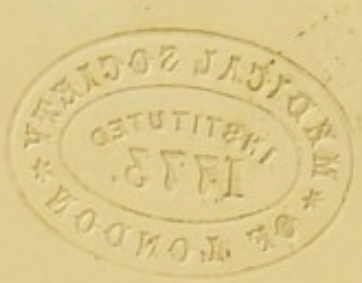
Lectures on dermatology : a synopsis of diseases of the skin delivered in the Royal College of Surgeons of England, January, 1870 / by Erasmus Wilson.

G.C.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LECTURES ON DERMATOLOGY;

A SYNOPSIS OF

DISEASES OF THE SKIN;

DELIVERED IN

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND,

JANUARY, 1870.

BY

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TO

RICHARD QUAIN, F.R.S. F.R.C.S.

THE PRESIDENT OF THE YEAR (1869) WHEN THE CHAIR OF DERMATOLOGY WAS FOUNDED;

AND

EDWARD COCK, F.R.C.S.

THE PRESIDENT OF THE YEAR (1870) WHEN THE LECTURES ON DERMATOLOGY WERE INAUGURATED;

This Volume

IS DEDICATED BY

THE AUTHOR.

PREFACE.

THE intention of these Lectures is to embrace a general view of the whole subject of Dermatopathology, to which they must be regarded as a simple introduction.

They were delivered in the Royal College of Surgeons of England in January and February, 1870; and were published in the *Medical Times and Gazette;* and from the pages of that journal they are now reprinted in a separate form. In the Author's MSS. and in the *Medical Times and Gazette* the Greek terms were written in accordance with the orthography of their parent language, in veneration of the Ancient Fathers of Medicine by whom the terms were employed and from whom they have descended to ourselves.

The Author's attention was drawn, subsequently, to the report of a conference of the British Association on the subject of Scientific Nomenclature, and to the proposal by a committee of that body to establish an uniform standard of terminology founded on the Latin tongue. In arranging the

Dermatological Collection the Author found the latter system of nomenclature already in use in the Hunterian Museum, and esteeming it a duty to conform with the precedent of an Institution to which he feels so deeply indebted, he has, in reprinting the Lectures, adopted the Latin style.

LONDON, *December*, 1870.

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LECTURES ON DERMATOLOGY.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,

Dermatology has a history and an ancestry. The language of dermatology is that of the ancient Greeks—of Æsculapius and his school—of Hippocrates and his disciples. In those early days the diagnosis of disease was very commonly determined by the examination of the exterior of the body, and especially of the skin; and, at the present day, the skin, when properly understood and carefully interrogated, will be found to be a valuable means of ascertaining the state of the general health of the individual and of the health of many of the organs of his body. It is obvious how, by its aid, we may discover a defect of the heart's conformation, test the vigour of the heart's action, and put to the proof the healthy or the unhealthy condition of the blood. The skin also furnishes us with a key to the knowledge of the normal and the abnormal sensibilities of its structure, and to the manifestations of its healthy and unhealthy nutrition. Cyanosis proclaims to us that the heart is imperfect in structure, and that a rudimentary communication subsists between the two auricles. A less marked and more partial lividity of the skin indicates torpor or obstruction of the circulation. Jaundice informs us of an aberration in the distribution of the bile, and possibly of the existence of disease of the liver. Chlorosis points out to us a state of leucocythæmia

associated with languid nutrition; and melasma a state of exhaustion of a part of the organic system of nerves, in one instance referable to the uterine plexuses, in another to those of the capsulæ suprarenales. These must be regarded as coarse and prominent examples only of the significance of the appearances of the skin; but it will be obvious, from the consideration of them, that there must exist many more besides.

To the genius and foresight of Æsculapius Medicine owes its deepest gratitude; it was he who first saw the importance of clinical annotation, and to an imitation of the records of those early days we are indebted for much of the scientific status of our art at the present time. In the temples or dispensaries founded by Æsculapius, and afterwards dedicated to his memory, it was the office of the Priest-Physicians to draw up and to preserve a careful report of all the cases that came before them. These reports were treasured with the most jealous care; and they were used as the foundation of the description of diseases which has been handed down to ourselves.*

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* Francis Adams, in his translation of "The Genuine Works of Hippocrates" (Sydenham Society's edition, 1849), notes, on the authority of Pausanias, that the number of Temples or Asclepia in Greece amounted to sixty-four. "Plutarch states in positive terms that all the Temples of Health were erected in high situations and where the air was wholesome." Indeed, "a large proportion of these temples were built in the vicinity of thermæ or medicinal springs, the virtues of which would, no doubt, contribute greatly to the cure of the sick. At his entrance into the temple, the devotee was subjected to purifications, and made to go through a regular course of bathing, accompanied with methodical frictions, resembling the Oriental system, now well known by the name of shampooing." "It is also well known that the Asclepiadæ noted down with great care the symptoms and issue of every case, and that, from such observations, they became in time great adepts in the art of prognosis." In the hands of Hippocrates the art of medicine had attained a "remarkable degree of perfection." Hippocrates is well known to have drawn the rudiments of his

The importance of those clinical records is shown by the fact that many of the terms which we use in dermatology at the present day were employed by the ancients, and very possibly fell from the lips of the great master Æsculapius himself. In the following table I have assembled a considerable number of terms of dermatology, thirty-seven of which I have collected from the writings of Hippocrates, and I have by no means exhausted the store. With the view of better comprehending their signification, I have arranged them in two groups, according to their *objective* or to their *subjective* character. In the objective group we discover three leading ideas, namely, *colour*, *figure*, and *quality;* and in the subjective group, — development, symptoms, cause, situation, and period of life.

ANCIENT GREEK TERMS.

Objective.

Colour.

Alphos—ἀλφός, white ; ἄλφιτον, barley meal.
Leuce—λευκός, white, shining.
Phalacros—φαλός, white, bright.
Melas—μέλας, black.
Anthrax—ἄνθραξ, a coal.
Erythema—ἐρυθαίνειν, to blush, to become red.
Erysipelas—ἐρυθρός, red ; πέλλα, the skin.

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knowledge "from the reports of cases collected in the Asclepion of Cos;" and a scandal has been raised against his name which tends to elevate the importance of similar records. "Why he left the place of his nativity, and visited distant regions of the earth, whither the duties of his profession and the calls of humanity invited him, cannot now be satisfactorily determined. The respect paid to him in his lifetime by the good and wise in all the countries which he visited, and the veneration in which his memory has been held by all subsequent generations, are more than sufficient to confute the base calumny, invented, no doubt, by some envious rival, that he was obliged to flee from the land of his nativity in consequence of his having set fire to the library attached to the Temple of Health at Cnidos, in order that he might enjoy a monopoly of the knowledge which he had extracted from the records which it had contained."

Figure.

Pityriasis—τὰ πίτυρα, bran.
Crithe—κριθή, barley.
Kenchrias—κέγχρος, millet.
Sycosis—σῦκον, a fig.
Terminthos—τερέβινθος, pistacia terebinthus.
Kerion—κηρός, wax.
Meliceris—μέλι, honey ; κηρός, wax.
Choirades—χοῖρος, a young swine ; χοιράς, a rock.
Acrochordon—ἄκρον, a point or end ; χορδή, a cord.

Quality.

Idroa—ἱδρώς, sweat.
Lepra—λέπος, rind ; λεπρός, rough, scaly.
Spargosis—σπάργωσις, swelling.

SUBJECTIVE.

Development.

Exanthema—ἐξ, out ; ἄνθος, a flower.
Exanthesis— „ „ a flowering out.
Eczema—ἐκζεῖν, to boil out.
Ecthyma—ἐκθύειν, to break out.
Phlyctæna—φλύειν, to bubble or boil up.
Phyma—φύειν, to grow up.
Herpes—ἕρπειν, to creep.
Lichen—λείχειν, lingere, to lick.
Epinyctis—ἐπί, upon ; νύξ, night.
Madarotes—μαδάειν, to flow away.

Symptoms.

Phlyzacion—φλύζειν, to be hot.
Phygethlon—φρύγειν, to roast.
Psora—ψώειν, to rub.
Cnidosis—κνίδη, a nettle ; κναίειν, to scratch.

Cause.

Ephelis—ἐπί, upon ; ἥλιος, the sun.
Cheimetlon—χεῖμα, winter.

Seat.

Ionthos—ἴονθος, root of a hair.

Period of Life.

Acne—ἀκμή, ἀκμαί, flos ætatis.

Uncertain.

Dothien—δοθιήν, boil, small abscess.

Thus, in the objective class, and in the sub-group represented by colour, we fine *white* in the instance of alphos, leuce, and phalacros; *black* in melas and anthrax; and *red* in erythema and erysipelas. In the sub-group designated by the *figure* of the objects, we have pityriasis, resembling bran; crithe, resembling a grain of barley; kenchrias, resembling a millet-seed; sycosis, resembling a fig; terminthus, the cone of the turpentine fir; kerion, the honeycomb; meliceris, clear honey as it flows from the honeycomb; choirades, a hog's back; and acrochordon, a rope's end. While in the sub-group which takes cognizance of the *quality* of the object, we meet with idroa, or a resemblance to the watery perspiration; lepra, or roughness and scaliness; and spargosis, a state of swelling.

