cases of eczema is the formation of vesicles and the production of a *peculiar* secretion. Eczema is of all diseases most prone to complication,—*e. g.*, by lichen. Again, eczema may be modified by treatment; it becomes chronic, or puts on special aspects,—*e. g.*, it may fissure; hence eczema is modified by three great causes; (a), arrest of development, so that the disease assumes the aspect of an erythema; (b), secondary changes,—*e. g.*, quick bursting of vesicles; free secretion or fissuring; (c), by complications,—*e. g.*, as by lichen. Such is a brief outline of the position of eczema.

Nature and Causes of Eczema.—Some look upon eczema as a simple inflammation. From what has been said with regard to the nature of the secretion, it probably is an inflam-

mation, dependent upon a peculiar state of nutrition, as yet imperfectly defined. The disease cannot be produced in all subjects, nor always by means which excite common inflammation. This primary state, then, may be hereditary and congenital or non-congenital, or it may be acquired, and any irritant or excitant may call forth its outward evidence. Eczema is the most common of all skin diseases, constituting about 30 per cent. (Wilson); more common in the male than female. Of 193 cases (Hebra), 118 were males, 75 females. Of 298 cases (Wilson), 171 were males, 127 females. As regards age, it is very common between the ages of 25 and 40. Of 581 cases, Devergie found 162 between the ages of 15 and 25, 243 between 25 and 45, 80 between 45 and 55, 66 between 55 and 65, and 30 after 65. Mr. Wilson found, in 298 cases, 8 under 1 year; between 2 and 9, 21 cases; 10 to 19, 40 cases; 20 to 29, 36 cases; 30 to 39, 56 cases; 40 to 49, 57; 50 to 59, 42; 60 to 69, 24; 70 and upwards, 1 case. Hebra noticed, of 193 cases, 101 between the ages of 10 and 20, 37 between 20 and 30, 26 between 30 and 40, 5 under 10, and 24 above 40. *The disease would appear to be most common, then, between 20 and 30 years of age.* The seat of eczema was the legs in 446 of 600 cases, the forearm in 155, the thighs in 152, the arm in 133, the face in 114, the scalp in 86, the genital organs in 68, the neck in 63, the breast in 54, the belly in 50, the back in 45 (Devergie). Of 193 cases (Hebra), the upper extremity was affected in 48 cases, the lower in 42, the face in 22, head in 21, and the trunk in 18: *hence the upper limbs are the most liable to be attacked.* The duration of the disease before coming under treatment was, in 561 cases, under a month, 19; from 1 to 2 months, 28; from 2 to 6, 106; nearly a year, 51; upwards of a year, 292; more than 10, 57; since infancy, 8. Erasmus Wilson gives as follows:—Less than a month, 29; 1 to 6 months, 89; 6 months to a year, 30; 1 to 5 years, 85; 5 to 10 years, 27; 10 to 20 years, 23; 20 to 30, 12: in 3 cases the eczema had existed for periods of 48, 57, and 70 years. The occupations which predispose to eczema

are those of coachmen, tinmen, farriers, mechanics, tailors, cooks, enginemen, grocers, carpenters, blacksmiths. As to seasons, of 384 cases given by Devergie, 60 occurred in the spring, 127 summer, 28 autumn, and 169 winter, or 296 cases in summer and winter, and 88 in spring and autumn. As to composite forms, Devergie states that of 600 cases 205 were of the impetiginous type, 101 lichenoid, 14 psoriasiform, and 4 herpetiform. Erasmus Wilson, in a recent publication, "An Inquiry into the Relative Frequency, the Duration and Cause of Diseases of the Skin," 1864, has gone most fully into the intimate cause of eczema. He thinks the essence of the disease is *debility*,—"a lowered tone of the system and of the tissues,—a reduction of vital force, bringing it below the normal standard, below the standard of health." This debility may be (a) *nutritive*, especially seen in young life; defective nutrition, brought about especially by bad food, "want of power to convert food into nutrient and restorative material;" (b) *nervous*,—"a state in which the nerves are easily excited by stimulants and irritants," followed by reflex and sympathetic irritation; (c) *assimilative* weakness of "the digestive and assimilative functions and disturbance of the secretions: the organs governed by the solar plexus and its dependencies are the parts of the economy primarily and chiefly at fault in this group." (d) *local debility*,—an atonic state of the tissues. Of 1,000 cases, there occurred under the first head 102, the second 32, the third 142, the fourth 22 cases. The predisposing causes in the first group were errors of diet 28, weakly parentage 13, hereditary diathesis 12, vaccination, rapid growth, malhygiene, deranged menstruation, &c. Then we have, under the head of nervous anxiety, fatigue, affliction, over-work, alteration of temperature, deranged secretions and functions, &c. Pretty much the combination of these two groups under the third head, and as local predisponents, injury, cold, heat, friction, local irritants, varicose veins, &c.

In 542 cases, the lymphatic temperament was present in 423 (Devergie).

Prognosis.—When eczema comes under treatment early, and is caused by local irritation, it is easy of cure. It never gives rise, *per se*, to danger, but the sudden retrocession of an eczema may be followed by grave symptoms. Infantile and congenital eczemas are most difficult to cure, so are localized varieties, especially E. mummulaire. Hereditary tendency, the strumous habit, necessitated ill living, indeed mal-hygiene of all kinds, protract the cure. The disease is always liable to recur.

Diagnosis.—This must be very carefully attended to, not as presented by the characters actually present, but those which have already existed and presently disappeared. The chief point to note is this, that eczema is a *moist* disease. As the statistics of Wilson and Devergie show, eczema when it first comes under notice has generally had more than a month's existence; hence it is not fair to deny the existence of vesicles, and to say that eczema is not a vesicular disease. Ask the patient closely as to antecedents, and he will often tell you that redness came first, then little bladders the size of pins'-heads, and then the surface discharged or began "to weep." This is the first point to attend to; then in the recent parts of disease you may be able to detect small aggregated vesicles without much redness, but with itching and a thin, unthickened skin: this is E. simplex. It may be mistaken for *Erythème vésiculeux* of Hardy, which arises from the application of local irritants, and is characterized by vesicles upon a red base; but the disease is of short duration; it has no tendency to spread, it is localized, the discharge is not viscid, stiffening like that of eczema. Intertrigo is produced by an evident cause,—the friction of two surfaces; its seat is in the folds of the skin; the absence of vesicles, of crusts, and the thin muciform secretion, are distinctive.

In *Sudamina* the vesicles are large, the size of millet-seed, not aggregated, scattered over a large extent, and follow profuse perspiration; these dry up in a few days, are unaccompanied by any symptom of itching; they do not discharge, but end in furfuraceous desquamation. Herpes presents a limited number of vesicles on a red base, which are large, do not often burst, but shrivel away in a few days; there is no persistent discharge, the disease does not spread, the pain is smarting, and there are no eczematous crusts. In Scabies the vesicles are scattered, not confluent; they are acuminate, and present the well-known furrow, at whose end the acarus lies imbedded and may be detected. There is no inflammatory base as a rule. Eczema may be interdigital, and then lead to confusion; but in scabies the eruption is seated on the anterior surface of the forearm, about the breast, abdomen, and buttocks,—the penis; on the feet, pustules (impetiginous and ecthymatous) are present, the itching is intense at night, but relieved by scratching. Lichen simplex never discharges,—it is a dry disease; papules are present, and the skin generally is dry and thickened.

E. rubrum attacks several regions at once; there is a red inflamed surface with vesicles in the early stage, giving out a peculiar secretion, and it may perhaps resemble erysipelas; but the rigors, smarting, defined boundary-line, the bullæ, &c., of the latter, ought to prevent mistake. When eczema attacks the fingers, quasi bullæ are formed by the coalescence of several vesicles, but there is eczema generally in other parts, and the aspect of the disease is acute; nevertheless it may be mistaken for pemphigus, which is not limited to the hands, whose bullæ are not preceded by vesicles, which is chronic, and made up of successive crops of little bullæ containing a thin fluid, drying into large flat scales. In eczema chronicum there is a history of a moist vesicular stage; there are no papules, the scales are thinnish, large and yellowish; fissures are present, and oftentimes exude a tenacious secretion. If the scabs are removed, the surface beneath

is smooth, somewhat shining and red; if the disease is extending, vesicles may be seen at the edge of the eruption; the skin generally is not discoloured nor thickened, but what may be termed lymphatic and irritable; sometimes the secretion is very free, and then large thick scabs may form so as to resemble,—*e. g.*, on the legs, ichthyosis spuria, in consequence of the brown tint.

Pityriasis rubra sometimes closely resembles *eczema rubrum*. According to Devergie, the former affects the surface of the body as a whole, *eczema* does not. In *pityriasis rubra* the colour is more intensely red, and in *eczema* it shades off imperceptibly into that of the surrounding skin, and the skin is not thickened; whereas, in *P. rubra*, the subcutaneous cellular tissue is swollen; the sensation present is rather burning than itching; the secretion is not thick, and staining or discolouring like that of *eczema*; and scaliness is a primary feature, not occurring late as in *eczema*; the scales are not adherent, but constantly detached, and the red surface is punctated by red points and exuding. Hardy thinks Devergie's *P. rubra* is *pemphigus foliaceus*.

Psoriasis ought never to be mistaken for chronic *eczema*. Let me say, Erasmus Wilson has named the latter *psoriasis*, but the term is *here* meant to signify the ordinary *lepra vulgaris* (alphos). In *psoriasis* (alphos) there is never any secretion; it is a primary form of disease; there are no vesicles, the patch is thick, cracked, and covered by white scales; the disease affects peculiarly the elbows and knees. *Eczema lichenoides*, or grocer's itch, occurs about the back of the hands; it exudes a secretion; the edge, however, is distinctly papular. *Lichen agrius* is considered by many to be *eczema lichenoides*; but the surface is not very moist; there are no vesicles; the secretion is not that of *eczema*; there are no yellow crusts, but thick scales; and the surface beneath is rough and papular; there is more or less induration and thickening, and the edge is markedly papular. Having given

the diagnostic points, it may be well to add that the effect of remedies must be taken into account, for we may be misled if we are not careful to appreciate the whole history; and we can now see how it comes that eczema is liable to be confounded with other similar diseases, and if we take only a certain stage, can appreciate the meaning of such terms as *E. erythematodes*, *E. vesiculosum*, *E. papulatum* (complicated by lichen), *E. pustulosum*, *E. ichorosum*, and *E. fissum* (fendillé).

Treatment.—What is the exact state of nutrition of which the peculiar discharge of eczema is the index?

The eczematous condition of blood, if not produced, is intimately connected with or evoked by debility. This has been noticed under the head of Causation. We must most carefully scrutinize our patient and ascertain what remote predisposing cause—a list of which has been given—is in operation, be it a deviation of stomach, of liver, of splenic or of uterine function. We must remove this source of evil.

Referring to idiopathic and non-complicated eczema, in the first instance, we must remember that it has three distinct stages as regards treatment, and that it is absolutely necessary, in a scientific and indeed practical sense, to recognize these; viz.—the 1st, *inflammatory*; 2nd, the secretory or *moist*; and, 3rd, the scaly or *dry* stage. In all cases we must, as preliminary, examine well into our patient's history, to ascertain the existence of any peculiar diathesis. Bazin has shown us example in making his division into scrofulous, arthritic, and herpetic, an arrangement of much value, scarcely based, however, so much upon the physiognomy as the effect of the treatment of eczema. We may define pretty clearly in the young the scrofulous taint, and have in our mind's eye at once the use of iron and cod-liver oil. The herpetic class, by the negative evidence of scrofula, the rather drier character of the eruption, and its more general diffusion, its recurrence and chronicity, in which arsenic is of great

use. The arthritic is difficult to describe. It is met with in elderly people of gouty and rheumatic habit, and in such, alkalies and colchicum do good service. Such should be the *tendencies* of our general treatment, so to speak. In all cases we must remember that nutrition is below par. The diet must be well considered and unstimulating. As a rule, if the eruption be general, general treatment is demanded especially; if it be local, then local treatment will often do alone.

Locally, we must remove all sources of irritation, and see that every facility is given to the thorough application of our medicaments and the removal of crusts.

Stage 1. *The Inflammatory.*—*General Remedies.* Purgatives, salines, and laxatives, with especial attention to the action of the kidneys; if any diathesis is marked, give its specifics if suitable. *Locally*, all that is needed consists of emollient applications, bran tea, poppy or oatmeal washes; by all means keep the parts well shielded from friction. *The object is to conduct the disease naturally through the first stage without interference or hindrance.* It is not sound therapeutic to attempt to "cut short" the early stage of an eczema.

A special annoyance (itching) is sometimes of great prominence; it may take on the character of a burning sensation. To allay this, we may use simple lead lotion, camphor ointment, black wash, belladonna lotion, or cyanide of potassium ointment, weak vinegar and water, prussic acid lotion.

Stage 2, *the Secretory or Moist*, is to be treated, as regards general means, by the exhibition of purgatives, with the view of lessening the discharge, and locally by the judicious use of astringents. Purgatives are only called for when any inflammatory symptoms are present, or the discharge is excessive and irritating. Iron, magnesia, and acid, or iron and aloes, are often useful; in the later stages, we may resort to our tonics. Locally we employ astringents; ointments are not required, indeed, are to be avoided at this stage. Liquid

applications alone are admissible. When the vesicles rupture, and the discharge commences, solution of carbonate of soda gr. x. ad ℥ij., borax gr. x. ad ℥j., or glycerine ℥iij., oxide of zinc ℥ij., lime-water ℥vj., are best adapted to the case. Our object should be to reduce the local heat, in so far as the local remedies are concerned,—not to add any additional irritation.

Stage 3. *The Dry or Scaly Stage.*—This is reached oftentimes very quickly, especially in the localized cases, when local treatment is very effectual, and speedily called for. It is at the end of the second and in the third stage that specific general remedies are called for; they are chiefly arsenic, arseniate of soda, and sulphur. Arsenic is useful in non-acute, general, scaly, periodic forms, in the nervous temperament; sulphur in the lymphatic. Baths of various kinds are now especially useful, and ointments are called for. There can be no question, that when the disease has lasted a long time, it has a great tendency to become more and more localized, the general condition improves, but the local mischief is perpetuated by the loss of vitality which the skin undergoes, so that in old-standing examples, eczema, for all practical purposes, may be looked upon as a local disease. Our treatment then, locally, depends upon the age and extent of eruption, and the degree of infiltration.

In mild and recent cases, absorbents will alone be required, such as the milder mercurial ointments, simple iodine ointment, and the like; Hardy prefers calomel ointment. Stimulants they may be called, if this name be preferred; but it is not so much a *stimulative* as an *alterative* effect that is required. In chronic examples, where the infiltration is marked, and the disease appears like psoriasis, we are compelled to set up some derivant or revulsive action;—oil of cade, consisting of equal parts of tar, spirit, and soft soap; or blistering may be desirable. In many cases, a strong ethereal solution of nitrate of silver is very efficient, in the

form of two scruples of the silver to an ounce of spirit of nitric ether. In the medium class of cases, the compound sulphur ointment of the Skin Hospital, tar, the nitric oxide, and nitrate of mercury ointments, seem best adapted, by their stimulation, to promote cure.

In eczema we start with soothing agencies only, avoid irritation of all kind; when the acute stage has passed, we employ absorptives; and when the disease has become localized, so to speak, stimulation, and if this fail, revulsive remedies. The difficulty seems to be to ascertain the exact moment when we should give up the soothing and have recourse to the stimulating system.

Fissuring is sometimes a troublesome condition, and we do not appreciate as we should the efficacy of *maceration*. Immense good results from the continuous application of glycerine and oily fluids, and this does not forbid the employment of astringents and stimulants at the same time, such as zinc, borax, or tar. If we keep the dry, harsh, and fissured parts constantly moist and supple, and at the same time stimulate gently, we shall meet with ample success.

Eczema, *secondary* to other diseases, requires some different plan of treatment. If consecutive to scabies, treat the scabies, whatever the state be. Eczema once set up by scabies, may, however, be perpetuated, when every trace of scabies is removed. A soothing plan of remediation is called for; to treat this state as an ordinary eczema, would be a grave misappreciation of its nature. In pruriginous eczema, see well to the existence of pediculi, don't irritate the skin, improve the general health, and give gelatinous and alkaline baths.

When lichen is present, we should avoid too much local irritation, and use gelatinous and soda baths, mercurial ointments, sulphur, and general tonics. When the mixed forms are pretty well localized, viz., as in baker's, grocer's, bricklayer's, and washerwoman's itch, we may conclude that

the cause, and therefore the treatment, must be in a great degree local, and in these cases we may use revulsive measures. All that is insisted upon here, in this mere mention of the treatment, is this, that complications rather imply a greater change in the nutrition at large, a necessity for general treatment, and the avoidance of local irritation; *ergo*, the employment of emollients and astringents.

The mineral (sulphureous) waters useful in eczema are those of Luchon, d'Enghien, Barèges, and St. Gervais.

HERPES.

HERPES is characterized by the presence of little globular vesicles, larger than those of eczema, distinct from each other, and seated *upon* an inflamed base; the vesicles are generally few in number; they do not rupture, as the rule; but their contents, after becoming opaque, disappear by absorption, or by rupture and desiccation into brownish scabs. The vesicles last about seven or eight days. The disease is mostly attended by sensations of heat, tension, smarting, burning; occasionally severe pain. Herpes has a pretty definite and limited course. Writers generally divide herpes into two groups,—the one, in which the vesicles are well developed, *phlyctenoid* group; the other, in which they are not so well marked, and in consequence of assuming a circular form, the *circinate* group. The phlyctenoid group comprises H. phlyctenoides, and the local varieties, H. labialis, H. nasalis, H. palpebralis, H. auricularis, H. præputialis, H. pudendalis, and the most important, H. Zoster or Zona. The circinate group includes H. circinatus, which should be placed with parasitic, and H. iris, a rare form of disease. Besides these two, Devergie adds the mixed forms, H. eczematosus, H. lichenoides, H. pemphigoides, H. psoriasiformis, H. rupiformis, H. lupiformis; but these are not recognized by English authorities.

H. phlyctenoides, or ordinary herpes, commences by a

sense of local heat and inflammation; an erythema appears; upon this arise round, grouped vesicles, from ten to twenty, in patches the size of sixpence to a five-shilling piece, surrounded by a red areola: there are generally several of these patches; they mostly occur about the face, arms, neck, and upper limbs. The contents of the vesicles, at first transparent, become milky, then quickly disappear; the vesicles shrivel, and scabs remain; the smarting heat and tension also subside; the disease lasts ten days or more; the vesicles get to their height in two or three days, and dry up on the seventh or eighth. When seated about the lips, the disease is named *H. labialis*. It commences as a "cold," with pyrexia, &c.; then the local heat, smarting, and tension are followed by a patch of herpes, with about six or eight vesicles. It also affects the mucous membrane of the pharynx and palate. It is common after catarrh, typhoid, remittent, and intermittent fevers. *H. præputialis* is mostly syphilitic; in simple cases, the patch scales over in a week or so; the scabs fall off, leaving little ulcers the size of pins'-heads or more, which quickly heal, the prepuce being irritable, and red; if syphilitic, there are successive crops; the prepuce gets hard, and indurated about the seat of the herpes; coition is sometimes painful. The mucous surface is more or less irritable, but the origin is clear, from vesicles, which give place to little ulcerations, which cluster together, and quickly scab over; in other cases, the vesicles abort, desiccate, and scale over; the little crusts fall off, leaving little pits, which presently heal. *H. Zoster*, *Zona*, or shingles, possesses the characters of *H. phlyctenoides*, but derives its special name from the peculiar manner in which it encircles one half of the body like a girdle. It follows the course of one or more of the cutaneous nerves, stopping short at the median line before and behind, though it may cross this point. It affects the trunk generally, but may attack the face, the shoulder, the belly, or upper part of the thigh; the right side more than the left. Of 178 cases collected by Barensprung, in 101 the herpes was

on the right side, in 77 on the left. Mr. Hutchinson's observations are confirmatory. It is most common in the young; of about equal frequency in the two sexes, and occurs particularly during change of weather. It is an acute disease, and lasts fourteen to twenty days. The patient often ails a few days before the eruption appears, is feverish, out of sorts, complains of headache, shivering, perhaps pain in the side, which may be very acute and of neuralgic aspect; presently patches of erythema appear, and present, on close examination, a number of little white points, which quickly enlarge into globular vesicles, perhaps coalescing and forming little bullæ; they are tense, and contain clear serosity; in four or five days the vesicles become partially emptied, flaccid, the contents becoming turbid and dark; at the same time the red blush fades, and the patch scabs over; the crusts disappear in ten days or so, leaving dark red stains. The changes are not completed at the same time over the whole area of the patch, but are later in taking place in one part than another; hence travel, as it were, over the surface; consequently, several aspects or stages may be noticed in the same subject. In some rare cases, the H. Zoster may ulcerate, or even become gangrenous. Pain may be a very prominent symptom; it may be lancinating, smarting, or burning. The convalescence finds the patient weak and neuralgic. The scars are not lost for many a week. Herpes Zoster rarely occurs twice in a lifetime; it does so rarely. Mr. Hutchinson, Feb. 25th, 1863, brought the subject of H. Zoster before the Hunterian Society. He concluded, from an analysis of 70 cases, (1) that it may occur at any age and in either sex; (2) that it is not associated with any special form of ill-health; (3) that it is non-contagious; (4) that it rarely occurs more than once in the same person; (5) that the eruption is never symmetrical, and always follows the course of a sensitive nerve; (6) that it occurs, without preference, on either side of the body; (7) that it cannot be produced by artificial irritation of the nerve-trunks; (8) that certain special nerves

are much more liable to be affected than others (the 3rd and 4th dorsal); (9) that it runs a definite course. Von Baren-sprung has carefully tabulated the following local varieties of Herpes Zoster, showing the various nerves implicated :—

- a.* Herpes facialis *vel* H. labialis — trigeminal (and labial branch).
- b.* Occipito-collaris — 3rd cervical (peripheral distribution).
- c.* Cervico-subclavicularis — 4th cervical.
- d.* Cervico-brachialis — cervical and dorsal, which go to form the brachial plexus.
- e.* Dorso-pectoralis — 3rd, 4th, 5th, 6th, and 7th thoracic nerves.
- f.* Dorso-abdominalis — 8th, 9th, 10th, 11th, and 12th thoracic nerves.
- g.* Lumbo-inguinalis — 1st lumbar, 12th intercostal, which anastomoses with it.
- h.* Lumbo-femoralis — 2nd, 3rd, and 4th lumbar, involving especially the anterior and external cutaneous, genito-crural, obturator, and crural nerves.
- i.* Sacro-ischiadica and sacro-genitalis — involving the anterior branches of the sacral nerves, which go with the two last lumbar and sympathetic to form the sacral plexus, from which arise the pudendal, the great posterior cutaneous, and ischiadic nerves.

Von Baren-sprung (*Med. Chir. Rev.*, Jan. 1863, quoted from foreign journals) has argued that the disease is due to an irritation of the spinal ganglia. He says the disease cannot be central because of its unilateral character, the sensory filaments are evidently involved, the motor are not; hence he regards the *posterior* roots as implicated. But whether it be the filaments of the sympathetic, or those which arise from the ganglia and pass on to the surface, is a matter of doubt,

Mr. Hutchinson places the matter in the best light. He says, If the disease be an exanthem, why is it unsymmetrical, non-contagious, and local in its phenomena? If a neurosis, why does one exempt from a second attack? Why does it run a definite course? Why is it unassociated with ill-health, and why is it not producible by artificial irritation? Why are the dorsal nerves most prone to suffer? Why are the *forearms* and *legs* never attacked? Why is the frontal branch of the fifth frequently affected and other divisions so rarely? &c. &c. The urine appears to be alkaline; and, as far as its components are concerned, the chlorides, the phosphates, the ammonia (hydrochlorate), are present in excess; the sulphates and uric are diminished in amount; there is fat present and oxalate of lime. Heller is the authority.

Herpes circinatus will be described with the parasitic diseases. Herpes iris is a rare form of eruption; it commences in the usual way; generally a solitary vesicle occupies the centre of the red base; the patch increases, and a ring of vesicles springs up outside the original vesicle: in this way several rings are formed,—generally four or five. These rings are differently coloured, as follows, from within outward, according to the books:—(1) Reddish brown; (2) yellowish; (3) vivid red; (4) rosy. The disease runs through the usual changes. In some cases the vesicles are not very distinct, and Devergie looks upon H. iris as a species of erythema. It is seen about the backs of the hands, the neck, and feet. The composite forms of Devergie need only be noticed here but very briefly. The herpes eczematousus is like eczema nummulaire, with this difference, that the former has a distinct border, the latter shades off into the surrounding parts. Herpes lichenoides is probably lichen circumscriptus. Devergie says the former differs from the latter only in the existence of a distinct margin, which continually increases. The other varieties are unimportant.

The causes of herpes have been already pretty well con-

sidered. It is usual to mention, as exciting causes, cold, change of season, delicate and fair skins, excess at table, moral emotions, great exercise, disturbances of digestion, local irritation of all kinds. Certainly *H. labialis* is connected with catarrh, stomatitis, influenza, fevers, and the like, and is often excited by cold winds. *H. zoster*, too, is very likely to result from sudden chilling of the body or other sudden change of temperature. The prognosis is always favourable except in old people: *H. zoster* in those subjects, if connected with sloughing and gangrene, is a serious affair.

Diagnosis.—Herpes cannot well be confounded with any other disease. The red base, upon which a few clustered large distinct vesicles are seated, with the acute course, its non-secretory aspect, and the presence of smarting, heat, and tension, are diagnostic. Erysipelas may resemble *H. zoster*; but it is not unilateral, the bullæ are large, the redness is accompanied by swelling, the edge of the blush is well defined, and rigors are present.

Treatment.—Nothing special is required in the local varieties of herpes. We must keep the vesicles intact, and help their desiccation by the use of powdered starch, lycopodium, &c., and subsequently employ zinc ointment. Internally salines, chlorate of potash, aperients, and tonics, as the case may be. In *H. præputialis*, if we suspect syphilis, special treatment must be adopted. In *H. zoster* it is necessary, to prevent friction, to keep the vesicles unbroken. We may use starch powder three parts, oxide of zinc one part, to dust over the surface;—presently we employ emollients, zinc ointment, and the like. If there be much pain, the endermic injection of morphia, belladonna lotion, or watery extract of opium lotion, are best. In young non-neuralgic subjects, salines and subsequent tonics; in neuralgic subjects, quinine, steel, &c.; in old people, bark, ammonia, and a good diet are required. If the surface ulcerate, astringent washes,

lead lotion, solution of nitrate of silver, yeast poulticing, are remedies of good avail.

MILIARIA AND SUDAMINA.

The two diseases really have no right to be considered as separate diseases. Sudamina is the lesser degree of disease, the contents of the vesicles being acid; miliaria is the more developed condition, in which the contents are alkaline,—in fact, inflamed sudamina, as Dr. Gull pointed out. Sudamina are little round vesicles, which are never confluent, and unattended by any inflammation: when the latter is present, the affection is called miliaria. Sometimes the vesicles are reddish (*miliaria rubra*), sometimes white (*miliaria alba*). These vesicles are developed about the neck, axillæ, clavicles, and trunk, in diseases in which profuse sweating occurs; their contents quickly dry, each crop is replaced generally in from three to six days by furfuraceous desquamation. The disease is seen in phthisis, during summer-time, in acute febrile disease, the parturient state, in rheumatism, fevers, in the sweating disease of Picardy. Dr. Gibb (*Lancet*, July 30, 1859) relates an instance of the disease in a family of eight persons, all affected. So-called miliary fever, said to occur in two forms, mild and malignant, is characterized by profuse sweating and the development of sudamina. (See an account of the sweating sickness by Dr. Babington,—translation of Hecker on the Epidemics of the Middle Ages, and also “A Booke or Counseill against the Disease commonly called the Sweate or Sweatyng Sickness, by John Cains, Doctor of Phisicke. Imprinted at London, A.D. 1552.”) The treatment demanded is a cool regimen.

SUB-ORDER BULLÆ, before described (see ELEMENTARY LESIONS), contains Pemphigus and Rupia.

PEMPHIGUS is characterized by the appearance of little

vesicles upon an inflamed base, which quickly enlarge, and subsequently cover the whole area of the red blush; the contents, at first transparent, soon become milky, and either are reabsorbed or dry into crusts of lamellar aspect, beneath which is the slightest ulceration; the bullæ are generally successive; their outline is generally round or oval; there may be one or many, and they may be confluent or discrete. In some instances there are severe premonitory symptoms, especially in the acute forms. The bullæ quickly form and affect all parts of the body; rarely, however, the head, the palms of the hands, or soles of the feet. In some cases bullæ form upon the mucuous surfaces, especially in chronic disease; at least bullæ have been demonstrated under such circumstances. (*Vide* Chaussit, *Traité élémentaire des Mal. de la Peau*, p. 95, 1853.) It is not unlikely that the same thing happens in the acute forms of pemphigus. Gastro-intestinal disturbance sometimes attends the disease. Pemphigus is not contagious, as shown by inoculations performed by Gaitskell and Husson, noticed by Gibert. Pompholix was a name applied to the chronic form, but now used synonymously with pemphigus. All authorities agree in dividing pemphigus into acute and chronic. *Acute* pemphigus, well described by Gilibert in his "Monographie du Pemphigus, ou Traité de la Maladie vésiculaire" (Paris, 1813), is ushered in by a varying degree of constitutional disturbance. When the disease is not severe, it takes the title of *pompholix benignus*, after Willan: the headache, fever, &c. are not so intense; at other times they are marked and severe. In a couple of days or so, little red points appear; and upon these little bullæ form, which rapidly increase and fill: there may be an areola; all depends upon the increase of the bullæ. The latter and the red blush increase together, but generally not *pari passu*, for the bulla overtakes the areola and hides it from view. In two or three days more the bullæ burst, a raw surface is left; but this scabs over: at first the incrustation is yellow, then

brownish. The bullæ which are seen on the limbs and trunk are successive, and so prolong the disease for several weeks, or cause it to lapse into a chronic state. As may be imagined, the disease varies somewhat, in the number of bullæ, their confluence, the presence or absence of an areola, &c. Occasionally there is but one bulla; it is large, bursts in forty-eight or fifty hours; is often preceded by tingling or itching, and makes its appearance in the night perhaps, about the ankle or wrist. After its disappearance, another arises, runs through the same course, and is succeeded perhaps by two or three more in like manner. It is mostly seen in elderly people: there may be accompanying general disturbance. It is the *P. solitarius* of Willan. In children the above-described forms exist; but there are some peculiarities worth noticing in the pemphigus of new-born children (*P. neonatorum* of Krauss, the *P. infantilis* of Willan and Hufeland, and, when in a severe form, the *P. gangrænosus* of Whitley Stokes).

It may be congenital; it may be epidemic. (Vide *Med. Gazette*, vol. i. pp. 35-36, for the account of an epidemic in the General Lying-in Hospital.) It is said to be contagious in this aspect by Willan. (See also *Dublin Med. Essays*, 1807—an account by Dr. Stokes.) It varies much in degree; in the least severe forms, the child may be apparently healthy, but in a few days after birth, bullæ, containing dirty-coloured fluid, appear about the hands and feet, quickly rupture, and give place to unhealthy ulceration, which varies somewhat in its extent and depth; fresh bullæ appear; at the same time the child wastes, diarrhœa comes on, and death ensues. In other cases, though the disease commences mildly, the skin is livid, the areola dark; the contents of the bullæ are fœtid; the ulceration is unhealthy, deep; the surface is dark, blackish, and exudes an ichorous matter; the edges are livid, shreddy, so that large circular depressed black ulcers are present. Not only are the feet and hands affected, but also the limbs, the genital parts, the abdomen,—even the mucous surfaces and

the head. Death generally occurs about the tenth or twelfth day.

Now, great discussion has arisen as to the nature of this *P. neonatorum*. Paul Dubois, Devergie, Cazenave, Ricord, Dugés, Wichmann, and Jörg, say it is syphilitic; of the other view are Krauss, Barnes (*l'Union Médicale*, No. 74, t. vi.), Cazeaux, Bazin, Hardy. In the treatise on Syphilis in New-born Children (*Syd. Soc. Trans.*, 1859, p. 173), Diday's opinion in the affirmative will be found. This much is clear, that pemphigus of the general surface in infants is certainly non-syphilitic, as is the case in adults; but when it occurs about the hands and feet especially, accompanied by extensive ulceration and marasmus, with a history of syphilis in the parents, it is probably specific. It has been supposed that syphilitic pemphigus never occurs in the adult, and Hardy makes use of this fact as an argument against the syphilitic nature of pemphigus neonatorum; but Dr. McCaul Anderson has lately (*Glasgow Med. Journal*, July, 1864, No. 46) published a very remarkable case, in which bullæ appeared on and about the hands, the fingers, and the ankles, as an exhibition of secondary symptoms apparently. Dr. Anderson calls attention to the fact that Ricord has figured it in pl. xxv. of his "*Traité complet des Maladies vénériennes*." Paris, 1851.

In the *chronic* varieties, constitutional symptoms are almost nil; the disease is more common than the acute,—may be periodic. It is seen in adults and old people. Locally there is a sense of itching, which is followed by the formation of bullæ, in a limited spot or pretty generally, running through the usual stages; this is the *P. diutinus*. It is seen mostly on the limbs and face; it may be associated with purpura, and is then a grave affair. There are other varieties of the chronic form. In elderly people especially, prurigo may complicate pemphigus; in which case there is intense itching, with pruriginous papules; the bullæ are not large; the skin generally is dirty, pigmentary. Cazenave describes it as an

acute form. (*Annales des Maladies de la Peau et de la Syphilis*, Mars, 1852.) Rayer figures it pl. 3, fig. 7, of his Atlas.

Pemphigus foliaceus, described originally by Cazenave, noticed fully by Hardy, and by Devergie and Bielt, under the head of *P. diutinus*, is, in fact, the latter disease invading the whole body. "Generally speaking, the whole tegumentary system is involved; the skin of a very bright red in many parts, white in others, and everywhere covered with yellowish crustaceous squamæ (traces of recent bullous excoriations) or dry epidermal white and foliaceous scales, which are raised and detached, and are the remains of old bullæ imperfectly developed, breaking on their first appearance, before they have had time to be elevated into phlyctenæ." The bullæ are successive, confluent, and rapidly form; generally appear first about the chest. The general symptoms are severe; itching is troublesome, and the skin exhales an offensive characteristic odour, the result of a moist secretion of more or less marked extent. The scales have been described as resembling French pastry, pieces of parchment, or papyrus. It is a fatal form of disease, death being ushered in by irritation of the mucous surfaces and dropsy, in old people who are weak and out of health.

The fluid from the bullæ and the urine of pemphigus have been made the subjects of special observation by Bamberger and Scherer. Bamberger's observations will be found in Schmidt's *Jahrbücher*, vol. cviii. p. 319. The urine amounted in ten days to 472 cubic centimetres, about a third of the medium normal quantity. The average of seven observations gave as the sp. gr. 1.025 (above the mean); the colour yellow, the reaction strongly acid. An analysis of the urinary constituents gave results as follows: urea, 295.3672; chlorine, 37.884, or chloride of sodium, 62.37; the sulphuric acid, 2.002; uric acid, 3.564; earthy phosphates, 4.482; alkaline phosphates, 2.834. Hence there is a deficiency of urinary constituents, especially of phosphoric and sulphuric

acids. Heller, quoted by Mr. Wilson, in a fatal case, found the urine of acid reaction of sp. gr. 1017·5, with a sediment of mucus, fat, urate of ammonia, and epithelial scales; the earthy phosphates normal in amount, the sulphates increased, the chloride of sodium deficient, and the urea in excess. In another case quoted by Mr. Wilson the urine was deficient, sp. gr. 1·033, very acid; it contained an excess of urea and oxalate of lime. We may conclude, then, that the urine is deficient in amount, of high specific gravity, very acid, and contains a large amount of urea, but is deficient in the earthy salts.

The fluid of the bullæ is alkaline (acid according to Scherer—vide *Simon's Animal Chemistry*), sp. gr. 1·018, and, on standing, deposits pus, blood, and epidermal corpuscles. There are no fibrine filaments to be detected; leucine and tyrosine are present, a little albumen, ammonia (Scherer), but no urea. Professor Malmsten detected uric acid, however. The blood contains ammonia in excess; the solids are diminished, the deficiency being chiefly in the albumen. Bamberger thinks pemphigus is due to an ammoniacal dyscrasia.

Prognosis.—Pemphigus neonatorum, P. foliaceus, and P. diutinus of old people, or when it is complicated by prurigo or purpura, are all grave states; otherwise pemphigus gives little anxiety. It is said to be complicated sometimes by chronic enteritis, by phthisis pulmonalis, anasarca sine albuminaria, and bronchitis, according to Hardy.

Etiology.—A very good *résumé* of the chief features of pemphigus will be found in the *Medical Times and Gazette*, vol. viii. 1854. It occurs at any age, but it is, according to the writer, most usual between the ages of 4 and 25. It has great tendency to recur in some people, to attack males more than females, especially fair-complexioned folk; the chronic form is most common; its chief seats are the arms, legs, genitals, abdomen, seldom the face, rarely the scalp; it is rarely a symptom of congenital, never (?) of acquired syphilis;

attacks persons of good health or temporarily cachexial; is not particularly seasonal; is not associated with any special cachexia; is best treated by tonics, by arsenic specifically, which does not prevent, but lessens the severity of a recurrence. I may add that congenital instances have been noted by Gilibert in his Monograph, by Osiander, Lobstein, and others. It is also hereditary. Summer seems to occasion it more than winter, and it may be evoked by irritants and excesses of various kinds. Frank, quoted by Gibert, has noticed a case recorded by some German physician, which occurred always in the later months of pregnancy. Acute diseases also predispose to its occurrence,—*e.g.* dysentery (Sauvages), fevers. In the aged the chronic form appears to be often but one symptom of a “break up.” Intemperance, bad hygiene, cold, bad food, gastro-intestinal disturbance, moral causes, and the like, seem to favour its occurrence.

Diagnosis.—Pemphigus can scarcely be confounded with any other disease, the presence of bullæ is so very significant.

Eczema manus sometimes possesses bullæ about the fingers; but these are seen to arise by the confluence of vesicles, and there is also co-existent disease of typical character elsewhere. Pemphigus is very rare on the hands and fingers *per se*.

In erysipelas there is a large inflamed red patch, but the bullæ are small and irregular; there are burning heat, a shiny look, much swelling, rigors, pyrexia, &c.

In ecthyma cachecticum the pustules contain bloody fluid; there are no true bullæ; the crusts are thick and dirty; the ulceration is deep; the disease is pustular. In rupia, the bullæ are smaller and flatter, the contents sanious, the crusts thick, dark, prominent; the ulceration beneath deep. Pemphigus foliaceus resembles pityriasis rubra; but in the latter here is no history of bullæ; the scales are smaller; there is no characteristic odour, no wasting of flesh. So states Devergie.

Treatment.—In the early stage, antiphlogistic. Then search for a diathesis,—*e. g.*, the syphilitic; if present, treat it. Then find out any cause of debility, either in the mode of life or the actual health of the patient; remedy deficiencies on this score. Commence a tonic plan as soon as possible; give bark and acid, and quinine, in the acute forms, preceded by purgatives: in chronic cases arsenic is regarded as the legitimate *sine quâ non*. In old people a generous diet with wine is demanded. Locally, we let out the fluid from the bullæ. Apply some inert powder, such as lycopodium; subsequently, weak astringent lotions, such as alum, tannin, zinc; or even ointments of zinc.

In the pruriginous variety, conium and aconite internally, with tonics and alkaline baths (soda, 2 oz. to a bath), are most useful; and in all chronic forms the frequent use of alkaline baths if there be any irritation, and sulphur baths where there is a sluggish state of skin, are called for; but arsenic is the remedy for chronicity. Bamberger's observations, commented upon in the *British Medical Journal*, May 11, 1861, lead us to expect much good from the use of albuminous foods to supply the diminished solids (albumen) in the blood; secondly, from the use of acids, such as hydrochloric and acetic, which would take up the superabundant ammonia in the system, and carry it away by the kidneys, which we should stimulate specially.

Note.—For completeness' sake, I add a few additional remarks. I mentioned that enteritis has been stated by some to be a complication. This is the case in dysentery, fevers, &c. Alibert thought that there was a true intestinal pemphigus (idiopathic); Chaussit has been quoted as confirming the existence of such a condition. M. Chalvet (*Bullet. de la Soc. Anat.*, vol. vi. p. 205) exhibited to the Anatomical Society of Paris the intestines of a patient who had died of pemphigus, and who had taken bismuth. "At different points of the mucous membrane of the small intestine, rounded surfaces were perceived, at the level of which were found agglomera-

tions of bismuth," and M. Chalvet believed these were the remains of bullæ. Curiously enough, Dr. Joulin (*Bull. Génér. de Thérap.*, Mai 15, 1861) has discovered a disease of the cervix uteri, which to all appearances is nothing else than pemphigus, and he is confirmed in his observations by MM. Castlenau and Nélaton. The disease gives rise to very few subjective symptoms, and is only discovered accidentally. Dr. Joulin has seen it twice. It runs the course of pemphigus. A large bladder-like, well-defined globular vesicle, containing clear fluid, appears upon the surface of the cervix, which is itself healthy; there may be an areola. The epithelium is sometimes tough, and the bleb does not break easily; but when this happens, the serum is discharged. It disappears in a few days. It is not the diphtheritic chancre of Bernutz, which is produced by the confluence of vesicles filled with opaque fluid. A few references in regard to other points will be useful. Bateman (*Delineations of Cutaneous Diseases*, pl. 33, fig. 2) notices the complication of prurigo with pemphigus, and so also does Erasmus Wilson; but they do not make it a distinct species. The hereditary form was noticed by Jacquemin ("Obs. sur une Maladie singulière de la Peau,"—*Journ. Gén. de Méd.*, t. xxx. p. 264); the gastro-enteritic form by Robert ("Obs. sur une Fièvre vésiculaire,"—*Journ. de Méd., Chir. et Pharm.*, t. xxiii. p. 227); Barbieux (*Annal. de la Méd. Physiol.*, t. ii. p. 78); Richard (*ibid.*, t. iii. p. 274); Strambio (*Bullet. des Sc. Méd. de Ferussac*, Mars, 1827, p. 248); and acute pemphigus raging in connection with fever in camps, by Thierry (*Méd. expérimentale*, p. 134, 12mo., Paris, 1755), as fatal and contagious among soldiers. Pemphigus of children was particularly noticed by Bateman in his Synopsis. Reference has been made to Osiander: his observations concerning the disease in the fœtus and infant will be found in "Denkwürdigkeiten für die Heilkunde und Geburts-hülfe," B. 1, st. 2; Lobstein's in the *Journ. Compl. de Scien. Méd.*, t. vi.; and Hinze's, "Sur le Pemphigus des nouveau-nés" (*Bull. des Sc. Méd. de Ferussac*, t. xi. p. 47).

Bunel wrote of it as seen in pregnant women (*Diss. sur le Pemphigus*, Paris, 1811): a case has been mentioned already. Ozanam also noticed the epidemic form in his *Hist. des Malad. épidémiques*, t. v. p. 108. Congenital pemphigus is also noticed by Reymann (*Canst. Jahrb.*, vol. iii. p. 314); and the treatment of P. infantile (*Revue de Thérap. Méd. Chir.* 1859, p. 9).

RUPIA is known by the development of small flattish bullæ (surrounded by a faintish areola, perhaps by none at all), few in number, containing at the very outset transparent serosity, but very speedily a mixture of blood and pus, giving place by desiccation to thick scabs, beneath which is more or less unhealthy ulceration, yielding a nasty, dirty, foetid discharge. The crusts are diagnostic; they are dark, stratified in such a way as to be conical, like an oyster-shell. There are three forms: *R. simplex*, *R. escharotica*, *R. prominens*.

Erasmus Wilson considers the first and last to be syphilitic, and *R. escharotica* to be the same as pemphigus gangrænosus, or cachecticum. *R. simplex* is very like pemphigus; the contents, however, are thick, bloody, offensive; and the scab is dark, thicker in the middle somewhat, and therefore slightly conical: the scabs are often successive; in process of cure, it leaves a red stain behind; it affects especially the legs, loins, and thighs, never the face or head. *R. escharotica*, or pemphigus cachecticum, has been described. The general symptoms are those of irritation and deficient nutrition, with more or less hectic. The disease commences by bullæ, which fill with sanies, and break forth into unhealthy ulcers: it has no thick crusts; hence is really pemphigus. It attacks the lower limbs, the trunk, the neck, and scrotum.

