

White has formulated the following conclusions with regard to America:

1. Prurigo, pellagra, lichen exsudativus ruber do not occur in America (?).
2. Skin diseases due to uncleanliness, especially to animal parasites, are more infrequent in America than in Europe.
3. Some severe diseases which are associated with constitutional affections are more infrequent or run a milder course in the United States than in Europe or those countries in which they are endemic (lupus, syphiloderma (?), leprosy).
4. Certain diseases of the skin, especially of the glands, and those connected directly with the nervous system, are more frequent in America than in Europe (seborrhoea, acne, perhaps also eruptions from heat, herpes, urticaria, and pruritus).

The physiological factors mentioned above act as producers of disease, not alone upon the entire organ, but also directly upon the skin, and thus constitute a transition to the causes of idiopathic diseases of the skin which will now be considered.

4. No one doubts the development of the latter from direct external injuries, whether of a physico-chemical or mechanical nature. But attention may be drawn to this fact, that we have to deal not alone with qualitatively injurious irritants, but often with a merely abnormal increase or diminution in the amount of action, so that substances which are innocuous in themselves, for example, water, may act as irritants.

To this class also belong the parasitic organisms which may act as irritants upon the skin. Their enumeration and detailed consideration must be reserved for the special part.

There are a few questions in the etiology of diseases of the skin which have not been answered hitherto in a generally harmonious manner. These may be formulated in the following manner:

1. Apart from the recognized connection between individual diseases of the skin and gout and rheumatism, is there an independent group of skin diseases which, with the same certainty that, for example, syphilitic eruptions are attributed to syphilis, may be called arthritic (Bazin), *i. e.*, directly due to an arthritic type of constitution or produced in the latter alone by accidental external irritants? And furthermore:

2. Is there an independent group of chronic skin diseases which must be attributed to an herpetic (Bazin) or dartsrous (Hardy) character of the entire organism?

Both questions must be answered in the negative. None of the supporters of these hypothetical diseases is able to give an objective picture of the symptoms, in the same manner as is readily done by the text-books with regard to scrofula, syphilis, anæmia, chlorosis, etc., although these in reality are merely abstractions.

In fact, the chief advocates of these diatheses, Hardy and Bazin, are strenuously opposed to one another. While Bazin's "arthritisme" is simply denied by Hardy, both believe in the existence of "herpetisme" or "dartre," but in entirely different senses. Arthritismus may be accepted in a certain sense, since gout and rheumatism have long been recognized as nosological entities; furthermore, because the presence of uric acid deposits in the skin in gout, and the occurrence of hemorrhages in them together with rheumatic pains (purpurarheumatica), may be made responsible to a certain extent for a peculiar connection between the dermatosis and the constitutional disease, although, with the exception of those mentioned, there is scarcely any other symptom of an "arthritic crisis" upon the skin.

This doctrine of diatheses has always been associated with consequences which have made the treatment of skin diseases somewhat difficult—it may even be said mystical. We refer to the conception that the skin should be regarded as a place of deposit for the morbid substances produced in the body by the diatheses, and furthermore to the fear that the chronic skin diseases, being cured upon the surface, will be driven back into

"more vital" organs. We would simply discard this entire series of ideas, were it not that it still holds sway in the minds of many.

After excluding everything that cannot withstand exact investigation, if we take a general survey of the relations between diseases of the skin and diseases of the organism or of other organs, we will be struck with the following facts:

There are numerous changes in the skin which appear in one and the same form as the result of various etiological factors. The elementary lesions may be produced by different irritants of the most varied kinds. Pustules may be produced by the bite of an insect, by inflammation of the trunk of a nerve and by iodine poisoning, although they may present the same structure, and on the whole, the same course and termination. Various morbid influences, which are termed constitutional when they arise in the organism itself, and chronic irritants when they come from the outside, may exercise such an influence upon the skin that its nutrition, power of resistance to external influences, its ability to perform the various functions devolving upon it may be more or less impaired. But this fact is not manifested—as the advocates of the diathesis theory imagine—by diseases of a definite character, but by a series of constantly recurring symptoms, though of frequently changing combinations, which present in general the character of enfeebled nutrition, atrophy, and occasionally even paratrophy of irregular development or anomalous nutrition.