In the subjective class the largest sub-group relates to the mode of *evolution* or *development* of the disease—for example, exanthema, a state of blossom; exanthesis, a blossoming out; eczema, a word which I have not succeeded in finding in the writings of Hippocrates, but too important to be passed over, a boiling out; ecthyma, a breaking out; phlyctænæ, bubbles produced by boiling; phyma, a growth; herpes, a growth by creeping or spreading from the circumference; lichen, a growth which licks the surface and holds on by adhesion to its base; epinyctis, a growth by night; and madarotes, a flowing away, as of the hair when it falls off. Next, as indicative of *symptoms*, we have—phlyzacion, a hot eruption; phygethlon, a consequence of a roasting heat; psora, an eruption provoking rubbing; and cnidosis, an eruption provoking scratching, like that occasioned by the cnide or nettle. Then we have terms having reference to *cause;* such are—ephelis, a sunburn; and cheimetlon, a winter companion; and, in addition, ionthos, an affection relating to the root of the hair; acne, an eruption corresponding with a particular period of age; and

dothien, a word of doubtful meaning, signifying a small abscess or boil.

This enumeration teaches us that words, which at present we regard as scientific, were, at that early period, the popular expression of—mode of appearance and growth, figure, colour, symptoms, physical nature, cause, locality, etc. They are the common language of the people; they concealed no doctrinal mystery; and, at the present hour, they are as eloquent as in the days of our ancestors. What, for example, can alphos mean but white, and melas black; lepra rough, and herpes spreading; lichen licking or adhering to; and psora rubbing or scratching? And the same for all the rest.

The ancients were observers of too shrewd a stamp to have overlooked the *anatomy* of the skin. We have it on record that Podalirius, the elder of the sons of Æsculapius, on his return from the siege of Troy, was wrecked at Caria, and that, on an accident happening to Syrna, the king's daughter, he bled her, and afterwards became her husband, relinquishing his surgical practice at home for his wife's ample dower and domain, the Chersonesus. To men of their acknowledged ability, the bubbles of the phlyctæ and phlyctænæ must necessarily have revealed the constitution of the skin as of two layers; and we find, besides, the curious observation, hardly appreciated at the present time, of the relation of ionthos, the synonym of acne, with the root of a hair. The most important modern discovery in reference to the anatomy of the skin is that of the permanence and organization of the rete mucosum and its nutritive operations in the elaboration of pigment and the formation of the horny epidermis.

The *physiology* of the skin is exemplified in its growth, its colour, and its structure; in its secreting and absorbing function, and in its sensibility. And its *pathology* is manifested by its aberration from the normal standard of structure and function.

Thus, it may be redder than natural, or discoloured in various degrees; for example, white, or black, or yellow, or blue, with their intermediate tints. Again, it may be raised on the surface into solid prominences of different size; or it may be, as it were, unfolded or dissected by the interposition of fluid between the rete mucosum and the horny layer of the epidermis, or by the voluntary separation of the epidermis in flakes of various thickness and of various extent. These diverse abnormal appearances of the cutaneous surface have received the name of *pathological lesions*, and are nine in number. For example, those dependent on colour are rubor and macula; those which are due to a solid outgrowth of the skin are termed papula, tuberculum, and tuber; those that result from the interposition of fluid between the layers of the epidermis are bulla, vesicula, and pustula; and that in which the epidermis is cast off in laminæ or scales is denominated squama.

PRIMARY PATHOLOGICAL LESIONS.

	Rubor.	
	Macula.	
Papula.		Bulla.
Tuberculum.		Vesicula.
Tuber.		Pustula.
	Squama.	

We commonly designate these pathological lesions as *primary*, in order to distinguish them from others which we term *secondary*, and which in reality are general rather than special, and are frequently accidental. For example:—

SECONDARY PATHOLOGICAL LESIONS.

Desquamation.	Fission.
Induration.	Ulceration.
Incrustation.	Cicatrisation.
Excoriation.	Discoloration.

Rubor, or redness, presents many degrees of variety, from the simple blush of emotion to the vivid hues of erythema and erysipelas. It is due to a filling of the bloodvessels of the skin with blood, a state of hyperæmia dependent on exhausted nerve-force and consequent dilatation of the capillaries. It obeys the laws which govern the blood in its circulation through the rest of the body. It is vivid and bright when the circulation is active; crimson, or purple, or livid, when the circulation is languid. It is sometimes evanescent, as in urticaria; sometimes prolonged and arterial, as in eczema; sometimes arterial-venous, as in gutta rosea; or completely venous, as in erythema a gelu, or common chilblain. Moreover, in rubor of a permanent kind the capillaries are sometimes dilated to the bulk of minute arterioles, and constitute a plexus, which must be regarded as a form of angiectasia.

Macula, or stain, is another form of coloration of the skin, which is sometimes due to an abnormal state of the bloodvessels, sometimes to the escape of blood from its vessels and its diffusion in the adjacent tissues, sometimes to a degeneration of the dermal tissues, and sometimes to an alteration of pigment. The vascular nævi or angiomata, certain forms of angiectasia and phlebectasia, all of them referable to a permanent dilatation of the cutaneous vessels, arteries and veins, are examples of maculæ. So also are the small purple stigmata, the petechiæ, the vibices, and the ecchymomata of purpura, and the ecchymosis of a bruise, spots which, unlike the blotches of rubor, remain permanent, and become more distinct under pressure with the finger. In the third series come the degenerations of the derma of xanthoma and melanoma, and the fibrous degeneration of morphœa and leuce. And then follow the pigmentary spots of melasma, of chloasma, of lentigo, and cyanopathia, all seated in the rete mucosum.

Papula, the pimple, brings to our notice the well-proven fact that the skin is not what it seems. It is not the smooth, homogeneous plane which it appears to the untrained eye, but is everywhere perforated by openings—the pores—which, over the greater part of the body, transmit a hair, and in some few situations, as the palms and the soles, a watery secretion alone. These openings or pores are the portals of the cutaneous follicles, and the follicles, besides serving as the sheath of the hairs, also receive, near their outlet, the ducts of the sebiparous glands. In structure, the follicles represent an inversion of the skin, and possess a similar structure; they have their epithelium or epidermis, and their capillary plexus, no longer spread out in a horizontal plane, but vertical in position and disposed like a cylinder, one extremity of the cylinder surrounding the pore, and the other penetrating inwards to the fundus of the follicle. When the skin is shrunk by the cold, the pores of the follicles, as a consequence of the structure just described, stand up in strong relief, and constitute the cutis anserina. And when the follicular vascular plexus is turgid with blood, and, still more, when, in addition to turgescence of vessels, there is infiltration into the intervascular spaces, the pores become the summit of small conical prominences, which are termed papulæ. The papula, therefore, ranges in size from that of the minute conical and colourless prominence of cutis anserina to the small red papula of lichen, or the still larger and coarser pimple of acne. In the apex of every papula is the aperture of a pore; immediately around the pore is the horny cone of epidermis that descends into the follicle and is continuous with its lining membrane; and externally to this, and forming the body of the papule, is the follicular vascular plexus enclosing its infiltrated intervascular tissue. Moreover, before the papule is developed, and after it has disappeared, a vascular

punctum is perceptible at the circumference of the pore, marking the state of congestion of the vascular plexus.

The *tubercle* is larger than a papule, and is not limited to a single pore or follicle, but implicates several. It may begin as a pimple, may show itself first as a vascular punctum, then become prominent, constituting a papule; but very soon, neighbouring follicles, taking on a similar process, become blended with the first, and so a compound or multiple papule is formed, and is distinguished from the simple papule by its greater bulk, and also by its smoothness of surface. Unless seen at an early stage, the origin of a tubercle by a punctum or by several puncta may fail to be distinguished, but it is evident, nevertheless, from the mere fact of its bulk, that several follicles must be implicated. As bulk is a principal element of distinction between a papule and a tubercle, it may be as well to mention that a papule will range in size between one and two and even three lines in diameter, while a tubercle commences at three lines, and may sometimes measure double that number—that is to say, half an inch.

The *tuber*, or small tumour, advances in bulk and size beyond the tubercle to a size corresponding with a furunculus or small abscess, such as the "panus" of the Latins. The tuber is the "phyma" of the Greeks, and is well illustrated by the encysted tumours so commonly met with in the scalp.

We believe that a little consideration of the subject will be sufficient to fix in the mind the three stages of growth, to which the terms pimple, tubercle, and tumour are technically applicable, and that nothing need be said of their structure.

The *bulla* is a bleb or blister formed by the effusion of a serous fluid on the surface of the rete mucosum splitting up the epidermis, and raising the horny layer of the cuticle into a convex dome. It is typi-

fied by the blister caused by cantharides, or by a burn, and presents a similar appearance, an erythematous or hyperæmic base, a serous effusion, and a diameter of various extent, ranging from a few lines to several inches. The development of blisters as an idiopathic affection is termed pemphigus, an individual blister of large size is a phlyctis, while those of smaller size are the phlyctænæ. The smallest kind of bullæ, which in reality are simple vesicles, are termed, from a comparison of their size with the millet-seed, kenchrias, or milaria; and others, somewhat larger, are met with in herpes—for example, in herpes zoster or shingles.