R. prominens attacks the upper and lower limbs, and the trunk; the bullæ are few, but large; the secretion is free and thick: hence the crusts are larger and particularly well-marked, conical, and prominent: hence the name. There is

usually an areola around the bleb; the scabs augment by accretion, and cover over deep ulcerations. The scabs are dirty and blackish; they are sometimes almost an inch in height in the middle or apex of the cone.

Etiology.—Cachexia of all kinds, especially that induced by syphilis, mal-hygiene, convalescence from severe disease, and the like, induce it.

Diagnosis.—In rupia the bullæ are small and flat; their contents are bloody and thick, and the scabs are dark, thick, and conical. In pemphigus the bullæ are larger and full; the contents are clear, not dark; ulceration is slight, and the scabs are thin. In ecthyma there are pustules; the areola is well marked, the base is indurated, the scabs are adherent; there are no conical crusts, and the ulceration is not so deep.

Treatment.—General remedies consist of tonics, steel, quinine, cod-liver oil in the young; good food, wine according to the amount of debility. Cleanliness is a *sine quâ non*. If syphilis is present, bark and iodide of potassium; locally, poultices, emollients, the removal of crusts, and the subsequent use of zinc ointment, warm baths, and, subsequently, astringents to the ulcers,—*e.g.*, nitrate of silver, nitric acid lotion, tar, and the like, are useful. Besides these, change of air and good clothing deserve notice.

CHAPTER V.

PUSTULAR DISEASES.

PUSTULAR diseases include two,—Impetigo and Ecthyma. The former consists of psydracious, the latter of phlyzacious pustules. (*Vide* ELEMENTARY LESIONS.)

IMPETIGO.

Hardy classes impetigo with eczema, as a subdivision; and he is probably right. In this place it must be described as a separate disease. Impetigo is characterized by the presence of psydracious pustules, which attain their full development in two or three days; are aggregated confluent, or isolated and distributed, discharging their puriform contents, which dry into thickish crusts of yellowish aspect, accompanied by more or less oozing. The local symptoms are heat and itching; the general symptoms are rarely acute, generally symptomatic of bad nourishment. The disease generally occurs in limited patches, and may be prolonged for many weeks by the succession of crops of pustules.

The varieties are—I. *figurata*; I. *sparsa*, as to the distribution of the pustules; I. *scabida*, which is a mere modification of local varieties; and, lastly, an inflamed form, I. *erysipelatodes*.

Impetigo figurata.—After more or less pyrexial disturbance, numerous pustules aggregate upon a reddish surface; they run together, break in two or three days, and discharge a tenacious fluid, which at first is very much like “concrete honey” (hence the name, *Melitagra*); presently becoming dry, yellow, discoloured. The disease is generally

observed on the face. The circumference of the patch is red, and exhibits fresh pustules; several patches may coalesce; the crops of pustules are successive; the surface beneath the scabs is red and superficially ulcerated. It often becomes chronic, and may cover the entire face. When this is the case, the deep parts are inflamed and swollen. The size of the crusts depends upon the amount of secretion. When it is free, as in infants at the breast, the scabs may be "stalactitic;" hence the terms "*crusta lactea*, *porrigo larvalis*. The neighbouring glands are swollen. *I. sparsa* is nothing more than the above separated out into its individual pustules, which are distinct and scattered. It occurs often over a wide area,—the head, the lower limbs, the trunk. Successive pustules appear, attended by itching and local heat; the part gets swollen; the movements of the limb or part are painful. The amount of scabbing depends upon the extent of secretion; it may be thin and yellow, soft or hard. The disease is often very obstinate, in consequence of the successive crops of pustules which appear. It is attended by more or less ulceration. Now, either of the above varieties may run on to the formation of thick large crusts, and then the disease is called *I. scabida*. It is best seen on the limbs, as in a case now under my care, where both legs were covered from knee to ankle with hard, dry, brownish, and thick crusts, covering over a red weeping surface beneath, like the "bark of a tree." Sometimes the onset of the disease is marked not only by general but much local irritation,—*e. g.*, heat, tension, redness, swelling: this is the *I. erysipelatodes* of Willan,—the *I. erythematica* of Erasmus Wilson.

Local Varieties attack the ear, the nose, the scalp, and face. It is usual to specialize *I. capitis*. This has received a host of names: *porrigo larvalis*, *tinea granulata*, *melitagra*, *crusta lactea*, &c. It may be *I. sparsa* or *I. figurata*. The pustules are perhaps not so distinctly clustered, are whitish,

attended by itching, the presence of pediculi, swollen glands, &c.; the discharge mats the hairs together into a confused mass, beneath which the surface is red and tender: at the edge of the patch the pustular aspect of the disease is seen. *I. sparsa* is the rarer form; *I. capitis* usually attacks children of lymphatic habit.

There are, in fact, but two ordinary forms of impetigo,—*I. sparsa* and *I. figurata*. Hardy, as before observed, ranks the disease with eczema; he also notices two very important varieties,—impetigo sycosiforme (described also by Devergie), and *I. acniforme*, “qui n’a pas été décrit”? (Hardy), seen only in bearded men, not in women or children. The *I. sycosiforme* (or sycosis impétigineux, Devergie), in fact *I. labialis*, is a vesiculo-pustular disease, accompanied by more or less superficial swelling, tension, and pain; the discharge forms uneven, yellowish, and honey-like crusts; it also mats the hairs together, and covers over a raw surface, that secretes the sero-purulent fluid. There is no parasite,—no induration of the cellular tissue. It attacks the upper lip (I have seen it several times) just beneath the nasal septum. Devergie states that it is often preceded by inflammation and discharge from the nasal mucous membrane, with the presence of pustules; that it affects the upper part of the derma, and is often scrofulous.

I. acniforme, according to Hardy, “is characterized by the development in the beard of a number of little vesico-pustules, which are isolated, rounded, of transient duration, without any indurated base, about the size of pins’-heads. One may see eight, ten, or twelve appear at the same time on the lower part of the face, but always discrete and isolated. They last three to five days, when they break and are replaced by crusts. There may be a succession of vesico-pustules and crusts, which prolong the disease for months and years.” Hardy adds, that nothing is more difficult of cure; and he is right: I have seen the disease, and know it to be true. There is no induration of the cellular tissue, no parasite, no loss of

hairs. Eczema impetiginodes has been described under the head of Eczema.

Causes.—Impetigo attacks both sexes, all ages,—mostly the young. I. sparsa affects elderly people perhaps somewhat specially; in a person predisposed, any irritant will evoke the disease,—*e. g.*, local irritation, uncleanliness, solar heat, teething. It is most common among the lower orders; in those ill-clad, ill-fed, ill-housed; in scrofulous and lymphatic pale, pasty subjects.

Prognosis is always favourable.

Diagnosis.—Impetigo is known by the pyodermic pustules, the yellow secretion drying into honey-like and subsequent thickish, dirty, yellow crusts. Eczema impetiginodes is a mixed form of disease, in which the outset is that of eczema by vesiculation, the discharge in the progress of the disease becoming like that of impetigo.

Ecthyma is known from impetigo by its phlyctenular pustules; the hard, inflamed, indurated base; the thick bloody discharge; the adherent crusts, and the history of the case. In *sycosis* there is swelling of the subcutaneous cellular tissue, indurated pustules, little secretion, change in the hairs, the presence of a parasite, and, in later stages, "tubercles."

Treatment is really that of eczema. When there are acute general symptoms, salines, purgatives, and emollient cataplasms, poppy decoction, warm lead lotion, zinc ointment, may be used. If there be any irritation from teething, the gums must be lanced. Generally speaking, there is a scrofulous habit present; then iron, quinine, and cod-liver oil are called for. We must always in every instance get rid of scabs before using local remedies; if the scalp be the seat of disease, the hair must be cut away from the pustulation. Sulphur ointment, carbonate of soda lotion (ʒi. ad ʒvj.), are generally beneficial. In obstinate cases, arsenic

internally is efficacious. We must remember that impetigo may be brought about by lice and by scabies: in these instances we must destroy the known cause, and the impetigo will get well.

Note.—An impetigo rodens has been described. Mr. Wilson thinks it is a syphilitic ulceration; Hardy describes it under the name of scrofulide pustuleuse; Devergie classes it with impetigo. It is mostly seen about the tip or sides of the nose, or the cheek,—possibly as a rarity on the limbs. There is redness and swelling, and upon this as a base, two or more pustules are developed, which become large, last for a week or so, and are then replaced by a brownish-yellow scab, beneath which the surface is dirty, foul, and ulcerated; the disease spreads, eats on (*rodens*) by the development of little pustules around the circumference of the primary ones, which go through identical changes; when the crusts fall, others form by the drying of the purulent secretion exuded; after a while an attempt at repair occurs, and cicatrices are left; there is neither much itching nor pain, except at the very outset. It is a chronic disease. It is only to be cured by cauterization. Devergie, denying its syphilitic nature, makes three varieties: the *diffuse*,—seat face, several distinct but small points, with the characters above described; the *excentric*,—seat inner angle of the eyelid and side of the nose, it is of circular form, very chronic, crusting over, and cicatrizing in the centre; the *ulcerative*,—seat about the nose and inner angle of the eyebrow; the secretion is free, the ulceration active. (For a full description, see Devergie's work, art. *Impetigo*.) The forms described by authors, under impetigo rodens, seem to include rodent ulcer, syphilis, and other diseases. Impetigo rodens is that form which, occurring in a scrofulous subject, begins by pustules and increases by the formation of circles of pustules outside the original ones, accompanied by an unhealthy ulceration and viscid puriform discharge. It is most common after convalescence from acute specifics in unhealthy children.

Impetigo contagiosa.—In the *British Medical Journal* for May and June, 1864, I have described fully a form of contagious impetigo which was epidemic amongst the patients at the Farringdon General Dispensary.

In the *British Medical Journal* for November 28th, 1863, is a description by Mr. R. W. Dunn. He says it consists of large dirty straw-coloured spots, flattened, of irregular shape, seeming as if they were stuck or glued on the part, without any inflammation at their bases; mostly seated on the scalp, but found also on all parts of the body. When the face is attacked, the spots are a little more regular; they discharge, and commence originally as papules, which become pustular. Mr. Dunn thinks it is of parasitic nature: from this opinion I entirely dissent.

Characters.—The disease varies considerably in aspect, according to its seat. It occurs mostly on the face, where it is generally unilateral, and seated especially about the angle of the mouth and side of the nose; also on the limbs, anteriorly and posteriorly; on the trunk, especially about the shoulders, the neck, and the buttocks. The constitutional symptoms which usher in the complaint are generally sufficient to make the friends declare the child "poorly," unable to take its food properly, "mopish," and the like. The local characters of the disease show themselves as little white, apparently vesicular, or more truly pustular points, just tinged at their bases with slight redness, and generally possessed of little pain. These points, which are always isolated and distinct at the outset, speedily enlarge, simulate flat bullæ, and umbilicate to a more or less perfect degree. Now and then coalescence takes place between two or more pustules. This is seen especially on the face. The next change is the assumption of the characters of a perfect pustule, which may desiccate, leaving a dark dry scab, depressed in the centre generally, through or from beneath which oozes out a little thick pus or puriform discharge.

The disease is always characterized by the presence of *circular* umbilicated *quasi*-bullous spots, which increase centrifugally, and become covered by yellowish flat crusts, which cover over superficial ulcerations of an unhealthy kind, leaving, in process of cure, dull red stains.

The degree of ulceration varies. It is always tolerably superficial, and presents a soddened, pasty, gelatinous aspect, due to the character of the secretion. The edge of the patch of ulceration is sometimes peculiar. It is often that which is seen in other diseases called "scrofulous," particularly when the sore itself is the seat of diminished or scanty discharge; viz., indurated, elevated, of a dull red hue, and slightly inverted, like some instances of lupus; only this state is of short duration, comparatively speaking. In other words, the ulcer, which is circular, may be bounded by a well-defined, rounded, raised, and dull red margin of thickened integuments. It is from this feature, among others, that one is led to infer the existence of a scrofulous taint in the totality of the disease.

Causes.—The disease exhibits no preference for sex. It attacks adults sometimes, but children most generally, and particularly those of the lower orders, of scrofulous habits—the fat, flabby, pale, thick-nosed, and light-complexioned ones. Want of cleanliness, light, and air, and wholesome food, help out its evolution. The disease not unfrequently follows in the wake of, or appears to be caused by, vaccination; at other times it seems to arise independently.

I have seen it most perfectly engrafted upon varicella. The disease is contagious: the origin of the contagious quality is uncertain.

Diagnosis.—No confusion of the disease with variola or typical vaccinia can arise; but the disease may very fairly be confounded with pemphigus, ecthyma, rupia, eczema impetiginodes, and impetigo simplex.

Pemphigus.—Impetigo contagiosa is umbilicated on the

surface; the contents are puriform, not watery; the blebs are all round, and not oval or distended, as in pemphigus. The smaller pustules are conjoined. The scabs are yellow, flat, and adherent. The disease, too, affects the face and the scalp, where it is seen to develop as isolated spots, commencing from little pustules. Lastly, it is contagious, and often traceable to vaccination. All these latter features are wanting in pemphigus.

Ecthyma is made up of phlyzacious pustules. There are no umbilicated pustules or blebs, but more induration at the base. The eruption does not occur on the head and face, as a rule; it is not contagious; and it does not break out in the *superficial* wet-leather-looking ulcerations, with a dark red blush about them. The ulceration is *deep*, and the areola well defined, in ecthyma. Besides, the history of the case is different from that of impetigo contagiosa.

Rupia.—Impetigo contagiosa never possesses the scabs of rupia, the bloody or sanguinolent contents of the apparent blebs. The latter in rupia are not umbilicated. Rupia does not occur on the face or head, in the way that impetigo contagiosa does; but it has a history of great debility or of syphilis, and occurs chiefly in adults; whereas the other is almost peculiarly limited to the child.

Eczema impetiginodes.—Impetigo contagiosa, when on the face near the mouth, may assume the aspect of eczema impetiginodes; but we mostly find scattered around the edge of the patch little minute pustules, which show the origin of the disease, perhaps in conjunction with characteristic pustuloids or ulceration elsewhere. But impetigo contagiosa may be positively limited to the face; and then careful examination will show that the patch is made up of the fusion together of little circular ulcerations. There are not only cracks, but distinct ulcerations of a circular form.

Scabies.—I have positively seen the disease mistaken for

scabies. When seated about the back, buttocks, or legs, it may certainly present a rough likeness to the severe form of scabies seen in unhealthy subjects—a form of disease which is quite familiar to those who have attended Dr. Jenner's *cliniques* on skin diseases. But scabies does not occur on the face, and but very rarely, if at all, on the head; though it is certain that it may give rise to eczema capitis by mere sympathetic irritation. At all events, impetigo contagiosa develops from pustules; it possesses no vesicles with cunuli; nor can the acarus be found. It does not attack the buttocks of children by preference. Itching may be absent. The eruption is not multiform, yet characteristic in the pustuloid stage. The contagious quality of the lymph is distinctive; inoculation will settle any dispute in forty-eight hours.

Impetigo simplex (non-contagiosa), a degree of eczema, is not confined to age; is not so amenable to treatment; mostly follows or accompanies eczema; *always* develops out of the latter, on the scalp. In other words, it is not a *primary* form of disease, and it is non-contagious. There is more redness around the base of the pustule in impetigo simplex.

There may be but one spot in impetigo contagiosa, and that is usually absolutely characteristic.

The character of the eruption (its circular form and umbilication, &c.); the isolation of the several spots, as a rule, on the general surface; its connection with vaccination; its occurrence chiefly in the child, and on the face and head particularly, assuming in the latter situation the aspect of circular, isolated, well-defined, flat, yellow, granular-looking scabs, developed from primary pustules; the implication oftentimes of the mucous surfaces; its contagious quality especially; the results of inoculation; its similitudes; the character of the ulceration and the tint of the areola,—mark impetigo contagiosa as an essentially distinct disease.

Impetigo rodens, I suppose some would name the severer cases; but this designation really refers to a mixture of several ulcerating diseases.

Treatment.—A very efficacious plan of treatment is that in which the internal administration of cod-liver oil and iron is combined with the local use of soothing applications,—*e. g.*, zinc ointment.

2. But a still more successful plan is to give cod-liver oil and iodide of potassium internally, and to apply externally sulphur ointment.

It must be remembered that the disease occurs among the lower orders, and especially in delicate and strumous subjects; that it also follows vaccination, and is eminently contagious. Nature is able sometimes to carry on the suppurative and desiccative processes quietly, and to overcome further mischief by the establishment of convalescence; but there evidently is a low state of vital power, which antagonizes this good effect, and leads to ulceration: hence we must always enjoin a tonic plan of treatment. At the outset we may have a good deal of febrile action: this must be kept within due bounds by the ordinary means.

The local treatment is most important. The chief point is to remove all scabs (*pediculi*, according to my own observations, are rare). The scabs must be removed, and the medicaments applied to the subjacent sore surfaces. Sulphur ointment is the best. Solution of nitrate of silver, the solid salt itself, zinc ointment, iodide of potassium ointment, acetate of lead lotion, or benzoin, may also be used. Sulphur has probably no very special charmed action in this disease, any more than in other cases,—*e. g.*, lichen, psoriasis, pityriasis, &c.

We must be careful to prevent all methods and modes of contagion; but, with the exercise of the greatest care, the disease will in all probability spread from one to several members of the same family.

For a full amount of detail as to its nature, see *British Med. Journal*, 1864, in a series of papers by myself.

ECTHYMA is a disease of pustular nature, the pustules being phlyzacious, viz., "large, raised on hard base, of a vivid red colour, and succeeded by a thick, hard, dark-coloured scab." The pustules are generally distinct, round, and isolated; they may be general or partial, generally leaving behind a cicatrix. The shoulders, buttocks, and limbs are the parts usually attacked. There are two chief forms,—acute and chronic. The latter includes *E. infantile*, *E. luridum* (livid), *E. cachecticum*.

E. acutum, seu vulgare, commences with slight febrile disturbance and sore throat occasionally, and, locally, a sense of heat and burning, followed by the appearance of reddish raised points, with hard indurated bases and distinct vivid areolæ; they quickly pustulate, vary in size from that of a pea to that of a shilling, and are accompanied by acute, sharp pain in severe cases. In two or three days the pustules discharge their contents, which dry into hard, adherent, dirty, discoloured scabs, covering over circular ulcerations: the crusts fall off in a week or so, leaving behind dark stains. The ecthymatous spots may be many or few; in the former case a good deal of irritation is set up; the patient may be unable to sleep from pain, and the glands and lymphatic vessels may become inflamed, and small abscesses form. The disease is generally protracted by successive crops of pustules, or may relapse into a chronic state. The limbs, shoulders, and trunk are the seats of the disease. Hardy has described an *E. gangrænosum*, which is a more severe degree of the above, occurring in old people of very bad nutrition. The areola is very dark, and sloughs form in the centre very speedily: when the scab falls off, a very unhealthy ulcer remains. It is an acute disease, and often fatal.

Chronic Ecthyma, sub-variety *E. infantile*, occurs in children who are weak, starved, ill-fed, mal-hygiened, suckled

by unhealthy mothers. The pustules vary in size,—some are small, some large; the crusts are dark; the ulceration sanious, giving out a foetid and unhealthy pus. The disease affects the body generally, often commencing about the lower limbs;—the scalp may become the seat of the disease; the child often wastes, becomes hectic, and death ensues. *E. luridum* is seen chiefly in old people and debilitated subjects: it is usually extensive; the pustules are large, slow in progress; they have a dull, livid look, a dark areola, are filled with sanguinolent curdy fluid; in a week or ten days they discharge their contents, which are dirty and foetid, and scab over or ulcerate. *E. cachecticum* is pretty much the same disease; it is seen mostly on the lower extremities; there is not so much of the livid aspect; it is rather more active; the subcutaneous cellular tissue is involved; the contents of the quasi-pustules are not so sanguinolent, but in great measure so: there is often a good deal of fever. In these last two instances the eruption is really something between a bulla and a pustule. Ecthyma, it must be remembered, may result from any long-continued irritation in badly-nourished subjects. It is a frequent complication of scabies and prurigo.

The three chronic varieties are but stages of one and the same disease. *E. luridum* and *cachecticum* are considered by Hardy to be in reality *rupia*.

Causes.—The causes of ecthyma are such as lead to debility and an impoverished state of blood. In infants, for instance, bad nursing, suckling by mothers out of health, scabies, bad clothing, damp dwelling-places, irritating applications. In adults and others, over-exertion, fatigue, debility after acute diseases, pregnancy, bad food, bad air, privations, various irritating occupations,—*e. g.*, bricklayers, butchers, grocers, &c.; excesses of various kinds, debauchery, want of cleanliness, night-watching, over-crowding, as in hospitals (garrison), workhouses, jails, vesicatories, and the like, are all conducive

to the occurrence of ecthyma; so especially are the lymphatic temperament, syphilis, and change of season.

The *Prognosis* is grave in proportion to the general condition of the patient. The ecthyma, *per se*, is no guide except in the lurid and gangrenous form in old people, which is of bad augury.

Diagnosis.—The inflamed areola, hard base, and pustular aspect, are distinctive of ecthyma.

In *Impetigo* the pustules are small, non-indurated, and the discharge is viscid, thick, and the scabs honey-like and yellowish: this is *I. sparsa*; the other confluent varieties are wholly different. *Furunculus* in its early stage is very like ecthyma; but there is more activity about it, no lividity as a rule; the cellular tissue is involved peculiarly, and suppuration soon takes place: there is no scabbing as in ecthyma.

Pemphigus is always bullous; there are no inflamed pustules; the crusts are thin; and there is little if any ulceration, and no pain.

In *Scabies* with ecthymatous spots, these latter are seated especially about the feet, legs, and hands; there are peculiar scratchings, pustules, and characteristic vesicles; besides, the *acarus* can be found, and the early history is that of a vesicular disease. *Prurigo*, followed by ecthyma, is recognized by the history very easily. *Rupia* approximates to *E. cachecticum* and *luridum*: the origin from bullæ rather than pustules, and the peculiar stratified concentric crusts of conical and dark aspect, are the deciding points.

Treatment.—If complicated,—*e.g.* scabies or prurigo, treat the primary (causative) disease; in all cases remove irritation,—*e.g.* that of sugar, lime, &c. In the uncomplicated forms we must remember that debility and impoverished blood are present. It is advisable in all instances to clear the bowels well out and insure a healthy eliminative action. Then our course is a hygienic and tonic one. The local mischief is an evidence of a bad state of blood. If there be any inflammatory symp-

toms at the outset, as in *E. acutum*, we employ purgatives, salines, and local emollients. In all cases we place the patient as much under the influence of cleanliness, good living, good air, as we may be able. Remove or arrest the debilitating influences mentioned under the head of cause. In the chronic forms, we give acid and bitters, quinine, iron, bark, iodide of potassium, as the case may be; with tepid or alkaline baths. Locally, remove the scabs, and apply alkaline (soda) or oxide of zinc, ℥ij. ad ʒvj., lotions; in the indolent cases, simple sulphur ointment or alum lotion, weak nitrate of silver solution, &c. In the cachectic forms, free living, with wine and bark, are urgently required. Locally, glycerine or lead (liq. plumbi ℥ij., adipis ʒij.) ointments. Charcoal and yeast poulticing, and subsequently oxide of zinc ointment (benzoated) and stimulant washes (chlorine).

SUB-ORDER FURUNCULI.

Furunculus, anthrax, or carbuncle, and pustula maligna, rank here, and may be looked upon as different degrees of one and the same pathological condition. Erasmus Wilson gives a most philosophical account of furuncular eruptions. Boils tend to exhibit phlegmonous; carbuncle and malignant pustule, gangrenous inflammation. The seat of furuncular inflammation is the deep layer of the corium, "and the cellular tissue filling the interspaces of its network." There is, says Mr. Wilson, "a concentration of inflammation: that inflammation is of a destructive kind, and the death of the part affected is the immediate consequence. The blood, hurried on by the inflammatory impetus, centres in a follicle, or several adjacent follicles, the representatives of the glandular function of the skin. Partly from the violence of the inflammatory impetus, and partly from the dense nature of the structure of that portion of the skin surrounding the follicle, the blood is arrested in its current; it becomes stagnant, and the part which it has ceased

to supply dies, while the stagnant elements of the blood are by a reparative process converted into pus, and constitute subsequent suppuration. The characters of distinction between furunculus and anthrax relate," continues Mr. Wilson, "to their prominence, depth, breadth, colour, number of cores, and degree of pain." Furunculus is more prominent, less deep, involving less of the tissues around, deep red, which obtains a bluish tint after awhile: the "core" is single, and the pain is less severe. Anthrax is less prominent, deeper, involves more tissue, much deeper in colour, possesses many "cores" (dead tissue), and has greater pain. Rokitansky looks upon furunculoid disease as a circumscribed inflammation, in which a small induration forms, giving rise to reaction, the inflammation forming "a wide halo around the swelling, corresponding with the pain and the marked degree of tension that exists; it reaches also into the deeper structures, and fixes the swelling of the skin to the subcutaneous cellular tissue." Before reaching its highest point of severity, it furnishes a product called the core or plug, this being a true exudation, and not a slough of normal tissue. "It occupies the whole thickness of the corium, and exists there before the swelling is very perceptible: at first it is closely connected with the surrounding injected tissue; but, as the (reactionary) inflammation around it produces suppuration, it is thrown out." Hence some regard the core or cores as dead normal tissue; others as new formations (exudations). If a carbuncle be cut into, "an uniformly red spongy, reticulated tissue is exposed, the meshes of which are filled with cores," which suppuration loosens. If the disease is severe, mortification, more or less extensive, ensues. The disease is looked upon by many as a concentrated erysipelas.

FURUNCULUS, or BOIL: *General Symptoms.*—Febrile disturbance, loss of appetite, headache, disordered bowels, and the like. Locally, a little red lump, the size of a split pea, makes its appearance: it is tender and painful, tense; the

base becomes indurated, a red blush surrounds it, and in a few days, increasing in size, the apex cones up and becomes yellow; the pain now is throbbing, the induration of the cellular tissue around augments, and so does the amount of pus contained in the central elevation. If the boil be opened, the pus—presently the core—escape, and granulations spring up with the gradual subsidence of the swelling; cicatrization takes place, and some redness remains; such is usually the course of boils. If large and many, the pain may be very severe, and rigors occur at the onset of suppuration. Blind boils are such as do not run into suppuration. Boils may be complicated by cellular inflammation, swollen glands, abscess, and the like: they are generally found on the back of the neck, the buttocks, the arms, especially in young people, and are successive, so that the disease oftentimes lasts a very considerable time.

The causes are unknown. The prognosis is only serious when boils occur in elderly people, as a chronic state, in successive crops, and associated with ill-health or organic disease.

Treatment consists, as Mr. Wilson observes, in elimination, in the administration of tonics, and the alleviation of local distress. I need not go into details.

Note.—Dr. Laycock, in the *Edinburgh Medical Journal* for October, 1856, under the designation contagious furunculoid, describes the epidemic form of disease. Dr. Laycock thinks that the furunculoid forms,—viz., simple furuncle, effusive inflammation of the derma (phlyctenæ), suppurative inflammation (ecthyma), carbuncles, gangrenous inflammation, phlegmon (diffuse inflammation of the cellular tissue), and whitlow, are associated as to cause with epidemics of eruptive diseases, due to the action of virus prevailing epidemically. A good many of these forms are erysipelatous, the character of the result depending upon the nature and extent of the tissue affected,—communicating from one to another, and from one part to another, it is affirmed.

ANTHRAX, or CARBUNCLE, is a multiple furuncle; it arises as a hot hard swelling, not so conical as that of the boil, more indurated, however, the cellular tissue around being much more extensively implicated; the colour is dusky, the sensation burning, dull, throbbing; the carbuncle varies in size, the swelling becomes "brawny," due to the meshes of the tissue diseased becoming filled with a plastic lymph. The next step is the formation of a *quasi*-abscess; the central part softens, feels boggy; the skin thins over the surface, and at several points openings occur, through which issues thick pus, more or less sanious; and the little holes are seen to be plugged up by little white cores, which loosen presently and come away: the apertures are red and papillated, the edges indurated and everted, particularly when they open into each other, so as to form oftentimes one large opening. Gangrene may set in; the healing process is often indolent; the parts remain undermined, brawny, dusky, shreddy, and also sloughy. Carbuncles are generally solitary. The patient, if the attack be severe, gets very depressed indeed. The posterior aspect of elderly people is the selective seat.

The causes of carbuncle are not at all clear. Mr. Wilson names debility of constitution, advanced age, cachexia and a gouty habit, in association, as predisposing. From some observations, there would appear to be some connection between diabetes mellitus and carbuncle: the coincidence has been noticed by Prout, Landouzy, and Dr. Goolden. From some observations, Dr. A. Wagner concluded: (1) that inflammatory and gangrenous affections of the skin not unfrequently have been developed, and have repeatedly occurred in persons who for a considerable time have laboured under diabetes; (2) that sugar does not appear to occur in the urine of persons affected with the skin diseases just mentioned, in whom diabetes does not exist; (3) that in rare cases of persons previously in health attacked by extensive carbuncular disease, which ran a tumultuous and fatal course, accompanied by septic symptoms, acute mellituria

has been observed. Dr. Wagner supports these propositions by the details of 52 cases of gangrenous inflammation: two cases are quoted in reference to the third proposition. The diseases were carbuncular in 8; furuncular in 15; erysipelatous, 22; and phlegmonous in 7: 4 cases of the total were fatal.

I cannot put my hand upon the reference just now. M. Marschal de Calvi (*Union Médicale*, 1856, No. 144) writes on diabetic gangrene, and believes that the production of sugar gives rise to "an inflammatory diathesis." This is felt in the lining membrane of vessels; and "as the vital resistance is enfeebled in diabetes, the inflammatory irritation thus produced possesses a gangrenous tendency." He confirms Mr. Wilson's view, stating that uric acid in excess in the blood helps out the disease.

The treatment consists in elimination, with the view to diminish any acidity of the blood or effete retention; then to stimulate freely, and give tonics with an unsparing hand,—quinine, bark, especially the red or oblongifolia, &c. Locally, emollients, yeast poultices, early incision, chamomile and poppy fomentations. Treatment by pressure, with the view of supporting the capillaries, originated by Mr. O'Ferrall (*Dublin Hosp. Gazette*, vol. v.), has been eulogized by Mr. Collis in the *Dublin Quarterly Journ.* for Feb. 1864, p. 74.

PUSTULA MALIGNA.—Rayer's definition runs as follows:—"A contagious and gangrenous inflammation of the skin, characterized at the outset by a vesication or bleb, filled with a sero-sanguinolent fluid, under which a small lenticular induration is formed, itself surrounded before long with an erysipelato-phlegmonous areolar swelling. This tumour is next stricken with gangrene, which spreads rapidly from its centre towards its circumference." The best account is given by Dr. W. Budd, in the *British Medical Journal*, Aug. 9, 1862, from which the following points are taken. The vesicle first appears on some uncovered part: "Its

special character is to excite a peculiar form of gangrenous inflammation, which, spreading rapidly from the point first affected to the neighbouring tissues, gives rise to local changes of very uncommon aspect, and finally destroys life by general infection." The subjective symptoms are at first, itching; then heat, stinging, burning. The vesicle exudes a little serum; then the part blackens, sphacelates; the parts around swell; the glands enlarge; and then on come the general symptoms; the blood may be so poisoned that death results very speedily; generally it takes place on the fourth to the eighth day: nausea, vomiting, depression, collapse, high fever, delirium, are the leading features. The patient may rally, the slough separate, and the same cure as in anthrax take place. It generally begins on the lip: of 15 cases, 2 began on the hand, 13 on the face. Dr. Budd gives these important propositions in summing up the labour of authors.

1. Malignant pustule in man is identical with and derived from the fatal and eminently contagious disease which, under the names "charbon," (in sheep) "sang," has prevailed from time immemorial on the Continent, in oxen, sheep, horses, and other animals (*Mitzbrand* of German writers).

2. That the disease may be communicated to man from the animal in the following ways:—

- (a) By direct inoculation, as in the case of butchers, herdsmen, drovers, and others, &c.
- (b) By means of the skin, or simply the tainted hair of diseased beasts, &c.
- (c) By eating the flesh of animals killed while affected with "charbon."
- (d) By the bites of insects which have been in contact with the bodies or carcasses of diseased cattle; a mode of inoculation obviously difficult to demonstrate, but in proof of which numerous cases have been recorded.

3. That the malignant pustule, when contracted by man, may be communicated by contagion to other men, or back to the animal by inoculation.

At first it is a local disease, but becomes general by diffusion of the pus.

Treatment is that of carbuncle, with this exception, that the local mischief must be speedily and freely destroyed by caustics.

Note.—A good deal of interest has lately arisen in regard to these carbuncular diseases. In the *Medical Times and Gazette*, 1863, vol. ix., is an account of the disease as attacking sheep. The same journal (Aug., 1864) notices some observations of M. Davaine. This gentleman finds from 137 observations, that bacteria are constantly developed during the life of the animals, and even after death. Davaine describes these minute organisms as from 4 to 12,000th of an inch in length, disappearing altogether during putrefaction; and thinks they are not analogous to the vibriones, because they have no movements and are much longer. He says they are a distinct species, "resembling filiform protozoa in mode of generation and propagation; the filamentous confervæ in form, appearance, and dimensions; and certain ferments by the phenomena which they induce." In this disease splenic apoplexy is common. The corpuscles of splenic apoplexy he calls *bacterides*. They are found in the blood of the capillaries more than that of larger vessels; they do not pass from the mother to the fœtus, even though they be in the placenta. When the blood contains bacterides, it is inoculable (produces the disease); when putrefaction sets in, the bacterides go, and the blood will not inoculate the disease. He concludes that the carbuncular disease, or splenic apoplexy, is not of a putrid nature; to produce it the blood must be fresh. It is very likely that bacterides transmit the disease in sheep through various

media,—by digestion, inoculation, &c. The blood at large is affected; that is, it, and not the spleen, is the primary seat of disease. The rapidity of the occurrence of death bears no proportion to the amount of bacterides produced, however. These observations are important. The observations of others more recently made tend to show that the bacterides do not act in any way as the efficient cause, but are rather the evidence of, and developed in, a peculiar state of blood.

CHAPTER VI.

SQUAMOUS DISEASES.

SQUAMOUS DISEASES are characterized especially by a hyperproduction of epithelial scales. These are either thrown off as thin branny scales, as in pityriasis, or *collect* in a more or less imbricated way upon different parts of the surface; as in lepra, psoriasis, and ichthyosis. The general symptoms are little in degree or amount; the diseases are mostly chronic, attended by heat and itching; often involve a large extent of surface, and are very obstinate to treatment.

PITYRIASIS.

The true *Pityriasis* is a primary form of disease; it is a "superficial cutaneous affection, sometimes accompanied by a slight rosy discoloration of the skin, or even a discoloration of another kind, but always exempt from those alterations of tissue which have been observed in the other elementary forms which we have described; and which scarcely presents any other characteristic phenomenon than a desquamation of the epidermis; this latter is detached in small whitish lamellæ, or falls off in a fine, and, as it is called (from its analogy with wheaten flour bran—*furfur*), *furfuraceous* or *branny powder*." The disease may be general, but more frequently partial. It is attended by local itching and slight heat; if the part affected be scratched, the little scales are detached, and expose beneath a more or less redness. The varieties generally described are,—*P. simplex*, *P. nigra*, *P. versicolor*, and *P. rubra* (*P. versicolor* is a parasitic disease, for which see Chap. XI.); and local varieties,—*P. capitis*, *P. palpebrarum*, *P. pudendalis*, *P. oris*, *P. labialis*, *P. plantaris*, *P. pilaris*.

P. simplex, or *vulgaris*, is the disease, as it ordinarily affects the body, in a localized state; *P. rubra* is an inflammatory form. I will describe, then, first of all, pityriasis vulgaris, or simplex (Hardy), taking as a good type *P. capitis*. This is by no means a severe disease; its extent and degree vary very considerably, from a small spot, in which slight furfuraceous desquamation is just visible, to a large extent of surface. Sometimes attention is directed to a spot simply in consequence of the itching which accompanies it; the scratching being followed by the fall of a few branny scales. On examination, a slight degree of erythema (this being the early stage) is noticed, and upon this the fine white scales are collected; not unfrequently the scaliness is bounded by a little zone of redness; there is local heat in slight degree, but the general symptoms are *nil*: there is a continual reproduction of the fine shining scales. The disease is met with over the body of delicate children of fair complexion, being excited by any local (*e. g.* soap) or general irritation (*e. g.* teething). After a while the redness goes, and there remains behind simple desquamation. On the head it is called dandruff: this seems to be often hereditary. Wherever pityriasis occurs, the surface is especially dry. Of the general surface of the body, the face, forehead, and flexures, are the especial seats. The itching is bad at night. Hardy describes a sub-variety, *P. lamelleux*, whose scales are large, and which is seen in people with long hair. It "commences with erythema, and is said to cause loss of hair." *P. simplex* is most usually a disease of early life, occurring between and about dentition and puberty. In adults it is said to be seen chiefly in those of the bilious temperament.

The local varieties seen in the forehead, eyebrows, lips, pudendum, and mouth, tally in external aspect with the description just given of *P. simplex*. They are likely to be confounded with psoriasis by novices. We do not observe cracks, fissures, and the like, in pityriasis. In rare cases,

when near the mucous membrane,—*e.g.* the mouth, the tissues being lax and full of blood, a good deal of swelling may occur, upon which is seated the scaliness; and it is true that the morbid action may extend to the contiguous mucous surfaces, giving rise to itching, heat, redness, tension, and even ulceration; but this is rare. Some of the obstinate cases may be kept up—*e.g.* in the head and pudendum—by parasitic complication; indeed, Dr. Bennett argues strongly in favour of such a disease. Of course, there may be secondary desquamation,—*e.g.*, in favus, herpes circinatus; but this is not the true idiopathic pityriasis.

Pityriasis rubra is an important variety in a diagnostic point of view. According to most authorities, it is simply an inflammatory form, looked upon by many as the link between eczema and pityriasis. *It never presents any vesicles.* There is a red base, upon which are produced the scales; the commencement is a pretty small erythema, which attains a large size either by enlargement or the coalescence of several spots which are near together. It is generally ushered in by febrile symptoms, and, as might be anticipated, the local changes are very well marked; that is to say, the scales are larger, more adherent, and the irritation is severe. Without the intervention of vesicles, the surface scabs over by the desiccation of the effused fluid. It is seen on the limbs, in the neighbourhood of the neck and head. The discharge (if any) does not, like that of eczema, stiffen linen,—indeed, it wants its plasticity. Hence, pityriasis differs in two important features from eczema,—the one just mentioned and the absence of vesicles.

Devergie has described (*Mal. de la Peau*, 2nd edit. p. 442) pityriasis rubra as affecting the whole surface of the body at once, commencing generally about the front of the trunk or internal aspect of the limbs, as an erythema, upon which form large scales, and from which a slight discharge exudes. It is accompanied by high fever, by heat, and itching; and

complicated, after a while, by considerable swelling of the cellular tissue and thickening of the skin; the scales, which are large and roundish, frequently become detached; but Hardy observes that Devergie very likely mistook pemphigus foliaceus, or general eczema, for this form of disease, which does not exist as a separate essentiality.

Pityriasis pilaris is often described under the head of lichen pilaris: in it the follicles stand out from the surface like little white, harsh, dry knots (something like the surface of a nutmeg-grater), and from the summit of each a hair escapes. The knots are produced by an excessive collection of cells (epidermic), which distend the follicle also, and are very adherent. It is seen after pityriasis rubra especially, and, according to others, after psoriasis of pretty general diffusion. Devergie gives the best account of the disease. It occurs in little ovoid patches on the outer aspect of the forearm, the legs, the backs of the fingers, and occasionally all parts of the body except the head. Devergie thinks it is preceded by either psoriasis palmaria or a greater or less extent of pityriasis rubra, and he thinks the so-called psoriasis palmaria may be in reality a pityriasis palmaria. (See the former disease.) There is a great resemblance between this disease and lichen scrofulosus of Hebra, if not an absolute identity.

The *Diagnosis* is not at all difficult. The composite characteristic of pityriasis is, erythema as the sole elementary lesion, pruritus, and desquamation; the scales being thin, white, shining (branny). Thus it is separated from all "secondary" desquamations.

It may be confounded with the *sebaceous scurf* of new-born infants, which, from dire want of cleanliness, may be persistent as a scaliness for a long time. No error ought to arise here, if such a condition be recognized as occurring;—a little soap and water will soon solve the mystery.

Psoriasis is distinguished by the greater depth of its extent;

by the derma being thickened; by the hypertrophied papillæ; by the larger, thicker scales; by the cracks and fissures; the lesser degree of itching comparatively, *quoad* the amount of local change; by its peculiar seat at the elbows and knees. Pityriasis rubra, and eczema in a late stage, at first sight, are similar. Hardy, indeed, thinks that oftentimes pityriasis is an aborted eczema. To me the contrary appears. The scaly form of eczema arises out of a secretory disease; that of P. rubra, an opposite condition. The latter exhibits no vesicles; the skin is dry, harsh, and often becomes irritated and inflamed in consequence of the want of its proper moisture, so to speak, and then the discharge is non-fibrinous, or non-plastic, which is not the case in eczema. It is simply local inflammation, often excited by scratching, superadded to desquamation.

Tinea (or *Herpes*) *circinata* approaches to simple pityriasis now and again;—the circular character of the ringworm, its central part, free from disease, or but slightly discoloured, its vesicles, especially at the edge, its microscopic character, are diagnostic.

The causation is in a most unsatisfactory condition, as regards our appreciation of it. The general health is usually good, except in P. rubra, in which some stomach derangement is often noticed, but nothing definite. The disease is not acute, but chronic. It is scarcely a local disease, and would seem to be dependent upon some peculiar blood-state, the local manifestations being caused by certain local excitants,—*e. g.*, cold, irritating applications, want of moisture and cleanliness, &c. Hardy thinks it is allied to eczema, and that the two often replace each other in the same family history, and that it is one result of a *dartrous* “diathesis.” It is liable to recur; is mostly seen in people of delicate skin, in females more than in men; and is said to follow the use of highly-seasoned food.

The *Prognosis* has no gravity whatever, but is merely a matter of duration. If it be general, it will be obstinate; in

young subjects, it is easily cured. If of long standing in adults, it may get well; but this will be probably temporary, especially if there be stomach derangement.

Treatment.—We must attend to—

1. The general condition favourable to its production.
2. The removal and prevention of the local changes.

With regard to the first point, we must in some way make a distinct impression upon the blood-state. In the present state of our therapeutics, we know of nothing that can be laid down in the light of a specific plan of treatment. We must scrutinize carefully the details of the patient's health, and rectify anything that we feel is wrong; in the first instance attending to hygiene,—such as perfect cleanliness, not only locally, but generally: the food should be light and unstimulating, and if there be any inflammatory symptoms, or a flushing after meals, &c., all spirituous liquors must be disallowed. See that the bowels act regularly; that there is a proper amount of bile passed; that the urine is free, not loaded, but healthy. Then see carefully to the stomach; treat acid dyspepsia as a great enemy. At the outset, all inflammatory symptoms must be treated upon ordinary principles. Having thus obtained a good basis to act upon, the use of so-called specifics may be employed. If the patient be pale, thin, or phthisically conformed, cod-liver oil and iodine are demanded; if anæmic, iron. Arsenic is decidedly a most powerful remedy: in chronic cases it should be had recourse to. I believe, however, that we do most good by getting the stomach into good working order, and correcting all deviations of secretion. The mineral waters are of great benefit,—*e. g.*, those of St. Gervais, D'Uriage, Aix-la-Chapelle, Pyrénées, Baréges, and Luchon.

Sulphur, given either by mineral water or in any other form, especially that of baths, is one of the most potent remedies.

Locally, much is to be done.

Avoid the use of irritants in early stages; use simple warm water, or bran-tea, or gruel, so long as any erythema with heat exists. The part may be kept anointed with a little liq. plumbi, rubbed up with lard, or with equal parts of olive-oil and lime-water,—in the simplest cases, rubbed in with a sponge; especially in pityriasis of the scalp, it seldom fails. In the severer cases, we may have recourse to bichloride of mercury (gr. i.—ij. ad 3 vj.), sulphur, tar, dilute nitric acid, glycerine.

Note.—Hebra makes *P. rubra*, the first stage of eczema, synonymous with eczema squamosus.