As by certain physiological conditions, for example, old age, the skin may be made to assume a changed condition (senile atrophy), which we recognize as dryness with vitreous swelling, accumulation of pigment, falling out and atrophy of the hair, pruritus senilis, etc., so also the skin may be affected in a similar manner by all those constitutional diseases which produce cachexia, by malarial diseases, scrofula and tuberculosis, diabetes and leukaemia, carcinoma and syphilis. The changes produced thereby will vary somewhat according to the conditions from which they develop, but they never lose the character of lowered nutrition, imperfect restoration of tissue, functional weakness, cachexia.

As in the mucous membranes, certain chronic changes of nutrition very often present the picture of a superficial chronic inflammatory process which we know in the integument as chronic eczema. Not that the skin is constantly eczematous in such cases, but that, as the mucous membranes of such individuals react by catarrh to the slightest irritant, and as these catarrhs are characterized by special obstinacy, so in these individuals the skin falls into a condition of great sensitiveness to irritants and obstinate retention of the eczematous disease. The forms of these eczematata gradually become mixed and certain paratypical eczematata develop.

With these are associated chronic anomalies of cornification (pityriasis tabescentium and scrophulosorum), cachectic conditions of the glands and their excretory ducts (lichen cachecticorum and scrophulosorum, xeroderma) and acantholytic affections of the upper layers of skin (pemphigus), finally disturbances of innervation (pruritus, prurigo cachecticorum).

It is evident that this series of skin diseases really does not differ much from those called "arthritides" and "dartres" by Bazin and Hardy, but to which they attribute an independent and peculiar position in pathology, which we cannot concede to them.

The subject of disturbances of innervation of the external integument appears very recently to have undergone thorough investigation, and the influence of the nervous

system upon the nutritive disturbances of the skin seems to be, at the present time, the most favored dermatopathological theme.

The part played by the blood-vessels is also directly concerned, since the muscular action in the walls of the vessels is regulated by the vaso-motor nerves. These must, therefore, be considered first with regard to nutritive disturbances. There are important reasons for believing that it is not exclusively the centrifugal influence transmitted by the motor nerves, and therefore also the vaso-motors, but another centrifugal influence which influences directly the nutrition of the tissues. It is very probable that this centrifugal influence is transmitted along the centripetal sensory nerve fibres.

The question now rises, What are the pathological data with regard to all these general assumptions?

In the first place, with regard to the influence of the vaso-motors: the action of the muscular coat of the vessels, which must be regarded in the normal condition as maintaining a medium condition of tension (tonus), will give place, as soon as the physiological condition is disturbed, to paralysis of the constrictors and spasm of the dilators, when dilatation of the lumen occurs, and to the opposite conditions when narrowing occurs. The question next arises, What must be the point of departure of such irritants to produce the above result? At the present time, the ganglia of the sympathetic and medulla oblongata, perhaps also the entire spinal cord, are regarded as vaso-motor centres, and in addition, certain parts of the brain are said to be connected with the vaso-motor centres in the medulla (Eulenberg and Landois). Irritation of these centres may be produced directly by noxious agents of a chemical or vegetable nature circulating in the economy, or occurs from the periphery in a reflex manner.

Those changes in the lumen of the capillaries which are manifested physiologically by changes in the amount of blood (blushing and pallor of the skin), in the blood pressure, the rapidity of circulation and the temperature, also constitute the type of all the pathological changes of vascular tonus.

Abnormal irritation of the vaso-motors does not give rise to the so-called neuro-paralytic inflammations, such as inflammation of the eye after injury to the trigeminus, inflammation of the lungs after section of both vagi, etc.