Vesicula is a bulla of small and even of minute size, but in pathological structure is identical with the rest; there are, commonly, the inflamed base, the hemispheroidal or conical dome, and similar contents, limpid, serous, and transparent. The essential difference between the vesicula and the bulla is the extent of surface brought under the influence of the effusive action. In bulla the surface is considerable; in vesicula it is small, often limited to the aperture of a follicle, or the pore may be surrounded by a chaplet of minute vesicles. It may be said of the vesicle in its relation to a bulla, as I have already remarked with regard to the relation subsisting between a papula and a tubercle, that the difference of structure is merely one of bulk.

The *pustule* is a vesicle in structure, and differs from it only in the nature of its contents, and the pus, more or less diluted with serum, is sometimes produced at the expense of the cells of the rete mucosum, and sometimes of the connective tissue of the derma. In certain eruptions it is not uncommon to find the contents of the pustule to be serous at first, and subsequently purulent; while at other times, vesicles and pustules are met with side by side in the same eruption.

Squama, or scale, is an excessive formation and

exfoliation of the horny epidermis, for the most part abnormal both in texture and colour. It is best illustrated by the *lepra* of the Greeks, wherein the scales constitute the element of roughness, and the abnormal structure, as exhibited by whiteness, has received the name of alphos. Scaliness is met with also in other affections, and especially in eczema, but in none are the scales so characteristic or their claim to special consideration so deserved as in lepra.

I may pass quickly over the signs representing the secondary pathological lesions.

Desquamation relates to the separation of the normal cuticle over a surface of greater or less extent that is or has been inflamed, as occurs in the exanthemata, and notably in that remarkable form of eczematous eruption, dermatitis exfoliativa, the pityriasis rubra of Devergie and Hebra.

Induration is the consequence of infiltration and condensation of the tissues of the derma, such induration being always accompanied with more or less swelling or tumefaction.

Incrustation is the coating or covering over of exuding surfaces by the desiccation of moist secretions and discharges of various kinds.

Excoriation, in general, results from the use of the nails for the relief of itching, or from the operation of pressure and friction in exudative eruptions.

Fission of the skin, giving rise to chaps and rhagades, is a result of the brittleness occasioned by infiltration and consequent inflexibility of the derma; the brittleness of the integument being often so great that the simple movements of the body are sufficient to produce disruption of its tissue.

Ulceration is a consequence of degeneration of tissue, a depression of vital force, and sometimes of the substitution of a lower for a higher form of organized material, the more lowly form of organ-

ization being incapable of maintaining its existence, and therefore falling into a state of dissolution and decay.

Cicatrization is the process of restoration of lost tissues, of replacement of the highly-organized material of the skin by a substance of inferior structure, generally white fibrous and connective tissue: while,—

Discoloration is the stain of the skin left on the site of a foregone primary lesion attended with hyperæmia; such are the brown stains of lepra, of dermato-syphilis, and of the congestion resulting from varicose veins.

Diagnosis.—The pathological lesions have a peculiar interest for the Medical observer, since, not only are they the signs of a departure of the skin from the normal standard of health, but they are also the means of distinguishing different forms of cutaneous disease from each other; they are, in fact, the basis of *diagnosis*.

By their aid we determine an eruption of redness only from one of papulation or tuberculation, of vesiculation or pustulation, or squamation. And a careful consideration of these lesions teaches us the principle of a very popular form of classification of cutaneous diseases—namely, that initiated by Plenck and subsequeutly modified by our countryman Willan —the so-called artificial classification.

In illustration of diagnosis, if we meet with an example of pathological *redness* of the skin or rubor, without any visible disturbance of its structure, we may conclude that the disease is an erythema or the early stage of erysipelas, an urticaria, or the blossoming out of one of the exanthemata; for example, a roseola, rubeola, scarlatina, or may be, variola. If the case be one of prominence in the form of small *pimples*, the disorder is probably a lichen; if it occur upon the face or shoulders, an acne; or at the roots of the beard, a sycosis; or the pimples may be of

glandular origin. If instead of pimples, the eruption be one of *tubercles*, it may be a case of aggravated acne or sycosis, a lupus, a dermato-syphilis, an epithelioma, an elephantiasis, or a harmless growth.

In the case of cutaneous *tumours*, the diagnosis might be, an encysted tumour, a furunculus, an anthrax, or an adenoma.

An eruption of *bullæ* constitutes a pemphigus; of large vesicles, a herpes or a miliaria; and if the *vesicles* be minute, we may regard them as appertaining to eczema. An outbreak of *pustules* may be an impetigo, an ecthyma, a variola, or a dermato-syphilis. And an exfoliation of the skin in *scales* may be a lepra, a dermatitis exfoliativa, a chronic eczema or psoriasis, a pityriasis, or an ichthyosis.

In this way the pathological lesions become the means of a rude kind of diagnosis, to be sifted subsequently by a more precise and differential method of diagnosis.

Cause.—If we ask ourselves the question,—What can be the *cause* of the pathological lesions, that is to say, of diseases of the skin?—we shall find that in some instances they are due to defect of development, sometimes to an error of nutrition, sometimes to mal-assimilation, sometimes to irritation external or internal, and sometimes to a specific poison. Defect of development is seen in ichthyosis and acne; error of nutrition in phytosis, in lepra, in lupus, in cheloma, in morphœa, in molluscum, in angioma, and in epithelioma; defect of assimilation is manifested by eczema, by impetigo, by ecthyma, and the anthracoid affections; external irritation acts as a cause in erythema, eczema, scabies, and cheimetlon or chilblain; and the operations of a specific poison, in the exanthematous and continued fevers, as also in elephantiasis, in equinia, and in dermato-syphilis.

Prognosis.—The *prognosis* of cutaneous diseases is favourable so far as the life of the individual is

concerned, but unfavourable in respect of duration; they are generally chronic and obstinate, partly because they are the manifestation of a defective assimilation and nutrition difficult to renovate, and partly because they are especially exposed to the influence of external irritants, such as cold, heat, air, and moisture. There are some which run a regular course, and begin and end within a limited space of time—such are, herpes zoster and the exanthemata; others are restricted to a given period of life, such as ringworm and acne; while some appear to identify themselves with the individual and become a part of his nature.

Treatment.—The *treatment* of diseases of the skin is founded upon the cause and upon the habits of the pathological phenomena. If a disease possess a known course, our business would be simply to watch it and protect it from aggravation. On this principle we dredge an erysipelas, a herpes, or a pemphigus with an unirritating absorbent powder, such as flour or starch. If an eruption be productive of excess of moisture, we employ desiccant remedies; if the disorder be over-dry, our applications must be moistening. Where irritation is present, the treatment must be soothing; but where languor or torpidity prevails, it must be stimulating. Sometimes the indication may be to arrest an existing action and substitute another, sometimes to destroy with the caustic, and sometimes to remove with the knife. In all this it will be perceived that there is nothing more than is comprehended in the general principles of Surgery adapted to an existing necessity. And I need do no more than suggest that we should reason well upon the subject before we act, and do nothing whatever without a sufficient reason. There are very few specifics for disease in general; for diseases of the skin it may be said that there are none. Arsenic might be cited as a specific; but arsenic is nothing more than a tonic

—possibly a nerve tonic—and obeys the same laws as other tonics ; it is only suitable after a course of preparation by other remedies, and by no means acts in all cases equally. With few exceptions, the medicines adapted to the improvement of the general health are those which are best suited to combat with cutaneous disease, and those that exert a stimulant or tonic influence have gained the highest amount of reputation. Of this kind are arsenic, and sulphur, and tar. And, as a general principle, the treatment of a cutaneous disease, whatever its kind, is—to regulate the functions of the body conducive to general health in the first instance, and, that being accomplished, to have recourse to more direct remedies.

Classification.—From general considerations relating to the structure and functions of the skin, its pathology, and the diagnosis, cause, prognosis, and treatment of its morbid conditions, our next step is the differentiation of the varieties of the morbid affection, and their arrangement in groups corresponding in nature and resembling in general features —in other words, their *classification*. In its simplest sense, the differences of nomenclature, such as we meet with them in the writings of Hippocrates, are nothing less than a classification ; thus, in the tables which we have already reviewed, we find groups representative of colour, figure, quality, development, symptoms, cause, seat or situation, and age. That is to say, the simple examination of the Hippocratic vocabulary leads us, as by a necessity, to a classification into certain groups, of which eight at least may be enumerated. May we not therefore conclude that dermatological classification is coeval with the earliest observations of the fathers of Medicine ?

Eighteen years previously to the commencement of the Christian era, appeared the excellent work of the most accomplished Physician of the Augustan period of Rome, the admirable Celsus ; Celsus gave

great expansion to the classification of diseases of the skin, and was the means, at the same time, of handing down to the present age some of the Latin synonyms of the Greek tables which we have already examined. He viewed diseases in general in their *therapeutical* character, and cutaneous affections he grouped under four heads—namely: 1. Such as are to be treated by diet; 2. Such as require the use of medicines; 3. Diseases demanding local treatment; and 4. Surgical diseases. Am I wrong in stating that there is material for thought and reflection, even at the present day, in the sound and practical classification of the distinguished Roman?

CLASSIFICATION OF CELSUS.

(THERAPEUTICAL.)

1. *Treatment by Diet—General Disease.*

Elephantiasis.