A state similar to pityriasis results in acute specific diseases, in erythema, in the chronic state, of eczema, parasitic disease, lichen, and other affections; but true pityriasis, such as here described, is a *primary form of disease*.

LEPRA AND PSORIASIS.

Much discussion is likely to arise in regard to the term psoriasis (lepra). Erasmus Wilson, in the last edition of his work, applies it to chronic eczema (scaly), and has made the word lepra do duty for psoriasis. Mr. Wilson prefers the word alphos, as including psoriasis and lepra, which are in fact identical in nature, and are included here under one term,—lepra (or alphos). It may be as well to add here, for the student's benefit, the supposed differential characters of lepra and psoriasis, as given by Mr. Wilson. In *Lepra*, the hypertrophy of the skin is the greatest; the patches are circular in form, elevated above the level of the surrounding parts markedly, healing from the centre, never attaining a large size; the scales are thick, regular in structure, and the disease is more amenable to treatment than *psoriasis*, in which the hypertrophy is less, the patches irregular in form, less elevated, healing more irregularly, always attaining a large size, the scales being thinner, irregular in structure, the disease being less amenable to treatment. Regarding these differences as those of degree, not kind,

I shall describe lepra and psoriasis under the term *Lepra*, recommending, with Mr. Wilson, the adoption of *alphos*. The disease is characterized by the presence of patches of various extent and size, which are elevated and covered over by thinnish imbricated scales of white aspect, with subsequent fissuring and channelling. It arises as a primary condition, and is not preceded by an "elementary lesion," except the redness and scaliness; the latter too is not the result of an exudation, but of an hypertrophic growth of the epidermic layer. It affects parts of the skin (by preference) whose epithelium is thick, especially the elbows and knees. It may be partial or general. At the outset the disease is attended by more or less pruritus; the increase of the patches is by centrifugal growth, and there is oftentimes a slightly red margin: the surface beneath the scales is dull red and shining; the scales are shed, to be again replaced by others; after awhile the derma itself becomes infiltrated and thickened. The general health is good. The disease is said to attack those of sanguineous temperament; it is often seasonal in its occurrence, is non-contagious, runs a chronic course, and is very prone to recurrence.

Its varieties are *lepra guttata*, same as *psoriasis guttata*, *L. diffusa*, *L. gyrata*, *L. inveterata*; with local varieties,—*e. g.*, *L.* or rather *alphos palmaris* (*psoriasis palmaris*), being that of most consequence.

Lepra (or *Alphos*), which, according to Mr. Wilson, occurs in about seven per cent. in all cases, commences as little points, which are whitish or slight red; they feel hard to the touch, are in size about that of pins'-heads, not elevated to any great degree; are presently covered over with micaceous scales: this is the *psoriasis punctata* of Devergie and Hebra. It affects the body and limbs generally: when the spots are somewhat larger, like drops, it is the *psoriasis*, or *lepra (alphos) guttata*. Very frequently a number of little spots aggregate together, and by their centrifugal growth join

and form a patch of varying size: when the patches are large—the size of a shilling or half-crown—and circular, the disease has been called psoriasis (or lepra) nummularis. *P. guttata* affects the arms, breast, back, legs, and thighs. Sometimes the scales are very white (*L. alphoides*), sometimes the patch clears in the centre: this was formerly considered to be lepra, in contrast to the opposite state, psoriasis. *P. diffusa* is the last-named disease in a more developed condition. The patches are irregular in form, over-covering the greater part of a limb, where it is especially seen; it is always seen at the elbows and knees; the surface beneath the scales is red and dull; the scales themselves make up a mass of whitish aspect and large extent, often being cracked and split up: there is not much local irritation. This disease may be brought about by the coalescence of several smaller patches: the extent of the disease varies greatly. It rather has a predilection to attack fleshy parts. It is seen on the scalp. Not uncommonly when the centre heals, a ring is left: this is the old lepra form. When the eruption takes on the form of bands, serpentine lines, &c., it is called *L. gyrata*; but lepra gyrata always arises from the coalescence of the circles of lepra; the scales are thin, speedily reproduced; and this variety attacks the trunk, seemingly the back by preference. Psoriasis inveterata, as its name expresses, is very obstinate; the surface of the disease is thickened, cracked; the scales are large, dry, and adherent; the skin is often irritable and discharges somewhat; the nails are affected,—they become thickened, opaque, and brittle. *P. inveterata* generally affects the limbs. Hardy calls lepra, psoriasis circinata. The local varieties are as follows:—*P. capitis* occurs in round spots on the head, which run together and form patches of greater or less extent, generally travelling on to or fringing the line of the forehead; the surface is dry, reddish, scaly, and there is co-existent disease of the body; the hair thins. *P. palpebralis* occurs at the outer angle of the eye; there are few well-developed scales,—the localized is

usually a part of general disease; there is itching, and the eye becomes irritated. *P. labialis* occurs on the lower lip mostly, and is often confounded with eczema; the surface is scaly and fissured, puckered in towards the angle of the mouth, reddish; the scales are speedily reproduced. *P. palmaris et plantaris* are important local varieties. The skin in those situations is thick. The aspect of the disease differs somewhat from the usual type. It may be limited to the centre of the palm of the hand or sole of the foot, coming on gradually and running a chronic course. The skin is dry, harsh, thickened, discoloured; the scaliness is not very marked, but the superficial layers peel off from time to time. Presently the surface cracks and fissures, and healing is very tardy: occasionally the surface bleeds. The muscular movements of the hand are painful. In other cases the disease runs a more acute course; the palm of the hand is quickly invaded over its entire surface, and the disease may travel along the palmar aspect of the fingers; the skin is red, "hot," cracked and fissured; as in the other case, it is attended by itching, and Devergie thinks this form is not unlikely to be a pityriasis (rubra). It is the form of eruption which generally precedes the development of the so-called pityriasis pilaris. When the sole existing disease, it is probably always syphilitic.

Lepra (or *Psoriasis*) *unguium* is mostly a complication of the inveterate form of lepra. The nails become opaque, thickened, irregular, and brittle; then torn away, more or less, the matrix becoming scaly. It may exist alone. The disease (lepra) also affects the scrotum and prepuce; the parts are swollen, red, hard, tender, scaly, fissured more or less, and give exit to a thin secretion, which adds to the scaliness; there is pain and pruritus, and the local mischief may be the sole, or part only, of general disease.

Devergie notices a mixed form of disease, "*psoriasis eczematoux*," in which the disease presents the characters of

eczema, and, in addition, the tendency to secrete a fluid secretion, which dries into scales of rather larger size than those of psoriasis; the surface beneath is red, and slightly moist: it is seen about the forearms and legs. The itching and pain are more marked than in psoriasis. I have seen this form of disease. He also describes a psoriasis herpétiforme; but this appears to be the circular lepra form in which the border is particularly raised.

The *nature* of the disease, lepra, is tolerably clear; it is the presence of an hyperæmic state of derma, connected specially with an excessive formation of epidermic scales; a morbid hypertrophy. The true derma appears not to be affected, except in long-standing cases, and then only as a secondary result of the long-continued congestion. The patches are made up of epidermic cells, imperfectly, because quickly, formed, collected together; the papillary layer of the skin seems, however, to play the part most active in this change. Such appears to be the nature of the disease, according to the most eminent authorities,—Hebra, Simon, Rokitansky. It is true of the variety pityriasis pilaris; the little knots can be squeezed or pulled away, and microscopic examination shows the follicle to have been distended by a multitude of epithelial cells, together with thickening of the limiting membranous follicular wall; the sebaceous glands belonging to the hair-follicle participating in this alteration, as I have myself closely observed.

The Causes of Lepra.—It is not contagious. “The cause of lepra,” writes Mr. Wilson, “is a special poison, the nature of which is obscure. I have stated my belief, and I see no reason to change that opinion, that the leprous poison is in its essence and origin *syphilitic*; that lepra is, in fact, a manifestation of the syphilitic poison, after transmission through at least one, and probably through several generations.” I herein agree with Mr. Wilson. An endless list of causes of lepra has been given: we are certain of the action of

some. Hereditary tendency is the best established; it frequently selects, fancifully perhaps, one (the one we should least have expected to be attacked) of a family.

Sex.—It attacks males more frequently than females. Devergie found, of 270 cases, 245 were males and 25 females. It is most common between the ages of fifteen and thirty. Of 268 cases (Devergie), 174 occurred in persons whose ages ranged between twenty and thirty-five; 50 cases between thirty-five and forty-five; 24 cases between forty-five and fifty-five, &c. It is not very common before sixteen or seventeen. The sanguineous temperament appears to have characterized those attacked. Devergie states that of 227 cases, the health was good in 206; of 200 cases in which the point was observed, 162 were of sanguine temperament. It is most common in summer and winter,—in 103 of 154 cases. All classes are liable to its attacks. Hebra most severely ridicules the other various influences, some of which are as follows, as enumerated by Hebra:—Climate, humidity, mode of life, gastro-intestinal irritation, change of temperature, catching cold, chlorosis, arthritis, darts diathesis, stoppage of usual discharges, mental states, dirt, irritants of all kinds, certain trades,—*e. g.*, shoemakers, silversmiths, braziers, tinmen.

The *Medical Times and Gazette*, July 24, 1864, quotes some observations of Dr. Wertheim, of Vienna (from the *Gaz. Hebdom. de Med. et Chir.*, 1864), with regard to the production of psoriasis. Dr. Wertheim noticed penicillium glaucum luxuriating upon the arms of some patients affected with psoriasis; the arms of others not exhibiting the same phenomenon. The former fact suggested the experiment of injecting the penicillium into the crural vessels of a dog; and accordingly this was done. Twenty-four hours subsequently, "isolated red spots, slightly elevated, appeared upon the extremities, and the eruption was rendered more active by repeating the injection." The like results came from in-

jecting an "emulsion of yeast from beer;" and it is added that "the eruption in its seat, symmetry, shape, and progress, presented many analogies with psoriasis; microscopically, he found it to be the result of an obstruction of the cutaneous capillaries by the vegetable elements injected." Dr. Wertheim arrives at the conclusion that the cause of psoriasis is the circulation of vegetable parasitic elements in the blood-current, and ascribes the greater frequency of the disease in men to the latter drinking more alcoholic fluids. Such a theory cannot be maintained for a moment, for reasons briefly as follows:—The presence of penicillium is only an occasional feature; it is not peculiar to psoriasis; various other substances injected produce like results; and the penicillium acts upon the capillaries similarly, by mechanically obstructing the current of blood. The results, as detailed by Dr. Wertheim, so far as the eruption is concerned, only show *analogy*, not *identity*, with psoriasis. The latter is a disease essentially consisting of an hypertrophic growth of epidermis. How could obstructed capillaries produce this, and in the short space of twenty-four or forty-eight hours?

Prognosis.—Alphos or psoriasis is an obstinate disease; it lasts several months before a cure can be effected. When it attacks the hands, or assumes the inveterate form, it will be most antagonistic to the beneficial action of remedies.

Diagnosis.—If we recollect that alphos (lepra vel psoriasis) is a primary form of disease, consisting of squamæ from the earliest appearance of the eruption, we shall scarcely confound it with any other disease. Chronic eczema has a history of vesicles or fluid discharge; is attended by itching; does not affect the elbows and knees peculiarly; possesses crusts, not scales. In pityriasis, the scales are not well formed, white, imbricated, but branny, and repeatedly exfoliated; the disease is not seated at the elbows and knees; the patch is not elevated; does not feel harsh and thick. (Hardy believes parents with psoriasis may transmit pity-

riasis.) Lichen circumscriptus has very fine scales; there are papules; it does not affect the elbows and knees; there is no imbrication, no clear centre, like lepra; itching is severe.

Treatment.—Alphos (lepra) puzzles us by its occurrence in persons of sound health (apparently), and we are compelled to appeal to the aid of specific remedies, and the specific, according to most authorities, is arsenic; but there are exceptions to this rule. We find a woman becomes pregnant, gets her stomach out of order, out comes her old enemy, psoriasis; another is nursing, she lives badly, presently suffers from hyperlactation,—the disease appears. A gentleman has heavy headwork to do, is worried, anxious, and becomes affected. Another partakes too freely of wine or seasoned food, or is thrown into circumstances which give him a gouty or rheumatic habit, or occasion a temporary change from his ordinary quiet mode of life, and he too suffers. *Ergo*, in a predisposed subject, anything which tends to lower the general tone of the system (the resistant power), is likely to conduce to the occurrence of the disease. It is questionable if the disease can arise idiopathically, except, from the contraction of syphilis, the disease is handed down as an hereditary heirloom. Two enquiries, then, are necessary at the outset: to ascertain the existence of syphilis, and the presence of any complication, mal-assimilation, bad-living, excesses, &c. In the former case we must treat the syphilis, and let the iodide of potassium be our chief agent in the cure. Those cases which are occasioned, as it were, by debility,—*e. g.* hyperlactation, will be removed by the employment of simple tonics, bark, iron, bitters, according to circumstances. Mr. Wilson gives an admirable example of this at p. 331 of the last edition of his work. When febrile symptoms are present, mild salines and purgatives will be required, with tepid and alkaline bathing. Having corrected any deviation from the standard of health, we then exhibit arsenic internally: some prefer Fowler's, some Donovan's solution. The former is

perhaps the best in the psoriatic, or diffused; the latter in the lepraic or circinate form of disease: 5 of the former and 10 or 20 drops of the latter three times a day, in the middle of or after meals. The French employ by preference the arseniate of soda in doses of 1-10th, 1-8th, 1-6th of a grain, three times a day, in pill. It is only right to say that Gibert (*Medical Times and Gazette*, p. 519, 1850) gave in a large number of cases 1-5th gr. of arsenious acid daily; and of 98 cases 40 were cured, 20 were not benefitted, and 38 improved, no local means being employed. He treated 119 cases without arsenic, but used local means; 59 were cured, 23 derived little benefit: the local means employed were tar, vapour and sulphur baths. Hence it would appear that cases do better in Gibert's hands without than with arsenic. Besides arsenic, tincture of cantharides is employed. Copaiba appears to be useful in cases of co-existent blennorrhagia. Bichloride of mercury and iodide of potassium are needed in syphilitic cases. Tar is often given internally; but it is of slow action, and also an unpleasant remedy. The diet should be unstimulating. The mineral waters recommended are those of Bagnères, of Luchon, Barèges, Aix-la-Chapelle, Louesche, &c. "The local treatment," says Mr. Wilson, "for the cure of lepra is useless," though it may be advantageous as regards alleviation of local distress. On the other hand, Hebra believes it to be the *sine quâ non*, the *alpha* and the *omega* of treatment. The French physicians hold the medium view. I confess that local means seem to advance the recovery very much. They consist in baths,—hot vapour, sulphur, and alkaline; the former and the latter are useful in detaching the scales and allowing the proper action of other remedies, and also induce the skin to return to its natural action. When the patches have been denuded of their scales by maceration or bathing, the best application is tar, either with glycerine or alcohol; generally about equal parts make a proper application. The tar should be applied at night, or night and morning, for some time. The oil of juniper, or *huile de*

cade, is efficacious. Other remedies are—iodide of sulphur grs. x.—xij. ad ʒi.; nitrate of mercury ointment; protoiodide of mercury grs. i.—v. ad ʒi. unguent; and lastly, vesicants in chronic cases. In some instances the eruption is very irritable; has a tendency to inflame and to discharge, as in scrotal disease. Here we must employ soothing measures: glycerine ʒij., oxide of zinc ʒij., aq. calcis ʒvj., as a lotion, or alkaline baths and lotions, until the irritation has subsided. It is not unlikely that in these cases some tendency to eczema is mixed up with the disease; if so, arsenic as an internal remedy is especially demanded.

ICHTHYOSIS.

ICHTHYOSIS is a peculiar disease. The term has been applied at different times to two very opposite states,—the one an epithelial, the other a sebaceous disease: it should be confined by right to the former; but for convenience sake, at the present day, two divisions are adopted,—into *Ichthyosis vera* and *I. spuria vel sebacea*.

Ichthyosis vera is a disease of that part of the dermal layer which is concerned in the production of epithelial scales. There is no inflammatory action, but simply a hyperformation of dry, hard scales, which are whitish, and imbricated, more or less, like the scales or plates of a fish: hence the term fish-skin diseases. True ichthyosis is a general disease, and hereditary—mostly congenital: there is no accompanying heat, pain, or pruritus; but the skin is harsh and dry: the scales are always of a more or less white colour. Now, in the early condition, the little scales are mealy; in a more advanced state, scaly; and presently they become thick and shiny, like mother-of-pearl. Devergie has hereupon made a division of the true ichthyosis (*ichthyose blanche*) into three varieties,—*I. blanche farineuse*, *I. blanche écailleuse* (scaly), and *I. nacrée* (mother-of-pearl). Generally speaking, in infants in whom ichthyosis is congenital, the

disease is only slightly marked at first, the skin being harsh, dry, and what has been termed "fretted:" this is the *xeroderma* of authors (dry skin). As the child grows up, the disease is developed in varying degree, so as to range itself under one of Devergie's three subdivisions. There is a continual desquamation, but with no subjacent redness. The disease differs in degree in different parts of the body; but it is always more or less general. The general nutrition of the body is below par; there is a less amount of fat than usual, and the various glands of the skin are implicated, choked up by epithelial matter, and rendered prominent.

Ichthyosis spuria vel sebacea includes the *I. brune* and *I. porc-épic* of Devergie, and is divided by Mr. Wilson into two species,—*I. sebacea squamosa* and *I. sebacea spinosa*; corresponding to those of Devergie, in fact. This is due to a hyperactivity of the sebaceous glands, the secretion of which collects into the scaly incrustations. It is different, therefore, altogether from the other or true (the white) ichthyosis: moreover, it is not necessarily congenital, and it is a local disease, seen especially about the knees, the elbows, ankles, wrists, &c.

In the least form, the disease consists of thickish discoloured squamæ,—*I. sebacea squamosa*; in a more marked condition, it forms dark horny elevations,—spines, as they have been called, and may be so large as to give one the idea of a porcupine's back; hence it is called "porcupine disease." Mr. Wilson, from the resemblance to the back of an alligator in some instances, called it "*Sauriderma*." If those productions be removed, the skin beneath is found to be apparently healthy, and the material itself to be made up of fatty and epithelial matter, with steatozoa perhaps. Dr. Ogle (*Med. Chir. Trans.*, vol. xlv. p. 217) gives an account, and states that on chemical examination, 8 per cent. of ash remained,—ether dissolved-out fat, and caustic potash,—an albuminous substance precipitated by acid. In the ash were found lime,

sulphate of soda, phosphoric acid, and iron; affording, therefore, some analogy to the analysis of Dr. O. Rees of the black matter of the blood. On microscopic examination, the scales were found brownish, semi-opaque, of irregular outline and surface, and more or less structureless. It appears from Dr. Sedgwick's observations that the disease is an example of what he calls "sexual limitation" (vide *Brit. and For. Med. Chir. Rev.*, April, 1861), being transmitted through one sex, whichever that may be, as in the celebrated Lambert case, or porcupine man of Suffolk. A good article by Dr. Begbie will be found in the *Edin. Med. Journal* for July, 1861.

As to *Prognosis*, little can be said: the disease is a matter of annoyance only. The cause is unknown.

The *Diagnosis* offers no difficulty.

Treatment consists in removing the scaly formations, by baths of various kinds,—gelatinous, sulphurous, alkaline. There are no known remedies of any avail in a curative sense.

Note.—An appearance of xeroderma is not unfrequently noticed in instances of congenital syphilis; the skin is harsh, scaly, and inelastic; but the changes in the skin are accompanied by characteristic concomitants, which suffice to indicate the true nature of the affection.

CHAPTER VII.

TUBERCULÆ, OR DEGENERATIONS.

WITH homologous products,—Elephantiasis, Frambœsia, Keloid; with heterologous products,—Cancer, Epithelioma, Cancroid, Rodent Ulcer, and Lupus.

ELEPHANTIASIS.

As this is a disease which the student is unlikely to meet with, I shall content myself with giving a brief summary of what is known of it. Elephantiasis, in its widest signification, includes two very different diseases; the one *E. Arabum* or *Arabica*, or Barbadoes leg, properly *Bucnemia tropica*; the other, *E. Græcorum*, the true tubercular and anæsthetic leprosy. The former (*bucnemia*) is essentially a hypertrophy of the cellular structures, and attacks the lower limb particularly; the other, *E. Græcorum*, consists in the formation of little nodules of blastema or tumours in, with implication of, the skin and subjacent parts; involving the nerves, and giving rise to anæsthesia, and being followed by more or less ulceration, loss of power, and death.

Bucnemia tropica, or *Barbadoes leg*, as its name expresses, is common at Barbadoes; also in Cochin-China, West Indies, Egypt, Malabar, some parts of America, and Abyssinia. The disease usually attacks the legs, being confined to one; but it also affects the face, neck, belly, breast, pudendum, the arms, and scrotum,—in Egypt called *Sarcocele*. It lasts a variable time, possibly a lifetime; attacks all classes, and is non-contagious. It is marked, when fully developed, by three features:—(1) Hypertrophic growth of the cellular tissue; (2) alteration in the aspect of the skin; (3) more or

less deformity. And this is brought about as the result of intermitting and repeated attacks of inflammation of the lymphatics. This is ushered in by febrile symptoms, and locally, redness, pain, and tension over the course of the lymphatics, which presently feel knotty and corded; the glands are swollen and tender. This acuteness of the attack soon vanishes—in a few days; but the limb does not resume its natural size; the glands especially remain enlarged. A repetition of this occurs at uncertain intervals, and after each attack the enlargement is permanently greater; and it has been ascertained, from careful observation, that the size of the affected part bears a direct relation to the frequency of the acute attacks of fever and local inflammation. During the progress of the disease, deposit and thickening have been going on in the skin and subcutaneous tissue,—hence the sensibility of the part is rather lowered; but, unlike the other form of elephantiasis, it is never annihilated, nor, indeed, *seriously* lessened. The swelling of the part may be pretty uniform or partial; sometimes it is enormous, as when the disease attacks the scrotum, when it has been known to produce a pendulous tumour of 60 lbs. weight. The skin undergoes distinct change; it is tawny, hard, dark, livid, varicose, thickened; often scaly and fissured or greyish; presenting warty projections, especially about the joints, and then resembles most perfectly the skin of an elephant. The subsequent changes are ulceration, with sprouting granulations (fungous), suppuration, and foul discharge. The glands participate in this action, which may carry off the patient by hectic. Frequently the disease becomes stationary, and the patient gets about as best he can with his unsightly deformity. The palms of the hands and the soles of the feet escape infection. The average size of 340 cases, round the ankle, Mr. Waring found $11\frac{7}{12}$ inches.

The *Pathology* of the disease appears to be well made out. It is, as shown by actual observation, a hypertrophy of the

derma and subcutaneous tissue, with the effusion of a blastema, of homogeneous aspect, mixed up with a large number of molecules, granules, free nuclei, and nucleated cells. The epidermis is more or less affected,—thickened; but this varies in many cases. The cutis is thickened, the papillæ are distinct and prominent, the subcutaneous cellular tissue (areolar, fatty, and elastic elements) is present in excess, and infiltrated by the blastema just spoken of. The veins are distended, the lymphatics obliterated; the muscles often pale and fatty. The internal organs also are frequently in a state of fatty degeneration. The blastema, when first effused, is slightly milky, and contains albumen, some fibrine, &c. The primary seat of the disease is the blood; *locally* the lymphatics are primarily affected.

Causes.—The disease is not hereditary, and not contagious. It attacks males more than females; according to Mr. Waring's observations (*Med. Chir. Review*, July, 1858), 75 per cent. males and 25 per cent. females. It is most frequent between the ages of 25 and 50. Of 945 cases collected by Mr. Waring, 729 occurred in people whose ages ranged between 26 and 60; 139 between 5 and 25; and 77 after the age of 60.

The date of its first appearance is noted also: existing since childhood in 16 cases; appearing before the fifth year, 7 cases; between 6 and 10, 33 cases; between 11 and 15, 111 cases; between 16 and 20, 222 cases. As to the part affected, it was the right leg alone, or with other parts, in 307 cases, or 32 per cent.; the leg alone, or with other parts, 287, or 30 per cent.; both limbs, &c., 344, or 36 per cent.; other parts alone in 7 cases; the upper limb in 4 cases. This agrees with Mr. Day's researches in Cochin-China (*Brit. and For. Med. Chir. Review*, Jan. 1861, p. 257), who found the endemic disease attack the lower limb in 93 per cent. In 224 out of 226 cases, in which the point was examined, Mr. Waring found the febrile attack *primary*. Europeans are

less liable than natives to be affected. Among the causes, hot climate and malarial emanations are supposed to have some influence. Mr. Waring thinks that the character of the water used by the inhabitants has much to do with the disease: "the sea-water, penetrating through the porous sand, renders the water saltish and brackish, and as the generality of these pools are surrounded by trees, it in addition soon becomes loaded with dead vegetable matter, which undergoing decomposition, renders the water dark (almost black) and highly offensive to the taste and smell, which even boiling and filtering fail to deprive of its unwholesomeness."

Prognosis is mostly unfavourable. Mr. Waring found in 218 cases, the duration of the disease range between 26 and 55 years. If the disease is rapid, the febrile paroxysms severe and quickly recurrent; if there be much suppuration, and the general health indifferent or bad, the prognosis is grave.

Treatment.—In the acute state, venesection, leeches to the lymphatic vessels, fomentations, rest, position, cold lotions. Internally, salines, mercurials. In the chronic state, friction, pressure, bandaging, blistering; and, internally, iodide of potassium, liq. potassæ, bromide of potassium. Mr. Waring recommends quinine.

ELEPHANTIASIS GRÆCORUM, THE TRUE TUBERCULAR LEPROSY.

Its synonyms are various: Leontiasis, Satyriasis, *Lepra tuberculosa*, Radesyge or Spedalskhed of Norway, Ma-fung of the Chinese, Baras of Arabia, the *Morphæa* of Brazil, Leprosy of the Middle Ages, Mal de la Crimée, *Lepra de la Chersonèse*, *Lepra Taurica*, Soubharry or Jugara of Hindoo-stan, the *Lepra gangrænosa* or Ngerengere of New Zealand. Of late years vast progress has been made in the study of

leprosy; and we are indebted especially to the labours of several gentlemen who have published valuable summaries of long observation. For fuller observation than can be given here I would refer the reader to the "*Traité de la Spedalskhed, ou Elephantiasis des Grecs*," par Drs. Danielssen and Böeck (the report of the Norwegian commission); to a most able and valuable, as well as elaborate article, in the *Trans. of the Bombay Med. and Phys. Soc.*, N.S., vol. viii., 1862, by Dr. H. V. Carter; also an article by Dr. T. W. Belcher, in the *Dublin Quarterly Journal*, vol. lxxiv., "On the Hebrew, Mediæval, and Modern Leprosis compared;" and the account given by Erasmus Wilson in his work, and a monograph by Hecker, Friedburg, 1858.

Leprosy is a disease of great interest; it is seen, nowadays, in Norway and Iceland, in India especially, in some parts of the Mediterranean, in Greece, along the Caspian Sea, Madeira, the islands of the Indian Ocean, &c. Generally speaking, elephantiasis has been looked upon as exhibiting two forms,—the one in which tubercular formations are marked,—*E. tuberculosa*, the form most common in Europe; and another, in which anæsthesia is the more distinct feature, together with more or less ulceration and atrophy,—the *E. anæsthetica*; but these are merely varieties of one and the same disease. The latter is most common in India and hot climates perhaps. Elephantiasis is a "blood disease," expressing itself by the deposition of a blastematous material in the cutaneous, mucous, and nervous tissues,—in the tubercular the former, and in the anæsthetic the latter, are chiefly implicated; but besides these two features, there is a third, which occurs at the outset in a large percentage of cases, and that is a peculiar and characteristic eruption, especially dwelt upon by Dr. Carter; and I shall follow this gentleman closely in the further description of elephantiasis. There are then three groups of symptoms: "(1) An eruption in the skin, related to lepra, and accompanied by anæsthesia;"

(2) anæsthesia of various parts, "owing to the affection of the superficially-placed nerve-trunks and cutaneous nerve-branches; the Paccinian and tactile corpuscles (appendages of the sensory nerves) are frequently also implicated;" (3) the development of tubercular enlargement affecting the skin and mucous surfaces.

The *eruption* is temporary, and one of the earliest features; it takes the form of an erythema, of a more or less circular shape, varying in size from one to two or three inches: sometimes the centre is very vivid, the edge pale; and this leaves behind a dullish stain (*morphæa nigra*); at other times the centre fades, and presents a whitish aspect, bounded by a vascular zone (*morphæa alba*); but the characteristic features are described by Dr. Carter thus:—"Patches or spots of a circular or annular form, three-quarters to three inches or more in diameter; edges raised, of a pinkish hue; free from scales, slightly cracked or wrinkled; centre depressed, pale, dry, glistening, having a tendency to spread and join so as to cover larger spaces." The central part of these patches is always anæsthetic, perfect in cases of some duration, and feels hard to the touch. The patches may vary much by the presence of scales or slight desquamation, or slight ichorous exudation; the hairs of the part atrophied, and it is said not whitened (Carter), are subsequently absent. The glands also suffer in like manner. This typical form of eruption is the *baras* of the Arabs, the *leuce* of the Greeks. The result of careful inquiry seems to show that these patches are the result of changes in the nervous supply, that they run the one into the other, and vary in aspect from simple white atrophied circles to large "isolated but blended patches," with or without red vascular margins, passing through the stages in which the centre is first red, then brown or pale, and surrounded by a distinct pink border of vessels. The centre of every patch gradually becomes more and more anæsthetic. The chief seats are the back of the hip, the front of the shoulder, about the elbows, and on the forepart of the knee, over the

temples, cheeks, the trunk, and also the limbs, and it is to be noted that the eruption is usually symmetrical, and often precedes the anæsthetic form of disease. It existed alone in 14 of 186 cases (Carter); in 48 of 186 cases of anæsthetic leprosy.

It is often confounded with lepra,—the “gachkaram” (gajacharma), “dadur,” “dinah,” “maigham,” of India. So says Dr. Carter. Writers have described a *white* and a *black* leprosy: the *baras* or *leuce* is probably the white species. Dr. Carter observes that in it tubercles and anæsthesia are both well marked: bronzing is often a marked feature, constituting the disease the black leprosy, and indicating a very grave phase.

The Tubercular form commences without much premonition: there may be eruption, or more or less erythema; soon the face begins to swell, then the limbs and trunk, and little tubercular formations make their appearance, first of all about the face, especially the ears. From this moment the disease steadily progresses. The tubercles vary in size, from that of a pea to that of a walnut; they are soft, smooth, shining, of a dusky-red colour at first, becoming presently brownish-yellow, or bronzed. In the early stage, the sensibility of the part is often rather increased, in consequence of the pressure exerted by the blastematous effusion upon the nerves; but after awhile this morbid sensibility becomes altered in character, and, from the greater degree of morbid change, diminished sensation sets in, and increases until it becomes decided anæsthesia.

The tubercles are most marked in situations where there is much lax cellular tissue; therefore about the face, nose, lips, eyes, mouth, and ear. The disease may be more or less partial. In the trunk the tubercles are at first scattered; they are pale, occasionally clustered; but this state augments after awhile. The sebaceous glands now take on a hyperaction: hence the skin is oily and shining. The increase in

the development of the tubercles produces terrible deformity; the surface feels thickened, knotty, or uneven; the face is altered completely; the edge of the mouth and lips, the eyebrows, the alæ of the nose, the eyelids, are all distorted and thickened, the whole integument being dirty and sallow-like, and the various aspects presented by the patient have been described by the terms *leonine*, satyr-like, &c. The hairs of the general surface are lost, the glands become enlarged. When the groin is the seat, this has been termed "femoral tumour." When the lower limbs are affected, the disease is generally most marked about the lower part of the thigh and the ankle. Not only the cutaneous but the mucous membranes participate in the same change. The mouth, the palate, the fauces, the trachea, the nose, the eye, are all affected by deposition of material in their mucous surfaces. The internal glands,—*e. g.* the liver,—indeed, all the internal organs, with the exception of the pancreas, are affected; the system generally is infiltrated. The patient's general condition all this while is not serious. He is morose, low-spirited, dull, and careless; but now his troubles are commencing in earnest. His voice, his sense of smell, of taste, &c., are affected, and the time has come for ulcerative action to set in: the tumours soften, ulcerate, and pour out an unhealthy, offensive secretion, which crusts over the sore from where it comes; the attempt at healing often fails. The eye is destroyed, the mucous surfaces of the internal parts ulcerate,—*e. g.*, the nose and its bones are destroyed. Diarrhœa from intestinal ulceration is a sad complication: the bones become carious, hectic sets in, and the patient dies. Ulceration is not so common in India as in Europe. The duration of tubercular elephantiasis, according to Drs. Danielssen and Böeck, is nine and a half years.

Elephantiasis anæsthetica (Anæsthetic Leprosy).—In the tubercular form the deposit shows itself in a marked manner, implicating the nerves more or less; but in the

anæsthetic variety the disease affects primarily the nervous trunks, and leads to a lowering of nutrition, anæsthesia, and subsequent destructive changes. There may be little of the tubercular aspect: anæsthesia is the great sign; the muscular power is deficient, but paralysis is not a marked feature; "in a word," as Mr. Wilson has it, "*insensibility and atrophy* are the distinguishing features." It is common to see anæsthetic leprosy partaking somewhat of the characters of the tubercular form. This is the *mixed form* of disease, occurring in India in about 15 per cent. It generally commences with eruption, which is usually of the white (*morphæa alba*) variety: it also begins in one-third of the cases under 20 and is rare after 40. The face exhibits the tubercles; two-thirds of the subjects attacked are males; and it is a fatal form, hereditary transmission being strongly marked.—(Carter.)

There are then transitions between the different forms of leprosy. It appears that the blastema effused in the anæsthetic variety is somewhat more transparent, not so opaque as in the other forms.

The anæsthetic commences with pretty much the same general symptoms as the tubercular form. It appears to originate, so far as local symptoms are concerned, by slight swelling (some say hyperæsthesia; but this seems doubtful), followed by many subjective sensations of heat, shooting, burning, pricking sensations about the hands, with more or less weakness, followed by tenderness, pain, and swelling along the course of the chief cutaneous nerves,—*e. g.*, the ulnar, the median, the saphenous, &c., ending in numbness and insensibility to irritants. The integuments get parched, dry, shrivelled, perhaps covered by a clammy sweat, and desquamate. Subsequently to this, the eruption makes its appearance: it consists not only of erythematous patches, but especially of bullæ, which are of large size, occurring on parts previously anæsthetic: these break, and their place is supplied by superficial ulcerations, which, after scabbing

over, leave behind white, hard, hairless, glandless patches of *morphæa alba*. Coincidentally with these changes, the body generally wastes, especially its muscular system: hence the fingers become distorted, and in a peculiar manner, the first phalanx is bent backwards by the extensor; the others are flexed: not only does this happen in the hand, but the feet and other joints also are distorted and rendered prominent. The bullæ may give rise to deep, ragged, foul-edged ulceration, the base of which may be sensitive, proving the superficial character of the disease. The face is now much disfigured; it looks haggard, shrivelled; the skin is what is termed "mummified," or lax and loose. The mucous surfaces are exposed, in consequence of the "sclerotic" or hardened and contracted state of skin. The deeper parts now become affected; a joint is seized with acute pain, a sinus forms, a piece of bone is discharged, and the sore heals. Dr. Carter thinks this is an unusual mode (by necrosis); he believes that the deep parts are removed by "interstitial absorption," without pain or reactionary activity of any kind: the terminal phalanges are the first bones to suffer, and the disease, by steady progression, removes bone after bone. The mucous surfaces become involved; they are infiltrated with "blastema," but not to the same extent as in the tubercular form: hence there is not so much diarrhœa or suppuration as in the latter disease; the patients live, on an average, about as long again—eighteen to twenty years. The ulcers of the surface are supposed to be due to irritants acting from without upon devitalized (anæsthetic) parts: hence they are seen in those accustomed to hard manual labour. In the later stages, the general health suffers very materially, but not to the same degree as in the other form of leprosy. The patient may die, worn out by exhaustion, bodily and mental, or be cut off by some intercurrent disease.

The Pathology of the Disease.—Elephantiasis is a blood disease, which shows itself by the effusion into the tissues of

a "viscous albuminous fluid, chemically composed of an excess of albumen, a small quantity of fibrine, some fat, and salts."—(Wilson.) There is this difference, that whereas in the tubercular form the deposit, besides being more opaque, is deposited chiefly in the fibro-cellular structures, in the anæsthetic form it is more transparent, and is deposited, *par excellence*, in and outside the nerve-tissue. In the tubercular form, the fibro-cellular coats and structures of all the organs except the pancreas are found infiltrated by the peculiar deposit; in the anæsthetic, there is often an absence of this feature in the internal viscera, or their coats. In reference more particularly to the anæsthetic variety, Dr. Carter's observations may be briefly summed up here. He found the brain, spinal cord, and the roots of the nerves healthy. Dr. Fabre, who studied the disease in Brazil, noticed the brain to be atrophied, its ventricles to contain fluid, the glandulæ Pacchioni numerous, and oftentimes a circumscribed suppuration in the membranes. Drs. Danielssen and Böeck differ from Dr. Carter: they state that the spinal cord and its membranes are altered; the latter are infiltrated with the albuminous deposit, a layer being found between the arachnoid and the pia mater; the cord itself being indurated, its grey matter discoloured, yellowish, and devoid of vessels: the sheaths of the nerves and the various ganglia being similarly affected. They think the primary seat of the disease is the spinal cord. Dr. Carter, on the other hand, contends that the disease commences in the superficial nerves, and travels towards, but does not reach, the spinal cord. The sympathetic nerves are healthy; the heart, lungs, and intestinal canal healthy (Carter); the liver and kidneys fatty,—in which all agree. The muscles generally are wasted and "fibrous," but not fatty, as the rule. The blood contains a more than ordinary quantum of albumen. The most important changes are observable in the nerves themselves. Dr. Carter says the nerve is swollen, dull-red, or grey, or semi-translucent, rounded, and firm. The funiculi are the

seat of disease, not the connective coat; the nerve is evidently very tense. The place of "the clusters of nerve-tubules" is supplied by the albumino-gelatinous infiltration which has pressed upon them; the deposit surrounds the nerve-tubules, "mapping out, as it were, the area into polygonal or rounded spaces, in each of which lie the remains of one or two altered nerve-tubules." Hence the chief features are *firmness*, *opacity*, and *enlargement*, from foreign deposition. This is chiefly marked in the compound trunks which are situate most superficially, and in the "cutaneous nerves just after perforating the deep fascia:" those chiefly diseased are the ulnar, radial, and musculo-cutaneous; and they may exhibit these changes over the space of an inch or more; sometimes, indeed, a greater distance along the parent trunk towards the spinal canal. Dr. Carter sums up the microscopic appearances thus:—The funiculus is "unchanged or slightly thickened, and marked by fusiform granular masses, or more distinct oval granular nuclei of full size;" from its inner aspect "septa pass, which map out so curiously the area of the diseased funiculus. These are composed of a nucleated fibrous tissue, very distinct and clear: the nuclei, varying in size, are granular; they have occasionally appeared to be free, and, when small, resembled at first sight the ends of the wasted nerve-tubules in a transverse section. The space inclosed by the septa is polygonal in shape, and from $\frac{1}{400}$ to $\frac{1}{1500}$ in. in diameter. It is occupied by a clear, homogeneous, refractile substance, in which the altered nerve-tubules are imbedded; the latter are usually much changed, their medullary sheath corrugated, and their contents granular, uniform (?), and firm:" there may be simply empty walls, or "no trace at all." The Paccinian contain the same deposit, and the tactile corpuscles are atrophied. The skin is infiltrated by the same blastematous fluid; the bones are "rarefied" by "molecular destruction." As to the origin of the nerve disease, "it appears that, first of all, a clear material, probably albuminous, is

deposited between the nerve-tubules, and in this nuclei, and subsequently fibres, are developed, and the deposit itself may become fibrillated. The nuclei are often large, $\frac{1}{2000}$, $\frac{1}{1600}$ in. in length, and $\frac{1}{8000}$ in. in diameter, clear, round, and very numerous."

The *Causes of Elephantiasis* are not well made out. The disease, according to Dr. Carter, appears in India to be most prevalent, as regards social standing, in the following order:—Native Christians, Marathas or low-caste Hindoos, Mussulmans and Parsees, vegetable-feeding Hindoos, &c.; Europeans are generally exempt. Of 543 deaths from leprosy during the last twelve years which he has collected, 409 occurred in males and 134 in females. It is common in Norway as in India, in the fish districts, where the folk eat quantities of foul fish; and Dr. Carter further observes, with regard to occupation, that many of the lepers "are fishermen, many ryots, all of whom lived more or less on rice and dried or salt fish."

Hereditary tendency is certainly an efficient cause, and is most marked when it is on the male side, and if children are begotten by lepers far advanced in the disease.

Males are more subject than females to elephantiasis. Age has some influence; the baras generally appears before the age of 20, the tubercular sooner perhaps than the anæsthetic aspect, which generally commences before the age of 30. Damp and humidity, uncleanly habits, filth, and poverty, are conditions favouring the occurrence of elephantiasis. The anæsthetic disease is most common in India. Of 186 cases (Carter), 67 were anæsthetic, 40 mixed, 17 tuberculous, 14 exhibited the "baras" only, and 48 were cases of anæsthesia complicated with baras. There is no reason to think that syphilis has any relation to elephantiasis. The cause is probably a mixed one; it is a compound especially of bad hygiene, exhibited in the bad damp dwellings, the putrid and innutritious food, and the humidity

of a malarial climate. There is, and always has been, a very wide-spread belief that the fish-eating population is peculiarly prone to the disease.

Treatment.—This is preventive and curative. I only indicate the principles here. We must prevent the intermarrying of actual lepers; remove them from humid malarial localities; alter and correct bad modes of living in every particular; secure good exercise and a dry air; if possible, a change of climate. In the actual disease, repeated venesection, counter-irritation of the course of the nerves, various baths, arsenic, mercury, cantharides, &c., have been tried, but with no avail. *Hydrocotyle Asiatica*, *Ginocardia odorata*, or *chaulmoogra* (used by Dr. Mouat), the *Asclepias gigantea* or *mudar*, are looked upon as specifics. In the *Dublin Medical Press*, April 20, 1864, is the account of the local treatment by arsenic: an ointment, gr. x.—xxx. of arsenious acid to ʒi. of lard, is rubbed into a spot about six inches large for a fortnight, so as to produce *pustulation*. This is often followed by great relief, and the disease is treated bit by bit until it disappears,—so it is said.