Perroud¹ has collected a number of cases of neuro-paralytic hyperæmia in human beings, which had persisted for a long time without being followed by nutritive disturbances. In addition, these conditions occur not infrequently without elevation, indeed even with diminution of temperature, for example, in partial myelitis, infantile paralysis, and progressive muscular atrophy. Finally, stress must be laid upon the results of C. Ludwig's experiments on the salivary glands: irritation of the peripheral end of the submaxillary nerve, which is derived from the chorda tympani, produces hypersecretion of saliva even if the veins are tied; the manometric pressure in Wharton's duct is, at the same time, greater than the pressure of the blood in the arteries, so that the hypothesis of an active dilatation of the afferent artery also appears to be excluded. It would seem, therefore, that the secretion of the glands is not under the influence of the vaso-motors and perhaps an inference is also justifiable with regard to the sebaceous and sudoriparous glands of the skin.

Disturbances of vaso-motor innervation will not explain the chief forms of nutritive disturbance of the skin, though this does not imply that these processes have no connection with vaso-motor innervation. There can be no doubt that the arterial redness and the elevation of temperature at the beginning of inflammation of the skin, and the venous disten-

¹ Charcot, Leçons, p. 137.

tion in stasis, must be attributed to changes in the lumina of the vessels and these again to the influence of the vaso-motors. But their influence is exhausted with this effect.

There are forms of inflammation, however, in which a disturbance of the vascular tonus continues for a long time and may be distinctly recognized in addition to the inflammation; this vaso-motor disturbance then imparts to the process a peculiar appearance, that of an angioneurosis.

It follows that every attempt to convert pure angioneuroses of the skin into independent forms of disease must be useless, because the simple hyperæmias meant thereby must be regarded either as merely increased physiological functions (for example, blushing, pallor) or as the beginnings and part-symptoms of inflammation of the skin (inflammatory hyperæmia), or finally as part-symptoms of neuralgic or neuritic processes.

We now pass to the consideration of the part played in diseases of the skin by the trophic fibres which run their course in or with the cerebro-spinal nerves, but which, I repeat, have not hitherto been isolated anatomically. It is a long known fact that an irritant applied at any part of the distribution of a sensory nerve may result in trophic disorders in the tract supplied by it. Such an irritant applied to the surface of the skin, *i. e.*, upon the extreme periphery, and which directly affects the peripheral distribution of sensory nerves in the skin, may be followed by a dermatitis, and on the other hand an irritant applied to a sensory nerve-trunk may spread, not alone centripetally, but also centrifugally and produce trophic disturbances in the skin.

The production of trophic disorders of the skin through the agency of nerve elements is therefore an undoubted fact, however we may be inclined to interpret them. Anatomopathological proofs have also been adduced in various diseases.

We have furnished illustrations above in the hemiatrophia facialis of Romberg, in herpes zoster, and in the traumatic forms of "glossy skin" of American surgeons. As additional examples we will add the appearances described in leprosy by Danielsen and Boeck (sclerosis of the spinal cord, spinal meningitis, atrophy of the medulla), also by Tschirjew (cell proliferation in the cervical segment of the central canal and atrophy of the cells of the posterior horns of the spinal cord), etc. In pemphigus Babesiu has recently demonstrated sclerosis of the posterior roots and Goll's columns and atrophy of the anterior horn.

With the pathological appearances here mentioned are associated some pathological experiments. Experiments made by Charcot and Brown-Séquard had given negative results or, at the most, had shown that diseases of the skin after destruction of the spinal cord were due merely to anæsthesia and paralysis and the consequent inability of the animals to avoid noxious influences. According to Charcot, the case is different when inflammation follows such an injury of the spinal cord; then trophic disturbances terminating in gangrene make their appearance upon the skin.

Babesiu and Irsai have recently made direct experiments upon animals, and after unilateral injury of the spinal cord have produced a vesicular eruption and atrophy of the skin upon the same side, but only after the lapse of a few days, *i. e.*, only after the development of a myelitis; after a few days these symptoms disappeared.

Recent experiments aim to throw light in another manner on the relation of skin diseases to the nervous system. They attempt to prove that in certain dermatoses, in which clinical symptoms of a nervous affection do not occur, anatomical changes in the nerves are present nevertheless and must be regarded as the cause of the former.

In this connection, I will refer to the important article by Jarisch on the coincidence of diseases of the skin and of the gray axis of the spinal cord.