2. *Treatment by Medicines—Limited Disease.*

Erysipelas (traumatic).
Bites and stings.
Carbunculus.
Carcinoma.
Therioma.
Ignis sacer.
Chironium.
Pernio.
Struma.
Furunculus.
Phyma.
Phygethlon.
Kerion.
Acrochordon.
Thymion.
Myrmecia.
Clavus.
Pustulæ.
Exanthemata.
Phlyctænæ.
Phlyzacion.
Epinyctis.
Scabies.
Impetigo.
Papulæ.
Vitiligo.
Alphos.
Melas.
Leuce.

3. *Treatment by Medicines—Local Diseases.*

Defluvium capillorum.
Calvities.
Porrigo.
Sycosis.
Area.
Alopecia.
Ophiasis.
Varus.
Lenticula.
Semeion.
Ephelis.
Phtheiriasis.

4. *Treatment by Surgical Means.*

Ganglion.	Steatoma.
Meliceris.	Hordeolum.
Atheroma.	

In recording the knowledge of these diseases possessed by the Greeks, Celsus adopts many, and indeed the greater number, of the terms in their original dress; to about one-third of the whole he applies the language of his own country; hence, some of the Greek terms have descended to us with a Latin synonym, and this circumstance has created confusion in modern nomenclature, to the extent, in certain instances, of conferring the Greek term on one disease and its Latin synonym upon a disease of a totally different character—we may instance, for example, eczema and scabies, pityriasis and porrigo.

The examination of the following table will render these observations more apparent.

GREEK AND LATIN SYNONYMS.

Acne	Varus.
Acrochordon	Verruca pensilis.
Alphos	Vitiligo albida.
Anthrax	Carbunculus.
Cheimetlon	Pernio.
Choirades	Scrofula.
Cnidosis	Urticaria.
Crithe	Hordeolum.
Dothien	Furunculus.
Eczema	Scabies.
Erysipelas	Ignis Sancti Anthonii.
Idroa	Sudamina.
Ionthos	Varus.
Kenchrias	Miliaria.
Kerion	Favus.
Lepra	Vitiligo albida.
Leuce	Vitiligo candida.
Madarotes	Calvities.
Melas	Vitiligo nigricans.
Phalacros	Calvities.
Phlyctænæ	Bullulæ.

Phygethlon	Panus.
Phyma	Tuber.
Pityriasis	Porrigo.
Psora	Scabies.
Sycosis	Mentagra.

As far back as the sixteenth century, two distinguished contemporary writers, MERCURIALIS of Pavia and RIOLANUS of Paris, arranged diseases of the skin in accordance with their physical characters, initiating, in fact, the more extended classifications of Plenck and Willan, both of which are founded on the same basis. Mercurialis divides diseases of the skin into affections of the head and affections of the body, and the latter into diseases of colour, of roughness and smoothness, and of magnitude; while Riolanus, without any primary division, includes the whole under the three heads embraced by the terms—pustula, deformitas, and tuberculum. Out of this simple division PLENCK, in his character of a nosologist, contrived to develop a system comprehending fourteen classes and 115 genera. And Willan, adopting the chief of Plenck's classes, reduces the number to eight, which he terms orders.

MERCURIALI'S CLASSIFICATION, 1570.

Nat. 1530, *ob.* 1606.

I. DISEASES OF THE HEAD.

Defluvium capillorum.	Achor.
Alopecia.	Favus.
Ophiasis.	Tinea.
Calvities.	Psydracia.
Canities.	Helcydria.
Morbus pedicularis.	Sycosis.
Porrigo.	Exanthemata.

II. DISEASES OF THE BODY.

1. *Colour.*

Leucai.	Exanthemata.
Vitiligines *seu* Alphoi.	

2. *Asperity and Levity.*

Pruritus.	Impetigo.
Scabies *seu* Psora.	Lepra.

3. *Magnitude.*

Papulæ.	Myrmecia.
Acrochordones.	Clavi.
Thymi.	Calli.

RIOLAN'S CLASSIFICATION, 1580.

Nat. 1539, *ob.* 1605.

1. *Pustula.*

Pruritus.

Scabies ..... { Psora. / Lepra. / Porrigo.

Lichen *seu* Impetigo.

Scabies capitis ..... { Favus. / Achor. / Tinea. / Psydracia. / Epinyctis.

Ambusta.

2. *Deformitas.*

Maculæ .... { Lentigo. / Varus *seu* Ionthos. / Facies flammea. / Ephelis. / Gutta rosacea.

Discoloratio ..... Vitiligo *seu* Leuce.

Casus pilorum..... { Alopecia { Area. / Ophiasis. / Calvities. / Canities. / Phtheiriasis.

Gibbus.

3. *Tubercula.*

Verruca.	Condyloma.
Myrmecia.	Mariscæ.
Thymi.	Callus.
Ficus in ano.	

PLENCK'S CLASSIFICATION, 1776.

Maculæ.	Callositates.
Pustulæ.	Excrescentiæ cutaneæ.
Vesiculæ.	Ulcera cutanea.
Bullæ.	Vulnera cutanea.
Papulæ.	Insecta cutanea.
Crustæ.	Morbi unguium.
Squamæ.	Morbi pilorum.

The classification of WILLAN is an arrangement founded on the pathological lesions, with this qualification, namely, that the period selected as the type of the affection is the moment of maturity. Thus, in the instance of variola, which passes rapidly through a series of evolutions corresponding with different lesions, the moment selected for classifying it is its pustular stage—in fact, unless a given eruption be seen at its height, the Willanean classification becomes an erroneous guide, and, as we know, an eruption may be a simple hyperæmic punctum to-day, a papula to-morrow, and a vesicula or pustula the day after. The Willanean classification is thought simple because it involves the most elementary part of the study of the pathology of the skin—because, in truth, it is founded on the alphabet of dermatopathological inquiry. It is the classification applicable to the lowest form in a school in which there are higher forms; and it addresses itself to a part only, instead of to the whole of the subject.

WILLAN'S CLASSIFICATION, 1798.

Eight Orders.

Papulæ.	Pustulæ.
Squamæ.	Vesiculæ.
Exanthemata.	Tubercula.
Bullæ.	Maculæ.

But a more serious charge that may be brought against the Willanean classification is, that on the

mere chance of their being papular, or squamous, or vesicular, or tubercular, or so forth, it assembles together incongruous and incompatible diseases. It has been termed artificial, and has been compared with the Linnæan classification of the vegetable kingdom; and, just as the faults of the Linnæan system created a necessity for the system of Jussieu or the natural classification of plants, so the shortcomings of the Willanean classification gave occasion to ALIBERT to inaugurate a natural classification of diseases of the skin, or, as he terms them, of dermatoses. As in the system of Jussieu, the classification of Alibert is founded on the idea of natural families, and these, according to him, are twelve in number—the twelve branches, as he was pleased to designate them, of the "tree of the dermatoses."

ALIBERT'S CLASSIFICATION, 1810.

(*Arbre des Dermatoses.*)

Eczematous.	Syphilous.
Exanthematous.	Strumous.
Tineous.	Scabious.
Dartrous.	Hæmatous.
Cancerous.	Dyschromatous.
Leprous.	Heteromorphous.

Both the preceding—namely, the artificial classification of Willan and the natural classification of Alibert—are founded on the pathology of the skin, in the one instance being purely objective, and, in the other, chiefly subjective; but it is evident that another basis is presented to us in *physiology*, which was taken possession of, in the first instance, by RAYER, and subsequently by myself. Rayer disposes of these affections under two principal heads, namely, diseases of the skin proper, and diseases of its appendages; and, following in the footsteps of Rayer, I arranged them in four groups, namely,—diseases of the derma, of the sudoriparous glands, of the sebiparous glands, and of the hair and hair follicles.

RAYER'S CLASSIFICATION, 1826.

1. *Inflammatory Affections.*

Exanthemata.	Papulæ.
Bullæ.	Squamæ.
Vesiculæ.	Tubercula.
Pustulæ.	Syphilis.
Furunculi.	Ambustio.
Gangrænæ.	Pernio.

2. *Non-inflammatory Affections.*

Anæmiæ.	Hæmorrhagiæ.
Congestus sanguinis.	

3. *Diseases of Secreting Functions.*

Ephidrosis.	Epidermidis exfoliatio.

4. *Neuroses.*

Anæsthesia.	Hyperæsthesia.

5. *Faulty Structure.*

Pigmentary affections.	Defectus congenitus.
Hypertrophiæ.	Extensio *seu* relaxatio insolita.
Gangræna simplex.	
Cicatrices.	

6. *Degenerations.*

Fibrous.	Tuberculous.
Melanotic.	

Next after pathological lesions, natural affinities, and physiology, comes the classification of HEBRA, having for its object to identify cutaneous pathology with general pathology. It may be said of the preceding classifications that they are too exclusively special, and that a language which should have the effect of exhibiting the alliance naturally subsisting between the pathological phenomena of every part of the body must necessarily be a desideratum. Hebra's classification, realizing this idea of an uni-

versal pathology, is represented by twelve classes, as follows :—

HEBRA'S CLASSIFICATION, 1844.

Twelve Classes.