Note.—Mr. Wilson observes that “elephantiasis still exists amongst us in this country as a faint trace of its former self.” It is called *morphæa*, and, as in true leprosy, there are two forms,—*M. alba lardacea*, in which deposit is marked, and *M. alba atrophica*, vel *anæsthetica*, in which atrophy is the prevailing characteristic. When the patch is of a brownish colour, Mr. Wilson names it *M. nigra*, in contradistinction to *M. alba*. The *morphæa alba lardacea*, according to Mr. Wilson, occurs in patches the size of from a half-crown to several inches, which are smooth, white, hard, dense, non-elevated,—in recent cases edged round with a network of vessels (lilac ring), and are caused by a deposit in the skin of a substance like *lard*. In a later stage it is devoid of vessels, and, the nerves being destroyed, the part is insensible: the glands and hairs disappear. It always begins as an

erythema: the central part whitens first. It is seen in women, and especially in the sub-clavicular region. The patches number three or four,—not more. *M. alba atrophica* is a real atrophy, without deposit in the dermal structures. The skin is white, sunken, dry, parchment-like, insensible; the hairs are lost. It affects the trunk on its first aspect, especially the root of the neck, the inner side of the legs. When in streaks, it forms the “linear atrophy” of authors. Mr. Wilson also regards the alopecia areata as a remnant of elephantiasis, and calls it *morphæa alopeciata*. These forms bear much resemblance to scleroma and kelis; indeed, Dr. Carter states as his opinion that kelis, elephantiasis, vitiligo, and *morphæa* (and, indeed, he includes lepra) are closely related. More will be said under the head of Kelis. At present I must notice only some unusual varieties of the elephantiasis class. In the *Morphie* of Brazil the tubercles do not form a prominent feature; the usual erythema is succeeded by bullæ; ulceration is rather the rule; indeed the disease presents rather the anæsthetic form. *Frambæsia*, called also mycosis, pian, or yaws, is an ally of elephantiasis; it occurs in America, Guinea, the West Indies. The disease commences with general debility, languor, and pains, simulating rheumatism; then about various parts of the body, especially the face, axillæ and genitals, arms, and rarely the scalp: little red spots appear,—generally more or less grouped,—they have been described as resembling flea-bites, which quickly become papular, or, rather, upon the red spot little red elevations appear, which in the course of a few days become quasi-pustular, give exit to a little ichor, and then become covered over by dry and adherent scales. The skin around is dry and harsh. The disease now makes progress towards the formation of distinct tubercular elevations, and in two or three months the exact resemblance to a mulberry is produced: there is no pain, and successive crops of tubercles occur from time to time; so that the disease covers over a surface of variable extent. The little tubercular projec-

tions are united together at their base, and are free at the apex, and one of them becomes considerably more developed than the rest, so as to form a distinct projection like a nipple: this is called *mama*, or *mother-yaw*; it presently ulcerates, and then appears as a foul ulcer, giving exit to an offensive ichor. Various attempts at repair take place, as evidenced by the many cicatrices present. The disease may last for years; it is said to be inoculable by means of the ichorous discharge: it often gets well, but may exhaust the patient. It occurs but once in a lifetime, attacks young people by preference, and seems to be produced by social and hygienic mal-conditions identical with those of leprosy. It attacks black more than white people, and has no relation to syphilis. There are some few more unimportant diseases which seem to be engendered by physical deterioration brought about by the misery, want, and filth of many foreign countries. The chief feature of these diseases is the presence of tubercles, which give rise to ulceration. In Lombardy there is the *pellagra* (unhealthy skin), or Italian leprosy; the *morbus Tauricus*, or *lepra Astrachanica*, and the *Aleppo evil*. The *Radesyge*, or Norwegian leprosy, or *Speldaskhed*, occurring in Faroe, Iceland, Norway, the western coasts from Stavanger to Stromsoe, and Bergen to Romsdal, has been described. It is the ordinary elephantiasis of Drs. Danielssen and Boëck. Lastly, there is the disease called "*Ngerengere*," *lepra gangrænosa* (Thomson); dry gangrene (Johnson) of the New Zealanders.

The *Morbus Tauricus* is tubercular leprosy; it is called "*black disease*" in consequence of the dark aspect assumed by the swelling. The peasants attacked by it live very badly, eat stinking fish and the like.

The Aleppo Evil, Bouton d'Alep, or Bouton of Biskra.—It runs the course of yaws very much. It is endemic at Bagdad, on the banks of the Tigris and Euphrates, and at Aleppo. It attacks all parts of the body, but especially the

face of natives. It is characterized by the formation of tubercles, which ulcerate and leave indelible cicatrices behind. It has a varying duration, averaging between a year and half a lifetime. There are two kinds of disease: that in which the tubercle is single is called the *male*; and the female, in which the buttons are multiple. Generally speaking, several chief are surrounded by smaller and subordinate tubercles. The disease has been divided into three periods of evolution:—

1. That of eruption. General symptoms *nil*; little lenticular prominences make their appearance, without any local discomfort; in two or three months, when these have increased in size, they are attacked with pain, and the stage of—

2. Suppuration is reached: the ulcers get covered by scabs; they vary in size from a quarter to two or three inches; they are not very deep, but are irregular, with a red surface, which is ragged, and gives exit to a thinnish yellow pus, sometimes pretty clear. In six months or so the period of—

3. Desiccation is reached. A certain time elapses, and then the ulcer heals, leaving behind a cicatrix.

The Causes of Disease.—It is not contagious. It is said an inhabitant scarcely reaches the tenth year without being attacked; no social position, no age or sex, exempts from its attack. Strangers have it after a fair sojourn, but then the face generally escapes. It is said that the use of bad drinking-water is an efficient cause. Bouchardat (see *Med. Times and Gazette*, Feb. 14, 1863) notices the assertion that those who use the water from the Coïck for a lengthened time become diseased, others being free. It is alkaline, and “contains the salines usually found in drinking-water, as well as organic matter, which latter is no doubt the cause of the evil.” The bouton of Biskra, which is, no doubt, the same as the Aleppo evil, is also ascribed, as regards causation,

to the use of the water of a torrent which runs from a plain where more than 100,000 palm-trees in a state of decomposition are accumulated. The only thing in treatment which has seemed to be of any use is the application of the actual cautery before suppuration sets in.

Ngerengere of the New Zealanders has been described by Dr. Thomson (*Brit. and For. Med. Chir. Review*, April, 1854) as an ally of elephantiasis. It "commences with a cutaneous eruption on the extremities, which extends over the trunk of the body. The eruption presents in some parts the oval patches and the copious exfoliation of a brown scaly morbid cuticle observed in *lepra vulgaris* (?); the irregular patches of psoriasis, and occasionally the innumerable fissures, the elongated and extensive cracks intersecting each other, of ichthyosis." There is frequently severe pruritus. The aspect of the disease is chronic, with a capricious course; the hair is gradually lost from the eyebrows, eyelashes, whiskers, beard,—not the head, axillæ, nor pubis, however. "The tatoo-marks are not affected." The mucous surfaces suffer, the voice alters, the eye becomes inflamed, the general surface livid; "the face, nose, lips, forehead, eyebrows, become swollen and shining; but there are no tubercular deposits in them;" the skin is *not* anæsthetic to any degree. In about a year the distal bones of the extremities (fingers and toes) are removed one by one by molecular or interstitial absorption; "a small boil or blister, or dry crack, appears in the direction of the flexures . . . the soft parts ulcerate by a dry process; the phalanx falls off, and the part heals." This is repeated year by year, the fingers generally being "dry, shining, and scabby-like." Death ends the scene before the wrist is reached, by diarrhœa, bronchitis, &c. The general health is not materially affected in the early stages. The disease attacks people under thirty years of age, generally after twenty; and the great majority (five out of six) are males. It may attack several of the same family.

The fingers are affected to a greater degree than the toes : its duration ranges between five and eight years. Dr. Thomson observes, that the subjects attacked are mostly strumous, certainly not syphilitic.

A similar disease has been described as existing at Jamaica, under the name of Cacubay, and is marked by the presence of white spots (*morphæa*) near the ends of the extremities, which ulcerate; the bones are lost by a process of *quasi-necrosis*; the sore heals up until a return again occurs. Dr. Thomson remarks that there is no elephantiasis Arabica (*buenemia*) in New Zealand.

The causes of Ngerengere are summed up as follows:—
(1) Hot sulphurous and silicious springs near the lakes,—*e. g.*, Roturna; (2) the eating of the karaka berry (about double the size of an acorn), possessing an apricot flavour, and belonging to the nat. ord. Laurineæ, and botanically known as the *Corynocarpus laerrigata*; but there is this significant addition, that some of the diseased have never partaken of it; (3) poor food, want of cleanliness, and inactivity of mind.

PELLAGRA, OR ITALIAN LEPROSY,—ELEPHANTIASIS ITALICA.

A very good summary has been given by Dr. Gintrac in a thesis entitled “De la Pellagre dans le Département de la Gironde,” Bordeaux, 1863, pp. 43. It is common in Lombardy, about Venetia, in Piedmont, south of France, and in some parts of Spain. It attacks the poorer population, and it has been calculated in about four or five per cent. of the population in the districts where it is most prevalent. Now, the disease is really a peculiar diathesis, as in leprosy, and external manifestations are symptomatic only of the change in the system at large. The symptoms arrange themselves into three groups. The first consists of certain changes in the skin, of erythematous type, followed by (2) signs of diminished general power and failure of nutrition, and (3) cerebro-spinal symptoms.

The eruption makes its appearance on the exposed parts,—*e. g.*, the back of the hands, the outer part of the forearm, the forehead and sides of the face, the upper part of the chest and the feet, more or less, in the spring, and is supposed to be excited by the sun's rays. In the men who wear large straw hats the face is not so greatly affected, but the uncovered faces of the women suffer more. Red spots first appear, which quickly become dark and desquamate; the surface beneath the scaly covering is red, thickened, rough, and fissured; there may be pain; and little bullæ, it is said, may form, which die away and are replaced by bluish stains. At the same time general symptoms appear. The eruption subsides in the winter. In the ensuing spring the whole thing is exaggerated, from year to year; each year the intermittence is marked by the increasing permanence of the discoloration. The general symptoms of diminished power and nutrition commence co-existently with the eruptive manifestation (some say impaired digestion is an antecedent); the appetite is faulty, digestion is inactive, and diarrhœa troublesome. The cerebro-spinal symptoms are the result of inanition and the morbid blood-state (anæmia); headache, giddiness, impairment of special senses, cramps, convulsive movements, loss of muscular power, are amongst the early ones. In the later stages these different symptoms intensify *pari passu*. The patient emaciates; phthisis or anasarca sets in; the skin is dirty, unhealthy, "callous;" delirium, mania (suicidal, it is said), melancholy, epilepsy, idiocy, and hebetude, have each its victims. A typhoid condition is the necessary result, and death ends the scene. It has an average duration in fatal cases of five years.

Etiology of the Disease.—Now, much has been done of late to place us in a position for forming a good estimate of the character of the disease. It appears that in about 90 per cent. the pellagrous are poor peasants, about 7 artisans, and 3 following other occupations.

Opinion differs as to the influence of hereditary tendency,

because each member of a family is generally placed under exactly similar circumstances,—those very ones which probably engender the disease. Calderini noticed in 184 families (comprising 1,319 members), inheriting predisposition, 648 were diseased, 671 healthy. It has been said to be the result of insanity, especially insisted upon by Billod. It has been calculated that about 9 per cent. have distinct mental affections (Peacock). Dr. Landouzy determined this question by a special journey through Spain. He visited 44 asylums, in which were 22,873 lunatics, and of these only 73 were pellagrous. Pellagra, says Dr. Landouzy, in asylums is only a matter “of general hygiene and alimentation.” During the five years ending 1861, only 310 cases of pellagrous patients have been admitted into the San Servolo at Venice,—82 maniacal, 2 monomaniacal, 95 melancholic, and 130 demented.

The disease is not contagious. It has been suggested again that it is due to the use of maize as food by the people; but in Southern Italy, Sardinia, and Burgundy, the people are not pellagrous, though they use maize largely. In India rice is employed to the same extent. It has been said that the true cause is a diseased state of the maize, for in Northern Italy, after wet and unhealthy seasons, the grain is attacked by a fungus, the *Sporisorium maidis*; the maize undergoes some action, by the onset of the parasite, if it be not properly dried. It may be so, but there can be no question that, at any rate, part of the causation is brought about by the poverty, misery, bad hygiene, malarious atmosphere, the character of the food and water, and the uncleanly habits; for these must *deteriorate* the general health; and then there is the exposure to the sun and the dry atmosphere of the summer time. Pellagra is the bane of the peasant, not the wealthy man. Unhealthy seasons affect man as much as the vegetable world; and the diseased maize, if it be not the efficient cause, is a certain index that the health of the population is being antagonized by external conditions.

The Morbid Anatomy.—The brain is occasionally atrophied, the arachnoid opaque, the spinal cord congested, and serosity effused around it; the liver is fatty, the lungs congested, the tissues generally anæmic.

Prognosis.—The rate of mortality varies very much in different parts: 3·43 per cent. in Mantua, but 47·85 in Sondrio. The frequency also bears a comparative relation: in Brescia, 34 per 1,000; in Sondrio ·03 per 1,000. Dr. Peacock (*Med. Chir. Review*, Jan., 1863) gave these and other statistics. In some 40,000 cases, 78 per cent. were cured, 15 per cent. were not cured, 9 per cent. had mental derangements, ·03 per cent. committed suicide, and 7 died naturally.

Treatment is purely hygienic and preventive.

I have given an account of leprosy and its allies, with the special object of calling the student's attention to the mode in which changes of the skin are brought about. It has become the custom very much of late to look upon skin diseases as local in origin and cause, and some have gone so far as to say that the blood condition has little to do with the matter, but that the nerve power and structure is primarily at fault. If we read aright the history of the diseases which have just been glanced at, we see that the state of nutrition has vast influence; we find that the very circumstances of every-day life are those which, acting directly on the blood-state, induce serious mischief. When the body has been subjected to the influence of bad living, bad dwellings, bad air, uncleanly habits, the blood deteriorates, the tissues are badly nutritioned, and the skin, in consequence of its exposure, is one of the first organs to suffer. We know also that the nervous system has the least resistant power of any, and is affected sooner, perhaps, than any other part. We see it markedly in starvation. Inanition is certainly induced by the hygiene, &c., surrounding patients attacked by the disease to which these remarks refer; hence its early implication

in them. There is a significant experiment of Brown-Sequard on record, who found that those animals only exhibited sloughing, after section of nerves, who had run about on the hard, cold, paved floor, dragging after them the insensible and weakened members. If this experiment teaches anything, it certainly teaches this; that when the nerve influence is lowered in quality and quantity, as in the ill-conditioned subjects of leprosy or any like disease (in elephantiasis the nerve-trunks are diseased), external influences are almost sure to produce marked disease. It is so in pellagra, for instance. The sun's rays act upon the pellagrous, in consequence of his state of nutrition; in others producing slighter forms, if they act at all hurtfully. So it is in yaws: the hands and feet suffer from pressure; and in other instances, in which great manual labour is exercised, disease is determined, and called forth in the place of pressure. This principle must be recognized throughout the whole range of skin diseases. The healthy subject can resist ordinary external influences,—the diseased cannot; and this diseased condition is brought about by agencies which are under our control in great measure. Herein we recognize the great lesson of the day,—that much of the disease, and especially that of the cutaneous system, is preventible.

This is eminently a would-be sanitary age; but it is probable that skin diseases are much upon the increase. The general causes of skin diseases are such as induce a deterioration in the community. In the class of disease now under notice, the action of humid and hot atmosphere, the badly-constructed dwellings, their objectionable light, bad water, bad food, bad drainage, malaria, overcrowding, bad ventilation, uncleanness, mental and bodily torpor, and the like, are at work. Civilization, as a sanitary agent, corrects these undesirable states in great measure; but, as inducing a fast mode of life, overcrowding, mental labour, and want, in the struggle of competition, it makes enormous demands upon the sanitarian, and is to some extent a decided con-

queror. It is not the use of any particular kind of food—the diseased maize, the stinking fish, the rancid oil—that can be regarded as the *causa vera*, but the general hygienic conditions under which the attacked live. What the exact causation is which determines the diseased changes in the skin is another point; but the clue to this is well seen in the case of pellagra. The principle which has been glanced at is also applicable to ordinary diseases. The eczema, to my mind, is not a local affair; it is an index of some profound change in the blood at large, which time alone will unfold to us. In ichthyosis, in lichen, in prurigo, is there not a distinct recognizable mal-nutrition,—a physical deterioration, independently of the diagnostic local change? We are taught distinctly, plainly, that the *prevention* of skin diseases is to be accomplished in great degree, and that the cure is not only a matter of actual medicine, but of hygiene. The state of the patient in his whole mode of life, and the appreciation of his general nutritive condition, are points of prime moment,—points which the specialist, in the ordinary sense of the word, cannot appreciate; and the successful man is he who, though dermatologist by name, is, in addition, the practical physician.

KELOID.

KELOID is a rare but interesting disease, and was described by Alibert under the term Cancroide, from its supposed resemblance to cancer. This, however, is not the case; it is a chronic disease, rarely ulcerating, not implicating the glands, and not destructive to life. The name keloid was given it from its supposed resemblance to a crawfish; some say from its scar-like aspect; others because it has some similitude to the tortoise. It is characterized by the presence of a swelling, out of which arises a peculiar indurated slightly elevated flat tumour, of a varied—generally oval—shape, palish

or deep rose in colour, and shining; the central parts generally become depressed, and processes (claw-like) run away from the edge of the patch into the surrounding part. It is usual to describe two forms,—the keloid of cicatrices, developed in old scars, burns, wounds, &c., and the true keloid, or kelis, a form of disease which is primary, and very frequently possesses many distinct localities of disease (several spots at once). There can be no question that many different things have been mixed up with keloid.

The keloid of cicatrices begins as “very hard, small, shining, tubercular-looking elevations, of a roundish or oval shape, somewhat firmly set, of a dusky or deep-red colour, and generally attended with itching and pricking, shooting or dragging pains in the part.” These tubercles increase in size and grow pale, flatten out and become depressed in their centre, which is marked by white traversing lines or bands, and a few straggling vessels. The increase takes place by means of offshooting lines, which run away from the edge of the tumour, claw-like processes; they are $\frac{1}{2}$ to 1 line broad by $1\frac{1}{4}$ to 1 inch long: the growth is slow (so Dr. Addison described it).

Dr. Longmore describes it thus, in a case which occurred after flogging:—A small round tubercle, which became a flat mass nearly as large as a man’s hand, without pain; there was some irritability, and it was tender where pressed upon by the cross-belt and the weight of the knapsack: on the front of the chest several small tumours, evidently of the same nature, were observed. So that we get in this form a result which is admirably described in the *Med. Times and Gazette*, Aug. 25, 1859, in the case of keloid following a burn, under Mr. Curling’s care, as follows:—“The whole has assumed a keloid state; it is thick, bossy, indurated, looking remarkably as if very luxuriant and elevated granulations had healed over, and then, instead of shrinking, had undergone consolidation and some increase.” As Mr. Wilson has it, “false kelis appears to be the joint result of hyper-

trophy, condensation, and concentration of the white fibrous tissue of the skin, and by a special power of contraction would seem to draw the rest of the cicatrix to itself, and produce a puckering of the adjacent surface."

The true keloid, or kelis, presents the characters very much of morphæa alba. No words can tell the tale better than the following of Dr. Alderson (*Med. Chir. Trans.*, vol. xxxvii.). They relate to the case of a young woman aged 20, whose left breast was affected at the upper part to the extent of 4 inches in length by $1\frac{1}{4}$ inch broad; it was "a perfectly smooth polished surface, of an opaque yellowish-white colour, like polished vellum or ivory; the margin of the diseased portion was defined by a strongly-marked border of injected vessels, but on the polished surface no vascularity could be perceived; there was no exudation whatever on any part of the breast, no crust, no scurf of any kind." A patch subsequently appeared on the left arm, several on the thigh, exhibiting the ivory surface with the same vascular margin (morphæa alba); but in this variety the changes are deeper, the hardness extends, it travels claw-like along the surface, but with greater preference along the fascia and fibrous structures beneath; the part becomes contracted, and movements are interfered with. There is pain; the skin puckers, is parchment-like; fresh spots appear on different parts of the body. In the *Lancet*, 1855, vol. i. p. 239, a case is noted as presenting "the indurated and cicatrix-looking condition of the left arm and forearm peculiar to the disease; the appearance is not that of a tumour, but rather as if the arm had been burnt and had left a leather-like hardness which required surgical operation, as after a burn, to remove it, or it seems as if a bad erysipelas had become turned into cartilage and bone."

There is yet another phase of kelis. It was Dr. Budd, I think, who gave the name of scleroma to the form of fibrous degeneration, in which the parts attacked become hard, shrivelled, white, shining, parchment-like, and produce con-

traction, when the patient is said to be "*hide-bound*." It is seen on the face and breast, especially of females.

In infants, again, it is sometimes pretty general, occurring about the hips, thighs, back, buttocks, and elbows. Dr. Henderson describes a case in *Med. Times and Gazette*, July 4, 1860. It has been supposed to be produced by atelectasis pulmonum, and called sclerosis. In adults it occurs at almost any age, and is preceded by rheumatic symptoms (Arning). It has been noticed that when the body is affected largely, the sensibility and temperature are lowered.

Dr. Auspitz (*Wien. Med. Wochenschr.* No. 478, 1863, and *Gaz. Hebdom. de Méd. et Chir.*, No. 14, Avril 1, 1864) describes the scleroma of an adult. The patient had ague, and then the skin became dry, brown, and tense. The sensibility, as tested by Weber's instrument, was diminished on the arms, nucha, and chest, where the most tension existed. The organs were apparently healthy. This was in November, 1862: the following March, Bright's disease came on, and the patient died of uræmia the twentieth day. At the *post mortem* there were old bronchitic changes, hypertrophy, and amyloid change in the left side of the heart; the spleen was enlarged, the kidneys were fatty, the suprarenal capsules healthy. As to the skin, the epidermis was normal; there was pigment-deposit in the rete mucosum; the papillæ were filled with connective tissue corpuscles; the areolar tissue was hypertrophied both in and beneath the derma; the fat was scanty; the vessels were normal; pigment was scattered throughout the derma, especially near the vessels; the glands were normal. The pigment deposit was supposed to be due to obstructed circulation by the effusion. It is an interesting and uncommon feature rather.

I ought to mention that in some syphilitic subjects a kind of compromise between keloid and scleroma is seen: it is called syphilitic keloid (*Guy's Hosp. Rep.*, vol. vii. 1861).

Circumscribed atrophy is described by Dr. Reuss,—it is the *morphæa alba* only. The centre is white, hard, depressed,

anæsthetic. Linear atrophy is another name, applicable to a special variety, when it occurs in streaks (see *Guy's Hosp. Reports*, 3rd series, vol. vii. p. 189). Its secondary kind is that produced by over-distension, as in pregnancy, ovarian disease, &c. I refer now to the primary form of disease.

Dr. Hugo Fiedler called it atrophy of the cellular tissue of the skin; Fuchs calls it "cutis tensa." It is described by Dr. M'Donnell, in *Dub. Hosp. Gazette*, Nov. 1, 1856, under the head of scleroma or pachydermatous disease.

Now in scleroma, or sclerosis, the tendency is towards atrophy, though to condensation also of tissue; but there is an opposite condition, in which the cellular tissue is not only hypertrophied but in a lax condition: there is the opposite of condensation. It is described by Valentine Mott, in the *Med. Chir. Trans.*, vol. xxxvii. He states it to be congenital. The integuments feel flabby, relaxed; the hypertrophic growth of the cellular tissue (proved by microscopic examination) arranges itself in layers like the turns of a tippet; there is little vascularity; the sensibility is diminished, and after excision the disease may return. Is it analogous to the annular collar-like growth described by Mr. Furneux Jordan, about the ankle? I have seen it from a complete collar around the root of the neck, and also the whole leg affected, as in a most interesting case, which Mr. Adams has at the Orthopædic Hospital, in which the whole leg is hypertrophied, especially the cellular tissue; and in addition, large growths of cellular tissue, which feel lax and soft, about different parts of the body.

Morbid Anatomy of Keloid and Kelis.—A section of the morbid structures presents a whitish aspect, an induration and thickening of the derma itself,—its connective tissue. From careful observation, the disease is so well defined that it appears to be separated by a sort of capsule from the healthy structures. On minuter examination, the growth itself is found to be tolerably homogeneous, and made up of

closely-packed fibres with many nuclei, but few vessels. The fibres of the areolar tissue do not "constitute curly bundles but thick trunks, the firmly-compressed fibres of which run at first in an almost straight direction, gradually separate from one another, and finally fall into several distinct bundles, which vibrating in curls, after repeated subdivision, are at last in nothing distinguishable from normal areolar tissue:" the trunks are closely compressed and interlace. "The tumour is supposed to be formed by a few vessels passing through a capsule of areolar tissue, supplying the plasma from which the fibres are developed." (Dr. Benjamin, *Virch. Archiv*, Bd. viii. Ht. 4, 1858; Ranking, vol. xxiv. 1856.)

In sclerema, Förster found much the same changes, but there was an absence of fat, and the hairs, glands, and vessels were normal, but the nerves few and minute. Dr. Addison quotes Dieburg's observations in reference to keloid. This observer states that the section of the tumour is dull white, densely fibrous, creaks when cut, without the expression of a fluid, except in rare cases. He detected—(1) some roundish bodies .05 mm. (largest), containing nuclei and free molecules; (2) elongated cells, rounded at both ends but bulging in their centre, .01 m. long by .06 m. containing nuclei: these are the elliptical bodies of Follin, and are said to be characteristic; (3) the same elongated cells, split up at the ends into long wavy appendages; (4) fibres of cellular tissue and elastic fibre. It appears that the fibres are developed out of the spindle-shaped cells.

The essence of the disease appears to be an hypertrophic growth of the fibro-cellular element, the latter, however, possessing the special property of condensation, and subsequent atrophy; though atrophy does not seem to be present to such a degree as one would expect—it is rather *condensation* than atrophy, which produces the sclerotic aspect. We notice that loss of sensibility occurs in many cases, always if the disease be severe; again, patches closely resembling—indeed, identical with—*morphæa alba*, are chief amongst the

features of keloid; again, deformity is very frequent about the face; and lastly, Förster's observations seem to show that though most structures are intact, the nerves are in a condition of wasting: they are minute, and few and far between.

These features certainly confirm the opinion of Dr. Carter, that kelis is a form of leprosy; at least, they show a close analogy; and as in leprosy there is a tubercular and an anæsthetic form, so in kelis there is a form in which the hypertrophic growth is the special feature, as in keloid of cicatrices, and pachydermatocele; and another in which anæsthesia and wasting "sclerosis," circumscribed and linear atrophy, &c., are peculiarly marked — an analogy which also hints at the relation of kelis and elephantiasis. The cause, then, of kelis appears to be a special diathesis similar to, if not a modified phase of, that of elephantiasis.

It is most common in the female sex, is a disease of early and adult life, and may arise spontaneously or be excited by a blow, a kick, the cicatrix of a burn, by flogging and the like. It is said children are never attacked. Mr. Sedgwick, in the *Path. Trans.*, vol. xii. p. 234, records a case in a female child aged $4\frac{1}{2}$ years.

Diagnosis.—The elevated tuberculous tumour with the claw-like processes, the puckered state of the skin, the absence of ill-health, glandular enlargement and ulceration, are diagnostic. In regard to the treatment, nothing is known; excision is useless; the other thing to be done is to improve the general health and to use locally mild absorbents in the shape of iodine preparations.

EPITHELIOMA.

Epithelial cancer affects the lower lip chiefly, also the scrotum (chimney-sweepers' cancer), the vulva, the prepuce, the glands of the groin, and rarely the anus. The first thing noticed is an induration (subcutaneous) of the part,—say the lip: it is flattish, hard, and tender to some extent;

it increases in size, so that the lip "pouts;" its surface may be somewhat pale or dusky, and it soon becomes slightly moist; at other times it is covered by a dryish scab, or an attempt is made at "papillation;" it may be also fissured; the tissues around become more or less indurated, though they do not exhibit any evidence of the change upon the surface; ulceration now sets in in the shape of a little central excoriation or abrasion, and this runs on to distinct loss of substance until an ulcer is produced, which has an eaten-out appearance: it is roundish, and bounded by hard indurated sinuous edges, which in an advanced stage are everted and undermined, in consequence of the extension of morbid action; the base of the ulcer is dirty or greyish, papillated more or less; it may be reddish and inclined to discharge a thin fluid, or be disposed to scab over at times. In scrotal cancers the development of the papillæ is peculiarly marked. It commences as a small pimple or nodule, or warty excrescence, which remains in a quiescent state without undergoing much change for some little time; it then becomes irritable, red, tender, excoriated, and gives exit to a slight moisture, perhaps slightly scabbed over; the moisture increases, sometimes to such a degree that it is "a thin acriminous ichor, which excoriates the surrounding skin." Very often other nodules appear and coalesce with the primary ones; ulceration now sets in in reality, "the edges of the ulcer become everted, and throw out a luxuriant growth with scirrhous hardness, which discharges a very fœtid, irritating matter. The progress of the disease is accompanied by the development of the papillæ, so that by-and-by, very early sometimes, the disease looks like a "fungous cauliflower excrescence;" and this sprouting ulceration extends deeply into the tissue after awhile.

On section, in an early stage, the mass looks of a greyish aspect, tinged occasionally with yellow: at the circumference, the boundary of the disease is well defined; there appears to be no stroma, or at least the stroma is formed by

the tissues of the part; but the papillæ, when enlarged, may give an aspect of the kind; but beneath the papillary layer the surface is uniform, grey, and shining, close-textured; generally, it yields a slightly milky juice, and sometimes a semi-fluid cheesy material may be scraped off the mass. In speaking of a diseased gland from beneath the jaw, which Mr. Paget examined, Mr. Hutchinson observes, "Its cut surface presented a nearly uniform greyish substance with a diffused tinge of ochre-yellow here and there, with no trace of granular or fibrous structure; it was all compact, smooth, shining. It yielded on scraping a yellowish, putrid, gruel-like thick fluid." In the ulcers, the papillary layer is made up especially of the cancerous elements, and the ordinary appearance above described is visible beneath.

The microscopic characters of epithelial cancer are as follows, briefly after Paget:—(a) Epithelial cancer-cells; nucleated, flattened, thin, round, or ovalish, seldom regular, outline linear or angular, and with processes, with granules clustering around the nucleus; exhibiting occasionally nucleoli, generally granules; the cell ranges in size from $\frac{1}{2000}$ to $\frac{1}{2000}$ inch, the nucleus on an average is $\frac{1}{3500}$ inch in size; (b) nuclei about $\frac{1}{3000}$ inch, free or imbedded in a homogeneous blastema; (c) brood or mother-cells, containing a varying number of nuclei in different degrees of development; the brood-cell is said to present a concentric arrangement, this being brought about by the continuous enlargement of the nucleus until its outer wall comes into contact with that of the parent cell; (d) what are called globes épidermiques or laminated epithelial capsules, said to be diagnostic: they vary in size from $\frac{1}{100}$ to $\frac{1}{800}$ inch; they are produced by the aggregation of successive layers of epithelial scales, curled one around the other like a ball; hence they look like fibrous tissue having a concentric arrangement: they contain granular matter, and nuclei are tolerably visible. Some say they are derived from the brood-cells, or by the aggregation of cells. All these elements are to be found in

the juice expressed from epithelial cancers. The disease tends after awhile to implicate the lymphatic glands; in 90 per cent. the disease attacks men, and in about 90 per cent. of cases the lower lip; the disease is not common till after 30, and its most usual time of occurrence is about the age of 60. The average duration of life in epithelial cancer is somewhere about four years, when it attacks the cutaneous surface.

The Diagnosis.—Epithelial cancer is likely to be confounded, when seated in the face, with lupus, syphilitic ulceration, rodent ulcer, and unhealthy sores about the mouth.

Its occurrence in late life, its seat at the lower lip, the papillary ulcer, with everted, hardened, undermined edges, and the implication of the glands, are guides which prevent our being misled as a general rule. In cancer, the "sore is attended by more induration than are syphilitic sores; it is usually single, while the latter are mostly multiple; it causes enlargement of the glands, which tertiary syphilitic affections rarely do." The history of the disease, the absence of the peculiar edges of the cancerous sore, the early age oftentimes of the patient, signs of syphilis elsewhere, and the seat away from the lower lip, will generally guide correctly. Lupus is a disease of young life, and can scarcely be mistaken for cancer. Rodent ulcer occurs between the ages of 50 and 60, but has never yet been seen to attack the lower lip; it occurs somewhere about the upper part of the face, it is slow in progress, has no tendency to affect the glands, possesses no everted and undermined edges; its surface is not foul, papillary, but clean, and does not give exit to any ichor. It contains no epithelial elements, but is simply fibrous degeneration.

The *Treatment* of epithelial cancer is summed up in one word—removal, and the employment of a thoroughly tonic plan of general treatment.

RODENT ULCER.

RODENT ULCER has been called cancerous ulcer of the face, cancrioid ulcer, *ulcus exedens*, *noli me tangere*. It has been confounded with cancer and lupus; it is essentially a fibroid ulcer. We are indebted to Dr. Jacob, of Dublin, for the first correct description of it. Sir Benjamin Brodie, in reference to it, in his "Lectures on Pathology and Surgery," p. 333, says,—“A man has a soft tubercle upon the face covered by a smooth skin; he may call it a wart, but it is quite a different thing. On cutting into it, you find it consists of a brown solid substance, not very highly organized. A tumour of this kind may remain on the face unaltered for years, and then, when the patient gets old, it may begin to ulcerate. The ulcer spreads slowly but constantly, and if it be left alone it may destroy the whole of the cheek, the bones of the face, and ultimately the patient's life; but it may take some years to run this course. So far, these tumours in the face and these ulcers are to be considered malignant. Nevertheless, they are not like fungus hæmatodes or cancer, and for this reason, that the disease is entirely local. It does not affect the lymphatic glands, nor do similar tumours appear on other parts of the body.” The disease usually attacks some part near the eyelids; it is of slow progress; there is little pain. When an ulcer forms, the edge is indurated and raised, but not undermined and everted; the surface is dry, clean, glossy, and does not discharge any foul secretion; in some instances the surface of the ulcer may present a granulating surface; it is irregular in form, more or less oval however. Mr. Paget says it is not warty nor granulated, and there is no upgrowth as in cancer; but the surface is dry and glossy, dull red, the border being slightly elevated, not everted or undermined much, round, and there is no infiltration of the surrounding healthy structures. If a section be made, it is firm, pale grey, and fibrous. Mr. Cæsar Hawkins,

in a clinical lecture (*Med. Gazette*, 1842), remarks, it differs from the ordinary progress of cancer by its greater slowness, exists 20 or 30 years without derangement of the health; there is little pain, little hæmorrhage, no attempt at the formation of a fungoid growth, no fœtor, and the glands are not affected. To Mr. Jonathan Hutchinson we are indebted for a complete summary of all that is known of the disease, in the *Med. Times and Gazette* for July 18, 1860, *et seq.*, according to whom the microscopic characters are as follows: An excessive growth of the fibro-cellular structure, well defined, firm, and greyish, mingled with fatty tissue, free fat, epidermic structures, exudation-cells, some of which are flattened and curled together somewhat similar to the globes épidermiques of epithelial cancer. Mr. Paget states that none of the cancer elements are present. The commencement of the disease in Mr. Hutchinson's collected cases is variously described as "a dark pimple on the tip of the nose ten years ago,"—"a small wart-like pimple which bled occasionally,"—like "a little blind boil,"—a "small, hard, pale tubercle,"—"induration the size of a pea,"—"a little long cut," &c. And to show the progress and aspect of the disease, Case II. may be quoted. Mr. H. says, "During a period of seven years the ulcer had never been soundly healed, yet no glands have ever enlarged. There is no extension of morbid deposit beyond the base and margin of the ulcer itself. There has been no tendency whatever to fungating or warty growth, and the sore has remained throughout almost clean. The woman has had little or no pain, and is still in good health," &c. Mr. Hutchinson ends his account with some thirteen aphorisms, some of the chief points of which are as follows:—

Rodent ulcer occurs on the face, has an indurated edge, a tendency to spread without respect to kind of tissue, is of slow progress, painless, is not related to any cachexia, never causes enlargement of glands, and microscopically is seen to be "fibrous degeneration;" it is allied to cancer, being probably the least expressed form of the cancerous cachexia. It

is most common between 50 and 60, does not occur before 30; generally about the eyelids of either sex equally, never attacking the lower lip.

Diagnosis.—"An ulcer with hard sinuous edges, situated on some part of the skin of the upper two-thirds of the face, of several or perhaps many years' duration, almost painless, and occurring in a middle-aged or elderly person of fair health and with enlarged glands—such a sore is almost certain to be of the rodent type."—(Hutchinson.)

Lupus occurs before the age of 30, *de novo*, never after middle life, often gets well spontaneously: rodent ulcer never does. Lupus always tends more or less to healing and cicatrization, rodent ulcer never does. The edge of the lupus is never indurated as in rodent ulcer; it has an inflamed aspect also, and is generally confined to the cutaneous structures. The edge of the rodent ulcer is very hard, smooth, rounded, and non-inflammatory. Cancer occurs generally about the lower lip, rodent ulcer never does; in cancer the glands are enlarged, the general health is bad, the ulcer is moist, gives out an offensive ichor, is warty more or less, its edges are everted and undermined, and the parts around are infiltrated by cancerous materials, and it is of more rapid progress.

The prognosis and treatment are linked together. If the disease be excised, the patient will get well, and then only, and by no other means.

LUPUS,

Called Herpes exedens, Esthiomène, Lupus vorax, is characterized as a scrofulous inflammation of the skin, in which erythematous patches of a dull-red colour appear, and upon these arise tubercles, which are hardish, small, circumscribed, possessing a tendency to multiply, ulcerate, crust over, and then heal more or less, leaving behind, in process of cure, indelible cicatrices. There are three chief forms,—Erythematous (L. erythematodes); the Ulcerating

(*L. exedens*); and the Non-ulcerating (*L. non-exedens*); to which may be added, in deference to the French, a lupus with hypertrophy (*L. hypertrophica*), described originally by Biett. These forms are degrees of one and the same thing. The general health is often apparently good, and the disease *seems* to be local: as Dr. Jones remarks, "the peculiar tissue-change which ensues upon the inflammation is the essential thing." It has some unequivocal affinities with scrofulous caries of bone, scrofulous disease of the skin, and tuberculous ulceration of the lungs.

Erythematous Lupus (scrofulide érythémateuse of Hardy) consists of roundish patches of a deep-red colour and shining aspect, without elevation; indeed, the skin looks just as though it had wasted somewhat, or become dry and shrunk from being "seared;" the circumferential edge creeps over the healthy surface (erythema centrifugum of Biett), and the surface of the disease gets covered over with thin adherent scales, which on removal expose a dry yet raw-looking surface of gelatinous aspect, and this may bleed. The central part often cicatrizes, or is covered over by whitish scales; the disease now spreads from its boundary-edge, and it also may be scabbed over. The usual seat is the face; general symptoms are absent, and so is local pain. It may ulcerate. This is noticed when the subjects attacked are scrofulous, which is not always the case, at least to the appreciation of the physician. The disease attacks children, and especially those of the lower orders. There are various degrees of this erythematous form. It may be represented only by an erythema of dull-red colour and great obstinacy, but leaving behind a slight cicatrix. It is said this is mostly seen on the forehead. When it attacks the nose, there is more induration or elevation of the patch, and the loss of substance is somewhat greater; the skin is "thin, smooth, shining;" lastly, this form may be somewhat modified by crusting, the scales being large and the cicatrix deeper.

Lupus non-exedens has as its basis the form first described ; but, in addition, little nodular elevations, which are softish, round, of a dull-red colour, often quasi-gelatinous-looking, stud the part, and by their aggregation or even fusion form a patch of greater or less extent, generally of circular or serpentine form : these are covered at first by little scales, presently quasi-scabs. It is seen in the face, especially about the nose, the lips, and chin. The central part of the patch may clear and cicatrize, being accompanied by an absorptive process without true ulceration. The outer part is tubercular, the skin is often tense and puckered. If the scales be removed from any portion, the part beneath is red, dry, shining, or even raw ; the upper layer next the cuticle presents an appearance which has been termed "cornified : " it is of transparent glue aspect. The process of healing is always attended by more or less loss of substance and sensibility ; the cicatrix is below the level of the adjacent surface. This form is not unusually associated with the erythematous variety, and may be coexistent with ulceration of the mucous surfaces near. The loss of substance is rather by interstitial absorption than ulceration, as before observed ; in some instances there is a general hypertrophy of the skin, with cicatrization. This is Bielt's lupus with hypertrophy.

Lupus exedens.—Ulceration is marked in this species of lupus. It commences in the usual manner, and then ulceration quickly sets in. The tubercles in this variety are harder, and lack the transparency of those in *L. non-exedens*. This form may be superficial and extensive, or, on the other hand, deep and circumscribed.

In the first case there is the usual attempt at repair, especially by scabbing ; but the ulceration is active and marked : hence, though the surface crusts over, the loss of substance is decided, and there is a thin ichor poured out by the diseased surface. In the second case the ulceration eats deeply into the tissues, the surface is "mammillated," red,

quasi-gelatinous, ragged, covered by a whitish exudation, and the edges are thick and red. Cicatrization may here, and generally does, take place to some extent. The nose, its mucous membrane, bones, and, indeed, the whole organ, may be rapidly lost. In the cicatrix we see white bands of condensed tissue running in all directions. The disease is very chronic, and is accompanied by some local heat and tenderness.

The peculiar destruction of tissue affects all the structures; the glands and hair-forming apparatus are destroyed.

Mr. Hugier (*Mémoire de l'Acad. Imp. de Méd.*, vol. xiv. p. 501) has described the disease as attacking the vulva. It presents the grades that we notice when the disease attacks the face, and occurs between the ages of 20 and 50. On microscopic examination, there are found—(a) an epithelial layer made of cells exactly resembling epidermic cells; (b) “nucleated pisiform bodies,” together with epithelial cells and fibro-cellular tissue; and (c) looser filamentous tissue, nucleated fibres and vessels.—(Hutchinson, *Medical Times and Gazette*, Oct. 20, 1860.)

Etiology.—It occurred, according to Mr. Wilson, in the better classes of society, in 24 out of 1,000 consecutive cases; of these 12 were instances of *L. non-exedens*; 7 of *L. erythematodes*; and 5 of the *exedens* form. It does not appear to be hereditary. It is said that it occurs in scrofulous subjects, and this is probably true. Devergie noticed that in 45 cases, 28 possessed the lymphatic and 12 a combined lymphatic and sanguineous temperament. It is more common in the country than in town, and rather more in the female than the male sex; 25 out of 47 cases were females. (Devergie.)

It is a rare disease after 35, not common after 30 years of age. It is most common between 15 and 25,—in 25 of 44 cases; between 15 and 35, 36 of 44 cases (Devergie); and it is said, more in winter than summer. Its selective seat is the face; in 41 of 44 cases this was the case; the nose only in 16

cases; the nose and other parts of the face together, 26 cases; the lips, 4 times, &c. It also affects the hands, arms, legs, &c. It is a disease of the poor rather than the rich. It is associated occasionally, according to Dr. Begbie, with phthisis.

Prognosis.—The erythematous and non-exedens forms are remediable, but require great assiduity and care. The other forms often lead to hideous deformity, and are intractable to a high degree.

Diagnosis.—Lupus occurs in young people, runs an indolent course without pain, is seated on the face, possesses slight scaly adherent crusts, and a gelatinous aspect; there is no true ulceration, the edge is dull red, inflammatory; there are attempts at repair in the shape of cicatrices; the glands are unaffected and the general health is not cachectic, often very good, though the patient be florid.

Cancer affects especially the lower lip; does not occur before 30; is painful; the ulcer possesses everted undermined edges; its surface is fungoid; there are no attempted cicatrices; the glands are diseased; there are no crusts over the ulcer, but an offensive discharge; the general health is bad. In syphilis the tubercles are larger, round, hard, and copper-coloured; have no great tendency to ulcerate; those of lupus are flatter, softer, and covered by thin scales. Syphilitic ulceration is foul, dirty, sloughy, and there is a copper-coloured areola; the edges are sharply cut and everted; in lupus, the edge is dull red, non-everted; the surface is not foul, &c., and the edges are rounded. Syphilis has also a special history and special concomitants.

Treatment.—We are taught to alter the nutrition of the patient, and to counteract the local mal-action.

The first indication is effected by carefully seeking out any signs of scrofula and treating those. Cod-liver oil is certainly the sheet-anchor in lupus, whenever the least trace of scrofula can be detected. It may be given in combina-

tion with iron, acids, and bitters, or iodide of iron. Mr. Wilson, in the erythematous variety, prefers Donovan's solution in doses of 8 or 12 or 10 drops, three times a day. In the severe form, if there be any history of syphilis, the bichloride of mercury and iodide of potassium are called for. Locally, in lupus erythematosus, absorbents are to be employed (iodide of sulphur ointment is the best), iodine paint (Tr. iodin. Co.) used freely, the nitric oxide, and ammoniochloride of mercury ointments; solution of nitrate of silver x.—xx. to ℥j., and tar ointment, are also serviceable. In the other forms of disease caustic applications are called for: various forms have been recommended. The arsenical paste, Dupuytren's powder, Vienna paste, acid nitrate of mercury, butter of antimony, are all efficient. The best is biniodide of mercury in glycerine, 15 gr. to ℥j. of the former to ℥j. of the latter: it should be applied lightly. The irritation which follows subsides in a few days, when the application must be repeated. When the diseased is being replaced by a healthy action, the milder absorbents should be made use of, and last of all emollients or slight stimulants, such as tinct. of benzoin. It is a good plan to apply collodion to healing lupus. All through the treatment we must place our patient under the influence of the best hygiene.

CHAPTER VIII.

MODIFICATIONS OF EXISTING STRUCTURES.

OF THE PAPILLARY LAYER OF THE SKIN.

THERE are four diseases which fall under this head ; but they require very brief notice. They are *Verrucæ* or warts, Clavus or corns, Callosities, and a state called by Mr. Wilson Pachulosis. In all, the papillæ of the skin are hypertrophied, often elongated so as to form permanent tumours, and the epithelial structures are likewise produced in greater than usual quantity.