The following is the history of the case reported by him:

A woman, *æt.* sixty-one years, who had suffered five years previously from a vesicular eruption with pruritus, was admitted to hospital with an eruption of nodules and vesicles covering the face, trunk and upper limbs, while in other places merely a vesicular formation upon the soles of the feet and a few vesicles upon the abdomen were visible. Then bed-sores upon the sacrum and pneumonia developed, from which the patient died. The autopsy showed interstitial nephritis, and also changes in the spinal cord from the third cervical to the eight dorsal vertebræ, in which coarse granulation and degeneration of the ganglion cells and sclerosis of the gray substance were demonstrated.

This clinical history enables us to recognize distinctly:

a. That we have to deal with an affection of the gray substance of the spinal cord from the third cervical to the eighth dorsal vertebræ, in those places in which, according to Charcot, the trophic centres of the skin are situated;

b. That the skin affection appeared over a surface corresponding exactly to this localization;

c. That it was associated with acute decubitus upon the sacrum and soles of the feet, a disease which neuropathologists have sharply defined as the expression of an affection of the spinal cord. Not a mere coincidence, as Jarisch with great reserve has expressed himself, but a causal connection between the spinal affection and the skin disease is here rendered certain.

In addition, Jarisch has examined seven cases of hereditary and acquired syphilis, one of psoriasis, and one of lupus erythematosus.

In two children with hereditary syphilis who died of general atrophy after the lapse of a few weeks, he found atrophy of the ganglion cells of the spinal cord and swelling of the basement substance, as well as circumscribed spots in the commissure and anterior horns, which the writer did not venture positively to call inflammatory; in two other cases, there were appearances the interpretation of which Jarisch himself declares doubtful (crumbling masses around the vessels, hyperæmia of the gray substance?); then a case of acquired syphilis with various secondary symptoms, but without cerebral or spinal syphilis. The autopsy showed hyperæmia of the gray matter, hemorrhages into the lower dorsal cord, and œdema of the tissue of the gray substance. The second case of acquired syphilis, in which cerebral syphilis was evidently present, presented a similar appearance and in addition atrophy of the ganglion cells; the third case, with a probable diagnosis of syphilis, but in which cerebral symptoms were present, showed merely sclerosis of the gray substance of the cord, which could be interpreted more properly as a senile process or atrophy than as inflammation.

The examination of the cases of psoriasis and lupus erythematosus, both of which presented spinal symptoms during life, also showed in part sclerosis, in part inflammation (?) of the gray axis in the first case and vitreous foci in the central and lateral portions of the anterior horns, which were visible even macroscopically.

Only in some of these cases do the appearances justify a conclusion of the presence of a morbid process due to syphilis, which may be termed an inflammatory tissue change. We believe that among these should be included only the first and second cases of hereditary syphilis, in addition to the positive case of "herpes iris." The first and third cases of acquired syphilis suffered from, and died with, marked symptoms of Bright's disease, and the second presented clinical symptoms of pronounced cerebral syphilis, such as are abundantly reported in literature.

With regard to the psoriasis and lupus erythematosus, the results of the examination in the latter permit an interpretation which is perhaps favorable to their nervous origin; concerning the psoriasis it is difficult to form an opinion.

It must be remembered also that the two cases of hereditary syphilis died in a short time from general cachexia.

The opinion is, perhaps, not unjustifiable that the atrophy of the ganglion cells of the spinal cord in these cases was merely an expression of the cachectic condition in general.

Attention must also be called to the fact that an examination of the intervertebral ganglia and peripheral nerves was not made in these cases and that changes in the skin might be produced in this manner as well as affections of the spinal cord as the result of neuritis ascendens.

Moreover, various observers maintain that, in inflammation and slow destruction of large portions of the spinal cord, they have observed no changes in those parts of the skin innervated by them.

We now pass to the second point, *viz.*: to those observations which endeavor to furnish a demonstration of peripheral nerve changes.

Attention must first be directed to the investigations of Leloir and Déjérine.