Hyperæmiæ.	Hypertrophiæ.
Anæmiæ.	Atrophiæ.
Anomalia secretionum et organum secernentium cutis.	Neoplasmata (homœoplasiæ)
Exudationes.	Pseudoplasmata (heteroplasiæ).
Hæmorrhagiæ.	Ulcerationes.
	Parasitæ.

It may seem presumptuous in me to express a dissatisfaction with the whole of these classifications, the creations of able and zealous men ; but when they come to be tested in their practical application, they are all found to be more or less faulty, and the mind, yearning after perfection, or at least the perfection of practical usefulness, wanders away to other ideas. We may be told that one classification is good, because it is easily retained by the memory ; but of what value is easy remembrance, if the classification embrace only a part of the subject ? Another classification is good because it is founded on practical considerations ; but of what service are practical considerations, when it is almost impossible to carry the classification in the memory ? A third classification is good because of its being founded on structure and function ; but then its tendency is too specific, and it is rebellious to practical views. While a fourth classification may, in its very nature, be too general.

It was in the midst of hesitations and doubts such as these, that the key to another classification was suddenly put into my hand in the course of a numerical examination of a long catalogue of cases of cutaneous disease.* The inquiry was practical, it was

* "An Inquiry into the relative Frequency, the Duration, and Cause of Diseases of the Skin." 1864.

clinical; it related to the frequency, to the cause, and to the duration of diseases of the skin; and it showed in strong relief the overwhelming importance of one disease in comparison with all the rest, namely, eczema. Commencing with eczema and its allies, that is, eczematous affections, other groups followed simply and naturally, and seemingly as a matter of course, and, to the whole, no designation appeared so applicable as "*clinical classification.*"

In its simplest shape the *clinical classification* presents us with nineteen groups, which may be assembled under seven, or, more in detail, under nine primary heads; the *seven* primary heads being:— 1. Common inflammation; 2. Blood poisons; 3. Diathesis; 4. Function; 5. Epithelium; 6. Hair; and 7. Glands; and the *nine* primary heads, as represented in the Table before us:—

I. Inflammations.
II. Blood-poisons.
III. Diathetic.
IV. Trophopathic.
V. Neuropathic.
VI. Chromatopathic.
VII. Epidermic.
VIII. Trichopathic.
IX. Adenopathic.

The nineteen groups are shown in the succeeding table, and are:—

1. Eczematous Affections.
2. Erythematous Affections.
3. Phlyctenous Affections.
4. Furunculous Affections.
5. Traumatic Affections.
6. Exanthematous Affections.
7. Syphilous Affections.
8. Elephantous Affections.

9. Leprous Affections.
10. Strumous Affections.
11. Carcinomatous Affections.
12. Trophopathic Affections.
13. Neuropathic Affections.
14. Chromatopathic Affections.
15. Epidermic Affections.
16. Onychopathic Affections.
17. Trichopathic Affections.
18. Steatopathic Affections.
19. Idrotopathic Affections.

This is the plan of arrangement which I propose to follow in the present course of lectures, the details of the plan being more fully elaborated in the tables before us. For example, I shall consider cutaneous diseases under two *primary* heads, namely :—

I. Diseases of Inflammation; and
II. Diseases affecting the Functions of the Skin and its Apparatuses.

The diseases of inflammation are :—

1. Inflammation from Common Causes.
2. Inflammation from Specific Poisons.
3. Inflammation from Specific Constitutional Causes.

The diseases affecting the functions of the skin and their apparatuses are :—

4. Aberrations of Nutrition.
5. Aberrations affecting Sensation.
6. Aberrations of Pigmentation.
7. Aberrations affecting the Epithelium.
8. Aberrations affecting the Hair.
9. Aberrations affecting the Secreting Organs, Sebiparous and Sudoriparous.

In the next place we find that these primary heads admit of subdivision into *groups*, and the groups into *separate diseases*. Thus, under the head of "Inflammations" there occur *eleven* groups; and under the head of "Diseases of Function and Apparatuses" *eight*, making the whole number *nineteen*.

LECTURE II.

DISEASES OF INFLAMMATION.

Inflammation of the Skin from Common Causes.

MR. PRESIDENT AND GENTLEMEN,

The order which I am about to pursue in my review of the family of diseases of the skin is laid down in the tables before us, the first of these tables, namely, that relating to diseases of inflammation, being as follows :—

I.—Common Causes.

1. *Eczematous Affections.*

Eczema, *including* { Psoriasis. Pityriasis.

Scabies.
Lichen, *including*—Strophulus.
Impetigo.

2. *Erythematous Affections.*

Erythema, *including*—Purpura.
Erysipelas.
Urticaria.

3. *Phlyctenous Affections.*

Miliaria.
Pemphigus.
Herpes.

4. *Furunculous Affections.*

Ecthyma.
Pustula maligna.
Furunculus.
Hordeolum *seu* Crithe.
Anthrax, *including* { Delhi boil. / Scinde boil. / Aleppo boil.

5. *Traumatic Affections.*

Ambustio.
Gelatio.
Pernio.
Irritants, chemical and mechanical.

Parasites. . . . . { Steatozoon. / Acarus. / Cimex. / Pediculus. / Pulex. / Œstrus. / Filaria.
Stings (wasp, hornet, bee, ant, etc.)
Bites (animals, wild and domestic)

II.—Specific Poisons.

6. *Exanthematous Affections.*

Roseola. | Scarlatina.
Rubeola. | Variola.

7. *Syphilous Affections.*

Dermatosyphilis.

8. *Elephantous Affections.*

Elephantiasis (Græcorum).

III.—Specific Constitutional Causes.

9. *Leprous Affection.*

Lepra (Græcorum).

10. *Strumous Affections.*

Dermatostruma.
Lupus.

11. *Carcinomatous Affections.*

Epithelioma.

Group I.—Eczematous Affections.

The grand type of inflammation of the skin is eczema; it is the commonest of the affections of the skin, occurring in the proportion of one out of every three examples of cutaneous disease; it is met with at every period of life, from early infancy to extreme old age; it presents every degree of severity and extent, and it is, moreover, the disease of the skin that makes the greatest demand upon our resources in the exercise of our efforts to promote a cure. These are my reasons for opening the investigation of diseases of the skin with eczema, and initiating our researches with an inquiry into the history of the inflammatory affections of the skin.

In inflammation of the skin, of the *summa cutis* of the early Latins, there are, as in fact is the case with inflammation of other organs of the body, redness, heat, swelling, and pain. If we apply a vesicant to the skin, we produce at first, redness, then a blister, and if we prolong the irritation sufficiently, we shall have a chronic secreting surface, and lastly, we may occasion the death of the part of the skin on which the experiment is made. In these four stages of one and the same irritation, we have brought before us the type of *four* of the primary heads under which I propose to consider the inflammatory affections of the skin. The redness or erythema is the type of the erythematous affections; the blister typifies pemphigus or the phlyctenous affections; the chronic secreting surface is the type of eczema and the eczematous affections; while the

death of a portion of the skin, consequent on inflammation, is the type of furunculus, the furunculous or dothienic affections.

It would seem natural to treat of these four heads or varieties of imflammatory affections in the order just enumerated—namely, erythema, pemphigus, eczema, and furunculus. But, practically, it will be found to be best to take the most persistent and prominent example of the group—namely, eczema—first, and make it the standard of comparison for the rest. Eczema will help us to an understanding of the others, while the reverse of this proposition is not equally true.

Eczema *is a chronic inflammation of the skin attended with desquamation, exudation, and pruritus.*

The disease is always chronic, for, even when it breaks out suddenly and with some degree of violence, it is slow in its subsequent progress. It always possesses sufficient force to disorder the nutrition of the rete mucosum, and to suspend temporarily the formation of epidermis; hence it is followed by separation and exfoliation or desquamation of the cuticle. Sometimes it is accompanied with effusion of serum, which elevates the cuticle into minute vesicles. Frequently the inflamed skin is denuded of epidermis and converted into a secreting surface, one while pouring out a transparent, colourless ichor or lymph, and another while a purulent fluid; and when the function of epidermis-formation is recovered, it is faultily and intermittingly performed, and gives rise to a desquamation of small scales, which may be continued for a very considerable length of time. Lastly, eczema is remarkable for the presence of pruritus, which is sometimes excessive, and always more severe in the dry state of the eruption than in its moist and exuding condition.

The *itching* property of eczema seems most to have attracted the attention of the fathers of Medicine. Hence it was termed by them *psora*, from a

verb signifying to *rub;* and this signification was adopted by the Latins in the word *scabies*, from *scabere*, to scratch; the word *eczema*, from ἐκζεῖν, to boil out, the equivalent of "breaking out," is also Greek, but of later origin. The two conditions of *moist* and *dry* also attracted attention very early; for we find the commentators, at the period of the revival of learning, noting the distinction between psora humida or scabies humida, and psora sicca or scabies sicca. And they further inform us that psora sicca in its desquamating state, when it is producing and throwing off an abundance of small scales, was termed psora leprodes or rough psora, and, furthermore, psoriasis. Thus we are enabled to trace the genealogy as it were of eczema, and thus also we meet, in the earliest stage of our research, with the means of explaining some of the *impedimenta* of dermatopathology. We see, for example, three, and in fact four, words applied to the same disease—namely, psora, scabies, eczema, and psoriasis—and we are enabled thereby to understand the accident by which those terms have sometimes become misplaced in modern times.