Verrucæ, or warts, are little raised tumours, sessile or pedunculated, hard, generally round, rugose, and mammillated. They are made up of coherent and enlarged papillæ, containing each a loop of blood-vessels, and more or less nerve-tissue, especially at their base. The pedunculated warts, the so-called *achrochordon*, are really the emptied sacs of sebaceous glandular enlargements,—*e.g.*, molluscum. The sessile warts, or the true hypertrophous papillæ, are seen mostly on the hands in children ; they may be multiple, solitary, or aggregated in clusters. Warts are often the result of syphilis about the anus, vulva, penis, but may also arise from simple irritation. *Verruca necrogenica* is the name given by Dr. Wilks to the warty growths which occur on the back of the finger-joints of those who are much engaged in making post-mortem examinations. "They are brown circular raised patches of morbid epithelium, giving the appearance somewhat of epithelial cancer," and curiously enough, if removed, they grow again ; they are caused by the acidity of the fluids of the dead body. I have seen one or two very curious

examples of warts. One case was under the care of Mr. Dunn; on the little finger (at its outside) of a woman, was a mass of warts packed closely together, and forming a patch $1\frac{3}{4}$ inch long and $\frac{1}{2}$ inch in breadth; around the base was hard, elevated, reddened, something like lupus; it might be called *verruca granulata*.

The causes of warts are unknown; they appear sometimes to be contagious. The treatment consists in destroying the abnormal growth by caustics,—the acid nitrate of mercury, caustic potash, arsenical paste, perchloride of iron, or chromic acid; the best is potassa fusa.

Corns are simply a like condition to warts, only that the epithelium is peculiarly affected, and are brought about by pressure and friction; they are of three kinds,—laminated (tylosis), fibrous (clavus), and soft corns.—(Wilson.) The laminated are the ordinary, the fibrous the well-marked old-standing corns; the soft occur between the toes, and being saturated with the secretion of the part, are moist and soft; generally there is some serosity effused under the upper layers, and this is discharged from a little central aperture. Mr. Wilson gives the name of pachulosis to the thickened state of skin which follows the healing in elderly people of ulcers of the legs; the skin is harsh, thick, and dry, &c. The treatment of these minor affections need not be detailed. The papillæ of the skin may sometimes enlarge so extensively as to produce horns—this is uncommon, however; they are usually sebaceous in origin. In the *Edin. Med. Journal*, p. 420, Nov. 1859, is a paper by Mr. Edwards, on horns of this description. He says that the microscopical appearances denote them to be an hypertrophied condition of the papillæ, each containing one or more vessels and being covered by epidermis; on section they have a “granular texture pierced with small orifices, and when dry, numerous concentric cracks.” The orifices on further inquiry are in reality the sections of little blood-vessels; “a clear amber-coloured circular area surrounded each of the vessels, which were

separated by the general granular structure of the mass, incapable in the compact part of the horn of being reduced to its ultimate original elements." The structure appears to be best seen at the edge of the horn, where "the vessels are seen occupying the axis of the papillæ, which are indicated by the clear cylinder area surrounding the vessels, the limit of the clear cylinder appearing to be the basement membrane of the papillæ, and presenting on an oblique section a somewhat jagged outline. The central parts of the horn are more compact and less vascular than the outside."

I have seen several cases in which the individual papillæ of the skin, especially of the face, have become enlarged, their vascular part *pari passu*, yet not sufficiently in excess to make the disease, nævus; it was a general equable hypertrophy of the structures composing the papillæ.

ALTERATIONS OF THE VASCULAR SUPPLY.

Under this head are included nævi and varicose veins.

A nævus is simply an hypertrophied state of the vessels of the skin, and occupies a variable extent of surface, from little points to that of a whole limb or region. When the venous tissue predominates, they are called venous; when the arterial, arterial nævi. The colour varies according to the amount of blood present. They differ also in the depth of surface which they occupy: at times, they are very superficial; at other times more or less subcutaneous. When nævi are large, they feel very much like "a bag of small worms." Nævi may be associated with pigment-deposit, and may be covered more or less by hair. Some undergo little change, some disappear, some ulcerate and bleed, some steadily increase, either by the hypertrophy of old, or the formation of new tissue. The latter assume the aspect of what Dupuytren called erectile tumours; they are illustrated by the so-called mother's marks. As a rule, the smaller they are at the outset the greater is the likelihood of their rapid increase. Micro-

scopic examination shows that the coats, calibre, and radicles of the vessels are all increased and hypertrophied.

Treatment.—If small, leave them alone, unless they show a tendency to enlarge; if the latter be the case, apply nitric acid to the extending edge, and so destroy the patch by degrees. In some instances excision is the most easy and rapid mode of cure. When the nævus is extensive and venous, we may pass threads through various parts of the mass, leave them for 24 or 48 hours, till some slight irritation is set up; then remove them: so that the growth may be obliterated by inflammation. Or we may inject perchloride of iron; but the silk thread treatment is much the best. Hence nitric acid, excision, and the use of silk sutures are the chief means of cure. Pigmentary nævi are described under the head of Maculæ.

PURPURA.

For convenience sake, Purpura may be described in this place, inasmuch as the local changes are those which especially interest us in a dermatological point of view.

Purpura is supposed to be dependent upon a diseased state of the capillaries, and a depraved state of the blood as well (a deficiency in fibrine), by which its exosmosis is favoured. It is possible that a certain amount of obstruction to the passage of the blood through the capillaries (which favours the escape of the blood of course) is brought about by the altered relation between the blood and the tissues outside. The disease is characterized by the appearance of points of extravasated blood of different sizes,—very minute (stigmata), the size of flea-bites (petechiæ), rather large (vibices), or of some considerable area (blotches or ecchymoses); of livid colour, unaffected by pressure, accompanied with a tendency to hæmorrhage occasionally into and from the mucous surfaces. It occurs under conditions which we should imagine would lead to “fluidity of the blood,”—*e.g.*, after convalescence

from various fevers, especially such as are of a malignant type,—*e. g.*, typhus, typhoid, scurvy. The term purpura, is generally however applied to the idiopathic varieties of disease. Five varieties are generally described.

P. simplex,—spots small, non-confluent, circular, the size of a pea or less; of livid hue, or dull red presently becoming livid; occurs at night, on various parts, especially the legs and thighs, and arms; each spot lasts a week or more, and dies away like a bruise. They may be noticed on the mucous surfaces,—*e. g.*, conjunctivæ. There may be slight accompanying pyrexia. *P. hæmorrhagica*, the same disease more strongly expressed; the spots are larger, confluent, forming irregular bands or patches. There may be vesications, which contain bloody fluid. Blood is lost from the nose, the mouth, &c.; generally speaking, it is a continual leakage. There is general weakness, lassitude, depression; the pulse is weak, &c. *P. urticans*.—In this variety the skin is irritable; the patches are somewhat elevated, perhaps light-coloured at the outset, and leave behind a dark stain; it is generally seen on the legs, and is associated with œdema of the cellular tissue. *P. senilis* is the disease as seen in old people, as ecchymoses; it is often caused by a blow; it is of little importance; the patches vary, but are usually of irregular form and size. *P. contagiosa* is the purpura of acute specific diseases.

The causes of purpura are obscure. It appears to occur in apparently healthy and robust people. As a complication in severe disease, we can easily understand its pathology. The vessels are not nourished properly, the blood is thin, and any local cause of obstruction, pressure,—*e. g.*, over-distension of the bladder, muscular action, &c., may cause rupture of the vessels and escape of blood. But in the idiopathic disease, the etiology is not so clearly made out. It is said to be due to a defibrination of the blood; but analysis has denied this. Then it has been supposed to be brought about by a deficiency

of salts, or the presence of excreta in excess in the blood. Mr. Wilson says, "There exists a state of general cacohymia and dyscrasia, of which the morbid constitution of the body and the general want of tone of all the tissues of the body are a part" (p. 265). It is remarkable how in some cases slight pressure will produce ecchymosis in purpuric subjects. Purpura is also a disease frequently seen in young people, and during *dry, hot* summers. I have seen it take the place of an abortive eruption,—*e. g.*, herpes zoster.

The *Diagnosis* is easy. The peculiar stain unaffected by pressure is diagnostic of purpura. Flea-bites are known by the central dark spot, the seat of the bite.

The *Prognosis* of purpura is always favourable, except in bad cases of *P. hæmorrhagica*, and then we must be cautious.

The *Treatment* in ordinary cases consists in the use of dilute acids, tincture of steel and bitter tonics, with the use of meat, fresh vegetables, and local astringent washes. Spirit lotion is the best.

In the severer forms of disease we must see that the state of system is not loaded, that the kidneys, and especially the liver, act well; we must correct any deviations from the healthy standard. If there be any febrile disturbance, a laxative or two, and alkaline and effervescing mixtures, are of most use. In severe cases of hæmorrhage, turpentine is perhaps the best remedy. Matico extract, and acetate of lead, rhatany, then acids and bitters, wine, and good food, with change of air and a cool regime, will get the patient rapidly well; but in some cases the difficulty of making progress is immense. In such cases the acid pernitrate of iron will be found of good service.

ALTERATION OF THE NERVE-SUPPLY.

It is customary to note under this head two opposite states,—hyper- and an-æsthesia; the latter forming the chief

feature in elephantiasis, and its forms, morphæa, leuce, baras, which have been described. These two opposite states are properly not regarded as skin diseases; in the majority of cases they belong to hysteria, or organic changes in the brain and cord. I shall only notice one local variety here; viz. pruritus. It has been partly considered under Prurigo, but the symptom pruritus is only in that disease an evidence of distinct local change; in the case now under consideration it is, apparently, the sole disease. There does not appear to be any local change. Perhaps the best way will be to regard it in its entire existence under all the circumstances in which it may occur. It is, then, primary or idiopathic, and symptomatic or secondary.

As a secondary disease it is produced by *general causes*,—*e.g.*, the rheumatic diathesis, the circulation of morbid elements, as bile, excreta; by alterations of temperature, gastro-intestinal disturbance, nervous diseases, genito-urinary and uterine derangements, sedentary habits, rich stimulating diet; by *local causes*,—ascarides, piles, parasites, animal or vegetable; by various skin eruptions, especially lichen, prurigo, psoriasis (in its early stages), eczema; by other local diseases,—*e.g.*, fistula; by local heat and irritants of several other kinds. As a primary disease, from *general causes*, general hyperæsthesia and hysteria; *from local causes*, local irritants and heat,—*e.g.*, the use of flannel, local hyperæsthesia.

It also is said to be often due to abortive and evanescent urticaria. In many of the instances quoted above, the disease is produced *by reflex and not direct irritation*. In strict language, pruritus should be applied to that disease in which there is no organic change. The forms usually described are P. ani, which is often very troublesome at night, and followed by excoriation (the result of scratching), &c.; P. scroti, P. præputii, P. urethræ, P. pudendi. Now the cure of pruritus depends upon our assiduity and perception in ascertaining the existence and character of any general or local, direct or indirect, cause of irritation; and the list I

have given will be the basis of our diagnosis. In the *pruritus pur et simple* we have to use general tonic remedies and local sedatives; the best are borax lotion, glycerole of aloes, glycerol tannin, bichloride of mercury lotion gr. ij. to $\bar{3}$ vj.; watery extract of opium lotion, gr. ij.—x. ad $\bar{3}$ i.; tar ointment, cyanide of potassium and camphor ointment, prussic acid lotion, decoction of marshmallow or *Triticum repens*, the ammoniochloride of mercury (with creosote) ointment, alkaline washes, steam douches, with the application subsequently of cold douches, and the steam from turpentine stupes; and, lastly, revulsive measures, such as blistering, the use of the solid nitrate of silver, stick or a strong solution of potassa fusa, if practicable. Partial fumigations with cinnabar or sulphur have done much good in obstinate cases. Let me repeat that, in the majority of cases, there is some cause of reflex irritation which we must find out.

ALTERATIONS IN THE COLOUR-FUNCTION, OR MACULÆ.

Mr. Wilson places these under the collective term *Dyschromatoderma*. These may be congenital or acquired, and are in the great majority of cases due to an alteration of the colour-function of the skin, the pigment being either in excess or in deficient amount, locally or generally; in other instances the vascular supply is at fault, or the discoloration is consequent upon the presence in the blood of various colouring matters, somewhat different from actual pigment; or it may be due to the presence of foreign substances,—*e. g.* parasitic fungi. I have already considered the vascular varieties.

The pigmentary diseases of general nature are, *Leucopathia*, *Melanopathia*, Addison's Disease, climateric peculiarities (negro), *Albinism*; and local varieties,—*Lentigo* (freckles), *Ephelis* (sun-burn), *Vitiligo* (or veal-skin), *Melasma* (*pityriasis nigra*), and *Moles*.

They have been also divided according to the colour of the diseased patch.

Leucopathia, or *White Colour*, is partial or absolute, congenital or not: Albinism is the most typical form; the piebald skin is the partial variety. It is one form of vitiligo.

Melanopathia, or *Black Discoloration*, of which Addison's disease is the type, and *Melasma* the local variety.—It is seen as a congenital disease, and is often an unequal distribution, not a want, of pigment. It is seen in the mulatto and in pregnancy about the nipples and abdomen. It is also seen in pityriasis nigra of Willan, in pellagra, and in old people, about old sores, and cicatrices.

In certain states of the blood,—*e. g.*, anæmia, syphilitic cachexy,—all local irritants are able to produce pigment-deposit,—*e. g.*, heat, light, blisters, chronic skin diseases.

Lentigo is a variety—it is known as freckles. The seat of the pigment-deposit is the rete mucosum; it is often congenital, and of varying extent and distribution; generally, however, consisting of round yellowish spots, the size of split peas and less, not only on the parts exposed to the light, but also that covered by the dress, especially in fair skins, particularly red-haired folk. There is no desquamation, no itching, and no heat of any kind: they often disappear after puberty; do not depend upon seasonal change; they require no treatment, except slight stimulation, acetate of lead, sulphate of zinc, and iodine lotions.

Ephelis (or *Sun-burn*).—The pigment-deposit is excited by the sun's rays in the same way that this occurs in the negro. They consist of little dots the size of pins'-heads, which appear upon the parts of the body exposed to the influence of the sun, and are seen mostly in lymphatic subjects with delicate skins. Treatment is of little avail. We may, if we choose, use a little bichloride of mercury lotion.

The long-continued use of nitrate of silver causes a permanent slate-colour, and this makes its appearance in the part most exposed to the sun's action.

Of course I cannot discuss *Morbus Addisonii* in this place.

Macula cachectica.—Dr. J. Whitehead (*Third Report of Clinic Hospital*, Manchester, 1859) says: "A maculated state of skin is frequently met with in the children of this class, consisting of small circular spots the size of face freckles, not, however, occupying the face and hands as the freckles do, but every other part of the body except the feet. They seem to infest parts covered by clothing, while freckles are only seen on parts exposed. The skin has a sickly opaque pallor, the flesh is flabby, the temper fretful, and the energy subdued. The cause is uncleanness."

Syphilitic maculæ are seen after all syphilitic eruptions,—they are observed in all parts of the body; but the term is usually confined in its use to the stains which follow syphilitic roseola, in which case they are noticed about the forehead, face, eyebrows, arms, and body; are generally the size of threepenny pieces. It is said that this may be a primary form of disease. This is very doubtful. In small circumscribed blotches it is certainly as a rule preceded by erythema, though this may be slight and overlooked. The spots are circular, of coppery hue, and slightly desquamate. In their early condition there is always a history of syphilitic inoculation, and perhaps distinct concomitant secondary symptoms.

Moles, or *Pigmentary Nævi*, vary in size; generally they are round, small, feel smooth to the touch, and are covered with a number of soft hairs, which are brown or black; they occur on any part of the body, but especially the face and back; they are very slightly elevated, are not nævoid in structure, and undergo little change; they are merely collections of pigment in the rete mucosum; they may cover over a large extent of surface, from several inches to a foot and more.

I should mention here that the term *Vitiligo* ranks with some as a partial leucopathia (a leucosma); with others it is

analogous to the *morphæa alba*; and Bateman, as Mr. Wilson observes, very likely applied it to the white cicatrices of lupus.

Under the term *Vitiligoidea*, Drs. Addison and Gull described and figured a disease in the *Guy's Hosp. Reports*, 2nd ser., vol. vii. p. 271, and vol. viii. p. 149, which Willan perhaps included under the term *Vitiligo*. It may occur in two forms,—“either as tubercles, varying from the size of a pin's head to that of a large pea, isolated or confluent; or secondly, as yellowish patches of irregular outline, slightly elevated, and with but little hardness.” These are mere modifications, and are termed *V. plana* and *V. tuberosa*. It is seen about the face, the ear, and the limbs and palms of hands. The most common is a symmetrical patching about the inner part of the eyes; the disease is symmetrical; the cuticle over the diseased part is unaffected. Rayer figures it at Pl. 22, fig. 15, and says, “On the eyelids and in their vicinity we occasionally observe little yellowish spots or patches, very much like chamois leather in colour, soft to the touch, and slightly prominent, without heat or redness, and often very symmetrically disposed.” Mr. Wilson regards the disease as a yellow hypertrophy of the epithelium of the sebiparous glands; others look upon the disease as due to the deposit of a peculiarly light-coloured pigment.

Some have described a blue discoloration of the skin and termed it *Cyanopathia*. It is a curiosity, if not, at least in the greater number of instances, a hoax. A curious disease is described by Dr. Arcken (*Amer. Med. Monthly Journ.*, April, 1858), which is endemic in New Granada and the northern parts of America, and is called *Carate*: it is diathetic, and characterized by the appearance of various colours on the body,—dull white, copper, crimson, red, and dark blue,—so it is said. There appear to be three varieties,—the simplest, *blue*, which is seen between 15 and 25, and consists of oval or roundish spots on the face, extending to the neck and lower limbs even; the *white*, occurring between the ages of 30 and 40, rare in males, and usually associated with ovarian

disease; and the *rose-coloured*, consisting of red points on the hands, face, and belly,—seen in both sexes. It is supposed to be brought about by ill-living. (See also *Brit. and For. Med. Chir. Review*, July, 1858, p. 261.)

Some other forms of pigmentary change will be noticed in connection with the diseases of the glands. Dr. Laycock (*Brit. and For. Med. Chir. Review*, January and April, 1861) has given a most elaborate and succinct account of pigments: he sums up the salient points in thirteen propositions, as follows:—

1. That besides blue and green, of rare occurrence, there are two common well-marked and distinct forms of morbid discoloration due to pigment-deposit,—the yellow or sallow, and the black or swarthy.
2. That both yellow and swarthy discolorations of the skin will occur from the action of local irritants, or in the progress of various diseases of the skin and its appendages.
3. That the absence of pigment (*leucopathia*), as well as its deposit, may be caused by inflammatory and other diseases of the skin affecting its chromatogenous function.
4. That morbid states of the cerebro-spinal centres will influence the deposit or non-deposit of pigment.
5. That morbid states of the genito-urinary organs in both sexes, acting probably through the nervous system, will determine the election of locality of pigment-deposit according to the same law by which the development of the sexual hair and pigment is regulated.
6. That structural diseases of the abdominal viscera and peritoneum also exercise an influence through the nervous system upon the local deposit of pigment in the skin.

7. That in diseases of the supra-renal capsules, the bronzing of the skin, whether swarthy or yellow, is partly nervous and due to the direct or indirect influence of the capsules on the kidneys and nervous system; partly hæmic, and in so far due to the morbid influence of dyscrasic blood.
8. That pigmentary changes in the skin of both whites and blacks may be the *result* of morbid causes, and yet may remain after the operation of the causes has ceased, and assume a physiological character.
9. That although local morbid pigmentation of the skin may occur exclusively from local causes or the influence of the nervous system, in the majority of cases there is a morbid condition of blood.
10. That the morbid condition of the blood, associated most commonly with pigmentary changes, is characterized by those changes in the blood-corpuscles (leucæmia, leucocytosis), which are observed in cachectic states of a constitutional character (pregnancy, chlorosis, tertiary syphilis, chronic rheumatism, cancers, &c.), or which are intimately connected with "dyscrasic" visceral or glandular diseases (of the spleen, supra-renal capsules, lymphatic glands).
11. That the tendency to discoloration increases (*cæteris paribus*) with age, after a certain period of life.
12. That the morbid pigment-deposits proper, as distinguished from masses of altered blood-corpuscles, are carbonaceous excretions, and are often vicarious, with the suspension or imperfect elimination of other carbonaceous excretions, as the carbonic and lactic acid and the pigment constituents of both urine and bile; and are consequently associated with morbid states of assimilation as well as of elimination (through the skin, lungs, liver, and kidneys).

13. That amongst the morbid states of assimilation the rheumatic and gouty are specially to be classed, as well as those coincident with anæmia.

Mr. Wilson (*Brit. Med. Journ.*, Jan. 3, 1863) thinks that there is an anæmia of special features, accompanied by pigment-deposit and change, due to debility of the nervous powers, and that the various colours are modified results. Especially in reference to melanæmia, he notices a peculiar condition of eye—"the melasmic eye." It consists of "a vivid brightness and brilliancy and sparkling lustre of the eyeball, a liquid depth of colour of the humours of the eye, and a strongly contrasting whiteness of the sclerotica, the effect being often increased by a more or less deep tint of a dull blackness of the integuments of the eyelids, more especially of the fold of skin of the upper eyelid which immediately borders on the eyelashes." And this leads me to say a few words upon the causation of discoloration in the acquired forms of disease. The non-production of pigment may arise from local destruction of rete mucosum, &c. ; from want of nutritive power, as in leucocythæmia, morphæa alba, &c. The excessive production is brought about by *imperfect oxidation*,—the carbon is not burnt off as carbonic acid; by the *imperfect elimination* of the carbon, in deficient menstruation, diseases of liver and kidneys, deficient hair-formation, during disease in pregnancy (leucocytosis present), and by *the excessive production*, from the use of highly carbonized foods: such are the causes given by Dr. Laycock. The above remarks apply to cases of true pigment-alteration. There is some distinction to be drawn between these and states of abnormal coloration, due to an alteration of the hæmation of the blood, and not to the excessive production of pigment, as in sallowness, icterus, chlorosis, scorbutus, cancer, and splenic disease.

The *Treatment* of pigmentary disease has been noticed as regards the local varieties. In melanæmia we find often-

times organic disease of various organs, especially the suprarenal capsules and liver: these we must treat according to general principles. The disease denotes usually a state of anæmia, a want of nervous power, by which imperfect oxidation and imperfect elimination are brought about. Here is another example of the fact that the thorough dermatologist must be the intelligent physician also.

DISEASES OF THE GLANDS.

A. First of all, the Sudoriparous Glands.

Mr. Wilson arranges the deviations from the healthy action of these organs under three heads,—Augmentation, Diminution, and Alteration of Secretion.

Augmented Secretion, Sweating, or Idrosis, is divided into Idrosis simplex and I. maligna. The former is seen in miliaria as an idiopathic disease. There are slight febrile symptoms, accompanied by the development of vesicles (sudamina); these quickly fade away, and there is some slight stomach irritation; but all is well in about a week. It is common in hot weather. In other instances there is no acuteness about the attack, and it may be general or partial. Dr. Elliotson (*Med. Times and Gazette*, Sept. 19, 1857) records a case of idrosis of the left half of the body and left extremities only, which was morbidly sensible. Mr. Wilson quotes other cases. Partial idrosis is mostly seen about the feet, hands, and axillæ. The treatment of these forms consists in exhibiting general tonics internally, with the application of astringents locally. The idrosis maligna is the sweating sickness, which was epidemic in bygone times, and infectious; it was accompanied by catarrhal symptoms of brain, lungs, and intestinal tract, often lasting two or three weeks, and was fatal in many cases.

Diminished Secretion, or Anidrosis, is mentioned for completeness sake; it is the feature of pyrexia, and is also seen as

an *accident* in many chronic skin diseases,—*e. g.*, ichthyosis, lichen, &c.

Alteration of Secretion.—As regards odour. The perspiration is rancid and acid in some habits: this is especially marked when the feet are the seat of the morbid change. Mr. Wilson calls it osmidrosis. In diseases also this is observed in such a way as to have led some to assert that the odour in some instances is diagnostic. In rheumatism it is “rank,” in scurvy “putrid,” in chronic peritonitis “musky,” in itch “mouldy,” in syphilis “sweet,” in jaundice “musky,” in scrofula like “stale beer,” in intermittent fever like “fresh-baked brown bread,” in fevers “ammoniacal,” &c.

The sweat may vary as to colour; it may be blue, black, or yellow (?), or it may be red, due to escape of the hæmation of the blood. These are all very rare instances of disease. Very recently a *mémoire* has been published by Dr. Le Roy de Mericourt, which contains a full summary of chromidrosis as it is called. It is seen especially about the lower lid of women suffering from menstrual disorder, and the blackness can be wiped off, but returns after a certain time. It affects the two lids together, and the subjects attacked are chloro-anæmic. On microscopic examination, the blackness is found to be made up of pigment-plates. Robin is of opinion that it is a peculiar true product: it is the steorrhœa nigricans of Wilson. The treatment consists in improving the general health, and any disorder of menstruation, and the local use of astringents,—alum, tannin, zinc, &c. This form of disease must not be confounded with venous lividity; it is a form of sweating in which the pigment is left behind in the form of a powdery substance. Great care is needed to prevent simulation in this form of disease: indigo will often be used for the purpose of deception. There is one form in which pigment appears to be deposited in the rete mucosum. This is in reality not an idrosis but a local melasma.

B. Diseases of the Sebiparous or Sebaceous Glands.

As in the case of the sudorific, we may divide the diseases of the sebiparous glands into those of Augmented, those of Diminution, and Alteration of Secretion; adding two more divisions, viz., Retention and Inflammation of the Gland-sacs (after Mr. Wilson). We may, if we like, after Hardy, include them under two heads,—*hypersecretion* and *inflammation*; but Mr. Wilson's arrangement is most simple, and gives one a general insight into the characters of the diseases.

1. *Augmented Secretion* simply of sebaceous matter—the stearrhœa of Wilson—is not so very uncommon in the various diseases of the surface; in elephantiasis it is a marked feature. Some persons have naturally a greasy skin. Its most usual form and seat are on the face, especially the nose, as little yellowish thin crusts, which on examination are found to be made up of sebaceous matter; the skin beneath is reddened and thickened more or less, and the sebaceous glands are hypertrophied. It may give rise on the scalp to a kind of pityriasis; the scalp however is greasy, not dry. There may be itching,—generally there is. It often disappears after a time. The causes are not well made out; it is said to be produced by over-stimulating diet in lymphatic subjects; it occurs in either sex, generally about puberty. The treatment consists in the exhibition of cod-liver oil and arsenic and the local use of alum, bichloride of mercury and sulphur ointments or lotions. When the secretion is oily, it represents the *acné sebacée fluente*; when in crusts, the *acné sebacée concrétée*; and in a more advanced state, the *acné sebacée cornée* of the French writers.

2. *Diminution of Secretion* is described by Mr. Wilson under the term Xeroderma. True xeroderma is in reality the early stage of ichthyosis, a true *epithelial* disease; but there are cases which appear to be dry and harsh, from deficient action of the sebaceous glands. It is seen in hereditary syphilis oftentimes, in badly nourished or uncleanly

folk. The treatment consists especially in the use of the bath, oily infrictions, generous diet, and tonic remedies, especially cod-liver oil. Mr. Wilson places true ichthyosis not under the head of squamæ, but in this place, believing that it is due to a deficient glandular action.

3. *Alteration of Secretion.*—In this form of disease the secretion may be of various colours,—yellow (stearrhœa flavescens), or black (so-called stearrhœa nigricans). It also forms the ichthyosis spuria described under the head of Ichthyosis.

Stearrhœa flavescens is nothing more than a greater degree of S. simplex; indeed is the same as the acné sebacée concrétée. The sebaceous matter is thick, yellow, forming scales; it generally affects the nose, limbs, or trunk: these first exude an oily transparent fluid, and this quite concretes. The crust may become hard and adherent (A. S. cornée). Sometimes the sebaceous matter is black: this is the stearrhœa nigricans of Wilson. The colour is produced by the presence of pigment-granules in the cells of the sebaceous matter. It is an analogous state to the *chromidrosis*; only in the one case the pigment comes with perspiration, in the other with sebaceous matter. Hardy observes that the disease may occur on the palms of the hands: hence the sudoriparous glands there must have a double function, or there must be the sebaceous glands there. The treatment is the same as in the simple stearrhœa.

4. *Diseases characterized by Retention of Secretion.*—Mr. Wilson subdivides this class into two, according as the duct is pervious or closed. In the former we have comedones or grubs (acne punctata), cornua or horns, and molluscum (acne varioliforme); in the second, sebaceous cysts, serous cysts, encysted tumours (steatoma). Now I would make this one remark, that in the second group of cases the diseases are very frequently *new formations*, that is, formed independently of the duct or the sac of a gland.

Comedones, or *Grubs*, are characterized by the retention of sebaceous matter simply. This excites slight inflammation, and then we have *acne punctata*. The skin in both is thickish, greasy; the secretion is retained and is inspissated; the dirt collects at the apex of each little grub, and forms a black speck or point: the whole face—for this is the common seat—may be covered. The sebaceous matter can be squeezed out, and then resembles, according to popular notion, a little maggot; but it is composed of sebaceous matter, epithelial cells, a number of minute hairs, and an *acarus*, called *steatozoon* (or *acarus*) *folliculorum*. The spores of a fungus, and even *puccinia*, have been found in these grubs. It is seen in lymphatic subjects and those of weak circulation.

The *Treatment* consists in curing dyspepsia, anæmorrhœal, leucorrhœal, and such-like conditions, which are often present, exhibiting in the lymphatic iron in combination with saline aperients, and cod-liver oil. Locally, shampooing the face, or kneading it, as it may be termed,—using friction, and then certain stimulating and slightly astringent lotions. Borax is the best to begin with. Other remedies are bichloride of mercury, with almond emulsion, alkaline washes, oxide of zinc lotion, weak alum lotion. Some recommend hypochlorite of sulphur ointment.

The retention of the secretion may occur to such an extent as to dilate the follicle, so that it rises up in the form of a little tumour. This is the (*acne*) *molluscum*, which is usually classed under the head of tubercula. The tumour commences as a little white elevation like a minute drop of white wax; this enlarges until it attains the size of a split pea: it may reach that of a nut. It is of circular form, firm, white, often flattened at the top, where is seen a little depression, which marks the orifice of the follicle; and it is attached by a more or less distinct pedicle to the surface. The section shows it to be an enlargement and distension of the whole lobules of the little glands. The contents can be squeezed

out through the orifice, and consist of sebaceous elements and "nucleated cells of oval shape." If left alone, these tumours either disappear or ulcerate, or remain pretty much *in statu quo*. Mr. Cock, in the *Guy's Hospital Reports*, vol. viii. p. 151, mentions some cases of follicular tumour which appear to be, in some instances, marked cases of molluscum. The disease (molluscum) is said to be contagious by some; this is denied by others. It is probable that there are two varieties. The contagious form differs from the non-contagious in containing a milky liquid, and in being, so far as the sac is concerned, more transparent and shining. The chief seats of molluscum are the face, the chest, the arms, the genital parts, and the neck. I have seen lately a number of cases, and in several instances seemed to be contagious. Caillault (*Archiv. de Médecine*, 1851) saw the disease spread from bed to bed, till no less than thirty were affected, in the children's hospital at Paris. Hardy has discovered the spores of a plant in the disease, and he thinks it is parasitic in nature. In one case recorded by Dr. Jones (*British Med. Journal*, Dec. 6, 1862), which seemed to be contagious, on minute examination the little tumour was "lobulated with vessels ramifying over the groups of ultimate vessels. These were rather larger than those of the pancreas, and had a distinct homogeneous and strong limiting membrane. Next to the homogeneous membrane is a layer of greyish semitranslucent aspect, inclosing a cavity filled with more opaque material. The former layer consists of epithelial cells inclosing granular matter in their interior, the outer ones being ranged so as to present a vertical striation, somewhat like columnar epithelium. The more opaque substance consists of highly refracting cells, about 5,000th of an inch in diameter, having a well-marked envelope and oily-looking and granular contents." Dr. Paterson thought the ovoid cells had a double wall and were peculiar structures. Now, curiously enough, in making careful observation of a case the other day, I found in the sac of one of these

little tumours a species of *acarus*, but I have not investigated the point fully. Can the peculiar cells be the eggs of any animal parasite?

The treatment consists in opening the sac and applying nitrate of silver freely to its inside. Dr. Paterson's original observations will be found in the *Edin. Med. and Surg. Journal*, vols. lvi. and lxix.

When the sebaceous matter collects, hardens, and increases by accretion, *horns* are produced.

We now come to diseases characterized by retention of secretion, but with *closure of the ducts*. These are brought about in two ways,—either by the dilatation of an already existing sac or duct, or by a new growth.

The simplest form is that of little white tumours of roundish shape and opaline aspect, varying in size from that of a pin's-head to that of a pea, solitary or multiple, and generally seated about the eyelids. They contain sebaceous matter. It is the *acne miliaris* of some authors: it differs from *molluscum* to all appearance only by the imperviousness of the duct. The treatment consists in turning out the contents and applying astringents or nitrate of silver. The contents are sometimes calcareous; the scales becoming "impregnated with molecular matter" (calcareous cysts); in like manner, the contents may be fluid (serous cysts). It is not unlikely that these may, in some cases, result from the distension of the sweat-glands or ducts. (See Lotzbeck, *Virchow's Archiv.*, xvi. 1 and 2, 1859.) When the tumours are larger and encysted, they are called *steatomata*. These are simply enlarged miliary cysts. Their most common seat is the scalp; they vary in size; contain cheesy, fatty matter. If it be "soft and white," the tumours are said to be *atheromatous*; "if yellowish, like beeswax," *melicerous*; and if white and fatty, *steatomatous*. The cyst wall is thickened and tough.

The best mode of treatment is excision. As I before observed, an opinion is gaining ground that these cystic for-

mations, when solid, are new formations. Hartmann says that the atheromata are solid from the first moment of formation,—the fatty and calcifying changes are secondary; whereas the “distended follicle is soft from the very first.” Dr. Lionel Beale gives a good description, in the *Path. Transactions*, vol. vi. 1854-5, of a case of the kind, in which he made full and careful microscopic examination; from which it appears that the gland-ducts could be traced independently of the tumour, being, however, often pushed aside or otherwise interfered with. A section of the tumour exhibited spaces left by the separation of fibres, and these were filled with cells. Dr. Beale concludes, that neither the sebaceous nor sweat glands, nor their ducts, were concerned in the formation of the tumours;—that the disease is really a morbid alteration of the structures concerned in the formation of the hair, particularly the deep cells of the follicle. Dr. Beale also noticed that the subcutaneous areolar tissue was hypertrophied. I should add that the hair-follicles and hair are only altered by the pressure of the tumour. Some observations on dermoid cysts by Lebert will be found in the *Canst. Jahrb.*, vol. iii. p. 323.

Under this head may be noticed another mixed form of tumour, to which is given the name of Nævoid lipoma. Mr. Erichsen has described it as follows:—“It is a tumour in which the nævoid structure is conjoined with or deposited in a cellulo-adipose mass. This disease is invariably seated upon the nates, back, or thigh. It occurs as a smooth, doughy, indolent tumour, incompressible; not varying in size or shape; without thrill or pulsation of any kind, possibly having a few veins ramifying over its surface, but no distinct vascular appearance. It is usually congenital, or has been noticed in early life.” After removal, it is found to be composed “of a cellulo-adipose base, having a large number of veins ramifying through it, so as to constitute a distinct vascular element communicating with small cysts containing a bloody fluid.”

ACNE

Is the disease which comes last for consideration under the head of sebaceous diseases. It consists essentially in an inflammatory condition of the sebaceous follicles and retention of the sebum. At the outset, there is simply a collection of sebaceous matter. This sets up slight irritation (*A. punctata*); congestion of the follicle ensues in some subjects, and the part becomes thickened by inflammatory products (*A. indurata*); more or less pus is produced and pent up in the follicle; in some instances the disease assumes an active character; there is also new formation of vessels and areolar tissue (*A. rosacea*), and in some cases this is so marked as to have led authorities to make an additional species,—*A. hypertrophica*.

Acne simplex is observed in the young of both sexes, especially about the time of puberty, on the face and back; it appears as little hard lumps, rising up, so to speak, out of the skin. In severe cases the base is hard and the apex pustular. (*Acne punctata* was described under the head of Comedones.) After awhile the pustule scabs over, and, healing, leaves behind a slight cicatrix. *Acne indurata* is indolent and chronic; the separate pustules have a very hard dusky-red base; suppuration is scantily evolved; the pustules are painful, and there is a feeling of tenseness about the face: the derma generally is congested, thickened, and tense: it is an exaggeration of acne simplex. *Acne rosacea* is rarely seen in young life. It appears sometimes to be hereditary. It is common about the nose in women of middle age. The redness is bright, and the congestion is active; in addition there is evidently a new formation of tissue; the veins are varicose, the attempt at suppuration fails; the face is much disfigured; the surface is red, and dotted over with pustules; the integument is thickened; food and stimulants produce great burning and flushing of the face.

There are two other conditions deserving notice. In both the disease commences as an acne. In the one the tissues become hypertrophied, the glands enlarge, the skin is greasy, and little tumours form, which may be sessile or pedunculated. It is sometimes connected with intemperance, and is called acne hypertrophica. There is an opposite condition described by Chaussit, in which atrophy takes the place of the hypertrophy. I have seen it affect the arm and face of a woman. It leaves behind little cicatrices. Hebra says the spirit nose is red, but not enlarged; the wine nose presents large excrescences, and the beer nose is œdematous and red.

The causes of acne are somewhat obscure. It is common in early life,—more so in the female than the male sex. It appears to have as its basis congestion of the follicles. This may be brought about by retention of secretion, or by a naturally torpid state of circulation, or by reflex irritation.

The circulation of the face possesses great excitability; it is liable to great fluctuation; it is very active. These states are acted upon by external, and not only external, but various internal agencies; and nothing is more probable than that some derangement of the vascular supply will take place. Then the glands are well developed, particularly so in the situations in which acne is wont to occur; and they are predisposed to become functionally deranged. We see, then, that all debilitating causes, all local causes of irritation and disorders of those organs which have a reflex relation with the face,—*e.g.* the stomach, predispose to the occurrence of the disease, and act most efficiently where torpor is a natural feature.

Hence want of cleanliness, stomach derangement, leucorrhœa, menorrhagia, cold winds, constipations, the use of cosmetics, physiological changes, as puberty, want of nervous power, intemperance, may induce “nutritive debility,” and so acne.

The Diagnosis.—In ecthyma, the pustules are large, sur-

rounded by an areola, without the induration of acne, and with larger and adherent crusts.

Syphilitic pustules are broader, flatter, copper-coloured around, ulcerated, shining, and co-exist on the surface; there is no greasiness of the skin; no characteristic induration, and there is a history of syphilitic impregnation.

The Treatment.—This varies. Speaking in general terms, we must, first of all, insure cleanliness; secondly, we must remove any cause of debility present, correct menstrual deviations, remove dyspepsia, &c., and especially prevent constipation. Then, in the simpler cases, which exhibit little inflammatory action, friction and gentle stimulation may be had recourse to: borax, soda, ammoniacal lotions, almond emulsion, and sulphur, are all that are needed. In the severer forms we should set up a revulsive action if absorbents fail. Iodide of sulphur ointment is the best for ordinary use. Hebra treats acne as follows:—he gives vapour douches to the face, applies soft soap or caustic potash $\mathfrak{z}\text{i}$. to Oj . of water. In other cases he washes the face with soft soap, and at night he applies a paste made of $\mathfrak{z}\text{i}$. of sulphur to $\mathfrak{z}\text{i}$. of alcohol or camphorated spirit, by means of a camel-hair pencil. This is removed in the morning by means of soap. Cocoa butter is kept on all day; sometimes he uses bichloride of mercury (gr. v. to $\mathfrak{z}\text{i}$. of spirit), with a compress for two hours. At other times he applies, two or three times a day, Tr. benzoin $\mathfrak{z}\text{i}$., bichloride of mercury gr. i., and distilled water $\mathfrak{z}\text{vj}$. It must be remembered that congestion is present. This depends upon debility, which is best met by syrup of iodide of iron, sulphate of iron, acid, and sulphate of magnesia; by arsenic, or by acid and bitters, according to circumstances. Locally, we use stimulation. If there be much inflammation, warm poultices, hot-vapour douches, poultices, leeching, and cold lotions are called for. Then, if these do not succeed, absorbents are used,—alum lotion, iodide of sulphur, oxide of zinc and glycerine; and

lastly, revulsives,—the biniodide of mercury (gr. v. ad ℥i.) is one of the best; and we may also adopt Hebra's treatment. In acne rosacea, diet and good hygiene are of vast importance. If there be many varicose vessels, they may be cut across: a blister often does much good. I have seen generally acids, and especially pepsin, given internally, do much good. Dr. Burgess gives some useful formulæ to be used in obstinate cases; for which see under the head of *Formulæ*, at the end of the work. Much has been said with regard to the efficacy of the iodo-chloride of mercury in acne rosacea and indurata. It is used in the proportion of gr. v.—xv. to the ℥i., but requires care, as it produces a good deal of irritation. (See Devergie, *Bull. Gén. de Thérap.*, June, 1859.) In the indurated forms, it is a good plan to touch the apices of the pustules with acid nitrate of mercury: this causes their absorption often very rapidly. The tincture of horseradish is also said to act very efficiently.

Diseases of the nails are very unimportant. The nails become peculiarly rounded, as in aneurism, cyanosis, chronic inflammations of the chest, and phthisis. Their structure is altered by the attack of certain parasites, as in favus. They are also attacked by psoriasis. This has been described. Hebra remarks that they become brittle, thickened, and broken off in lichen ruber. Sometimes the matrix becomes inflamed. This appears to be erysipelatous in character. It may be primary and idiopathic, or secondary, and often traumatic. The early symptoms are sense of heat and pain, throbbing, and redness just around the base of the nail of erysipelatous aspect. This spreads, the surface gets livid, the part beneath the nail inflamed, and gives a cloudy aspect, often a sanious appearance, in consequence of the effusion of blood; the nail loosens, becomes soddened and opaque, thickened; and from beneath its surface oozes out a nasty dirty fluid. The nail often falls off by-and-by, leaving behind a very tender pultaceous-looking raw surface, which readily

bleeds. Two courses may now be taken. The part may ulcerate, the finger inflame, the bone necrose more or less, and phlegmonous inflammation attack the arm; or an attempt at repair is made, a new nail produced after awhile, which is short and stumpy generally. The treatment consists of local blood-letting, warm fomentations, removal of the nail and other dead structures; the use also of astringent lotions, good generous diet and bark, with acid or ammonia internally.

In-growing of the toe nail is easily cured by softening the nail, and then scraping off as much as possible, so as to thin it in the middle.

Diseases of the Hair.—In estimating the character of diseases of the hair, we must start with a distinct appreciation of its physiology. It is a bad conductor of heat, and therefore acts beneficially by equalizing to some extent the temperature; it is also a certain kind of protection, in the ordinary sense of the word; it is a condenser and bad conductor of electricity, and possibly some special mission is executed by this feature; it is subservient to the purposes of ornamentation; it is governed by the same laws which rule the transmission of hereditary peculiarities; it serves in all probability some "complementary" function in the economy, and in this sense is an excretion, as shown in the case of the lunago; hence the growth of the hair is very intimately connected with nutrition generally. We see this also exemplified in the development of the beard, &c. at puberty, and in "moustachios" of elderly women. Lastly, the hair, like all other parts of the body, has a definite term of life, and, if not interfered with, would shed itself to be reproduced at certain times. The effect of hair-cutting is to counteract this and to concentrate its growth. The amount and colour of the hair is certainly a very fair index of the tone and stamina of any individual. It is much to be regretted that the subject of the every-day management of the hair is

not investigated and discussed in a philosophic spirit by some careful observer, for it is unfortunately a "California" to the quack and hair-doctor. The hair in health and disease is a matter which may very fairly claim the most profound acquaintance with physiology and diseases of the body generally. Certain it is that loss of hair is much more prevalent than formerly. The explanation cannot be detailed here, though it is an interesting topic; suffice it to say that the hair, like all other parts of the body, requires a supply of its proper pabulum. The blood must be in a due and fit condition to nourish it; hence, especially in so far as it possesses but little vitality, all deteriorating or debilitating influences are likely to be followed by more or less thinning of the hairy covering; but change may also be induced by derangement in the local formative machinery,—*e. g.* local eruptions; or by the action of external agencies,—*e. g.* parasitic fungi. I am anxious to make these few general remarks, in order to show that the prevailing doctrine of *local stimulation* is not of universal application, and in many cases is positively calculated to do harm, because a demand is made upon the local powers already in a weakened state.