These authors found:

a. In vitiligo, parenchymatous neuritis, disappearance of the axis cylinder, partial distention, in individual fibres, of the sheath of Schwann by drops of myelin; in other fibres, complete disappearance of the myelin and axis cylinder, also atrophy of the nerves.

b. In two cases of ichthyosis, Leloir observed the same appearances. But these were evidently cases of atrophy in cachectic individuals, and were only accidentally complicated with congenital ichthyosis.

c. In two cases of ecthyma, Leloir found degeneration of the peripheral nerve distribution, in the first one also in the posterior roots. But in both cases a disease of the spinal cord was demonstrated clinically (general paralysis, right hemiplegia).

d. In chronic pemphigus of a cachectic individual, degeneration of the nerves (?) in the region of the vesicular formation, which we must explain simply as cachexia of the skin and perhaps also of the affected ends of the nerves.

e. In cases of acute gangrene of the skin and leprosy, Leloir found the spinal cord normal, but parenchymatous and interstitial neuritis of peripheral twigs.

To these we will add a case of Schwimmer which was examined by Babesiu.

The patient suffered from interstitial nephritis, sclerosis of the brain, the skin was atrophic in all its parts, the tissue of the corium converted into a mesh of elastic fibres; the nerves were surrounded by granules and drops of fat, their sheaths were thickened.

We have to deal evidently, as in some of Leloir's cases, with atrophy of the skin, and at the same time of its peripheral nerves. As in this case, the appearances found by Leloir are evidence rather of the secondary than of the primary nature of the skin affection. We may summarize the subject in the following manner:

1. Primary diseases of the brain or spinal cord are often followed by trophic disturbances of the skin, which present usually an inflammatory character terminating in atrophy or destruction, or are modifications of previously existing processes.

2. After experimental lesions of the spinal cord, such appearances, in favorable cases, are presented upon the skin, but only when inflammation of the injured nerve parts has occurred.

3. As is clearly proven, primary diseases of the spinal ganglia are also followed by trophic affections of the skin (zoster, etc.) or by changes in the course of those already existing.

4. This holds true also of the neuritis of the peripheral nerves in which a spread of

the inflammatory process is observed toward the periphery as far as the skin, together with trophic disturbances upon the latter.

Our experience concerning injuries of nerve-trunks seems to indicate that only such traumata which produces irritation or inflammation of the peripheral nerve-trunks will result in the well-known nutritive disturbances with the atrophic terminal symptoms of glossy skin, etc.

5. The anatomical examination of the central nervous system in various skin diseases, in which clinical symptoms of a central nervous affection were not manifested, hitherto has furnished in part negative results, in part positive ones of such a character that for the present the assumption of a primary central nervous disease does not seem to be well established in such cases.

6. The anatomical examination of the peripheral nerve distributions has not succeeded in furnishing proof that we have to deal with primary affections of the nerves which is followed secondarily by the skin affection as a sequela, *i. e.*, with a trophoneurosis.

If we rely alone upon what has been actually proven, what remains of the etiological structure which has been based upon the nerves? Really very little—merely the fact that functional disturbances and diseases of the nervous system may produce secondary functional disturbances and diseases of the skin. But the facts and the reasoning of pathologists are different. An abundance of clinical material, poorly arranged and improperly interpreted, is adduced as proof to substantiate the neurotic nature of skin diseases. From congenital naevus to eczema there is no dermatosis which is not attributed to faulty innervation and by ingenious arguments is termed a “trophoneurosis,” or “trophopathy.” This term has begun to exercise the pathologists in a lively manner during the last few years, and the majority of skin diseases are now called trophoneuroses. But this term is only justifiable when applied to secondary trophic disturbances of the skin as the result of nervous diseases, and in this manner it was also employed formerly.

But a decided veto must be passed on the attempt to apply the term trophoneuroses to all skin diseases (erythema, eczema, prurigo, lichen, herpes, miliaria, pemphigus, purpura, naevi, acne rosacea, elephantiasis arabum, sclerema, leprosy, ichthyosis, atrophy of the skin, myxœdema, neuroma, pigmentary and developmental anomalies). Should it not be considered probable that morbid factors may act upon various apparatus of the body at the same time, that the nervous symptoms in leprosy, for example, can and must be explained by the simultaneous action of the parasites circulating in the blood, not alone upon the skin, but also upon other organs and among these chiefly the nerves.