One of the most striking and at the same time instructive of the examples of eczema that we can meet with is eczema infantile. Infants are very liable to eczema. A trifling matter of alteration or insufficiency of food is often quite enough to engender an eczema, which most commonly seizes upon the face and head, but is sometimes thrown out over the greater part or the whole of the body. Whatever may be its extent, our attention is instantly drawn to the fact of a diversity of appearance in the eruption, which is due to structure; we detect the pores and the interporous surface, or, as the pores are the mouths of follicles, we might say, the follicles and interfollicular surface. It may be thought that this distinction is sufficiently self-evident and therefore needless of comment; but, in reality, it is much more important than it may seem. If you examine

a piece of injected skin under the microscope, you will see at once the distinction to which I refer, and that distinction I press upon you to bear in mind when you come to investigate diseases of the skin. In the interfollicular space, the capillary plexus is spread out superficially; around the follicle the capillary plexus is placed at right angles to the interfollicular plexus; hence, congestion of these plexuses must necessarily present some diversity of character. They may be distended separately as well as together; in the one instance giving rise to a uniform redness, in the other to a punctated redness. Another consequence follows upon this arrangement, and it is to it that I wish especially to draw attention—namely, that hyperæmia is necessarily accompanied with increase of bulk. Hence, in the case of hyperæmia of the superficial plexus, the increase of bulk or swelling will be uniform; whereas, in a similar condition of the follicular plexus, there will be an uplifting of the lip of the follicle, forming a conical prominence, or, in dermatological language, a papula or pimple.

Now, in a case of eczema infantile, we shall perceive a uniform redness or erythema, which we may term erythematous eczema or *eczema erythematosum*. Then there will be the papulæ, resulting from prominence of the follicles, papular eczema, or *eczema papulosum*. In a third place, the cuticle may be raised into minute vesicles, and especially in the neighbourhood of the pores and where the latter are not papulated: this is vesicular eczema, or *eczema vesiculosum*. Then, in certain parts, the cuticle may be gone, and the denuded rete mucosum may pour out a large quantity of secretion, exuding or ichorous eczema, or *eczema ichorosum;* or the vesicles may be filled with pus instead of serum, and the secretion from the denuded derma be purulent, purulent eczema, or *eczema pustulosum;* or, finally, secretion may have ceased, the skin may have become thickened from interstitial infiltration, and an

abundance of small epidermic scales are thrown off, constituting a persistent desquamation: this is the state to which the term squamous eczema, or *eczema squamosum*, is rightfully due.

Thus it will be perceived that the disease eczema presents not one, but many pathological lesions—that it is no more vesiculous than it is erythematous and papulous, ichorous, pustulous, or squamous; and indeed it may be stated at once that of all its forms the vesiculous is the least frequent. In this fact are involved the incompetency of the Willanean arrangement to maintain its place as a classification, and the resulting necessity of viewing diseases of the skin in some other way. With the exception of eczema infantile, however, it is rare for eczema to manifest on the same patient so great a variety of lesions, and, where one lesion only is present, or where one lesion predominates over the rest, it is convenient to designate the variety or form of the eruption by the subjective term expressive of its chief character. Hence we admit as forms of eczema—E. erythematosum, E. papulosum, E. vesiculosum, E. ichorosum, E. pustulosum, E. squamosum; to which may be added certain subforms—for example, eczema *orbiculatum* and *circinatum*, which are subforms of eczema erythematosum; eczema *marginatum*, a subform of eczema papulosum; eczema *mucosum* and eczema *crustaceum* seu *scabidum*, subforms of eczema ichorosum; eczema *fissum* and *sclerosum*, which are subforms of eczema squamosum; and also other peculiar but exceptional forms, such as eczema *œdematosum*, *papillomatosum*, *tuberosum*, *spargosiforme*, and *neurosum*.

A glance at the following Table will make apparent the forms of eczema dependent on development.

FORMS OF ECZEMA.

Development ... { regular, modified, accidental.

Regular.	*Modified.*
Eczema erythematosum,	Eczema orbiculatum,
,, papulosum,	,, circinatum,
,, vesiculosum,	,, marginatum,
,, ichorosum,	,, mucosum,
,, pustulosum,	,, crustaceum,
,, squamosum.	,, exfoliativum,
	,, fissum,
	,, sclerosum.

Accidental Forms.

Eczema œdematosum,
,, papillomatosum,
,, tuberosum,
,, spargosiforme,
,, neurosum.

Besides diversity of form due to *development*, eczema also presents differences of appearance which are referable to its manner of *distribution* over the surface, and also to its behaviour in different parts or regions of the body. In manner of distribution it may be general or partial. As a general or universal eruption it may burst forth at once like an exanthema, or it may creep on by successive addition until the whole or the greater part of the body is covered. Again, as a partial eruption, it may be diffused or circumscribed, the circumscribed forms being sometimes termed figuratum, and sometimes, from their smallness and uniform roundness, eczema orbiculatum or nummulare. The *regional* distribution of eczema, in a practical point of view, is of greater importance even than its manner of distribution; for the disease must necessarily present differences of character having reference to its attack upon the hairy or the naked regions of the skin, the covered or the uncovered parts, the folds and creases, the hollows and convexities, surfaces exposed to contact and friction, and peripheral

extremities of the body. Hence, in the more minute study of eczema, it has been found convenient to examine the disease under seven regional groups—for example, the head or hairy scalp, the face and ears, folds of the skin, flexures of joints, pudendum and perinæum, the mammæ, the hands and feet.

The following is a scheme of the manner of distribution of eczema :—

- Distribution
  - general ... exanthematic, successive.
  - partial ... diffused, circumscribed, serpiginous.
  - regional . head and scalp, face and ears, folds of skin, flexures of joints, pudendum and perinæum, mammæ, hands and feet.

In my definition of eczema, I term it a chronic inflammation attended with desquamation, exudation, and pruritus. The correlation of these three important symptoms is peculiarly interesting. The first sign of an eczema, as on the fingers, is sometimes nothing more than a mere dryness and exfoliation of the cuticle; but whenever an eczema has held possession of a portion of the surface for a considerable time, the affected skin becomes thickened and hardened, and with this condition are associated an excessive production of scales, an operation which takes the place of ichorous exudation, and more or less troublesome pruritus. In the state of hardening and condensation, the skin becomes rigid and brittle, and is apt to crack upon the mere flexion or motion of the part, constituting eczema fissum. And again, when the pruritus is excessive, it may always be mitigated by such an amount of rubbing

or scratching as will induce exudation or occasion bleeding; the pruritus being due, as it would seem, to the compression of the nerves of the skin resulting from infiltration. It is to this state of thickening and condensation of the integument, conjoined with a copious formation of small scales, that the term psoriasis is correctly applicable. Psora, in fact, has degenerated, by aggravation, into psoriasis.

Psoriasis I define to be *a thickening and hardening of the skin accompanied with an excessive production of small irregular scales, with pruritus sometimes very severe, with a tendency to exudation of an ichorous lymph on being rubbed, and to fission on moderate pressure or flexion.* Psoriasis is, in fact, the psora leprodes or scaly psora, or simply, a form of chronic eczema squamosum.

Directly associated with eczema, and especially with psoriasis, is another chronic form of eczema, which presents appearances identical with psoriasis, but in a minor degree. The condensation, if not the thickening, of the skin is still there; the skin is dry, hot, extremely itchy, and covered with minute scales, and, from the small size and fineness of the scales, which have been compared to *bran*, the disease has been named *pityriasis*, and by the Latins porrigo.

Pityriasis, therefore, is a chronic and sometimes an exhausted eczema, usually limited to the scalp (pityriasis capitis), and it may be defined to be *a state of heat and dryness of the skin, with condensation of its tissue, the production in excessive abundance of minute micaceous scales, and excessive pruritus.* The Latin term porrigo is very nearly the same in signification as pityriasis, being derived from *porrum*, an onion, "quia, ut porrum, in tunicæ involucra, ita cutis, velut in squamas resolvitur." According to Willan's classification, psoriasis and pityriasis are squamous affections, because one of their lesions, and the principal one in the case of pityriasis, is a formation of scales; and by a similar erroneous mode of reasoning

the term psoriasis has, on the Continent of Europe, been transferred to the lepra of the Greeks. Nothing can be more obvious in practice than the transition of an eczema from its more active stages into the chronic condition of a psoriasis on the one hand, or of a pityriasis on the other; and only by violence can their separation be accomplished.

We often derive considerable information from anomalous forms of disease—indeed, sometimes more than from those of a regular type. Of the anomalous kind is a remarkable affection which generally pervades the whole surface of the skin; it is a dermatitis accompanied with excessive desquamation, dermatitis exfoliativa. But for the absence of serous exudation it would be recognised at once as an eczema; viewed by its pathological features—an inflamed derma, which is at the same time dense and infiltrated, and sheds a great abundance of coarse scales—it is a psoriasis; whereas Devergie, who first described it, terms it *pityriasis rubra*, and Hebra recognises it by the same name. In the tables before us I have given it a place among the modified forms of eczema.