Diseases of the hair may be divided into those of Augmented and Diminished Formation, Abnormal Direction, and Alteration in Physical Aspect.

Augmented growth may be congenital and of varying extent, from the little hairy moles to such as the "hairy man" described by Mr. Crawford. Stimulation has a tendency to augment the growth of hair, if the formative power is normal. During convalescence a reactionary growth takes place oftentimes.

Diminished formation of hair, which is partial or general, comparative (thinning) or absolute (alopecia), congenital, accidental, or normal (senile), may be represented in its different aspects as follows:—

1. *Congenital*—(a) partial, (b) general. This is a rare form of disease. Generally downy hairs stud the surface and prove the existence of bulbs, though in an inactive state.
2. *Accidental*—(a) partial, as in *tinea decalvans* and other parasitic diseases; in cases of wounds, direct injury, and the like; (b) general, from parasitic diseases; from such as lower the vital tone,—*e. g.*, fevers, syphilis, anæmia, gout, rheumatism, neuralgia, fast living, great study, violent emotions, dyspepsia, want of cleanliness, over-purgation, local eruptive diseases, wasting of subcutaneous fat, atrophic state of the peripheral nerves, *morphæa* (?); and, lastly, physiological states,—*e. g.*, hereditary peculiarity, pregnancy, seasonal shedding, deficiency of formative force inherent in the system, and failure of the mutual relations of parts.
3. *Normal*, as the shedding of the *lunago*, and the loss of hair in old age (calvities).

When the hair is lost entirely from a part, this is called alopecia, or baldness. Parasitic disease is the most usual cause of *localized* baldness; syphilis, violent emotion, atrophy of the nervous filaments of the scalp (?), and senility, are most efficient in producing an absolute or *great amount* of baldness. The other conditions noticed above usually give rise to thinning, not absolute loss or baldness. Circumscribed baldness will be considered under the head of *Tinea decalvans*. The total loss of hair is sometimes seen in early life. I have a boy at present under observation who has not a vestige of hair on his scalp; he is about four years and a half old: no cause could be assigned for the loss of hair. Another instance is that of a young lady about thirty. Now, in some instances of complete loss, the baldness has commenced at one spot and travelled over the scalp: these are

instances mostly of parasitic disease. In other cases the disease commences as a general thinning; "handfuls" of hair "*come out*," and suddenly the whole is lost. Various theories have been suggested. Von Barrnsprung believes that the cause is a failure in the nerve-power. It is clear that the vital force suddenly loses its energy; for in the early condition the follicles are distinct, and the skin is normal. It is true that it presently becomes thinned, hard, white, shining, insensible somewhat, and the follicles waste; but these changes are the necessary consequence of the inactivity of the hair-forming apparatus, and not the cause of the loss of hair. Atrophy as the primary cause of disease will be noticed under the head of *Tinea decalvans*. It appears to me that in some of these cases the hair dies from want of nutritive pabulum, as in syphilis; in others, in consequence of the cessation of the normal reproductive function of the formative apparatus. The hair comes to its natural period of existence, and no attempt is made to reform it. Violent grief, great mental labour, and anxiety, are determining causes of this form of baldness. It is pretty rare.

Senile baldness, or calvities, is due to an atrophy of the structure generally; it commences on the crown of the head, the hair first turning grey; the scalp is dry, thinned, loses its subcutaneous fat, and the follicles become indistinct. In some people this change takes place at an early age; it is either an hereditary or physiological peculiarity.

General thinning of the hair, it is easy to understand, is most likely to occur under conditions which lower the vital energy of the patient. The scalp generally is scurfy and dry. This is in all probability due to the sluggish action which goes on. The usual sebaceous matter is not secreted; the follicles become choked by retained fatty and epithelial matter, and the formation of the hair is interfered with. This is also the case in eruptive disease and in syphilis.

The loss of hair in all these cases is an evidence of the

working of some debilitating cause; it is not remediable to its most perfect extent without the use of general remedies,—not by the employment of *local stimulation*; and herein is an exemplification of the fact, as in many other instances, that to be a successful dermatologist one must be a thorough physician.

The hair in cases of thinning and baldness is often dry, brittle (crisp), and twisted or split up. This results from the peculiar absence of moisture; in its turn from the diminished activity of the circulation of the scalp; in its turn again, from the general debility of the structures.

The various other alterations in physical aspect come under the head of Parasitic Disease (for which see Chap. IX.).

The Diagnosis.—Senile baldness commences with the hair becoming grey; it occurs mostly in old people, at the vertex of the scalp first of all. The structures generally waste; there is little subcutaneous fat; the follicles are indistinct; the circulation is diminished, and the scalp is white, thin, and shining.

Alopecia from parasitic disease occurs in the young chiefly, and is preceded by signs of local irritation. It commences not at the vertex but at the side of the head generally; the hair is not grey, the scalp is natural; it is not white, thin, and shining, but the follicles are distinctly visible; the circulation is always pretty active. In some cases there are peculiar features present, in consequence of the rapid and free growth of the fungus,—*e. g.*, favus, tinea tonsurans. Parasitic disease generally gives rise to absolute though partial loss; debilitating causes to general thinning; syphilis sometimes to general and absolute loss.

The Treatment.—This is a wide subject. The *preventive* I must omit; for though I have paid special attention to this matter, I should not like to give any other than a full detailed account, and space will not allow that here. The *Curative.*—In the cases of total loss, much good may often-

times be done. In the first place, all syphilitic taints require detection and specific treatment; the hair will assuredly grow again under these circumstances. Then debility of all kinds must be removed; and this is a matter of some considerable nicety, rules for which cannot be laid down. It is customary to give arsenic in these cases, and it is requisite that the student should know that one of its special actions is supposed to be the promotion of the re-growth of the hair. I prefer to treat the patients not by specifics but on general principles; and so with regard to the cases of general thinning. Dyspepsia has appeared to me to be a very frequent source of evil in the latter class of cases; it has assumed, too, a most determined and inveterate form, resisting acids, alkalies, bitters, and yielding at last to a long course of pepsin (porci). Iron and tincture of nux vomica are a useful tonic in the "nervous" cases. With regard to local measures:—In the cases of absolute loss, which occur from trouble, or rather a failure of the reproductive function of hair-forming apparatus, local stimulation is the *sine quâ non* whenever any downy hairs are visible; if these be absent, the scalp atrophied from disease, and white and shining, little good will be done, though I have succeeded even here. Repeated blistering must be adopted, and stimulating washes used. If there be œdema, or any tension, though the follicles are distinct, tincture of iodine applied over parts of the scalp every two or three days is of service. Shaving the downy-haired scalp is also beneficial. Nine out of ten affirm that this does harm. I know to the contrary; it should be done once a fortnight regularly for a while. In the cases of general thinning, the plan of stimulation requires modification. The general state of nutrition is below par; and hence the local also. The scalp is not healthy; it is dry, scurfy, irritable. We should first of all try and get it into a soft and cleanly condition. Frequent ablution, the use of glycerine and lime-water, or olive-oil and lime-water, used night and morning. Then local warm vapour douches, with gentle friction and the use

of a soft brush, and slight kneading to get the sebaceous structures up to a healthy standard. When the system is under the influence of tonics, we may employ local stimulation with the best results. Some teach that greasy applications should be avoided. As a rule, this is good advice. Certainly ordinary pomades, cosmetics, and the like, on account of their very rancidity and "cloggy" nature, do harm; the olive-oil and lime-water are not open to this objection. Tincture of *nux vomica* I have found the most efficient local remedy, in combination with distilled vinegar, &c.

When thinning of the hair is the result of eruptive disease, the latter must be treated upon ordinary principles.

CHAPTER IX.

PARASITIC DISEASES.

THESE may be divided into two grand subdivisions:—

- A. Those produced by, or associated with, the presence of animal parasites, and which may be called *Dermatozoa*.
- B. Those in which vegetable parasites are concerned—*Dermatophyta*.

I speak now of the parasites found on the *exterior* of the body only (on and in the skin). Parasites are sometimes divided into those which may be called *true*, and others *false*. The false parasite grows upon diseased products,—*e. g.* mucus and pus, &c., and does not apparently give rise to any lesion; the true parasite, once fixed upon the soil, produces distinct disease. This is a distinction, as we shall see, of *degree* only. Now, parasites will not grow upon a healthy surface: this seems clear from very many considerations. I may mention one or two illustrative facts. Itch insects have been placed upon healthy surfaces, especially in sheep, and no ill result has followed; but if the health of the subject deteriorate in the least, they take hold and grow. Mr. Wilson, in speaking of parasitic disease (vegetable), says, "We have never, however, seen an instance in a person of perfectly sound health." Mr. Cooke states, "that by experience we may soon learn to expect the occurrence of parasites on leaves, from the exhausted and unhealthy appearance which they assume;" and "all fungi flourish in proportion to the wetness of the season and the dampness of the locality." Not only in the caterpillar diseases, but those

of the human system, we have direct evidence that the visibly unhealthy ones and those on whom the component elements of mal-hygiene must have worked their influence, are those attacked by parasites. We also notice that those parts whose nerve-power, as in experiments of Brown-Sequard, is lowered, are liable to be infested with parasites. After acute nutritive diseases, parasitic disease is frequent. I may add an extract or two from an account of "scab" in sheep, which illustrate the position which I take most lucidly. "The disease is produced by a small insect . . . it burrows itself in this pulpy substance (skin), producing a degree of irritation quite unbearable to the animal. The itch in man and the mange in horses are analogous diseases. . . . The scab in all animals is seldom found to originate where the inhabitants are comfortably lodged and liberally fed. Like many other diseases, it is fostered and propagated by a diseased and weakened system; the blood becomes poor and unfit to support the body in a healthy state; hence we invariably find the first attacks of scab to originate amongst the starveling flocks pastured on the roadsides and commons, or amongst the sheep on some exposed and barren mountain-top, where an insufficient quantity of rough innutritious food affords a scanty subsistence for those denizens of the wilderness," &c.—(*Gardeners' Chronicle*, April 30, 1864.) The same is exhibited by the occurrence of pediculi in the beggar and workhouse inmate, the scabies of the children of the poor, dirty, and needy, &c.

The kinds of soil which are favourable to the growth of parasites we know not. In regard to animal parasites, it is one in which uncleanness plays an essential part; in regard to vegetable parasites, it is one in which the tuberculous and scrofulous habits of body have much to do.

The parasite animal or vegetable having found a congenial soil, produces certain results, which are in the majority of cases diagnostic of certain parasites. In all instances the parasite is an additional source of irritation; for example, in

impetigo of the scalp, though the *Pediculus capitis* is rarely the cause of the disease, it may give rise to additional mischief by its mere presence. The effects of parasites may be summed up under three heads :—

- a.* Direct injury,—*e. g.*, flea-bites, bug-bites, &c.
- b.* By acting as an additional source of irritation.
- c.* By producing actual change of structure,—*e. g.*, vesiculation in scabies, and brittleness of the hair in *tinea tonsurans*.

Parasitic disease then is composed of three conditions :—

- a.* A suitable soil.
- b.* A certain lesion, mostly characteristic; and
- c.* The cause of such lesion,—*e. g.* the parasite.

In addition there may be secondary accidental features,—*e. g.*, the ecthymatous spots of scabies, chronic lichen which sometimes follows an attack of itch, and which is treated wrongly as the holding-on of the original disease.

The characteristic lesions of course will be fully detailed in the description now to be given of the various forms of disease, to which the general remarks which I have made apply.

A. THE DERMATOGLOIA, ECTOGLOIA, OR ANIMAL PARASITIC DISEASES.

These are as follows :—Scabies, Trichinosis (? a disease of the skin), Pedicular disease, those associated with the development of “bots,” Chigoe, the *Dracunculus*, the presence of the lepto, the flea, the bug, and lastly the *Steatozoon folliculorum*.

The latter parasite has been referred to under the head of Acne. The flea (*Pulex irritans*) makes its bite and produces a little circular erythematous spot, with a dark speck in its centre, produced by the wound made by the insect: the irritation may extend, but generally fades, and leaves a little dark ecchymosed point behind, smaller than a pin's head.

The bug (*Cimex lectularius*) produces a rather more marked condition of things; there is a good deal of swelling, a little infiltration of the subcutaneous cellular tissue, in consequence of which the part or spot feels tumid, hot, and tender: little "bumps" of this kind are noticed oftentimes all over the body. The central point is not dark but light, and exhibits the bite of the insect. It cannot well become the subject of mistake. The best treatment is the application of a little spirit lotion. Under the head of Urticaria I mentioned as a cause the impaction upon the surface of the little hairs of some of the larvæ. The leptus, a species of insect, attacks those who pick ripe gooseberries, it is said, and an account will be found in the *American Journal of Medical Science*, N.S., xx. 91.

Sometimes the skin is the seat of the development of the œstrus, the "bots," or "gadfly," as it has been variously termed. In the *Edin. Med. Journal*, April, 1854, is an account by Dr. Londres, who states that this condition is common in Surinam. The larvæ burrow under the skin, giving rise to "circumscribed furunculoid tumours," the size of a nutmeg, which appear to give exit by a small aperture to a sanious discharge. Presently these open and leave ulcers behind. The insect is called the musquito-worm: it bears close resemblance to the *Œstrus bovis*. Another notice will be found in the *Monit. des Sciences Méd.*, Juin 22, 1861, and also in *Ranking's Retrospect*, vol. xxix. 1859, by Dr. Spence and Dr. Duncan. It appears to be common in the South Americans. In Dr. Duncan's case, there was "a little lump at the back of the neck, which slowly changed its position in various directions; then a hole opened over it, and a worm was squeezed out." Two or three similar occurrences took place. It appears that the girl had herded some cows in Perthshire. The larvæ were those of *Œstrus bovis*. Dr. Spence has seen people in Shetland attacked by the same thing. "The larvæ occur in exposed parts of the body, and in those who are loosely dressed." The disease is essentially characterized by the presence of little

painful lumps, which shift about, a little red ecchymotic line marking their tract. The parasite is the *Cæstrus bovis*, order Diptera.

The chigoe (*Pulex penetrans*), or chiggre, is a common cause of disease in the West Indies. The chigoe attacks the feet and hands, entering either by a channel penetrated by itself, or by the ducts of the skin: it takes an oblique direction under the epidermis, and its tract is said to be traced as an "elongated brown spot." As the insect gets deeper, this goes. "The hands and feet of the parasite then become hidden beneath its own stomach, which enlarges rapidly, the upper part alone of the insect being perceptible through the epidermis, under the form of a milk-white spot. This spot enlarges considerably daily, until it looks like a large freckle, insensibly meanwhile changing its milk-white colour to a pearly grey. By the time the animal is ready to deposit its eggs; it has become, says Dr. Guyon, *literally all stomach*, and this period may be known by the ashy-grey colour of the eggs, which are visible through their transparent envelope. The eggs now come forth one by one with astonishing rapidity, following each other through the layer of the epidermis, which reopens for them the passage previously made by the entrance of the parasite. The departure of the eggs brings to a termination the existence of the insect. It then perishes, attached entire, head, feet, and stomach, to the epiderm which had enveloped it, and with which it is carried finally from the individual in whom it had fixed itself. The best time for extracting the insect is just before the emission of the eggs; if they are left to be hatched beneath the skin, great irritation and painful sores are sure to result." —(*Social Science Review*.) Some curious facts have been further noticed. In some cases of elephantiasis (? which) certain little openings are seen in the skin, and it is said that from thence chigoes make their exit. When the insect reaches the dermis with his proboscis, "it establishes between it and the dermis an intimate circulation, which is demon-

strated by the movements of the systole and diastole of the heart of the subject being seen in the whole parasitical body, and by the vascular connection, which is wonderfully perceptible as the vessels are becoming distributed for the nourishment of the eggs." The vascular supply springs from one main trunk, and vessels run off from this; the main supply terminates in the end of the head or sucker, and, curiously enough, the movements exhibited by it are synchronous with those of the heart of whatever animal the chigoe fastens upon.—*Social Science Review*.

The *Guinea-Worm* disease is due to the presence and growth subcutaneously of the *Dracunculus*, or *Filaria Medinensis*. According to recent observations, it is rendered probable that some of the microscopic filaridæ or tank-worms, as Dr. Carter styles them, gain an access to the skin and there develope into the *Filaria Medinensis*. These worms are found in stagnant waters of pools and swamps, in India especially, where the disease is endemic. At the time of entry into the body, their size is about $\frac{1}{3300}$ of an inch. The bare-footed natives are mostly attacked, and in above four-fifths of all instances the full evidence of the affection shows itself in the legs below the knees. These worms possess a greater or less degree of boring property. After the first entry into the skin, a "latent period," as it is termed, of from eight to fourteen months is passed before any perceptible result takes place. The head begins to make its way to the surface, and local irritation is set up, and an abscess threatens; this presently forms, opens, and exhibits part of the worm; this is always solitary in the sac, though there may be several abscesses or foci of disease. The worm can be drawn out a little way. Its average length is 18 inches; it may be much longer,—three or four feet in the African species. It is milk-white, cylindrical, slightly flattened laterally, and tapers towards either end. It is about $\frac{1}{16}$ th or $\frac{1}{15}$ th of an inch in thickness.

The *Treatment* consists in carefully pulling away as much of the worm as one can with gentle traction, winding it on a piece of card, and repeating the operation day by day until the whole comes away, when the abscess heals. If the worm be broken, a good deal of sloughing, &c. occurs. For fuller information I must refer the reader to a most excellent account from the pen of my friend Mr. Charlton Bastian, M.A., the Assistant Curator of University College, read to the Linnæan Society, February 19, 1863, and published in the Transactions. The essay stamps Mr. Bastian as one of the valuable, able, and trustworthy workers of the day.

The *Trichina* disease, which is attracting so much attention, I have no right to discuss here. The best account is that published lately by Dr. Althaus; and certainly every one should read it, as it is most complete and practical in its teaching. The title is "On Trichinosis."

PEDICULAR DISEASE, MALIS PEDICULI (WILSON), OR
PHTHIRIASIS.

There are three species of pediculi infesting the body,—the *P. capitis*, the *P. corporis vel vestimenti*, and the *P. pubis*. It is a disputed point whether they be the real cause of disease or only an additional source of irritation. In predisposed states, the presence of the pediculi, by the irritation which they set up, may give rise to disease. The symptoms of the disease in which they occur may be present without pediculi. Again, in the cases of the *Pediculus pubis*, the parasite must of necessity be the cause of disease; and, moreover, the disease often disappears if the lice be destroyed. Practically speaking, I would say that on the head lice are an additional source of irritation. On the body in old people, where the prurigo is seated, especially about the neck, and red scratches exist to a marked extent, the lice are probably the cause of the disease; on the pubis they

always are. Sometimes lice are produced in great numbers, and, it is said, subcutaneously. This is certainly incorrect.

The *Pediculus capitis* is seen mostly in children, and in association with impetigo.

The *P. corporis* is whitish, and gives rise to prurigo, already described.

The *P. pubis* grasps the hairs a little way from the surface, and gives rise to pruritus, erythema, and eczema.

The *Treatment* consists in the use to the head of ammonio-chloride of mercury ointment; the same, indeed, to the body and pubis; or bichloride of mercury lotion, with baths, plenty of soap and water, and, if necessary, sulphur or cinnabar fumigation. I have not thought it necessary to enter more fully into details.

SCABIES

Is second to none in importance, both in a therapeutical and diagnostic point of view. Its frequency is extreme, its varied form marked, its facility of cure universally admitted, and yet its diagnosis is often a matter of considerable bungling and indecision. Scabies, or itch, is a contagious disease, depending upon the presence of the *Acarus scabiei*. Now this acts the part of an irritant, and the result depends upon the amount, the persistence, and continuance of the irritation; and the state of the system at large. The eruption of scabies may be vesicular, papular, or pustular, *per se*, respectively, or a more or less unequal mixture of these. The parts where the cuticle is thinnest are generally the seat of the disease,—*e.g.*, the interdigital spaces, the anterior surface of the forearm, the flexures, the belly, the groin, and the nates. The disease also has the greatest tendency to spread. It is not often seen on the face or head, never, according to some, on the hairy scalp or face of adults, but only occasionally on the face of children. Scabies never gets well spontaneously.

The period of incubation varies from four to six days in the young, and in warm weather, and about ten or so in cold weather and in adults.

The habits of the acari are well described by Hebra (after whom Dr. Anderson writes as follows):—"When the female is placed upon the skin, it seeks a suitable spot, and then, its head raised at right angles to the skin, it penetrates into the deeper layers of the epidermis, where it lies imbedded, and derives its nourishment. If impregnated, as is usually the case, an egg is soon laid, to make room for which the insect burrows a little farther. Each day a fresh egg is laid, and each time the insect penetrates farther, leaving its deposited eggs to occupy the space formerly inhabited by itself. The direction of the canal thus produced is oblique, the portion first formed being nearest the surface." The eggs come to the surface (as the epidermis is thrown off and reproduced), just as the young is ready for hatching; the young female "crawls about the skin, meets its mate, becomes impregnated, and then burrows likewise, and repeats the process just described." It takes about a fortnight to lay and hatch young, and there are about fourteen in one canal. The canal contains eggs, little black pieces of excrement (?), and the female acarus at the extremity; the back of the female is armed with a number of little spines which prevent its re-exit from the follicle.

The male acari wander about over the free surface, concealing themselves under crusts especially. The presence of the insect is first known by itching, which is intensified at night, or by stimulants. Then papules are developed. In the majority of cases these are pruriginous, and this is really what one would expect in an unhealthy habit of body. Vesicles are also present in nine-tenths of the cases, it is said; and, lastly, pustules, which may become ecthymatous. The papules are numerous and scattered; the vesicles are also isolated and scattered, small, slightly pinkish; in the young, the size of pins'-heads; often excoriated and conical, espe-

cially when seated about the fingers; contain a transparent fluid at first; but this may become pustular. The vesicles do not contain the acari; the characteristic vesicle is one which has a fine white elevated line or little ridge running away from it in a straight, curved, or serpentine direction, at whose extremity the acarus is to be found, and is betrayed by a little white speck. The white line is called the cuniculus or furrow (sillon); it varies in length; sometimes it is a quarter to four or five lines (five or six millimetres to even three centimetres, Hardy). The acarus may be obtained by gently elevating the epidermis at the end of the furrow, and lifting it out; it looks like a little piece of "scurf." The channel of the cuniculus does not communicate with the interior of the vesicle; the latter is the result of irritation. The pustules are psudracious, of varying size, often puckered in around their circumference, and ecthymatous. They exist oftentimes as the sole or rather prevailing feature in children, about the thighs, buttocks, and feet. Various species of scabies are described, according to the kind of eruption present; as, *Scabies papuliformis*, *S. lymphatica*, *S. purulenta*, *S. cachectica*.

It has been supposed by some that the *Acarus farinae* may, by transmission in the use of powder in infants, give rise to the itch.

In decided cases there is oftentimes a little line of scabious vesicles around the lower end of the ulnar, at the wrist. In the female, vesicles are often seated around the nipple; in the male, on the penis, and generally observable about the seats of pressure, below the level of the mammæ and above the middle of the thigh, on the front aspect of the body. In children the eruption is often absent from the hands; it frequently commences about the thighs, from the contact of the mother's arms affected with scabies. The delicate skin of children also becomes the seat of ecthymatous pustules in great abundance: these are common about the ankles, the soles of the feet, and the buttocks.

The eruption is increased by scratching. In long-standing cases, the skin gets into an unhealthy state, and though the scabies be cured, other secondary eruptions may be manifested,—*e. g.*, lichen, eczema, &c. Prurigo may be associated; we have then a mixed disease, called by Hardy *S. pruriginosus*.

Mr. Hothouse (*Lancet*, July, 1857), in a letter, states that he carefully examined 126 cases; in 100 which were vesicular, cuniculi were found in 23; in 7 of 15 pustulo-vesicular; in none of 11 pustular cases. He says that in only 30 of 126 cases were cuniculi noticed. Now acari are never found except at the end of the cuniculi, and in “none of the above cases were cuniculi discovered in any other locality than about the hands and feet; mostly the former, rarely the latter;” and there is no direct relation between the amount of disease and the number of cuniculi (*alias* acari). These facts illustrate a proposition which I have heard enunciated, that the cause of disease is located about the hands, and that the eruption over the general surface is the result of the introduction of some special poison by the insect *plus* sympathetic irritation. One fact only I allude to; viz., the occurrence of the disease on the thighs of children, as contradictory. Characteristic vesicles are often seen over the body generally. There is, however, much truth in the assertion noticed just now, and we may conclude that the chief focus of disease is the hand.

Students may be asked the difference between the male and female acarus. I cannot go into the history of the acarus in this place, but I quote Dr. Anderson's words:—“The male differs from the female in so far as it is considerably smaller, the wavy lines on the body are not so numerous, the inner pair of posterior legs are provided with stalked suckers like the anterior ones, and the parts corresponding to the genital organs are very distinctly marked.”

The cause of scabies is essentially the insect *Acarus scabiei*. The disease is mostly seen in the poorer, but may also affect

the upper classes. Mr. Wilson observes, "Since the return of the army from the Crimea, the disorder is revived ; it has spread very extensively, and has found its way into a higher class of society than that in which it previously moved." It is most common in winter, and in connection with uncleanly habits.

Diagnosis is not always an easy matter. To diagnose scabies often requires the aid of a good deal of experience. Too much stress must not be laid upon the presence of the disease between the fingers. "When a person comes to us with pruriginous eruptions on the belly, inner parts of the thighs, and front of the forearms—a well-marked eruption of ecthyma on the hands, and complains of itching, becoming intolerable at night, we can say to him without further examination that he is affected with scabies."—(Anderson.) As a rule this is true. The only absolute diagnostic point is the discovery of the cuniculus and the contained acarus. In scabies, as ordinarily seen, the itching at night, the presence of small pointed isolated vesicles between the fingers, on the anterior aspect of the forearm, about the mamma of the female, the penis of the male, below the level of the mamma on the front of the belly ; and in children, ecthymatous pustules about the hips, feet, and ankles, are for all practical purposes characteristic.

Lichen occurs on the back of the hands ; the papules are agglomerated, do not occur between the fingers, but on the outer not the inner aspect of the forearm ; there are no vesicles, no multiplicity of eruption as in scabies ; the itching is not characteristic, the skin generally is thickened, and there are no cuniculi and no acari. In prurigo, the papules are peculiarly pruriginous,—in the prurigo of scabies this is not so marked ; pediculi are also present ; the skin is quasi-urticated ; the papules are situate at the outer aspect of the arm and forearm, about the neck, above the level of the mamma, not on the front of the belly, though about the back,

and below the middle of the thigh : the sensation present is not itching, but burning (formicant), &c. Scabies and prurigo may be conjoined, but then the prurigo attacks the belly and thighs. In *eczema* the vesicles are not pointed, they are not isolated but agglomerated, &c. There is a pretty sure sign in marked cases, especially those of old standing, which is very valuable, and that is, the existence of marked eruption at the ulnar side of the wrist, as around the ankle in children. In dubious cases, the microscope may settle the matter. The eggs (ova) of the acarus may often be detected mixed up with the secretions of the little pustules, and attached to crusts : they are in their longest part about $\frac{1}{600}$ th of an inch. As Dr. Gull observed (*Lancet*, June 1857), their presence "as a diagnostic test has been overlooked." Scabies has also in a large number of cases a history of contagiousness which is significant.

The Treatment.—"The object to be attained is the thorough impregnation of the skin with the vapour of sulphur" (Wilson), in order that the acari may be destroyed. This may be effected in several ways. We must remember that in most instances there are two conditions present,—the actual disease and secondary eruptions. If the former (and acari) be treated, the latter go also as a necessity. If there be much irritation—and there is in bad cases, it may be as well to give an aperient, a few doses of saline, and an alkaline or starch bath, before we apply our parasiticide.

If we wish to effect a rapid cure, we should wash or rather rub our patient from head to foot with black soap, give him a bath, and then rub in Helmerich's ointment (sulphur and subcarbonate of potash), or Vleminck's lotion. The following morning the patient takes a warm bath, having worn flannel during the preceding day. Mr. Wilson's plan "has the advantage of demanding no confinement, and none of the heroic rubbings described." "My plan," says this gentleman, "is to require the patient to rub into his hands, and par-

ticularly into the wrists and between the fingers, a little sulphur ointment. This he repeats several times a day; for example, every time he washes his hands, and again at bedtime; the latter rubbing being a more thorough one than the rest; moreover, at bedtime he further rubs the ointment into any other part of the body where the eruption may exist. Then, besides the outward application, he takes ten to thirty grains of the sulphur sublimatum twice or three times a day." This must be continued for a week. When sulphur is objectionable, the iodide of potassium ointment may be substituted. In ordinary practice it may not be possible to adopt many details, and then the ung. sulph. comp. (*vide* Formulary) may be adopted, with the internal exhibition of magnesia. To disguise the sulphur, a little cochineal should be added to ointments. All clothes worn by scabious patients should be ironed with a very hot iron, or baked or fumigated with sulphur. The disappearance of eruption (and itching) guides us as to the continuance of treatment. We must be very careful not to produce secondary eruptions, and to keep them up by the employment of irritating treatment, after the acari are all killed.

In some climates scabies is often very severe; the skin is irritated to a great degree, excoriated, dirty, discoloured, crusted over, &c. This is "the Norwegian Scabies." The harvest-bug (*Acarus autumnalis*) sometimes produces irritation erythema, *quasi*-wheals. The treatment consists in the use of aromatic and spirituous lotions.

B. THE DERMATOPHYTA, EPIPHYTA, OR VEGETABLE PARASITIC DISEASES.

I shall only give here a brief summary.

Two different opinions are held with regard to the part played by fungi in disease. Some affirm that fungi are "accidental occurrences;" others, that they are the *vera causa* of disease. I defined clearly the true position in the opening remarks of this chapter, showing the compound

nature of parasitic disease. A fungus growing upon the surface may or may not produce lesions. It may act simply as a slight source of irritation or become a potent agent in producing mischief. I hold—

1. That nothing but the growth of a fungus can produce the ravages upon the hairs and epithelial tissue seen in the tinea,—the generic term for parasitic (vegetable) diseases.

2. When the parasite is absent, the damaged hairs are absent.

3. The disease (of hairs, &c.) will certainly not get well unless the parasite be destroyed or die.

4. The fungus in a state of growth need be the only abnormal thing present, in addition to the diseased hairs and epithelium; hence—

5. The disease of the hairs and epithelium is the pathognomonic lesion of a fungus growth. No other known agency can produce this state of things.

The Relation of Parasite and Eruptive Diseases.

1. It is clear from the history of tinea decalvans that the presence of actual eruption is unnecessary to the evolution in full force of the parasitic lesion.

2. The characteristic effects of tinea are never produced by eruptions alone.

3. The eruption may exist before the appearance of the fungus upon the scene.

4. The growth of the parasite may nevertheless act in like manner to all local irritants, and call forth predisposed or latent eruption.

5. The relation then of parasite and eruption is not a necessity, but the co-existence of the two is likely. The truth is just this, the fungus grows upon a soil which is disposed to evidence itself by eruptive manifestations. If these latter are present to a marked degree, of course the soil is very suitable for the growth of a fungus; and according

to the degree in which the soil exists, so may the eruption precede or follow (being evoked by) the presence of the parasite. The distinction here insisted upon is very important. The reviewer of my work on Parasitic Diseases, in the *Microscopical Journal*, says, "The author well establishes his chief point—the essential difference between eruptive and parasitic disease." It is borne out by the evidence afforded by a careful study of the action of parasitic fungi upon the hard structures of animals generally.

The parasitic diseases are :—

1. *Tinea favosa* (Favus).
2. *Tinea tonsurans*.
3. *Tinea decalvans*.
4. *Tinea sycosis* (Mentagra).
5. *Tinea versicolor* (Chloasma, vel Pityriasis versicolor).
6. *Tinea circinata* (Herpes circinatus).
7. *Tinea Polonica* (Plica Polonica).
8. *Tinea tarsi*.
9. Mycetoma, or the Fungus foot of India.

I have made use of the term *tinea* as the generic name for parasitic disease.

Tinea favosa, or *Favus*, is a rare form of disease, which commences generally at about seven years of age (it may be sooner, it may be later) among the poorer classes of the community. It is characterized by the presence of little straw-coloured cupped crusts, called favi, surrounded by more or less redness : these favi coalesce after awhile, and give rise to a honeycomb appearance. The disease commences with the implantation of the spores of a fungus just within the follicle, and all that is noticed in the early stage is an increased production of epithelial scales; presently a little white speck becomes visible, which quickly develops into a "favus." The favus is nothing more than the developed fungus. As the elements of the latter grow, they collect about and in the hair-follicle; each favus cup is pierced near its

centre by a hair. As the fungus grows downwards into the follicle, the formative apparatus is interfered with; hence the hair loosens, being at the same invaded by the parasite, and rendered opaque and thickened. The favi are sometimes separate, at other times aggregated; they are roundish (seated upon a depression of the derma), in size about $\frac{1}{25}$ to $\frac{3}{8}$ inch in diameter, and $\frac{1}{25}$ to $\frac{1}{6}$ in depth, concave above, convex below, and sometimes marked by concentric lines on the upper surface; they are composed entirely of fungus elements,—*spores*, mycelial *threads*, and granular particles, called *stroma*. If the scalp be entirely freed from them, it is seen to be red and tender, and they soon reform. The nails often become invaded by the fungus, and are then thickened, rendered opaque and brittle. The general health of favus patients is said to be good, but in all cases uncleanliness, bad food, bad living, damp dwellings, &c., have some or all exerted their influence. The odour of favus has been described as like cats' urine, mice, &c. The fungus is the *Achorion Schönleinii* (Link). It consists of—(a) spores, generally somewhat oval, .003 to .01 mm., the largest having a double envelope, being either free, jointed, or even constricted; (b) "filaments which are large and branched, more or less tortuous, containing generally granules and sporules in their interior; (c) sporophores or fibres, which are short and straight, and bear at their extremities spores,—generally four it is said,—these are not often seen; (d) stroma, which is made up of a number of free but small cells, sporules in the true sense of the word." Favus affects the scalp chiefly, but it may be seen on the general surface. The fungus invades the epithelial scales as well as the hairs.

Tinea tonsurans, *Porrigio scutulata*, or *Trichosis furfuracea*, attacks the scalp. It is rarely seen, except in children; it is, like favus, contagious; does not appear to be attended by any marked ill-health, though it is frequent in lymphatic

subjects. It generally consists of little circular patches, the hairs of which look dry, withered, and as if nibbled. In the first instance a fungus takes hold of the under surface of the epithelium, just within the follicle, and quickly invades the hair, which becomes, in consequence, changed as described, and brittle. In the early stage the hair is bent or twisted just above the point of its emergence from the follicle, and it is at this place that the hair breaks off, producing the gnawed appearance; at the same time the orifice of the follicle appears to be fringed round with little "micaceous" scales, and the surface of the diseased patch is the seat of more or less furfuraceous desquamation. It is said that the scales are the remnants of vesicles. The scalp may be diseased in one spot, in several places, or over its whole extent. Oftentimes a little erythematous ring bounds the circumference of the patch. If the hair be examined, it will be noticed to be bulged, rendered dark, and its fibres more or less separated by collections of spores, which become distinctly visible on the addition of a little liquor potassæ; in other cases the diffusion of sporules is pretty general. As in favus, if any mycelial threads are present, they mostly run parallel to the fibres of the hair, and not transversely. Baldness often results, but it is temporary as a rule. Itching is frequently troublesome. The follicle is choked with epithelial cells, and more or less effused blastema. *Tinea circinata* is often a co-existence elsewhere. The fungus of *tinea tonsurans* is the trichophyton tonsurans (Malmsten); the spores are most numerous; they are round, .003 to .007 mm. long, by .003 to .004 mm. broad, nucleated, oftentimes constricted, and exhibit a great uniformity in size in the same subject: they are very plentiful in the root of the hair. The filaments are articulated, somewhat undulated, and possess granules in their interior. The fungus invades not only the hair but the epithelial scales.

Tinea circinata (*Herpes circinatus*, or *Ringworm* of the

body) is, according to most authorities, a modification of the last described tinea. It consists of little circular patches of erythema, which become the seat of furfuraceous desquamation, the scales of which are invaded by a fungus. The edge is faintly vesicular, and the patch increases in area by centrifugal growth. Itching is a very common and marked symptom. It is erythema, slight vesiculation and subsequent desquamation, produced by a local irritant (a fungus), and is seen mostly on the face, neck, breast, and upper limbs. It has been seen to travel upwards to the head, and become tinea tonsurans. Sycosis also commences sometimes as tinea circinata. It is a favourable nidus for the development of the favus fungus. It is sometimes epidemic in public institutions, and frequently co-exists with tinea tonsurans of the scalp. The fungus invades the hairs as well as the epithelial scales (*vide* fig. 7, Pl. I., in my work before referred to); it is the *trichophyton tonsurans*.

Tinea Sycosis, Mentagra vel Sycosis menti, is a disease of adult life. The onset of the disease is marked by heat, itching, and redness about the follicles of the beard, which become swollen, enlarged into little pustular elevations, giving exit to a fluid which dries into crusts; the pustules indurate at their bases; the tissues around and outside the inflamed follicles are infiltrated and irritated; shaving pains; the hairs loosen somewhat and become matted together. The disease affects the intemperate, those exposed to great heat,—*e.g.*, firemen, engine-drivers, smiths, &c. The characteristic of the disease is the induration and swelling around the follicles of the hair; the latter when examined is seen to be surrounded, and more or less invaded by a fungus, called the *Microsporon mentagrophytes* (Gruby), which bears the closest similitude to the trichophyton, and is said to be most abundant around the shaft of the hair, forming a kind of sheath. The spores are from .003 to .004 mm. in size, round, nucleated, indeed, identical with those of trichophyton;

the mycelial threads are said to be peculiar, in that they are branched, considerably and markedly annulated. Sycosis is, according to Bazin especially, a variety of *tinea tonsurans*, and sometimes commences as *tinea circinata*. It is probable that the fungus, which is the cause of the primary irritation, is more or less destroyed by the pus which forms in the follicle; the tissues nevertheless continuing inflamed, in consequence of the peculiar structure of the part.

Tinea decalvans, or *Alopecia areata*, is supposed by many to be entirely unconnected with the presence of a parasite. It is not so very easy to detect a fungus in many cases, and a marked illustration is exhibited by the case of the fungus foot of India. Dr. Carter, noticing how long its fungus was overlooked (and yet it exists in large quantity), and mistaken for dried blood, adds, "it is important to remark that the structure of fungi is difficult to investigate, and to one impressed with some other idea, even to detect." *Tinea decalvans* commences by loss of hair over a small circumscribed, well-defined area,—it is said, without previous change: this is an error; in the early state there is frequently a little redness, itching, and slight furfuraceous desquamation. In the developed condition the disease consists of "complete baldness in circumscribed patches." The denuded patch remains simply bald, white, shining, smooth, and more or less insensible; the hair which comes away is seen with the naked eye to be thin and bulbless; it is also dry. The disease commences generally on the side of the head, and may involve the entire scalp, the eyebrows even, the beard, the whiskers, &c. Occasionally it is preceded by thinning of the hair over the general surface of the scalp. It is more frequent in the young, more so in girls than boys. The scalp may be puffy and irritable. It is very chronic. If a microscopic examination be made of the hair, the chief thing that strikes one is the atrophied state of the bulb, and the

deficient action, evidently (as exhibited by the structure of the hair), of the formative apparatus.

Now and again the elements of a fungus are seen outside and within the hair, but it is only in the early stages that a fungus is plainly to be detected. In addition, it is not uncommon to notice little masses of epithelium sticking to the hair, evidently produced by some local irritation in the follicle; and, more than this: the hair may be bulged by collections of sporules in its interior; it may also be split up into its separate fibres. It is not improbable that the fungus dies out about the time the loss of hair begins; that it is left behind frequently in the follicle; that it flourishes slightly because of the absence of moisture. Some believe that it is due to an atrophy of the peripheral nerves. Mr. Wilson regards it as a remnant of or allied to elephantiasis, and he calls it *morphæa alopeciata*; but it is an observed fact that the hair of the head is not lost in elephantiasis, though it is from the *morphæa* patches of the general surface.

The occasional antecedent—irritation of the scalp, the occurrence of the disease in the young, especially in girls, the signs (microscopic) of local irritation in the follicle, the characteristic damage to the hairs, the analogies of the disease in mode of growth, the effect of treatment, the actual frequent discovery of fungous elements, certainly render its parasitic nature probable. I speak of the localized examples of baldness. The fungus is the *microsporon Audouini* (Gruby), the spores are small,— $\cdot 001$ to $\cdot 005$ mm. It is said that this fungus differs from the *trichophyton* in the smallness of its spores and its wavy, ill-developed mycelial threads, devoid of granules.

Tinea versicolor.—*Chloasma* or *Pityriasis versicolor*, commences as little erythematous points, attended by itching, which is increased by warmth of all kinds. This stage is rarely observed. The patient presents him or herself with patches of a fawn colour, which are slightly elevated, dry,

rough to the touch, somewhat scaly at the edge, and from which branny scales can be rubbed off. These patches occur chiefly on the parts covered by flannel, it is affirmed, in phthisical patients; they spread and cover large tracts of surface. It is especially common on the front part of the chest and the belly. If the scales be examined, their under-surface will be noticed to be studded with little collections of spores arranged in heaps. The minute hairs of the part are more or less infiltrated, and the fibres split up. The disease has been noticed by myself to be produced by the implantation of the oidium, and by Mr. Hutchinson from the fungus of tinea tonsurans. The plant is the *Microsporon furfur* (Eichstädt). The spores average in size between $\cdot 0008$ and $\cdot 002$ mm.; they are round, do not contain granules, are said to be "bilinear," and to be collected into little heaps, which are sub-epidermal. The mycelial threads are much branched and wavy.

Tinea, or *Plica Polonica*, is endemic in Poland, and supposed to be produced in great part by the bad living, the uncleanly habits, and foul, damp dwellings of the inhabitants. The scalp generally inflames, becomes tumid, red, and tender, exuding at the same time a viscid secretion, which mats the hairs together into one mass. The hairs appear to be infiltrated with a reddish serosity, and their removal causes intense pain. Lice, pus, blood, and fungus elements are found mixed together in the plicose felting. The disease affects the hair of the head, scalp, pubes; also the nails. After several months the diseased mass is "pushed off," as it is termed. The disease is seen in the lower orders especially. It appears to be somewhat of the same nature as, though exhibiting a different aspect from, the pellagra, or modified forms of elephantiasis, viz., a result of action of deteriorating influences upon the general nutrition at large. Now a fungus,—the trichophyton sporuloides (Günsburg),—has been found, and supposed to be the real

cause of the disease; the truth is probably this: the soil favours the development of a parasitic fungus, which may produce splitting up and other characteristic lesions upon the hair, as in other cases; the prevailing feature of the affection, however, is the altered general and local nutrition. The *S. sporuloides* resembles *T. tonsurans*; the spores are from .002 to .005 mm. in size round; the filaments are articulated and moniliform; according to authorities, each spore exhibits a distinct bright spot in its central part.

Tinea tarsi comes under the notice of the ophthalmic surgeon; but it may be as well to say that the inflammatory state of the Meibomian glands frequently seems to depend upon the presence of the trichophyton.

The *Madura foot*, *Fungus foot of India*, or *Mycetoma*.—This disease depends upon the presence of a parasite which makes its way beneath the integuments of the foot to the bones, producing symptoms closely resembling caries. There are numerous sinuses leading to the diseased bone, and giving exit to fungous elements in the form of little black or white masses, together with thin sero-purulent or viscid secretion. If an examination of the structures of the foot be made, we find them studded with little masses of varying size, which may be black, red, or white, and which may be picked out from apparent cavities lined by a special membrane. The little pits containing these may be situated in the bone, and caused by simple absorption. The joints are healthy, and no true caries exists. Dr. Eyre describes the appearance of the soft parts, as composed of "numerous minute tubercles resembling fish-roe lying beneath the muscles, and extending from the bones to beneath the skin, and nodules composed of the same, often black in colour." These latter often surround the apertures of the sinuses on the surface. In addition to these elements, there is more or less fleshy substance infiltrated amongst the tissues, together with fat and sloughy matter. The fungus is the *Chionyphe Carteri* (Berkeley).