If we are satisfied to accept the facts with regard to the neuropathological foundation of skin diseases simply as they are and as they probably will remain, we may briefly formulate the relation of skin diseases to the nervous system as follows:

Those skin diseases which, by their clinical symptoms, prove their origin from anatomically demonstrable nervous affections (central or peripheral neuritis), and they alone, must be differentiated from simple inflammation of the skin and the angioneuroses; on account of the difference of interpretation now existing, they should not be called “trophoneuroses,” but rather “neuritic dermatoses.”

Finally, the last question to be solved with reference to the etiology of skin diseases is that of their parasitic origin. Animal as well as vegetable organisms have long been

recognized as an etiological factor of various skin diseases, and their mode of action has been described in detail.

Moreover, recent investigation has demonstrated the existence of micro-organisms in a number of skin diseases in which this had been suspected before, and in part it has shown that the development of these diseases is dependent directly upon their existence and further development in the economy.

Micrococci and bacteria have been demonstrated in measles, scarlatina, roetheln, variola and vaccinia, erysipelas, dissecting wound pustules, splenic fever, typhoid fever, cholera, the bites of snakes, scorpions, and spiders, etc.

Furthermore, in the chronic infectious diseases, like syphilis, tuberculosis, lupus, leprosy.

In my opinion, two main propositions must be adhered to rigidly:

1. We are not justified in regarding a skin disease as produced by micro-organisms from the mere demonstration of their occurrence in pieces of the skin. In addition, the following conditions are necessary:

a. The accurate characterization and, if possible, a clear differentiation of the parasites.

b. The constancy of their occurrence in the skin.

c. The proof that they have not come from the outside.

But in order that such an affection, after the fulfilment of the above conditions, may be termed an infectious disease, we consider it necessary to demonstrate the occurrence of exactly the same parasites in other organs of the body, in addition to the skin, and also in the blood.

If these conditions are fulfilled, the assumption of an infectious disease is justifiable, even though there are no positive results from attempts at conveying them to other organs.

Under these conditions, the general pathology of the skin cannot definitely regard the majority of the above-mentioned diseases as infectious until further data are furnished by investigation in this respect. The question of the systematic classification of these diseases, even if the etiological question is settled positively in favor of infection, will depend upon the fact whether the nature of the disease in question is more sharply characterized than by other nosological factors. This much is certain, that in the group “infectious diseases” must be classed very different nosological forms; in the first place, the acute exanthemata, then malarial diseases, then granulomata. Common to all of these is an important factor, *viz.*, a circulating poisonous microzoon which reproduces itself in the organism. Nevertheless, pathology will and must oppose the union of diseases like scarlatina, intermittent fever, syphilis, and leprosy into one nosological group, because the anatomo-clinical pictures of these diseases, despite their pathogenetic relationship, present insufficient analogies to one another, and because the solidarity of these affections appears to be demonstrable clinically not in all, or even the majority of those relations upon which are based the pathological character and independence of a disease, but only in a single though important (etiological) relation.

IV. GENERAL REMARKS ON DIAGNOSIS, COURSE, AND PROGNOSIS.

The diagnosis of skin diseases in one of the most difficult subjects to the beginner, because he always runs the risk of neglecting the nosological process as a whole, in view of the complexity of details presented by the diseased integument. A considerable share of the

fault is due to the manner in which the symptomatology of skin diseases and their primary lesions has been converted into chaos by a diffuse system of nomenclature.

In order to further the determination of a correct diagnosis, a series of diagnostic doctrines and dogmas should not be given to the pupils, but the teachers themselves would aid the cause most by coming to an agreement concerning the assertion of simple, strict, and logical conceptions in the nomenclature. This being assumed, the pupils may be told in addition:

1. The clinical history should always be taken before the inspection; the statements of the patient should be received only with the greatest caution, but should by no means be neglected.