Upon the correct appreciation of eczema all our future progress in dermatopathology may be said to be founded. And, as you will perceive, eczema is a classification in itself. It presents for our study six several lesions, and, to use the language of Willan, it is a papula, a squama, an exanthema, a pustula, and a vesicula; although Willan himself only adopts its sixth and rarest part as the object of classification, and groups it with vesiculæ. As I have described it to-day, there are several points in its history which I would endeavour to impress upon you with more than ordinary urgency, and these are—1, its multiple lesion; 2, its tendency to papulation; 3, its tendency to pustulation; 4, its tendency to infiltration and thickening; and 5, its tendency to desquamation.

Eczema is subject to a multitude of *causes*, some of which are internal and others external. The internal causes induce a tendency to the disease, and predispose as well as excite; the exciting causes excite only; but where the predisposing cause is already present, although passive, an accidental exciting cause may be the means of awakening the whole skin into a state of eczematous inflammation. Such an exciting cause as I am now contemplating exists in the sarcoptes or acarus scabiei. An acarus reaches the hand, it burrows in the epidermis, selecting the secluded recesses between the fingers or the creases of the lines of motion; within this burrow it deposits its ova, and therein, also, the ova are hatched and the embryos pass through their transformations. The young issue forth, males and females—the females to be impregnated, to dig new burrows, and lay the foundation of new families; the males to hunt after females and take refuge under any chance roof which the broken cuticle may afford. The most frequent habitat of the acarus is the hands, and from and by the hands it is conveyed to the pudendum and feet, and is dispersed, more or less extensively, over the rest of the body, always burrowing in the epidermis, and always pursuing the same cycle of generation and colonisation.

Of the irritant action of the acarus we can have no doubt; but the manifestations of that irritation are extremely varied. In one person, a little pruritus with roughness of the cuticle, is all that is perceived; in another, there may be a few scattered papulæ; in a third, minute conical vesicles with erythema; and, in a fourth, a combination of the whole of these symptoms—redness with roughness, papulæ, vesiculæ, pustulæ, and exuding excoriations —in one word, there is eczema. Can we refuse the evidence of the lesions? Can there be a doubt that the case is one of eczema dependent upon a local cause? But sometimes, where an eczematous dia-

thesis prevails or eczematous predisposing causes are present, the eczema so closely resembles an idiopathic attack of that disease as to render the diagnosis of scabies extremely obscure.

It is for the reasons just given that I regard scabies as an eczema, and place it among the eczematous affections; and we have thereby thrust under our notice an illustration of the eccentricities of nomenclature which I previously noticed. Scabies is the Latin translation of psora; and while psora is retained as the synonym of eczema, scabies is limited to that form of eczema which is occasioned by the acarus. Not unfrequently the eczema is prolonged for a considerable period after the acarus is destroyed; and not unfrequently also an irritative habit is set up in the skin, which manifests itself in the form of papulæ for several or many months after the scabies ab acaro is completely cured.

Scabies I define as *a state of pruritus of the skin associated with the presence of the acarus scabiei within the epidermis, and accompanied with roughness of the cuticle, erythema, papulæ, vesiculæ, pustulæ, and exuding excoriations.*

The pruritus is greatest at night, for then the acari are most active in their operations, and the diversity of manifestation presented by the skin has reference to the age and temperament of the patient. In the adult male there may be nothing to be discovered but burrows and pruritus, and here and there a papule; in a more sensitive skin, as that of the female, vesicles may be superadded; while, in very delicate persons, and children with a weakly and moist skin, the greatest number of lesions may be present, and with cuniculi or burrows there may also be found erythema, papulæ, vesiculæ, pustulæ, and moist excoriations. The discovery of the female acarus within the epidermis is very easy. The cuniculi, more or less flexuous in their course, may be discerned with the naked eye or by means of a lens

of low magnifying power. Swellings of the cuniculus from point to point indicate the spots occupied by a double pair of ova, and in the expansion at the extremity of the cuniculus the animalcule lies imbedded, and may be exhibited by detaching the roof of its cell with a fine needle and introducing the point of the needle; the acarus clings to the needle, and is then very easily drawn forth.

I must now remind you that I called your attention a short time ago to the *pathology of a papule*, and that I described the papule as a prominence of the pore of the skin resulting from hyperæmia of the vascular plexus of the follicle, to which hyperæmia is superadded infiltration of the intervascular tissue. I may now proceed to state that the term "lichen" has been identified with "papule," and that the proper designation of an eruption of inflammatory papulæ, such as I am now indicating, is lichen. Willan made no hesitation in classing the papulæ of eczema under the term lichen; but the effect of such a mode of classification is of a necessity to assign two names to the same disease, an argument *ad absurdum*. We trace this mode of thought in a synonym of eczema papulosum — namely, eczema lichenosum. The presence of papulæ as a conspicuous feature of eczema identifies papulæ with that disease, and therefore, in employing the term lichen, I shall endeavour to draw within its embrace eruptions which, although eczematous, are not strictly eczema; and, in this sense, lichen must be regarded, like psoriasis, pityriasis, and scabies, as little more than a dependency or a sub-group of eczema.

Lichen I shall therefore define as *an eruption of minute papulæ varying somewhat in size, more or less conical, hemispheroidal, or flat, more or less red, generally pruritic, and frequently terminating by desquamation.*

An eruption of papulæ presenting the character of a single lesion, and in the absence of the other

lesions which constitute an eczema, must therefore be termed a lichen. In this way, and according to the mode of *distribution* of the papules, we find described a lichen simplex, a lichen disseminatus, a lichen circumscriptus, a lichen circinatus *seu* annulatus, and a lichen gyratus. According to *symptoms* or subjective signs, there is a lichen strophulosus, urticatus, and pruriginosus; and *objectively*, a lichen planus, pilaris, and lividus, to which Hebra has added a lichen scrofulosorum.

FORMS OF LICHEN.

Distribution { aggregated / disseminated / circumscribed / serpiginous.

Symptoms.
Structure.

Lichen simplex,	Lichen urticatus,
„ disseminatus,	„ pruriginosus,
„ confertus,	„ planus,
„ circumscriptus,	„ pilaris,
„ circinatus,	„ lividus,
„ gyratus,	„ scrofulosorum.
„ strophulosus,	

The terms simplex, disseminatus, confertus, circumscriptus, orbiculatus, circinatus, annulatus, and gyratus, are common in dermal pathology, and serve to express ordinary variations of appearance; for example, simple or uncomplicated, dispersed or scattered, crowded, circumscribed or bordered by a distinct boundary, circular, annulate, or a confusion of broken curves and segments of circles. *Lichen strophulosus*, or simply strophulus, is an eruption of round red papules, common to infancy, and associated with strophos or colic, or, as expressed by the Latins, *tormina*. *Lichen urticatus* is an eruption of dispersed papules, remarkable for their pruritus; hence the

comparison with the *urtica* or nettle. *Lichen pruriginosus*—doubtless the prurigo mitis of Willan—is also a disseminated eruption, and illustrates in a still higher degree the pruritic quality of the papule. *Lichen planus* is an eruption of papulæ of large size, and remarkable for a smooth, flat, horn-like, and glossy summit, with the opening of the follicle, loaded with epithelial contents, visible in the centre. They present a peculiar dull crimson-redness, which has gained for them, on the authority of Hebra, the synonym of lichen ruber. *Lichen pilaris* is a papule occupying its normal position—namely, the aperture of a follicle—and visibly perforated by a hair; such papulæ are common on the shins. And, in this same situation, the papulæ are sometimes livid from torpid circulation, and sometimes even purpuric, as in *lichen lividus*.

Nothing, perhaps, is of more importance in medical science than to have a fixed signification for technical terms; and I trust that I shall have helped you in this respect by the definitions which I have attached to the terms which we have hereto been considering—for example, eczema, psoriasis, pityriasis, scabies, lichen, and strophulus.

I have next to deal with a Latin word which has come down to us without the companionship of a Greek synonym—namely, *impetigo*, that is, *impetu agens*, a breaking out with impetuosity; and there is sufficient evidence to prove that by impetigo was meant a severe kind of eczema. Willan employed a term—namely, eczema impetiginodes—which at once makes us at home with impetigo, and identifies it with eczema pustulosum. But just as, in the case of lichen, papules of eczematous character may be developed which are sufficiently different from eczema to be treated apart, so the superficial pustules of eczema pustulosum sometimes show themselves apart from eczema, and seem to merit consideration under a separate head.

Impetigo, therefore, I define to be—*an eruption of superficial pustules, sometimes minute, at other times three or four lines in diameter, developed on an inflamed base, and terminating in purulent exudation and the formation of thick yellow crusts.*

Impetigo is an eruption occurring on the skin of children, frequently of the face and hands, and sometimes on young persons of delicate constitution. The pustules are, in fact, purulent vesicles, and comport themselves after the manner of vesicles rather than of pustules, and their contents vary in density and colour, being sometimes sero-purulent, sometimes whitish or cream-coloured, sometimes yellow, and sometimes greenish. By the ancients they were termed *psydracia*, or cold blisters, from the slight degree of inflammation at their base. The pustules associated with scabies are examples of impetigo. And it happens very commonly in children of the lower class, that a pustule of impetigo suddenly takes on a vesicular character around its circumference and forms a compound lesion, beginning with pustular force, and then expanding by a passive exudation of serum: to this form of eruption I have given the name of impetigo phlyctænodes. It is often epidemic; it is apt to attack several children at the same time, and for these reasons Dr. Tilbury Fox has seen cause to denominate it "impetigo contagiosa."