It occurs in little masses, varying in size from that of a pin's-head to that of a bullet. They are black, white, or red. The black variety is made up of tubular, cylindrical, knotted threads, radiating in every direction, and terminating in globular dilatations $\frac{1}{120}$ inch in diameter, the fibres being about $\frac{1}{3000}$ inch in diameter; they may be beaded. The smallest masses are a mere packing together of these globular dilatations. In addition there are oval, clear, thick-walled cells, from $\frac{1}{2000}$ to $\frac{1}{800}$ inch in diameter, which give off prolongations; granules, fatty matter, and a framework of fibres. The light-coloured variety is composed of the same elements, viz., beaded fibres, compound or simple cells of pinkish hue oftentimes, which can be seen when aggregated, by the unaided eye; they are very numerous, and on examination the cells appear to be often quadruple, double, triple, or cuboid. The two chief forms, then, in *Chionyphe Carteri* are, "cylindrical articulated threads," ending "in large spore-like cells," and brood filled with daughter cells. The latter are often dotted externally with a radiating growth assuming a variety of forms, which, as I have remarked elsewhere, is probably produced by the crystallization of fatty matter. Mr. Berkeley has recently communicated to the Linnean Society (Mar. 3, 1864), some further observations which confirm Dr. Carter's views almost entirely. Mr. Berkeley believes the *Chionyphe Carteri* to be closely allied to the genus *Mucor*, but differs in the absence of the columella in the sporangium.

In treating parasitic disease four indications are to be regarded—

1. To alter the soil.
2. To kill the parasite, and thus prevent damage to the hair and alopecia.
3. To promote the re-growth of the hair.
4. To subdue and cure secondary eruptions.

The remedial plan of action then consists in the employment of both local and general measures. When the disease

is recent, local applications will suffice for cure; but if it has taken firm hold upon the system, it becomes necessary in addition to employ tonic remedies to correct the debilitated nutrition which favours the growth of the fungus. In *tinea tonsurans*, for example, it is difficult to reach the fungus elements with parasitocides; the hairs are very brittle, and, when an attempt is made to epilate, break off, leaving behind in the follicle their roots loaded with the germs of disease.

Indication No. 1 is effected in *favus* by removing the patient from the impoverishing conditions which surround him, giving plenty of animal food, ensuring cleanliness, correcting the secretions if at fault, and exhibiting cod-liver oil and iron. In *tinea tonsurans*, by the use of cod-liver oil, iron, quinine; and in obstinate cases, especially such as are complicated by a rough, scaly state in different parts of the skin, or actual *tinea circinata*; a course of arsenic and iron. The subjects of *tinea tonsurans* are markedly lymphatic. In *tinea decalvans*, by the exhibition of bitter tonics, more particularly the removal of dyspepsia, in those of good age; and if the nervous temperament be marked, *nux vomica* with phosphoric acid. Some look upon arsenic as a specific in these cases. In *tinea circinata* local remedies are alone required as a rule. In some instances this form of "furfuraceous herpes" is most obstinate; it spreads rapidly over the surface, the mycelial threads of the fungus being plentiful though minute, and running over a large extent of a body seemingly well suited to its growth. In some cases arsenic is valuable; but cod-liver oil, syrup of iodide of iron, iodide of potassium, and sulphur are called for according to the habit of the patient. In *tinea sycosis*, by the avoidance of intemperance or too free indulgence in fermented liquors, the cure of dyspepsia, abstinence from highly-seasoned food, local heat; the exhibition, in obstinate cases, of cod-liver oil and arsenic. And lastly, in *tinea versicolor* (*chloasma*), by strict attention to general hygiene, especially as it concerns clean-

liness. Some affirm that in obstinate cases a course of arsenic is necessary.

Indication No. 2 is effected in *favus* by epilation and the free application of parasitocides; the hairs should be removed by means of forceps, from a certain area, day by day, and a strong solution of bichloride of mercury (2 scruples) in spirit (an ounce) applied at once, in the mean time keeping the scalp well greased, so as to prevent the diffusion of spores, with weak ammonio-chloride of mercury ointment, or wet with a lotion of sulphurous acid; if much irritation be set up we must allay this, and proceed as before. In *tinea tonsurans*, by epilating as far as we can, then shaving the head regularly, so as to keep the hair short, applying the mercurial parasiticide; in minor cases, tar and alcohol, iodide of sulphur, or sulphur and creosote ointments, repeating this until the hairs grow up in an erect and unbent manner. In *tinea sycosis*, by epilating and using mild parasitocides,—*e. g.*, the bichloride of mercury (10 grains), in almond emulsion (6 ounces); or, in chronic cases, setting up a revulsive action by biniodide of mercury ointment. In minor cases the compound sulphur ointment does good service (see formulary). In *tinea circinata*, by blistering the surface, using tincture of iodine freely, or the bichloride parasiticide. In *tinea decalvans*, by the use of sulphurous acid lotion, camphor, ammonio-chloride of mercury and sulphur, in an ointment, or blistering with the usual mercurial solution before mentioned in *tinea versicolor*, or first of all softening up the cuticle with weakish liquor potassæ, and then using sulphurous acid lotion, or applying tincture of iodine freely, sulphuret of potassium lotion, bichloride of mercury ointment, or the use of slight blistering. It becomes frequently a matter of some doubt as to the necessity of continuing or discontinuing the use of parasiticide: we must be guided in this respect by the external evidence of the spreading of disease, microscopical examination, and the amount

and character of secretion. With regard to the latter, I will caution my readers against the very natural and frequent mistake, that an increased amount of secretion is necessarily a proof of aggravation of disease. It may be the direct effect of the too free employment of irritants, and I have on several occasions seen cases in which this was the case, the actual disease, as estimated by the degree of destruction of parasite, being *nil*: the irritant had destroyed the fungus, but had also produced a new feature; the cure only waiting for a soothing plan of treatment. The external evidence of spreading speaks for itself. Microscopical examination is the chief guide; it must be frequently, carefully, and cautiously made. We are enabled by it to estimate the amount of parasite, how deeply it has penetrated the follicle, to what extent our remedies have destroyed it, how far Nature is recovering herself, and needs any more help in the way of parasitocides. So long as there is any amount of fungus in the root of the hair, so long must we use parasitocides; when the root appears healthy and well formed, the follicular linings are reforming, and if the follicle appears to be filled with blastomatous matter (surrounding the hair shaft), free from parasitic elements, a slightly stimulating or soothing plan must be substituted. No man should treat parasitic disease except under the teaching of microscopic examination.

Indication No. 3 is favoured by adopting means to bring the scalp into a condition of good tone,—*e. g.*, by soothing all irritation, gently stimulating the deranged and languid circulation, removing œdema by the adoption of constringents,—*e. g.*, cold douches, gentle hand friction, cold lotions, &c.; and, lastly, when it is proper, employing free stimulation. In some instances the diseased part becomes hardened, condensed, so to speak, its sensibility being lowered; here the continued use of iodine, vesicants, or solution of nitrate of silver, does good. The form of stimulation most commonly used is a compound of cantharides, spirit of rose-

mary, distilled vinegar, and rose water. The other agents are ammonia, acetic acid, and blistering fluid.

Indication No. 4 is met by the adoption of treatment based upon ordinary principles. There are many other points in parasitic disease of great interest, such as the minute lesions produced upon the hairs, the epithelium, the follicle, and its linings; the general occurrence of epiphytes in animals and plants, their mutual and close relation,—in many cases, identity, as exhibited by the minute characters of the fungi, and clinical and experimental evidence afforded by the latter, and their associated diseased states; but for a full account of these points, a more extended description of parasitic diseases, and of the fungi growing upon the mucous surfaces, I must refer the reader to my work on *Skin Diseases of Parasitic Origin, their Nature and Treatment, &c.*, which contains a series of plates illustrative of the whole subject.

Note.—Dr. Aloys Martin (*Med. Chir. Rev.*, April, 1863) describes a new fungus attacking the hair of the scalp of two children convalescent from typhus fever. He noticed a little spot where the hair was scanty and flax-like, even tonsurant, and as if smeared over with yellow-red pomatum, forming little lumps on the hair. In one patch (the size of sixpence) the hair appeared as if singed. On microscopic examination, the hair was yellowish-red, or even brownish, varicose, due to infiltration in, but chiefly around, the shaft of the hair, by the spores and mycelium of a fungus, called the *Zooglæa capillorum*. The fungus appeared to be derived from a woollen cloth, which had been dipped in well water, containing fungus elements, and which had been used to wrap round the children.

CHAPTER X.

SYPHILODERMATA, OR SYPHILITIC ERUPTIONS.

OF one thousand consecutive cases thirty were of syphilitic nature (Wilson). The syphilitic poison once introduced into the system is apt to be followed by certain eruptive manifestations: these are only the naked-eye evidences of a deep-seated change in the system at large. The functions of various organs are deranged, "the blood is charged with a poisonous principle, and all the organs and structures supplied with that blood suffer to a greater or less extent. The brain evinces its suffering by mental dejection; the nerves by a general feeling of prostration and debility there is often neuralgia (nocturnal) the pulse is quickened the tongue coated, white, broad, and indented by the teeth. The fauces are more or less congested, the tonsils and soft palate being frequently swollen; there is irritation of the larynx, producing a mucous cough and often nausea the conjunctiva is congested and muddy, and the whole skin remarkable for its yellowish and dirty appearance, looking as if saturated with impure and discoloured humours." (Wilson.) Dr. Brodrick, in *Madras Quarterly Journal of Med. Science*, Oct., 1862, called attention to what he believes a diagnostic sign of the existence of an acquired syphilitic taint, viz., *sub-sternal tenderness*; it was noticed by Ricord. Various diseased states of internal organs, of the special senses, and fibro-cellular structures also result from the poison of syphilis, especially in hereditary instances. We have only to do with the matter in so far as the skin is concerned. Syphilodermata exhibit the same elementary lesions as ordinary eruptions; they are exanthematous, papulous, squamous more especially, but also bullous, tuberculous, vesi-

cular, pustular, &c. But they possess certain modifications of features as to colour, shape, &c.: hence syphilis, in so far as it does not give rise to skin diseases of special and peculiar character, is simply a modifying agency; in other words, the ordinary eruptions may occur in a person of syphilitic taint, and then certain modifications of form and appearance result. Syphilitic taint giving rise to eruptions may be hereditary or acquired.

The hereditary Syphilis is mostly, but not necessarily however, synonymous with infantile or congenital. The child may be tainted through the medium of the milk of a syphilitic nurse. Congenital syphilis may be derived (*a*) from the mother contaminated before or after conception; (*b*) from the father (the mother being healthy) before he is affected by tertiary symptoms; (*c*) when the parents are both syphilized, in double degree. It is uncommon before the end of the second or beginning of the third week, rare after the sixth month; the usual period of occurrence is when the child is about three weeks old. No one can mistake the tainted infant. The general aspect is more or less marasmic, shrivelled "old man" like. The skin is dirty, muddy, it has lost its elasticity and hangs in loose folds; it is dry, and often exfoliating. Its cry is harsh, cracked (characteristic), "the snuffles;" the presence of mucous tubercles about the anus and the mouth; the fissures at the angles of the mouth; ulcerations of mucous surfaces; the high arched palate; the inflammation of the thymus gland; various eruptions over the body, especially about the feet and hands (perhaps bullous); a subacute onychia possibly present; and a family history of syphilis are diagnostic: other details may very well be given under the head of what I now pass to.

Acquired Syphilis.—An adult may exhibit hereditary syphilis, *pur et simple*. Acquired syphilis is more common and has three groups of symptoms.

Primary, which is simply *chancre*; *secondary* and *tertiary* are eruptions and diseases of the bony parts, and ulcerations which follow as the consequence of the introduction of poison into the system, mostly by the primary disease. The secondary forms of eruption are—*roseola* and *maculæ*, *lichen*, *psoriasis*, *tubercula*, *pustulæ* (*ecthyma* and *rupia*), *onychias*, *alopecia*. The tertiary are—*psoriasis* of the hands and feet, the ulcerating tubercular forms, mucous tubercles, and syphilitic ulcers. They are generally accompanied by *cachexia*, *nodes*, *periostitis*, *laryngitis*, and deeply seated mischief.

The syphilides have certain peculiarities :—

1. There is a *history of syphilitic inoculation*, which tells its tale by the numerous symptoms (due to the circulation of the poison), noticed at the opening of this chapter; and, in addition, by the presence of *cicatrices*, *indurations*, *scars*, and stains about the penis and groin.

2. *Their colour*.—It is described as copper coloured; in reality "*a reddish yellow brown*" (Wilson). It is dull red at first, and becomes coppery after awhile, and as the eruptions vanish a dull red or yellowish dirty stain remains for a varying length of time. In the early stages of disease the tint may be violet, but this soon becomes replaced by the coppery hue.

3. *Their form*, which is peculiarly circular. This feature is not perhaps of much moment, *per se*, but in conjunction with other points is of some aid in a diagnostic sense. It may be destroyed or prevented by the confluence of other patches, but even then the typical form can be recognized in the component parts of the patch of disease. Syphilitic *scaly* eruptions are composed usually of small circular spots. Scales or *squamæ* are thin, oftentimes very fine, grey, and few in number; fewer and lighter than in the typical aspects of eruption. Crusts are thick, greenish, or black, and firmly

adherent. Vesicles are flattish and do not readily rupture. Ulceration is a common feature; the ulcerated surface is ashy grey, covered with a pultaceous substance, and bounded by sharply cut edges. Cicatrices are whitish and reticulated, or dull and brownish, leaving in their place on disappearance a yellowish stain. Fissuring is marked in the squamous forms.

4. *The Absence of Pain or Itching.*—With the exception of mucous tubercles and some forms (moist) of infantile syphilis, syphilodermata are generally unaccompanied by heat or pruritus during their existence. In the tubercular forms, just prior to ulceration, a process of softening, apparently depending upon a low kind of inflammation, goes on, and the tubercles may be painful and tender.

5. *Their Polymorphism.*—This is very characteristic of syphilitic disease. Several different kinds of eruption may co-exist, and this is a rule of general applicability, if we except the squamous class of eruption. It is no unusual thing to see papules, pustules, and squamæ co-existent on the same syphilitic subject.

I shall give the salient features of the various syphilitic eruptions.

Pigmentary Stains, or Maculæ Syphiliticæ, may be simply a remnant of other forms of syphilis, or, apparently, idiopathic. They generally commence by slight pyrexia, pain in the limbs, anorexia, headache, and malaise, followed by the development of little roseolous spots, which soon fade, take a dirty-brown aspect, and subsequently a rather lighter hue. These maculæ are neither elevated, itchy, nor hot; they are circular, in size ranging between that of a fourpenny-piece and that of a florin, scattered over a pretty large area, usually isolated, but occasionally confluent, forming sometimes bands (annulose); they do not disappear on pressure, and their especial seats are the neck, the breast, the face, especially the forehead, and the arms. In children the maculation is so com-

plete, that the whole surface has an earthy look. In acquired syphilis, in adults, there is oftentimes a significant staining, particularly well seen about the forehead. Maculæ syphiliticæ are unattended by pruritus or desquamation, and sometimes occur in conjunction with other forms of eruption. It has been said that they constitute a primary form of disease, but it is the rule that they commence as roseolous spots, though the red blush may be very ephemeral and escape detection. They can only be confounded with pityriasis, but in the latter there is desquamation, itching, elevation, and absence of the copperish hue, and a want of circular form. Chloasma possess itching; the colour is fawn, without any shade of copper tint; the surface is elevated, rough, and desquamative, and the microscope detects parasitic elements; chloasma, too, is so peculiar in its seat.

Exanthematous Syphilide, or Roseola.—This is one of the earliest secondary symptoms, occurring generally between the sixth and ninth week after the reception of the primary mischief. It is preceded by pyrexia of mild character, prostration, and very frequently more or less irritation of the mucous surfaces,—*e. g.*, redness of the fauces, sore throat, &c. The eruption commences as little round spots of a pale-red colour, with very well-defined edges, which may appear very suddenly, often in the course of a single night, acquiring in a little while a perfectly pale-rose tint; they are unattended by itching, and observed usually most perfectly and abundantly on those parts which are well covered and kept warm by clothing, especially flannel; hence particularly on the trunk. The little patches may be slightly elevated, isolated, and round; they fade, but do not disappear on pressure. Sometimes they are scattered pretty freely over the trunk, the upper part of the chest (especially the lateral parts), and on the back. When the rash fades, it always leaves behind a branny or more deeply-coloured stain; the epidermis desquamates in largish but thin scales. This latter condition

becomes more decided in a few more days. What strikes one is this: that there is evidently a large scattered amount of eruption without apparent cause, without local irritation, and only the slightest febrile disturbance, the eruption leaving behind a dirty staining. The coppery hue is evolved out of a roseola, which is somewhat dusky on its first appearance. In ordinary roseola the tint is vivid, and quickly disappears. Syphilitic roseola occurs in three chief forms,—“as a patchy and mottled redness, as circular blotches, and as congested rings” (Wilson); and, according to the degree of congestion, the aspect of the rash may be punctated, uniform, or papulated. The stains left by syphilitic roseola, when the congestion has disappeared, constitute the so-called *Maculae Syphiliticae*, before noticed.

* *Papular Syphilis* assumes the form of lichen, and all authors agree in describing two forms,—the acute and the chronic.

The acute consists in the development of small, hard, pointed papules, which are packed closely together, each being attended at the outset with a red areola, affected by pressure. The papules are seated upon the face especially, and also the trunk (on both aspects), the neck, and less frequently the limbs; they become covered over with fine greyish scales, and occasionally become pustular or ulcerate. The eruption is scarcely successive, for it arrives at its full extent within a couple of days or so. Slight febrile disturbance precedes the development of this state. When the acute stage is passed, the disease appears to be constituted of little dark points or papules seated upon a somewhat dull-red base; in a few more days this dark hue is replaced by a well-marked copper colour, and more or less desquamation. The disease lasts a month or so, leaves behind more or less staining, and little cicatrices or pits, which are very characteristic. This form of syphiloderma then commences with congestion and subsequent deposition in the form of papular elevations; the

peculiar coppery tint is masked at the outset by the congestive redness, and only shows out markedly when the latter disappears.

The chronic form of lichen possesses a slower and more indolent course, simply. The papules are larger, numerous, flat and broad, copper-coloured, without distinct areolæ, local itching, pain or heat; they are seated on the outer sides of the limbs, the forehead, the trunk, and even the scalp. The papules are successive in mode of appearance, and on their subsidence leave behind coppery stains. Erasmus Wilson describes this form of syphilide as a transition from the roseolous form, and makes several varieties according to the manner in which the papules are distributed. When they are scattered, *Lichen syphiliticus disseminatus*; when they are confluent, *L. S. confertus*; when clustered together like fruit, *L. S. corymbosus*; if in the form of rings, the term *annulatus* is used; and lastly, when the papules become pustular, the disease is called *L. S. pustulosus*.

The *Diagnosis* of syphilitic lichen is generally easily made. A prior history of syphilitic inoculation; the seat of the eruption on the face especially, its general distribution, coppery hue, and tendency to become tubercular; the absence of pruritus and pain; the general cachexia of the patient, and the evidence of concomitants,—*e. g.*, mucous tubercles, roseola, nodes, sore throat, &c., suffice.

Vesicular syphilis is very rare. The vesicles are grouped together, and possess a copper-coloured base; the disease is indolent, and possesses a very well-defined edge usually; there is an entire absence of the ordinary local symptoms of vesicular disease, viz., itching and heat; the vesicles too are often abortive, they quickly dry up, thin scales take their place, but a dark stain remains. Slight pyrexia is not an unfrequent antecedent, and significant concomitants are generally present. Hardy describes three aspects, which, however, are but stages, affecting somewhat different dispo-

sitions, at the same time clinically to be commended and recognized. They are syphilide vésiculeuse *eczémateuse*, syphilide vésiculeuse *varioliforme*, and syphilide vésiculeuse *herpétiforme*. The vesicular syphiloderma in fact may occur in the form of eczema or herpes, or a modification of the bullous form of disease, in which the vesicles are varicellous or depressed more or less in their centre (*varioliforme*).

The eczematous form consists of *little* vesicles, which are sometimes grouped or aggregated, but often scattered; they possess a copper-coloured areola and base; their contents, at first transparent, soon become absorbed, and scabiness takes the place of the vesicles; occasionally the latter burst, and crusts form, which expose on their fall a coppery stain, of persistent character. The herpetic form assumes the aspect of herpes circinatus or herpes phlyctenodes. In the former the disease is rather a roseola,—the vesicles are abortive; in the latter instance there are largish vesicles seated upon a dull red base; the vesicles do not easily rupture, but desiccate, and are replaced by dark-coloured scaly scabs. In both cases a copper-coloured stain is left behind. This herpetic syphilide is noticed on the face, limbs, trunk, and penis, often associated with other syphilodermata, and generally within six months or so after primary disease. In the varioliform variety, the vesicles are about the size of lentil-seeds, disseminated and intermingled with little bullæ, which are pointed, and now and then umbilicated. They possess the characteristic areola, crust over in a short time, beneath which a copper stain exists.

The *Diagnosis* is based upon the absence of fever, the ill-developed state of the vesicles, the coppery tint, the brown or dark colour of the crusts, the staining, the history of the patient, and concomitant conditions.

BULLOUS SYPHILIDE.

For convenience sake I have referred to syphilitic pemphigus under the head of simple pemphigus. I may repeat

here that there is little difference apparently between pemphigus and rupia, except in the degree of crusting that occurs; rupia differing from pemphigus in the fact that the ulcerated base of the bullæ gives out a peculiar secretion which dries into thick, dark-coloured, and more or less conical crusts. Erasmus Wilson classes rupia with syphiloderma, under the pustular group. I must refer for other detail to the description of rupia elsewhere given. It is necessary to say a few words in reference to pemphigus. It has been said that pemphigus is never syphilitic in the adult. I have already given a case recorded by Dr. Anderson, clearly showing that such a thing may exist, but certainly its occurrence is very rare, as far as we know, in the adult.

Pemphigus in the very young may or may not be syphilitic. It may be epidemic, attacking robust healthy children, running the course of ordinary pemphigus, and wanting the concomitances of syphilis; in this aspect it is met with among the infants of lying-in hospitals, and appears to be much of the nature of, and produced by the same causes as, erysipelas. Non-syphilitic and non-epidermic pemphigus is not usually seen in children before the seventh or eighth month of age; the contents of the bullæ (which are discrete in this species) are serous, and there is little tendency to ulceration.

Syphilitic Pemphigus (*P. neonatorum*) is now regarded as a positive existence. It occurs in those in whom we can trace an hereditary tendency to syphilis, in those who exhibit signs of constitutional tainting (earthy hue of skin, snuffles, wasting, mucous tubercles, lepra, &c.); about the hands and feet especially; the bullæ are abundant, their contents puriform, and they possess a great tendency to ulcerate more or less deeply, the ulcers having a copper-coloured areola, and a nasty, dirty, foul surface, with thinly cut edges. It is often congenital, and is seen most frequently before the end of the first fortnight of existence. Sometimes the bullæ may be

not well marked, and scabbing may be extensive in degree, the disease exhibiting a close relation to rupia; indeed herein we see the link as it were between rupia and pemphigus. The ulcerative tendency displayed by syphilitic pemphigus is no doubt dependent upon the cachectic state of nutrition brought about by the syphilitic poison; hence we see here another illustration of the fact that syphilis is a *modifying agency* in disease.

Pustular Syphilide.—Erasmus Wilson regards rupia as the only true pustular syphiloderma, the so-called impetigo, and ecthyma, being respectively suppurating lichen and suppurating tubercle; ecthyma, however, being the most likely form of disease (in a primary sense).

There are three degrees, so to speak: (*a*), that in which the pustules are small, somewhat resembling acne, impetiginous in type (psudracious), often called tubercular syphilis,—the syphilide pustuleuse acniforme of Hardy; (*b*) in which the pustules are larger, and assume the aspect of ecthyma (phlyzacious); and (*c*) the rupia syphilitica (the syphilide pustulo-crustacée of Hardy).

The first, or impetiginous variety (the pustular lichen of Wilson), is seen about the forehead and face, and on the trunk; the pustules are successive, numerous, isolated, and scattered; they possess, as their especial features, an indurated, livid, dull-red base, which soon acquires a coppery hue, and great indolence. Sometimes they are flattened, at other times conical, the points or summits being purulent; a thick greenish crust forms, beneath which is an ulcer, depressed in its centre, and leaving behind a more or less marked cicatrix and copper-coloured stain; this is often associated with other forms of syphiloderma, and preceded by febrile disturbance. It often remains in one condition for weeks, being remarkably indolent, the crusts adhering very closely and persistently. The second, or ecthymatous variety (ecthyma syphiliticum), is observed affecting the face,

trunk, but especially the limbs, the lower more than the upper, and occasionally the head. The pustules are phlyzacious, scattered, with a coppery base, and indolent, flattened, scabbed over with dirty brown or blackish scabs, covering ulcers with indurated and dark edges, which on healing leave behind cicatrices and characteristic stains. It may commence as a quasi-vesicular (bullous) disease, each vesicle having a red base, quickly enlarging, pustulating, and breaking out into obstinate ulcers; the crusts are peculiarly thick, and very adherent. The third, or rupious variety, has been noticed before; it is a tertiary not a secondary form of syphiloderma. Hardy looks upon it as an exaggerated state of ecthyma accompanied by a peculiar augmentation of the crusting. Little bullæ, or purulent vesicles, arise, crust over, and by accretion, hard, dark, greyish, thick crusts, surrounded by a coppery tint, are produced; beneath these, dirty greyish ulcers may be detected. The disease may be serpiginous.

It is as well to repeat that lichen, or even tubercular syphilis, may pustulate and assume the aspect of ecthyma especially.

The relation of ecthyma, pemphigus, and rupia, of syphilitic origin, is very close indeed.

The *Diagnosis*.—Syphilitic ecthyma is distinguished from *simple* ecthyma by the history of the patient, the concomitance of other syphilitic lesions, the coppery hue, the thick black crusts, the foul ulcers, the depressed scar, and the absence of a livid areola,—*from acne*, about the face especially, by the non-limitation to the face of the pustules of specific ecthyma, for these are seen conjointly on the back and arms usually; by the ulceration at the apices of the pustules, the absence of pain, the indolent, non-inflammatory aspect, the antecedent and concomitant histories.

Squamous Syphilide is simply the ordinary lepra and psoriasis modified by the syphilitic poison; the two diseases

just named are secondary affections, and may be described (being mere modifications) under the one term syphilitic *alphos*. Erasmus Wilson describes lepra under the name *Tubercula annulata*. The chief differences between the simple and specific alphos are, the copper-coloured tint of the eruption, the thinness of the scales, the fact that the spots are rather smaller and circular, the existence of concomitant symptoms of syphilitic taint, and, as described by Bielt, the presence of a little white rim around the base of each patch. When the disease consists of small, whitish, non-imbricated scales, frequently reproduced, and seated upon a copper base, leaving behind a coppery stain, the middle of the little patch (which varies from a few lines to a five-shilling piece in size) being less affected than the circumference, it has been called *lepra syphilitica*. This is common about the trunk and neck. A special form, *lepra syphilitica nigricans*, has been also described; in it the colour of the patch is black, especially in its middle, the form circular, the margin more raised than the centre, the squamæ very fine and dry, the surface beneath shining, and there is a general earthiness of the surface; the disease also arises by the appearance of darkish livid stains. In other instances, the squamous syphiloderma assumes the aspect of what is generally regarded as psoriasis, particularly the variety *guttata*. There is a disposition to a circular form; solitary isolated spots are seen, the size of a pea, a shilling, or an intermediate degree, covered by thin squamæ, which are hard, adherent, and grey, and seated upon a copper-tinted basis, which is smooth and shining, not elevated, not papular, not red, as in simple alphos; a white rim surrounds each patch, and this is formed by the loosening of the cuticle around the circumference. These spots are scattered over the arms, breast, face, and trunk generally; and when the palms of the hands or soles of the feet are diseased, the skin is dirty, harsh, scaly, cracked, and fissured. Wilson calls psoriasis palmaris, erythema palmare, as it attacks the middle of the palm; it

exhibits a reddish spot, over which the cuticle becomes hardened and yellowish; the surface then cracks, and the diseased action tends to spread, producing a "red, inflamed, hot, cracked, exfoliating surface," and assumes an annulate, serpiginous, or tubercular form. If the central part heals (lepra), it is called *E. palmare annulatum*: these palmar and plantar diseases are tertiary symptoms. Hardy has described a syphilide cornée; it is merely plantar or palmar psoriasis, in which the epidermis hardens very much, and the coppery areola is well marked. Devergie thinks that the psoriasis palmaris, when it affects the palm of the hand rapidly, and the palmar aspect of the fingers as well, with pretty free desquamation, is pityriasis rubra, and not psoriasis at all.

Diagnosis.—There are seven leading features which, taken together, are positively diagnostic of syphilitic alphas. (1) Alphas limited to the palms of the hands and soles of the feet, is in the majority of cases syphilitic. (2) The disease does not attack the elbows and knees by predilection as in the simple forms. (3) It is generally displayed in little circular patches, which are isolated and not confluent. (4) The patches have a peculiar whitish line circumscribing them, due to the elevation and detachment of the cuticle. (5) The squamæ are thin, small, grey, and repose upon a coppery base. (6) There are generally significant co-existences of specific infection. (7) Copper-coloured maculæ follow in the wake of the disease.

Tubercular Syphilis is decidedly a common form of secondary syphilis, the tubercles for practical purposes being regarded as an exaggerated condition of papules: they vary a good deal in size and form, but are always indolent, and mostly occur about the face, especially the nose and forehead. Authorities recognize five varieties, in every one of which the tubercles commence as little papular elevations, varying in size from that of a pea to that of a nut; possess a coppery tint, and are flat and hard; when they ulcerate,

which they do when large, they become covered over by thick and black adherent crusts. The first variety is that in which the tubercles are aggregated and assume the form of lepra somewhat; it is the "herpetiform" species,—the syphilide tuberculeuse *en groupes* of the French, the tubercula circumscripta of Erasmus Wilson. The tubercles are about the size of peas, flat somewhat, though not markedly confluent, and disposed in a circular manner; they are seated on the face and forehead especially; present at first a dull-red, subsequently a coppery tint, and exhibit a scaly aspect in some cases; in the progress of cure, dull brownish stains are left behind; the tubercles do not ulcerate, and are unaccompanied by any signs of local irritation. Several circles may coalesce, and then pretty large patches are observed in different parts, in which may be traced the component circles; this is called by Erasmus Wilson *T. corymbosa*. The patches increase by the centrifugal growth of tubercles; hence in the two sub-varieties now described, the edge is generally bounded by distinct tubercular elevations; the surface is muddy and cachectic. When the central part clears, as it were, the disease closely resembles lepra; and when the tubercles disappear, the derma often appears to be atrophied, so that cicatrices are left in connection with a considerable degree of maculation. The *second* variety is that in which the tubercles are disseminated; hence called syphilide tuberculeuse disséminée, by the French; tubercula disseminata by the English. This is papular syphilis in a marked degree; the tubercles, rather larger in size than that of peas, are not arranged in any particular order, but are seen scattered over the trunk, the back, and the face; they are very indolent, do not ulcerate, and are only covered by squamæ to a very slight extent. A state midway between the two varieties is described as that in which a tubercle increases in size, or several collect, so that a ring is formed, the enclosed central area being tolerably healthy. This is "the tubercula annulata" of Wilson.

The third and fourth varieties are both characterized

especially by the occurrence of ulceration: in the one instance it is superficial; in the other deep: the *third* is the syphilide tuberculeuse perforante (perforating or deeply ulcerating tubercular syphilide). In it the tubercles are large, few, livid red, with a copper-coloured areola, having a tendency to ulcerate deeply, with accompanying pain and discomfort; the ashy-coloured and foul ulcers, which may become confluent, crust over, the ulceration meanwhile eating more deeply, the crusts being repeatedly shed and reproduced. In this way the nose may be destroyed and lost, the disease resembling lupus: it is most common about the face. Severe ulceration is generally a symptom of tertiary syphilis, and accompanies severe cachexia, indurations of the perios-teum, syphilitic caries, &c. The *fourth* variety is the ser-piginous syphilide; it differs from the last chiefly in the fact that the ulceration takes place in a superficial manner, creeping over the surface; the form varies somewhat,—it may be in bands or circles; the surface of the ulcer becomes covered over with blackish crusts, which fall and are reproduced from time to time; the tubercles themselves are large, and, if the ulcers heal, distinct livid cicatrices remain behind; if the tubercles become confluent, the ulceration is more marked. The *fifth* variety is the fissured tubercle; it is smallish, and is noticed to be the seat of a linear ulcer, or fissured in its centre; there is a good deal of pain; and it exudes a thinnish ichor; it is seen about the side of the nose, lip, scrotum, and anus.

There are then two distinct aspects of tubercular syphiloder-mata,—the ulcerating and the non-ulcerating; but even these are not absolutely separated the one from the other. The *non-ulcerating* may be subdivided into disseminated and aggregated; the latter again into annulate, in the form of rings; circumscribed or herpetiform, and corymbose, in which large patches are made up of more or less distinct circles or segments of circles. Any of these may, but do not usually, ulcerate; their tubercles mostly disappear by resorp-

tion. The *ulcerating* form may be likewise subdivided into perforating and serpiginous; but even a mixed condition of these two may exist. A syphilitic lupus or lupiform syphilis has been described. The characteristic of lupus is the attempt at repair, which is so far successful that it gives rise to peculiar indelible cicatrices, and when tubercular elevations are accompanied by a dull-red tint and succeeded by deep ulceration, with or more or less scabbing, sanious discharge, and attempts at repair, ending in partial cicatrization, the disease is termed syphilitic lupus.

Syphilitic ulcers are likely to be mistaken for lupus; the former have sharply-cut edges, tubercles around which are *hard*, smooth, dryish, dense, shining, and copper-coloured. They occur in people of *middle age*, are accompanied by concomitants of syphilis, and the ulcers are *foul, dirty, ashy, exuding an ichor*, and the tissues around are infiltrated and indurated; in the lupus ulcer the edges are not sharply cut, but thickened and rounded; there is no copper colour; the tubercles are *soft*, red, *quasi-gelatinous*; the parts around are painful and œdematous; it often occurs about the face alone *in young people*; there is an entire absence of syphilis, and the ulcers are *clean and dry*.

Sometimes a syphilitic ulcer originates in *subcutaneous indurations*; these are observed in very old-standing cases. They are called tumores gummati, or tubercula gummata; they are hard and about the size of nuts or walnuts. Presently the surface over them becomes red and tender, and ulceration commences; but it is very indolent, indeed it has no tendency to heal; gives exit to a little fluid, scabs somewhat, and is not painful.

Just as we have growths and eruptions of the cutaneous, so have we similar affections of the mucous, surface: it is only needful to refer now to those changes which are observable to the eye, and which are seated especially at the junction of the skin and mucous membrane; hence particu-

larly at the orifices of the natural outlets: but not only here, for any part of the surface which is habitually bathed in secretion, and acted upon by heat, is liable to the same kind of disease. This form of syphiloderma has been called Vegetative Syphilis, and is noticed mostly in the female about the vulva; in the child about the mouth, buttocks, and arms; and the penis in the adult. There are two species,—mucous tubercles and condylomata (warts). Mucous tubercles (see Elementary Lesions) are circular flat elevations, of soft look and feel, and may be described curtly as warts formed out of mucous membrane; they become more or less irritated, the parts around being also inflamed, at the same time that they give exit to a faint, pale, viscid secretion: they may ulcerate, or become pedunculated, when they are to all intents and purposes condylomata; they frequently spring up in the seat of an old sore, and always cause considerable local discomfort. Condylomata are simply pedunculated little warts, occasionally sessile, differing from mucous tubercles in the fact of being firmer and not giving rise to ulceration or secretion.

Syphilitic Alopecia is pretty common; the hair may thin out, if the cachexia be marked; or it may fall off in patchy form. The diagnosis is made by a process of exclusion, and the positive existence of latent or developed signs of syphilis.

Syphilitic Onychia may attack the structure of the nail itself, or the matrix especially. In early infancy (under a year), subacute onychia attacks several fingers at one time in conjunction with iritis, otitis, snuffles, &c.; it ends in exfoliation of the nail, and is not unfrequently attended by a papular rash, &c., over the surface of the body. The local symptoms are pain, redness, swelling around the base of the nail, followed by suppuration and ulceration of the matrix, with loss of the nail. This state is sometimes a secondary symptom in the adult, but usually the matrix escapes; there is no pain and no exfoliation, but the superficial

layers of the nail become affected. As Mr. Hutchinson described it to the Pathological Society, it begins at the root, where a "semilunar furrow is seen extending across it; the outermost layer is destroyed over the entire lunula, and a ragged border overhanging that part is presented by the distal portion; by degrees, as the nail grows, the diseased margin is pushed further and further on. The nails appear dry and brittle in texture, as is shown by the fissured and broken condition of the free edge." Several nails are attacked at the same time and that symmetrically; the progress is very indolent indeed.

The so-called tertiary symptoms are psoriasis palmaris and plantaris (erythematous, Wilson), mucous tubercles, ulcerating tubercles, syphilitic lupus, and tumores gummati, and the large syphilitic ulcers which occur in cachectic subjects who have long been impregnated by the virus. Erasmus Wilson also regards lepra and lupus as hereditary taints of syphilis, and describes the psoriasis seen in infants as erythema syphiliticum infantile, transmitted; hereditary also.

Treatment of syphilodermata consists in the first place in subduing the feverish symptoms which accompany the eruption,—in other words, the syphilitic fever; secondly, in removing "the poison from the blood by every means in our power; and, thirdly, in supporting the powers of the system, to give it greater energy to eliminate the poison, and also to resist its lowering tendency. To remove the poison we have recourse to remedies which are calculated to act on the natural emunctories of the system, the bowels, liver, kidneys, and skin; and our means of support must be derived from the catalogue of tonic remedies, amongst which the most useful is iron" (Wilson). Our treatment varies considerably according as the cutaneous eruption takes the aspect of a secondary or tertiary syphilis, and also if it be hereditary; the first, or only a recurrent attack. In secondary syphilis the remedy is *mercury*; in tertiary disease, *iodide of potassium*.

At the present time a considerable amount of argument has been adduced against the use of mercury in the treatment of syphilis. It is said that all the symptoms of "secondary disease" can be cured without the aid of mercury. It is true that cases will get well; the system will get rid of the poison by the exercise of patience and the use of tonics, but others most assuredly will not. Moreover, it is positively affirmed that the ills which we attribute to the effect of syphilis are brought about by the use of mercury, and that no ill (tertiary) symptoms arise in those who have never taken the drug for the relief of syphilis in its primary or secondary forms. But it may as certainly be held (1) That all the secondary and tertiary symptoms, in their full force, may arise in those who have never taken a particle of mercury. (2) Patients recover much more speedily under the use of the drug than by any other plan of treatment. (3) It has been shown that those who are engaged in the use of mercury daily in their occupation,—*e.g.* gilders, &c., enjoy special immunity from bad secondary or tertiary syphilis (Bielt). And (4) that these subjects do not suffer, in consequence of their occupation, in any special degree from symptoms which are usually held to be syphilitic.

The injudicious use of mercury may undermine the general health, and so enable the specific virus to obtain the upper hand, and work out effects upon the system that otherwise would not occur; but these can only be charged to the drug indirectly, for bad living and bad hygiene will act in a precisely similar manner. Secondary symptoms follow, *par excellence*, non-suppurating buboes and indurated chancres.

I shall consider the general treatment of syphilodermata in the form of a summary, premising, in reference to mercury, that it "is an invaluable medicine, but one requiring to be used with judgment, to be watched in its effects, and to be regulated according to those effects rather than upon any scheme of theoretical results; indeed, mercury, like iodide of potassium, and every other medicine, must be

exactly graduated in dose, combination, and period of administration, to the special case of the patient. Each patient, as he varies in physiognomy from his foregoers, varies also in constitution, in the character of his disease, and in his susceptibility to the influence of medicine" (Wilson). Now, in the first attack of secondary mischief, especially if the primary disease has not been treated by mercurials, the specific drug must be used. (*a*) In the papular and erythematous varieties, if there be acute symptoms, the disease has a great tendency towards a natural cure; hence all that is required consists in the exhibition of salines, aperients, emollients, and, at the fag end, iodide of potassium and sarsaparilla, and tonics, especially nitric acid. (*b*) The pustular syphiloderma requires also at the outset antifebrile treatment, and then mercurials and tonics. (*c*) The squamous syphilide, mercurials and arsenic, with stimulating applications locally. (*d*) The tubercular (non-ulcerating), mercurials, tonics, local absorbents, and stimulants, and always iodine in combination with the general remedies. (*e*) The ulcerative, iodide of potassium, in combination, perhaps, with mercurials, tonics, especially iron and cod-liver oil, and, locally, caustics. (*f*) Tertiary symptoms demand acid and bark, iron, and iodide of potassium in pretty large doses. (*g*) In cachectic subjects who are debilitated, restless, and irritable, opium given internally is of much service. In reference to iodide of potassium it must be borne in mind that its use is beneficial in direct proportion to the duration of the disease; hence, when nodes, tubercles, caries, and secondary ulcers are present, when mercury has been fully used, or seems to fail.

In all cases the exhibition of decoctions of various woods is to be attended to. The compound decoctions of sarza and guaiacum are the best; they keep the skin and bowels freely acting, and thus very materially help the elimination of the poison; when a patient is under the influence of mercury, he should avoid stimulants, cold, and other sources of irrita-

tion and catarrh; the drug itself acts by its effect upon the system at large; the exhibition then should be continuous, and not interrupted; it should be given in moderate doses at the outset, and increased, perhaps, slightly by-and-by; the dose must also be proportionate to the strength, build, and habit of the patient; if it be long given, having been slightly augmented in dose (for large doses are injurious and unnecessary, perseverance being capable of effecting all necessary influence), without much beneficial result, then its use should be discarded and the iodide of potassium used, with tonics. Local measures are only urgently called for in those instances of tubercular and ulcerative syphilodermata in which destructive action can be thereby checked. The extent to which we should carry our mercurialization depends upon the progress of the disease; for if this get well, then is there no need to continue the use of the drug, except, perhaps, in diminished and less frequently exhibited doses, to guard against a return of eruption. Should salivation occur at any time, the mercurials must be omitted, or given cautiously and with attentive watching. In no case should it be our object to induce or push the drug to the point of salivation. I fear very much that practitioners regard the occurrence of salivation as the gauge whereby the administration or disuse of mercury is to be determined. The action upon the salivary glands is not strictly, indeed, by any means, an evident certainty that the general system is under the full, or even distinct, influence of the drug; the glands may be peculiarly and specially affected; at other times the general system may (as evidenced by the cure of the disease) be fully influenced without the faintest sign of salivation, and *vice versa*. Salivation is, then, a check to the continuous use of mercury, but not the standard point which we should aim at or reach after for the cure of disease. Mercury tends to lower, to a certain degree, the nutrition of the body; hence, after its exhibition it is as well to give a short course of iodide of potassium, with the view of causing its removal from the

body; and as a subsequent matter, or even immediately following the cessation of the use of mercury, it is highly desirable to prescribe tonics, such as nitric acid and bitters, quinine, iodide of iron, and, perhaps, cod-liver oil. Various preparations of mercury have been recommended; but of all, the protiodide is the best,—better than calomel, the bichloride, or blue pill, in secondary disease; it may be given in doses of one-third of a grain, made up with conium or lactucarium extract, three or four times a day, in conjunction with a pint or more of decoction of sarsaparilla or guaiacum. A very useful form of giving this preparation is the *mist. hyd. iodidi* of the Skin Hospital Pharmacopœia, containing a scruple of bichloride of mercury, six drachms of iodide of potassium, and two drachms of compound tincture of iodine, with sufficient water to make up a pint; and a drachm contains one-eighth of a grain of bichloride of mercury, and three grains of the iodide of potassium. Hardy often gives the biniodide of mercury in combination with iodide of potassium, in the tubercular forms. Devergie prefers the *separate* use of the iodine and mercurial preparations; others, again, prefer arsenic in combination with mercurials or iodine,—both or either. Sometimes the forms mentioned disagree with the stomach, and produce diarrhœa; in that case opium must be given with them; but it is right to add, that some regard opium as preventive of the good effects of the other remedies. Under these circumstances the bicyanide of mercury has been recommended, in doses of a sixteenth of a grain; it does not purge nor gripe, and vegetables do not decompose it, it is said. The same drug may be exhibited in the form of a bath. Mr. Langston Parker has insisted most strongly upon the use of this means of medication. The patient is seated upon a chair and covered with flannel, and outside this by an oil-silk quasi-coat or bag; beneath the chair is placed a copper bath, containing a pint or somewhat less of water; upon this is placed a tinned iron plate, which holds the mercury to be sublimed; beneath

the bath is placed a spirit-lamp; the patient, after the latter is lighted, is "exposed to the influence of three agents,—heated air, common steam, and the vapour of mercury; in about five minutes perspiration comes on, and the patient should be subjected to the influence of the bath for some twenty or thirty minutes, when the lamp should be removed, the patient allowed to cool gradually, and made to take," as Mr. Parker further observes, "a warm drink of decoction of sarza or guaiacum."