2. In the examination of the objective appearances, if possible, the entire integument should be looked at uncovered, even if the patient states "there is nothing anywhere else."

3. The skin may be in a condition of active and passive congestion, although this may not constitute a direct morbid factor. The mere act of undressing and the diminution of temperature produced thereby often produces active congestion; moreover, the integument of some individuals is so sensitive that almost every irritant, even mere contact with a foreign body and the like, produces sudden irregular contractions and dilatations of the vessels of the skin (districts of spasm and paralysis) which are manifested by alternating red and pale patches, often even by acute cedema (elevation of the surface of the patches, even the formation of wheals).

4. By means of sight and touch, it must be determined whether changes of color are due to congestion (the red patches of which, when recent, may be removed by pressure), or to serous infiltration (here also the redness and elevation of the surface may be removed, at least in part), or to cellular infiltration (in which this cannot be done); whether it is due to the serum or coloring matter of the blood, or to blood in mass, or finally to increase or diminution of the pigment.

5. Not the individual anthemata, but their relation to one another as synanthemata and exanthemata, their distribution, and, in the main, their course, in detail and as a whole, finally their relation to the organism constitute the sum of the objective data upon which the diagnosis must be based. It must be pointed out in particular that the examination of the expansions of the mucous membrane, which are near the integument, and also of other epithelium-bearing membranes, should never be omitted.

6. The subjective symptoms are important in so far as the statements with regard to them harmonize with the objective appearances and the course of the disease. In this connection, the feeling of pruritus, in particular, plays an important and pathologically interesting part in skin diseases. Even the absence of pruritus in certain, for example, syphilitic forms of anthemata, while entirely similar non-syphilitic ones are characterized by violent pruritus, may often be of an importance which cannot be underestimated.

The manner in which skin diseases develop from anthemata into synanthemata and exanthemata is as manifold as the pictures of the developed diseases themselves, and finally a series of varying forms are presented in their transitions from the acute into the chronic stage or their definitive retrogression in the residua which they leave behind, such as pigmentation and cicatricial formation.

Finally, the prognosis of skin diseases, which is on the whole more favorable than that of other parts of the organism, is connected very closely with the diagnosis, course, and treatment. With the increasing perfection of methods of treatment, especially with

reference to individual groups of disease, the history of dermatology has made considerable advances for the better.

V. CLASSIFICATION OF SKIN DISEASES. HISTORICAL.

We now pass to the consideration of the classification of skin diseases.

In the system which I have published recently,¹ an attempt has been made, at least in the upper classes, to form natural groups, *i. e.*, those characterized by a series of essential qualities. There are nine² of these groups (classes), which I will now mention, and will refer you to my "System" for a detailed justification of their subdivisions down to individual diseases. I will here reiterate that the clinical unity of the groups of disease and the diseases themselves—in so far as they are presented as wholes to the observation of the pathologist—has been regarded as alone decisive in determining the principles of classification, and that individual general pathological factors (such as the cause, localization, the anatomical and functional factors, the symptomatology in detail, the course and terminations) have only been placed in the front rank when they actually coincide with the real nature of the class, group, or disease in question.

The following is the system:

FIRST CLASS.

Simple inflammatory dermatoses (dermatitides simplices).

A. Dermatoses with the character of superficial inflammation of the skin (dermatitides simplices catarrhales, catarrhs of the skin).

I. Family. Diffuse superficial inflammations of the skin. (Surface catarrhs of the skin.)

1. Mere hyperæmia predominant:

Erythema: *a.* simplex.

b. papulatum.

2. Sero-purulent exudation predominant:

Eczema: *a.* typicum.

b. paratypicum.

Varieties: rubrum.

papulatum.

vesiculosum.

rhagadiforme.

pustulosum.

squamosum.

II. Family. Erosive superficial inflammations of the skin (stigmatoses).

1. Produced by animal parasites:

Parasitic stigmatoses.

a. Entomoses:

due to head lice.

" body lice.

" clothes lice.

¹ "System der Hautkrankheiten." Wien: Braumueller, 1881.