If the preparation employed be the bisulphuret of mercury, about one or two drachms should be used; if calomel, from ten to twenty grains; if the iodide, ten to twenty grains; the oxides and the bisulphuret are the mildest, the iodides the strongest fumigants. The bath may be used once, twice a week, or even more, according to circumstances.

Inunction is another mode of bringing the system under the influence of hydrargyrum. Continental dermatologists advocate a plan, which Wilson briefly defines as "a triple compound of starving, purging, and sweating," and which he mentions with commendation; it is the so-called Zittman treatment, but is one which compels the patient to give up his usual employment, to take to bed for a fortnight or so, and on this account is almost inapplicable in a general way. The patient who has syphilitic disease wants to get rid of it without entering upon any plan of medicine which would disclose his secret, and take him away from his work; most men could not afford the time; however, the plan is as follows:—first day, a purge (calomel and jalap), and three meals of broth; up to the fifth or sixth day four pints of the Zittman decoction are taken daily; of these four, two pints are made of the strong and two of the weak decoction (*vide* Formulary), with each day two ounces of meat and two of bread; on the sixth day an active purge, with broth as before; the seventh till tenth repeat the drinks, and meat and bread: this continues till the fourteenth day or so, and then the patient is kept on low diet, allowed to get up, but

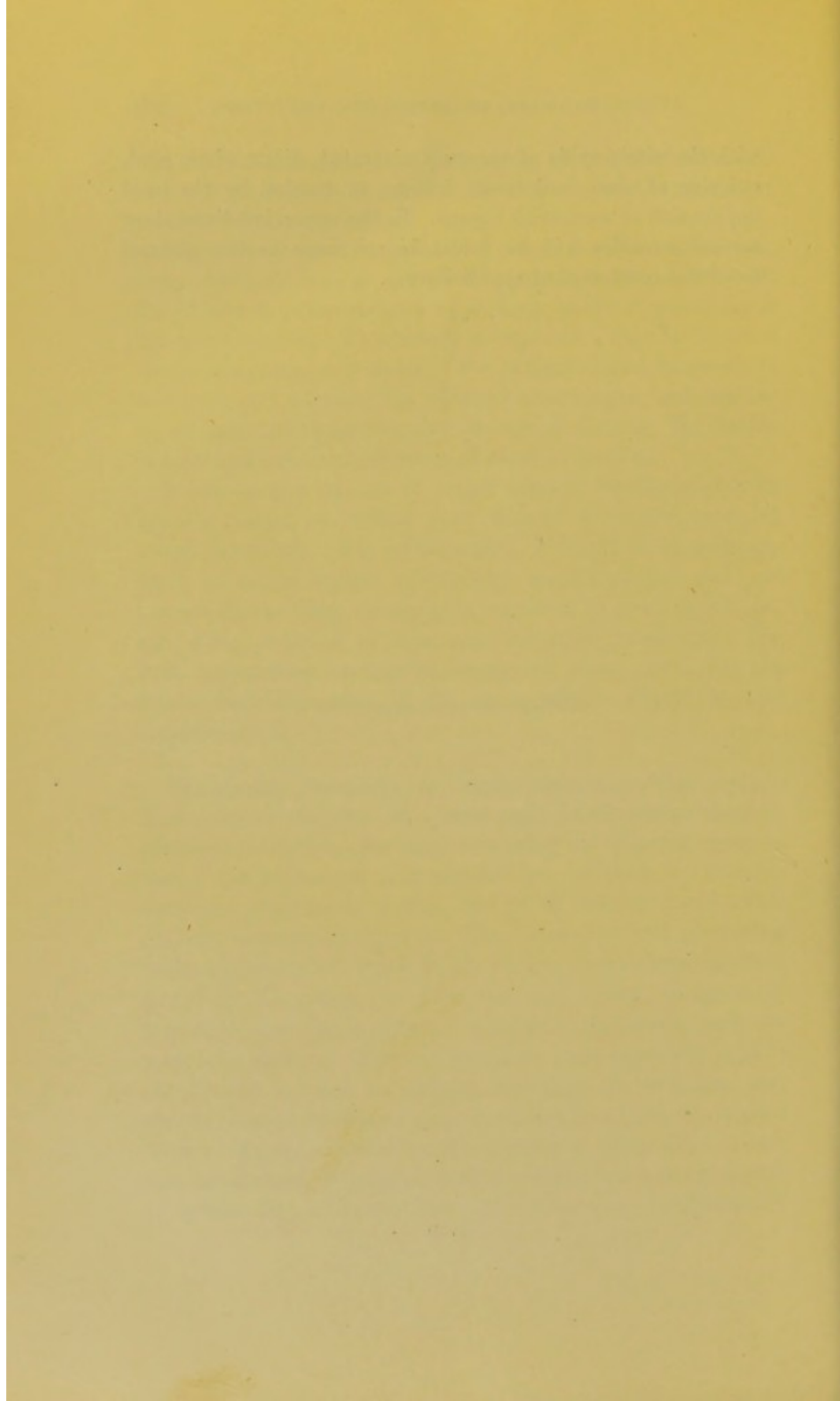
still continues to take a small quantity of the decoction. If convalescence is tardy or insufficient, the same treatment must be recommenced.

When mercury is inapplicable, either from its repeated or long-continued use, or special disagreement, or the fact that the disease is of the tertiary type, then iodide of potassium is the sheet-anchor. This much is important, that in all cases the physiognomy and habit of the patient should be carefully analysed, and a tonic plan adopted accordingly, and applied in all cases of long-standing or severe disease; the iodide of iron and cod-liver oil being of especial service.

It has been a matter of much dispute whether infantile syphilis should be treated upon similar principles as those above described. For my own part, I should be exceedingly sorry to be an infant affected by specific disease and not treated by the drug mercury, in addition to chlorate of potash, syrup of iodide of iron, and iodide of potassium. The best preparation is the hydrargyrum cum cretâ, for the infant, and the nurse, if she be syphilitic, should be also mercurialized.

The Local Treatment of Syphilodermata.—The erythematous forms require no special application, except they be obstinate, and then the ung. mercurial co. (Startin) may be used; the squamous and papular are relieved by calomel ointment, bichloride lotion, iodide of sulphur, and nitric oxide of mercury ointments. The tubercular and ulcerating forms of disease are those which require special local medication. In the tubercular form the acid nitrate of mercury, biniodide, and the compound mercurial ointments, and the ung. rubrum comp. (Startin), are those most especially useful; the former is used to destroy the little indurations, and should be used cautiously; the biniodide in glycerine, applied with a brush, is often most efficacious. Syphilitic ulcers may be dressed, if painful, with a solution of watery extract of opium, may be dusted over with calomel, or be stimulated

with the nitric oxide of mercury ointment, dilute nitric acid, chloride of zinc, and borax lotions, or treated by the local application of mercurial vapour. In the appended Formulary several remedies will be found in reference to the general and local treatment of syphiloderma.



FORMULARY.

BATHS.

1. THE VAPOUR BATH.—Mr. Grantham (*Brit. Med. Journal*, August 20, 1864) details a very simple mode of applying steam-vapour. “Boil two gallons of water; at the same time put into the fire half a brick, which must be heated to redness; have a cane-bottomed chair and a hot bath to the feet, with a large blanket, in the room; put the boiling water into an earthen pan, and place it under the chair; then put the red-hot brick into the pan. The patient is to be seated on the chair in a state of nudity, with the feet in the foot-bath, and then to be covered, excepting the head and face, by the blanket. By these means the steam is kept up on the surface of the body for the space of fifteen or twenty minutes; after which the patient is to be well dried and retire to a warm room, or be placed between the blankets.” If a sulphur-bath is wanted, “boil six ounces of sulphur fifteen or twenty minutes in the two gallons of water; or, if an ammonia-bath is required, merely put two ounces of the strong liquid ammonia into the water just before the brick is introduced.”

2. A MODIFIED PLAN is the bath invented by Messrs. Benham and Froud, of Chandos Street, W.C., called the Portable Oriental Vapour Bath. The price is about thirty shillings and there is apparatus for all kinds of fumigation. If a sulphur bath is to be used, the quantity of sulphur should be half an ounce: the mercurial agencies were noticed under the head of the Treatment of Syphilodermata.

3. ORDINARY BATHS.—A bath in which the patient is im-

mersed is considered to consist of 30 gallons, and to this may be added the following, as the case may require:—

Emollients.—Bran lb. 2 to lb. 6, potato flour lb. 1, gelatine lb. 1 to lb. 3, linseed lb. 1, various herbs,—*e. g.* marsh-mallow, lb. 4, size lb. 2 to lb. 4.

Alkaline.—Carbonate of soda $\bar{3}$ 4 to $\bar{3}$ 8, carbonate of potash $\bar{3}$ 3 to $\bar{3}$ 6, or the same, and in addition borax $\bar{3}$ 2 where there are many crusts to be detached. Borax or sulphur, of each $\bar{3}$ 2. The above are used in eczema, lichen, and prurigo, where there is much local irritation.

Acid.— $\bar{3}$ 1 of nitric or muriatic, or a mixture of nitric acid, $\bar{3}$ 1 or more, with hydrochloric acid, in like quantity; useful in chronic lichen and prurigo.

Iodine.—Iodine $\bar{3}$ $\frac{1}{2}$, iodide of potassium $\bar{3}$ $\frac{1}{2}$, with $\bar{3}$ 2 of glycerine; iodine $\bar{3}$ 1 or more, with $\bar{3}$ 1 or $\bar{3}$ 2 of liquor potassæ.

Bromine.—20 drops of bromine, with $\bar{3}$ 2 of iodide of potassium.

Sulphuret of Potassium.— $\bar{3}$ 4. The balneum sulphuris co. of Startin is made with $\bar{3}$ 2 of sulphur (precipitated), $\bar{3}$ 1 of hyposulphite of soda, and $\bar{3}$ $\frac{1}{2}$ of dilute sulphuric acid, with a pint of water added to the usual 30 gallons of water.

Mercurial.—Bichloride $\bar{3}$ 3 with $\bar{3}$ 1 of hydrochloric acid. Biniiodide of mercury $\bar{3}$ 1, with $\bar{3}$ 2 of chloride of sodium. The iodine-baths are useful in scrofulous eruptions, in syphilis, and in squamous diseases; the bromine in the same; the sulphur in itch especially, in chronic eczema, lichen, and psoriasis; the mercurial in general pityriasis and the syphilodermata, especially with ulceration. The Purton springs in North Wilts are bromo-iodated and sulphated waters, having a temperature of $58\frac{1}{2}^{\circ}\text{F.}$, and would appear to be very useful in strumous subjects.

CAUSTICS.

1. *Iodine.*—Iodine $\bar{3}$ $\frac{1}{2}$, iodide of potassium $\bar{3}$ 1, distilled water $\bar{3}$ 5.
2. *Nitrate of Silver*, $\bar{3}$ 2 to $\bar{3}$ 1 of spirit of nitric ether. (To be kept excluded from the light.)

3. *Chloride of Zinc* (Startin).—Chloride of zinc ζ 4, chloride of antimony ζ 2, starch ζ 1, and glycerine *q. s.* Use in ulcerous and tuberculous affections.
4. *Arsenical* (Startin).—Calomel ζ $2\frac{1}{2}$, bisulphuret of mercury \mathfrak{D} 2, and arsenious acid ζ 1. Use in lupus, scrofulous ulcers, and syphilis.
5. *Vienna Paste*.—Unslaked lime and caustic potash, of each equal parts; when used, mix with alcohol. Use as above.
6. *Bicyanide of Mercury*.—gr. 2 or more to ζ 1 of water (Burgess). Use in acne rosacea; to be painted on for two or three minutes and then wiped off.
7. *Biniiodide of Mercury*.—gr. 10 to gr. 20 to ζ $\frac{1}{2}$ of glycerine. Use in lupus especially.
8. *Plencks*.—Alcohol and acetic acid, of each ζ $\frac{1}{2}$; bichloride, alum, camphor, and carbonate of lead, of each ζ $\frac{1}{2}$. Use in syphilitic warts; pencil twice a day.
9. *Savin* (Langston Parker).—Powdered savin, bichloride and nitric oxide of mercury, of equal parts. Use in condylo-mata and warts.

SOAPS.

1. *Hendrie's Dispensary petroleum soap*. Use in eczema.
2. *Juniper-tar Soap* (recommended by Velten of Aix-la-Chapelle), in the squamous diseases especially.
3. *The common Soft* (potash) *Soap*, in chronic infiltration,—*e. g.*, lichen circumscriptus or chronic eczema. It may be dissolved in boiling water, ζ 1 of the soap to ζ 2 of water; and scented with some aromatic oil.
4. *The Sulphur Soap*, of use in scabies and prurigo.
5. *Sapo Laricis* (Moore, *Dub. Hosp. Gazette*, March 15, 1859).—Wheaten bran ζ 4, glycerine ζ 3, white curd soap ζ 24, extract of larch bark ζ 6, and rose-water ζ 12. Use in pityriasis, psoriasis, chronic eczema, and herpetic eruptions.

ASTRINGENTS.

1. *Tannic Acid* gr. 40, French vinegar $\frac{3}{4}$, and distilled water $\frac{3}{4}$ 7 $\frac{1}{2}$ (Neligan).
2. *Tincture of Krameria* $\frac{3}{4}$ 2, creosote m 8, prussic acid m 8, and distilled water $\frac{3}{4}$ 4 (Neligan).
3. *Opium* gr. 8, creosote m 10, adeps $\frac{3}{4}$ 2 (Neligan).
4. *Tincture of Myrrh* m 30, cold cream $\frac{3}{4}$ 1, oxide of zinc gr. 20 (Neligan).
5. *Borax* $\frac{3}{4}$ 1 to $\frac{3}{4}$ 1, glycerine $\frac{3}{4}$ 1, and $\frac{3}{4}$ 8 of rose-water. Use in squamous diseases.
6. *Zinc*, oxide of, $\frac{3}{4}$ 2, glycerine $\frac{3}{4}$ 2, liquor plumbi $\frac{3}{4}$ 1 $\frac{1}{2}$, lime-water to $\frac{3}{4}$ 6 or $\frac{3}{4}$ 8. Use in the secretory stage of eczema, in acne, in lichen, in foul ulcers, impetigo, and herpes.
7. Lotions containing in the $\frac{3}{4}$ 6 of water $\frac{3}{4}$ $\frac{1}{2}$ to $\frac{3}{4}$ 2 of dilute hydrochloric or nitric acid or less, gr. 5 to gr. 10 of acetate of lead, &c.
8. The benzoated oxide of zinc ointment of Bell, the most elegant preparation of the kind made, should take the place of the ordinary zinc ointment in all instances.
9. *Alum* $\frac{3}{4}$ 2 to a pint of infusion of roses (Cazenave). Use in acne, pityriasis, and eczema (*sine crustis*).
10. Sulphate of *copper* $\frac{3}{4}$ 1, sulphate of zinc $\frac{3}{4}$ $\frac{1}{2}$, distilled water 1 pint, cherry-laurel water $\frac{3}{4}$ $\frac{1}{2}$ (Dupey). Use in mentagra.

SEDATIVES. (Lotions and Ointments.)

1. *Soda*—

Carbonate of soda gr. 30, *conium* juice $\frac{3}{4}$ 1, elder-flower water $\frac{3}{4}$ 9.

Bicarbonate of soda $\frac{3}{4}$ 1, glycerine $\frac{3}{4}$ 1 $\frac{1}{2}$, elder water $\frac{3}{4}$ 6 $\frac{1}{2}$.

Biborate of soda $\frac{3}{4}$ 2, cherry-laurel water $\frac{3}{4}$ 1, elder-flower water $\frac{3}{4}$ 11 (Neligan).

A lotion of $\frac{3}{4}$ 2 of soda or potash to $\frac{3}{4}$ 6 or $\frac{3}{4}$ 8 of water, and

either of the above, are useful in the early stages of vesicular and papular diseases to allay itching.

Borax $\zeta \frac{1}{2}$, rose-water $\zeta 8$, sulphate of morphia gr. 6 Use in pruritus vulvæ (Meigs).

2. *Prussic acid*—

Bichloride of mercury gr. 1, prussic acid $\zeta 1$, almond emulsion 6 ζ . Use in itching in lichen, &c.

Prussic acid $\zeta 1$ to $\zeta 2$ to $\zeta 5$, $\zeta 6$, or $\zeta 8$ of marsh-mallow infusion.

Acetate of ammonia $\zeta 2$, prussic acid $\zeta 1$, tincture of digitalis $\zeta 3$, rose-water $\zeta 5$ (Thomson). Use in the prurigo of old people. Prussic acid $\zeta \frac{1}{2}$ to $\zeta 1$ to $\zeta 2$, $\zeta 4$, $\zeta 8$ of fluid.

Borax $\zeta \frac{1}{2}$, rose-water $\zeta 8$, prussic acid $\zeta 2$ (Neligan). Use in lichen agrius.

3. *Cyanide of potassium*—

Cyanide of potassium gr. 6, cold cream $\zeta 1$, cochineal gr. 1 (Anderson). Use in pruritus.

Cyanide of potassium gr. 5, sulphur and bicarbonate of potash of each $\zeta \frac{1}{2}$, cochineal gr. 1, and axunge $\zeta 1$ (Anderson). Use in eczema with pruritus.

Cyanide of potassium gr. 15, water $\zeta 8$ (Hardy). Use in pudendal irritation, lichen and prurigo. N.B.—Keep in a dark place.

4. *Chloroform*—

Chloroform $\mathfrak{m} 6$, cucumber cerate $\zeta 1$.

Carbonate of lead $\zeta \frac{1}{2}$, chloroform $\mathfrak{m} 4$, cold cream $\zeta 1$.

Chloroform $\mathfrak{m} 8$, glycerine $\zeta 1$, white wax ointment $\zeta 7$, cyanide of potassium gr. 4 (Neligan).

Chloroform $\zeta 1$ to $\zeta 4$ of glycerine (Duparc). Use in prurigo.

Glycerine $\zeta 2$, bichloride of mercury $\mathfrak{m} 6$, chloroform $\mathfrak{m} 20$, and rose-water $\zeta 6$ (Burgess). Use in itching in papular and vesicular diseases.

5. *Belladonna*—

Extract of belladonna $\zeta \frac{1}{2}$, hydrocyanic acid (dilute) $\zeta \frac{1}{2}$, glycerine $\zeta 1$, water to a pint (Startin); $\zeta 1$ contains $\mathfrak{m} 14$ of prussic acid. Use in papular and phlegmonous affections.

6. *Liquid pitch*—

℥ 1, extract of opium ℥ 1, adeps ℥ 1 (Duparc). Use in obstinate prurigo.

7. *Varicæ*—

Sweet almonds ℥ 1, orange-flower water ℥ 2, rose-water ℥ 8, to make an emulsion, and then add muriate of ammonia ℥ 1, and tincture of benzoin ℥ 2 (Hermann). Use chiefly as a cosmetic.

Solution of diacetate of lead ℥ 1 to ℥ 2, to ℥ 16 of infusion of althæa (Burgess). Use in lichen and chronic eczema.

Solution of acetate of ammonia ℥ 2, spirits of wine ℥ $\frac{1}{2}$, rose-water ℥ 4 (Burgess). Use in lichen.

Protochloride of lime ℥ $\frac{1}{2}$, almond oil ℥ 2, lard ℥ 3 (Bielt). Use in papular itching.

Acetate of lead ℥ 1, distilled vinegar ℥ 2, distilled water ℥ 2, olive oil ℥ 3 (Graves). Use in prurigo.

Aconitina gr. 1 to gr. 5 to ℥ 1 of adeps.

8. *Camphor*—

Camphor ℥ $\frac{1}{2}$, alcohol sufficient to dissolve it, powdered oxide of zinc and starch, equal parts. Use as a powder to allay the burning heat of eczema (Anderson).

Camphor gr. 8, tincture of conium ℥ 2, white-wax cerate ℥ 1 (Neligan).

Camphor ℥ $\frac{1}{2}$ or more, spirits of wine ℥ 1, borax ℥ 2, and rose-water ℥ 8. Use in pruritus, eczema, and erythemata.

SPECIAL STIMULANTS FOR OUTWARD APPLICATION.

1. *Soft soap*—

Soft soap ℥ 1, boiling water a pint, to be scented with some essential oil. Used in the second stage of eczema, to counteract the infiltration.

Equal parts of tar, methylated spirit, and soft soap, constituting the "Tr. saponis viridis cum pice," and used by Hebra in eczema.

Spirit of wine, oil of cade, and soft soap, of each $\text{ʒ} 1$, oil of lavender $\text{ʒ} 1\frac{1}{2}$ (Anderson): a more elegant form than the last.

2. *Unguentum Camphoræ* (Startin)—

Camphor gr. 10, glycerine $\text{m} 10$, fresh lard $\text{ʒ} 1$; mix. Use in erythematous, vesicular, and squamous diseases.

3. *Lotio Boracis composita* (Startin)—

Borax, sesquicarbonate of ammonia, of each $\text{ʒ} 1\frac{1}{2}$, glycerine $\text{ʒ} 1$, dilute hydrocyanic acid $\text{ʒ} 3$, distilled water to a pint. Modus, $\text{ʒ} 1$ to $\text{ʒ} 1$ or $\text{ʒ} 2$ or $\text{ʒ} 4$ of water. Use in vesicular and sebaceous diseases.

Borax $\text{ʒ} 2$, oxide of zinc $\text{ʒ} 1$, solution of diacetate of lead $\text{ʒ} 2$, lime-water to $\text{ʒ} 6$ or $\text{ʒ} 8$. Use in eczema.

4. *Mercurial*—

Calomel $\text{ʒ} 1$ to $\text{ʒ} 1$ of lard. Use in herpes, psoriasis, pruritus vulvæ.

Protiodide of mercury gr. 2 to gr. 15 to $\text{ʒ} 1$ of lard (Hardy). Use in acne.

Bicyanide gr. 5 to gr. 10 to $\text{ʒ} 1$.

Bichloride gr. 2 to gr. 20 to $\text{ʒ} 1$ of lard. Use in parasitic affections.

Biniodide gr. 5 to gr. 20 to $\text{ʒ} 1$ of lard. Use cautiously in tubercular syphilis and lupus or acne indurata.

Iodo-chloride of mercury gr. 3 to gr. 10 to $\text{ʒ} 1$ of lard. Use as above.

The Unguentum Mercuriale co. (Startin); viz., levigated nitric oxide, ammonio-chloride of mercury, of each gr. 6, fresh lard $\text{ʒ} 1$. Use in sebaceous, squamous, ulcerous, tubercular, and papular affections.

Linimentum Hydrarg. c. iodinio (Startin); viz., iodine $\text{ʒ} \frac{1}{2}$, glycerine $\text{ʒ} 2$, olive oil $\text{ʒ} 3\frac{1}{2}$, the stronger mercurial ointment $\text{ʒ} 2$. Use in tubercular and cachectic affections.

Lin. hyd. nitrico-oxydi (Startin). Olive oil $\frac{3}{4}$ 2, fresh lard $\frac{3}{4}$ 2, nitric oxide of mercury $\frac{3}{4}$ 1, oil of bitter almonds \mathfrak{m} 10, glycerine $\frac{3}{4}$ 1. Use in pityriasis.

5. *Sulphur*—

Iodide of sulphur gr. 10 to gr. 60 to $\frac{3}{4}$ 1 of lard. Use in acne. Equal parts of precipitated sulphur and alcohol (Hebra), in acne.

Hypochlorite of sulphur $\frac{3}{4}$ 2, subcarbonate of potash gr. 10, purified adeps $\frac{3}{4}$ 1, essential oil of almonds \mathfrak{m} 10 (Wilson). Use, acne.

Sulphuret of potassium $\frac{3}{4}$ $\frac{1}{2}$ to a pint of lime-water. Use in pityriasis, pustular and parasitic diseases.

6. *Tar*—

Equal parts of tar and alcohol, in psoriasis especially.

The pyroligneous oil of juniper $\frac{3}{4}$ 1, mutton suet $\frac{3}{4}$ $\frac{1}{2}$, and $\frac{3}{4}$ 1 of lard. Use in eczema, psoriasis palmaria, &c.

The Tr. sap. virid. pice. Tar $\frac{3}{4}$ 1, camphor gr. 10, adeps $\frac{3}{4}$ 10 (Baumés). Use in pruritus, in vesicular and papular diseases.

7. *Acetate of Lead* gr. 15, hydrocyanic acid $\frac{3}{4}$ 3, alcohol $\frac{3}{4}$ $\frac{1}{2}$, water to $\frac{3}{4}$ 6. Use in impetigo.

8. *Silver*—

Chloride of silver gr. 5 to gr. 15, lard $\frac{3}{4}$ $\frac{1}{2}$, white wax $\frac{3}{4}$ 2. Use in psoriasis.

Nitrate of silver gr. 2 to gr. 10 to the ounce. Use in eczema and erythemata.

9. *Lotio bismuthi nitratis* (Startin).—Trisnitrate of bismuth $\frac{3}{4}$ 2, bichloride of mercury gr. 10, spirits of camphor $\frac{3}{4}$ $\frac{1}{2}$, water to a pint. Use in sebaceous, pustular, and vesicular diseases, and in pityriasis. Modus 1 to 2 or 3 parts of water.

10. *Phosphorus*—

Phosphorated ether $\frac{3}{4}$ 1, cerate freed from water $\frac{3}{4}$ 5 (Burgess). Use in lupus, syphilitic tubercle, acne rosacea.

Phosphorus gr. 2 to gr. 5, ether *q. s.*; dissolve and add camphor gr. 20, cerate $\frac{3}{4}$ $\frac{1}{2}$. Use as above.

11. *Creosote* 50 drops, glycerine ζ 3 to ζ 6 or ζ 8 of water. Use in pityriasis.

12. *Varicæ*—

Tincture of nux vomica ζ $\frac{1}{2}$, essence of camphor, essence of caraway, each ζ 2, distilled water ζ 7 (Neligan). Use in chronic lichen simplex.

Lotion for Ephelides (Hardy). Bichloride of mercury gr. 8, distilled water ζ 4, sulphate of zinc \varnothing 2, acetate of lead \varnothing 2, alcohol *q. s.* Use night and morning.

Mezeron bark and horseradish, of each ζ 1, hot distilled vinegar half a pint. Infuse for a week and strain (Wilson). Use in tinea decalvans.

Persulphate of iron ζ 1, tincture of iodine and soap liniment, of each ζ 1. Use, chilblains.

Virgin's Milk. Bichloride of mercury gr. 1, tincture of benzoin ζ 2, distilled water to ζ 6. Use, acne.

Equal parts of cod-liver oil and tincture of cantharides (Langston Parker). Use in syphilitic alopecia.

Cod-liver oil ζ 1, solution of ammonia ζ $\frac{1}{2}$, tincture of cantharides ζ $\frac{1}{2}$, honey-water ζ 2, essence of rosemary ζ 4. Same authority and use.

White wax ointment ζ $2\frac{1}{2}$, Peruvian balsam ζ 2, oil of lavender \mathfrak{m} 12. Use in loss of hair.

Fowler's solution ζ 1, distilled water ζ 1 (Hooper). Use in lupus.

N.B.—Some of the above formulæ might very well be placed under the head of Sedatives or Astringents, if the individual components were regarded; but I have placed them under the head of Stimulants for convenience sake, as the diseases in which they are useful often exhibit a lowered state of tone.

REMEDIES SPECIALLY ADAPTED FOR SCABIES.

1. Sulphuret of potassium \bar{z} 6, white soap lb. 2, olive oil 2 pints, oil of thyme \bar{z} 2 (Author?). Use in scabies and prurigo.
2. Olive oil \bar{z} 2, sulphate of potash \bar{z} 15, sulphate of soda \bar{z} 15, precipitated sulphur \bar{z} 10 (Mollard).
3. Sulphur, tar, or oil of beech-nuts, of each \bar{z} 6, soft soap, axunge, of each lb. 1, chalk \bar{z} 4 (Hebra).
4. Ammonia chloride of mercury ointment \bar{z} 1, musk gr. 2, oil of lavender \mathfrak{m} 2, almond oil \bar{z} 1 (Wilson).
5. Iodide of sulphur and iodide of potassium, of each \bar{z} $1\frac{1}{2}$, water to 2 pints (Cazenave).
6. Chamomile powder, adeps, and olive oil, of each \bar{z} 16 (Bazin). Cures in three frictions, it is said.
7. Ung. sulphuris compositum (Startin). Sublimed sulphur \bar{z} $\frac{1}{2}$, ammonia chloride of mercury gr. 10, sulphuret of mercury cum sulphur gr. 10. Mix and add olive oil \bar{z} 2, creosote \mathfrak{m} 4, fresh lard \bar{z} 2.
8. Iodide of potassium ointment is very efficacious.
9. Sulphur ointment \bar{z} 4, oil of chamomile \mathfrak{m} 20 (Wilson).

MIXTURES.

Chiefly those of use in the more obstinate and chronic cases.

1. *Mercurial*—

Bichloride of mercury gr. $\frac{1}{16}$ to gr. $\frac{1}{8}$, dilute hydrochloric acid 10 drops to \bar{z} 1 of water or bitter infusion for a dose.

Bichloride gr. 1, iodide of potassium \bar{z} 2, water \bar{z} 3; dose, a dessert-spoonful three times a day. Use in acne (Burgess).

Mist. hydrargyri iodidi (Startin). Bichloride \mathfrak{D} 1, iodide of potassium \mathfrak{z} 6, compound tincture of iodine \mathfrak{z} 2, water to a pint. N.B.— \mathfrak{z} 1 contains gr. $\frac{1}{8}$ of the bichloride and gr. 3 of iodide of potassium.

A mixture containing in each dose gr. $\frac{1}{12}$ to gr. $\frac{1}{10}$ or gr. $\frac{1}{8}$ of bichloride and gr. $\frac{1}{40}$ to gr. $\frac{1}{20}$ of arsenious acid.

Biniodide of mercury gr. 3, iodide of potassium \mathfrak{z} 1 to \mathfrak{z} 2, spirits of wine \mathfrak{z} 2, syrup of ginger \mathfrak{z} 4, water to \mathfrak{z} 1 $\frac{1}{2}$ (Puche). Dose, \mathfrak{m} 30 three times a day.

Biniodide gr. 1 to gr. 2, iodide of potassium \mathfrak{z} $\frac{1}{2}$, water to \mathfrak{z} 8 (Hardy). Dose, a table-spoonful in a cup of ptisan, with the waters of Baréges and Louchon.

Liq. arsenici et hydrargyri iodidi (Donovan's solution). Dose, \mathfrak{m} 10 to \mathfrak{m} 30. \mathfrak{z} 1 contains gr. $\frac{1}{8}$ of arsenious acid, gr. $\frac{1}{4}$ of peroxide of mercury, and about gr. $\frac{3}{4}$ of iodine, converted into hydriodic acid.

Bicyanide of mercury gr. 2 to gr. 10, water a pint (Langston Parker). Dose, \mathfrak{z} $\frac{1}{2}$ night and morning. N.B.—The above are used chiefly in secondary syphilis; the 3rd, 5th, 6th, and 8th, especially in tubercular forms; 4th and 7th in lupus, especially when it is of syphilitic nature; and also in some obstinate forms of acne.

2. Arsenical—

Steel, wine, and syrup, of each \mathfrak{z} $\frac{1}{2}$, Fowler's solution (liq. potassæ arsenitis) \mathfrak{m} 32, dill-water \mathfrak{z} 1 (Wilson). Dose, a teaspoonful twice or thrice a day. (\mathfrak{z} 1 contains \mathfrak{m} 2 of arsenical solution.)

Fowler's solution \mathfrak{m} 80, iodide of potassium gr. 16, iodine gr. 4, orange-flower water \mathfrak{z} 2 (Neligan). Dose, a spoonful three times a day. Use, eczema.

Cod-liver oil \mathfrak{z} 2, yolk of egg 1, Fowler's solution \mathfrak{m} 64, syrup \mathfrak{z} 2, distilled water to \mathfrak{z} 4. Dose, \mathfrak{z} 1 three times a day (Wilson).

Bromide of iron \mathfrak{z} $\frac{1}{2}$, Fowler's solution \mathfrak{z} 1, elder-flower water \mathfrak{z} 1 $\frac{1}{2}$, orange-flower syrup \mathfrak{z} $\frac{1}{2}$ (Neligan). Dose, a

teaspoonful three times a day. Use in anæmiated subjects.

Arseniate of soda gr. 1—2, distilled water ζ 8 (Hardy). Dose, 1 spoonful daily, then 2, in conjunction with, alternately, alkaline and vapour baths, and tincture of cantharides night and morning, and the mineral waters of St. Sauveur and Louesch. It is beneficial in lichen, also in psoriasis and chronic eczema.

Equal parts of tincture of cantharides and Fowler's solution (Bennett). Dose, \mathfrak{m} 10 (twice a day), increased to \mathfrak{m} 15. Use in psoriasis especially.

Solution of chloride of arsenic ζ 1, dilute hydrochloric acid ζ 1, tincture of sesquichloride of iron ζ $1\frac{1}{2}$ to ζ 3, water ζ 8. Dose, a sixth part three times a day.

3. *Ferruginous*—

The *mistura ferri acida* (Startin). Sulphate of magnesia ζ 3, sulphate of iron ζ 2, dilute sulphuric acid ζ $\frac{1}{2}$, infusion of quassia to a pint. Dose, ζ 2 to ζ $\frac{1}{2}$. Use in acne, eczema, impetigo, and ulcerous affections. (An aperient tonic.)

Mist. ferri iodidi (Startin). Sulphate of magnesia ζ 5, solution of iodide of iron ζ 1, oil of peppermint \mathfrak{m} 10, water to a pint. Dose, ζ 2 to ζ $\frac{1}{2}$. Use as above. ζ $\frac{1}{2}$ contains $\frac{1}{2}$ gr. of iodide of iron. N.B.—The liq. ferri iodidi is made by macerating in 3 pints of water, ζ 4 of iron filings, ζ $2\frac{1}{2}$ of iodine, and ζ 3 of glycerine.

Iron in combination with arsenic will be found under the head of Arsenical Solutions.

Citrate of iron ζ 1, iodide of potassium gr. 18, tincture of cantharides and compound of tincture of cardamoms, of each ζ 2, water to ζ 16 (Kinneir). Dose, a sixth part three times a day. Use in rupia.

4. *Mist. Magnesiæ cum Colchico* (Startin).—Sulphate of magnesia ζ 5, carbonate of magnesia ζ $\frac{1}{2}$, tincture of colchicum ζ 1, oil of peppermint \mathfrak{m} 10, water to a pint. Dose, ζ 2 to ζ $\frac{1}{2}$. Use in erythematous, papular, and acute forms of disease in loaded habits.

5. *Zittmann* decoction.—Sarsaparilla \bar{z} 12, water 24 pints; boil for 2 hours, and suspend in a linen bag \bar{z} $1\frac{1}{2}$ of alum, \bar{z} $\frac{1}{2}$ of calomel, \bar{z} 1 of oxysulphuret of antimony, \bar{z} $1\frac{1}{2}$ of liquorice, \bar{z} 2 of senna leaves, \bar{z} $\frac{1}{2}$ of aniseed; remove it from the fire, and allow it to infuse. Strain off 16 pints. (Decoction, No. 1.) To make No. 2 decoction, take the residue of No. 1, sarsaparilla \bar{z} 6, water 24 pints, orange-peel, cinnamon, cardamoms, of each \bar{z} 3, \bar{z} 6 of liquorice; infuse and strain off 16 pints.
6. Tincture of *guaiacum* \bar{z} 3, tincture of aconite \mathfrak{m} 20, camphor mixture \bar{z} 6. Dose, \bar{z} $\frac{1}{2}$ three times a day in chronic skin diseases.
7. *Turpentine* rectified \bar{z} $\frac{1}{2}$ to \bar{z} $1\frac{1}{2}$, \mathfrak{m} 3 of creosote, spirit of rosemary \mathfrak{m} 40, acacia mixture \bar{z} 3, water to \bar{z} 4 (Budd). Dose, 2 spoonfuls every 3 or 4 hours. Use in purpura.
8. *Phosphorus*—
Phosphorus gr. 10, almond oil \bar{z} 1. Dose, \mathfrak{m} 5 to \mathfrak{m} 10 in emulsion.
Phosphorus 4 parts, ether 100 parts. Dose, \mathfrak{m} 5 to \mathfrak{m} 10. Use in acne especially.
9. *Varia*—
Borax \bar{z} 1, bitartrate of potash \bar{z} $\frac{1}{2}$, white sugar \bar{z} 2, water a pint (Neligan). Dose, 2 spoonfuls every six hours. Use in erythema nodosum.
Almond oil \bar{z} $\frac{1}{2}$, olive oil \bar{z} 2, iodine gr. $\frac{1}{2}$ (Duncan). Dose, a third part three times a day. Use in scrofulous eruptions.
Compound tincture of *guaiacum* \bar{z} 1, tincture of serpentary \bar{z} $\frac{1}{2}$, \mathfrak{m} 20 of mucilage, \bar{z} $7\frac{1}{2}$ of decoction of mezereon, and \bar{z} 1 of decoction of dulcamara (Neligan). To be taken three times a day in psoriasis guttata.

PILLS, &c.

1. *Mercurial*—

Iodo-chloride of mercury gr. 4, gum gr. 15, bread-crumbs ζ $2\frac{1}{2}$, orange-flower water enough to make up into 100 pills (Rochard). Dose, 1 to 3 daily. Use in acne.

Biniodide of mercury gr. 1 to gr. 2, extract of gentian \varnothing 2; to make 12 pills. Dose, 1 twice a day.

Protiodide of mercury gr. 16, extract of lettuce ζ $\frac{1}{2}$; to make 40 pills. Dose, 1 to 4 daily. Use in syphilodermata.

Bicyanide of mercury gr. 24, hydrochlorate of ammonia ζ 3, guaiacum ζ 3, extract of aconite ζ 3, oil of anise \mathfrak{m} 24; to make 400 pills (Langston Parker). Dose, 1 three times a day. N.B.—One pill contains $\frac{1}{16}$ gr. of the bicyanide. Use in syphilis.

2. *Arsenical*—

Arseniate of soda gr. 2, water enough to dissolve it, guaiacum powder ζ $\frac{1}{2}$, oxysulphuret of mercury \varnothing 1, mucilage so as to make 24 pills (Wilson). 1 two or three times a day, in chronic skin diseases.

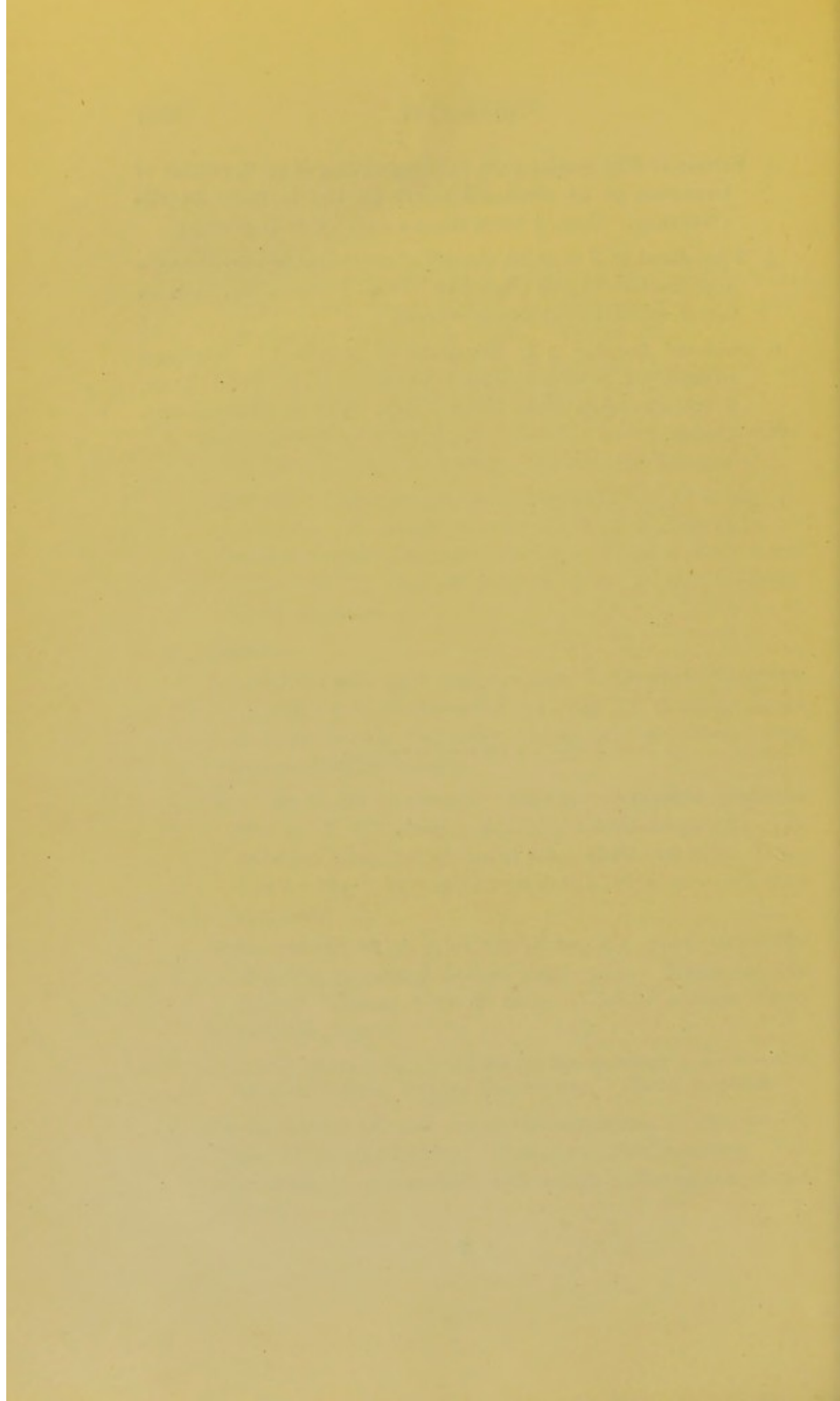
Pil. arsenicalis composita (Startin); levigated arsenious acid gr. 5, powdered acacia ζ $\frac{1}{2}$, cinnamon powder ζ 3, extract of jalap ζ 2, glycerine *q. s.* Make 100 pills. Dose, 1 or 2 a day. Each pill contains $\frac{1}{20}$ of a grain of arsenious acid.

Arseniate of iron gr. 3, extract of hop ζ 1, powdered marsh-mallow ζ $\frac{1}{2}$, orange-flower water *q. s.* Make 48 pills (Biett). Dose, 1 to 2 daily. Use in chronic lepra, psoriasis, lupus.

Iodide of arsenic gr. 2, manna gr. 40, mucilage *q. s.*; to make 20 pills. Dose, 1 three times a day. Use in psoriasis.

3. *Aconite*, extract of, and extract of taraxacum, of each gr. 15. Make 40 pills (Cazenave). Dose, 2 night and morning. Use in prurigo, in conjunction with starch baths and arseniate of iron.

4. Extract of *Nux vomica* gr. 3, inspissated ox-gall gr. 6, extract of taraxacum gr. 24, powdered myrrh gr. 18; to make 24 pills (Neligan). Dose, 1 three times a day. Use in prurigo.
 5. *Phosphorus* gr. 3 to gr. 20, almond oil m 10—60, powdered acacia s. q.; to make 12 pills (Burgess). Dose, 1 twice a day. Use in lupus, syphilitic tubercular disease.
 6. *Sublimed Sulphur* \bar{z} 2, bitartrate of potash \bar{z} 1, powdered rhubarb \bar{z} 2, powder guaiacum \bar{z} 1, honey lb. 1. Mix. Dose, 2 tablespoonfuls three times a day. Use in chronic skin disease.
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