² I need not prove that this is not an attempt to classify skin diseases "upon a neuro-pathological basis," as Kaposi has discovered in his "Lectures" which have recently appeared.

HJB

- due to bed-bugs.
 " fleas.
 " flies (*Culex*, mosquito).
 " caterpillars (*Bombyx processionea*).
- b. Acarinoses:
 due to the harvest-mite (*Leptus autumnalis*).
 " the tick (*Ixodes ricinus*).
 " the hair-worm (*Acarus folliculorum*).
 " the acarus (*Acarus scabiei* = *Sarcoptes* hom.).
 " the barley-mite (*Acarus hordei* = *Krithoptes* [Geber]).
2. By injuries of other kinds (the vital restorer of Baunscheidt, cupping, and the like):
 Traumatic stigmatozes.
- III. Family. Follicular superficial inflammations of the skin (perifolliculoses).
1. Only around the mouths of the follicles:
 Miliaria alba et rubra (should perhaps be included among the epidermidoses [akantholyses]?)
2. Also around the excretory ducts of the follicles and the follicles themselves.
 Without coincident implication of the sheath of the hair:
 Acne.
 With coincident implication of the hair-sheaths and hair:
 Sycosis.
- IV. Family. Superficial stasis inflammations of the skin.
1. With the termination in new-formation of skin.
 Ecthyma.
2. With the termination in cicatrices:
 Cutaneous ulcers.
- B. Dermatoses with the character of deep-spreading inflammations (dermatitides simplices phlegmonosæ, simple phlegmons of the skin).
- I. Family. Phlegmons of the skin in layers.
1. Due to burns:
 Combustio.
2. Due to freezing:
 Congelatio.
3. Without external injury:
 Pseudo-erysipelas (phlegmone diffusa idiopathica).
- II. Family. Localized phlegmons of the skin.
- Furunculus.
- Parasitic varieties:
 Due to the sand-flea (*Pulex penetrans*).
 " the gadfly (*Estrus*).
 " the guinea-worm (*Filaria medinensis*).
- Anthrax (carbunculus).
 Aleppo and Biskra boils.
- III. Family. Stasis phlegmons of the skin.
 Phlebitis and lymphangioitis cutis.
 Erysipelas.

SECOND CLASS.

Angioneurotic Dermatoses.

Dermatoses with the character of a widespread disturbance of the vascular tonus, in addition to more or less well-marked inflammatory nutritive disturbance.

I. Family. Infectious angioneuroses of the skin (acute exanthemata, eruptive fevers).

1. With predominant catarrhal character:

Erythematous exanthemata:

Roseola of typhoid fever.

of cholera, etc.

Scarlatina.

Papular exanthemata:

Rubeola.

Morbilli.

Vesiculo-pustular exanthemata:

Varicella infantum.

Vaccinia.

Miliaria crystallina (only accompanying fevers, or also an independent epidemic disease [?])

2. With predominant phlegmonous (diphtheritic) character of the inflammation of the skin.

Variola.

Maliasmus (carbuncle of glanders).

Pustula maligna (carbuncle of splenic fever).

II. Family. Toxic angioneuroses of the skin (medicinal exanthemata, etc.).

1. With predominant inflammatory congestion:

Erythema toxicum.

Varieties:

Maculo-papular forms: Erythema toxicum, pellagra, acro-dynia.

Vesicular and bullous forms: Herpes, pemphigus, and eczema toxicum.

Pustular forms: furunculi and ecthyma toxicum.

Hemorrhagic form: Purpura toxica.

2. With predominant spasm of the vessels of the skin:

Urticaria toxica.

3. With occlusion of the vessels and termination in necrosis:

Ergotism.

III. Family. Essential (idiopathic, diathetic) angioneuroses of the skin.

1. With predominant inflammatory congestion:

Erythema essentialis (idiopathicum).

Varieties:

Maculo-papular forms:

a. Superficial: erythema multiforme, papulatum, circinatum, iris, annulatum.

b. Deep-seated: erythema nodosum.

Vesicular, bullous, and pustular forms:

Herpes circinatus, iris, annulatus.