Impetigo is sometimes met with in little groups or clusters of pustules, and at other times is dispersed over the body in scattered points: hence we distinguish an impetigo figurata and an impetigo sparsa. The impetigo figurata will sometimes occupy a rather considerable extent of surface of the face, sometimes surrounding the mouth and nose, sometimes the ears, and in a few instances covering the entire face. And its yellow crusts—sometimes bright as amber and sometimes like dried honey—

have suggested the term *melitagra*, the honey attack or honey disease.

I have now, Mr. President and gentlemen, passed in brief review the six diseases which I have grouped under the head of eczematous affections. There is the typical polymorphic eczema; then there are the dry, indurated, and squamous forms of eczema—namely, psoriasis and pityriasis; the papulous forms, lichen and strophulus; and the pustulous form, impetigo. And I hope I have made the alliance between them, as well as their differences, sufficiently clear. Upon this presumption, I shall proceed to say a few words as to their etiology and treatment.

Eczema, both in its moist and in its dry forms, is a disease of debility of the skin, for the most part proceeding from disorder of digestion, of assimilation, and nutrition, and sometimes from local causes. Therefore, our treatment, like the etiology, must be equally twofold; it must be constitutional, and it must be local. Constitutionally we must regulate the functions of the alimentary canal and its associated organs by their appropriate remedies; and we must supply tone or vital force to the system by every means in our power. We may require the aid of a mild purgative pill to render the act of elimination by the bowels sufficiently active, and at the same time relieve Nature of one of her labours, for in a depressed state of the vital power every function is attended with proportionate exhaustion. And, at the same time that we open a way for the proper evacuation of the contents of the alimentary canal, we may endeavour to improve assimilation and supply force by means of the mineral acids with bitters, by quinine, and by the citrate of quinine and iron; and, when all is accomplished that ordinary tonics will effect, and in an indolent state of the disease, we may have recourse to that most valuable of nerve-tonics and cutaneous stimulants—arsenic.

The powers of medicine, it must be understood, must be proportioned to the force of the disease and to the constitution of the patient. In certain states of debility, cod-liver oil is an excellent remedy; so also, and in various forms, are—iron, phosphoric acid, strychnine, and, in fact, tonics of every class.

In the *local* treatment, we have to adapt our means to the indications presented by the form of the eruption. In its erythematous form we may have recourse to a sedative powder to relieve heat and itching, or to a lotion of oxide of zinc, calamine, and lime water. In the papulous form a lotion is best suited, such as that of hydrocyanic acid with emulsion of bitter almonds, or one of carbolic acid, or tar. In the vesicular, the ichorous, and the pustular forms, the best remedy is the benzoated ointment of oxide of zinc, either alone or in combination with carbolic acid, spirits of wine or camphor; and the ointment is to be employed not merely as a sedative, but as a means of excluding the atmosphere from the inflamed skin. In the squamous form of the disease where the inflammatory process is still active, a similar sedative course of treatment must be pursued; but as soon as indolence of character becomes apparent, our treatment must be stimulant, and we must employ mercurial ointments and preparations of tar and soap. There is a short period in the course of an eczema when the water-dressing may be of service—namely, when the heat and itching are so great as to prevent sleep; the moisture of the water-dressing will promote exudation, and exudation will relieve the tension and hardness of the skin induced by infiltration. In fact, the water-dressing converts a dry into a moist eczema, and in the latter state the treatment must be that which is adapted for eczema ichorosum. This is the principle of treatment of psoriasis: to promote exudation to the full relief of the distended and indurated tissues, and then to induce the healing of the skin by sedative measures.

In that other dry and furfuraceous eczema known as pityriasis, the nitric oxide of mercury ointment, diluted to one-third of the Pharmacopœial strength, is invaluable; while in eczema attended with irritability or neuralgia, we have an admirable remedy in a lotion of the nitrate of silver in solution in nitrous ether.

Scabies, which, according to my interpretation, is an eczema dependent on a local and a living cause, the minute animalcule denominated acarus scabiei, requires the destruction of the acarus; and after the destruction of the acarus, if any irritation of the skin remain as a sequela, whether in the form of pruriginous pimples or real eczema, the treatment adapted for the latter forms of eruption must be employed and persevered with until the whole of the irritation has ceased. Our problem, therefore, resolves itself into the simple one of the destruction of the life of the acarus, and to this end perfumes and strong odours of all kinds—oils and grease, staves-acre, chamomile, carbolic acid, and, last and best of all, sulphur—are all conducive. It is important to know the habitat of the acarus in order to follow it to its home. In this country the chief habitat is the thick epidermis of the hands and fingers, the pudendum and neighbouring parts, the podex, the anterior border of the axilla, and, in infants, the feet as well as the hands. A little sulphur ointment well rubbed into the hands, particularly at the seat of the broken skin or of the burrows, will inevitably destroy the acari and their ova in a few hours, and promote cure in a few days or in a week. A similar friction may be used to any part where the peculiar itching caused by the acarus is felt; and this, with ablution, attention to clean linen, and the avoidance of clothing that has been recently used, is all that is needful for a cure. The only caution that is necessary is to avoid using the sulphur too bountifully or too long, and, as it is an irritant to the skin,

to substitute for it in the case of children and infants the unguentum potassæ sulphuratæ, or, milder still, the stavesacre ointment perfumed with chamomile or carbolic acid. Lichen presents itself for treatment, sometimes in a pruriginous form and sometimes with an inflammatory character. With the latter aspect the means of relief are similar to those required for eczema; and nothing will be found more to the purpose than the oxide of zinc ointment with carbolic acid. To relieve the itching we must have recourse to special antipruriginous remedies, such as lotions containing bicarbonate of ammonia, or hydrocyanic acid, or carbolic acid, or tar.

Strophulus, being a lichen of infants, requires the use of remedies adapted to the sensitive organism of the earliest period of life; and the benzoated oxide of zinc ointment, alone or with spirits of wine or spirits of camphor, will accomplish all that can be desired.

Impetigo implies a pyogenic disposition of the constitution, and demands a similar treatment to that which is applicable in eczema pustulosum. The benzoated ointment of oxide of zinc with carbolic acid is invaluable; and, as the subjects commonly affected by the disease are young persons, that portion of our Pharmacopœia which is devoted to nutritive tonic remedies is brought into requisition; for example, iron, with hydrochloric and phosphoric acid, and cod-liver oil.

LECTURE III.

MR. PRESIDENT AND GENTLEMEN,

The classification or arrangement of subject which I have adopted for my present review of the family of cutaneous diseases may be denominated an *objective* classification. It commences with the *inflammations of the skin*, and these it comprises under five heads, the first four being represented by as many typical forms—for example, eczema, erythema, pemphigus, and furunculus. Eczema, as being at the same time both the most common disease and presenting the greatest variety of lesions, I take first; that disease, together with its allied affections, psoriasis, pityriasis, scabies, lichen, and impetigo, we have already submitted to inspection; and now I pass on to the erythematous affections.

Group II.—Erythematous Affections.

Erythema *is a simple pathological redness of the skin, superficial, more or less circumscribed or diffused, apt to change its place and spread, attended with little or much swelling, a variable amount of pruritus, subsiding sometimes suddenly, sometimes by degrees, and rarely followed by desquamation.*

In this definition you will perceive a striking contrast with eczema—a single lesion—namely, redness, in place of several lesions; and only in rare instances such an amount of disturbance of nutrition of the epidermis as to result in exfoliation or desquamation. In popular language an erythema is a *rash*, a corrup-

tion of the word "rush," as though it would express a hurrying of blood to the surface; it is, in fact, a *blush*, not a physiological blush disappearing as suddenly as it has arisen, but a pathological blush, more or less enduring and permanent. Pathologically it is a state of distension of the vessels of the skin with blood—in fact, a hyperæmia—and hyperæmia of the skin may be active or passive. At the present day we look upon hyperæmia as being due to a loss of power of the special nerves of the blood-vessels, the vaso-motor nerves, and active or passive is the expression of the degree of loss of power which exists; it may be transient, or temporary, or permanent; it may be the consequence of an irritant; or it may be mechanical, as in the case of obstruction of the general circulation. As might be supposed, there will be a difference of appearance of the part corresponding with these opposite causes; in active hyperæmia the current of the blood may be unimpeded, there will be simply a larger quantity of blood in the vessels, and the part will be bright and arterial in its redness; whereas, in passive hyperæmia, and with an impeded and partially suspended circulation, the colour will shade by degrees into that of venous blood, and become more or less crimson, or purple, or livid.

The erythemata are essentially superficial, as though the peripheral nervous plexuses and peripheral capillary plexuses were principally concerned; and associated with this peripheralicity of character is a tendency to spread over the surface like a wave, to extend by the circumference, while the action in the centre may, at the same time, be subsiding; to disappear suddenly in one place, and reappear as suddenly in another. I may illustrate these remarks by the mention of erythema circinatum, of erythema iris, of erysipelas, and urticaria. And, in all these phenomena, three factors are principally concerned, namely, the cause, the nerves, and the vessels.

But you will perceive that there is another element which must also be taken into account—namely, the tissues of the derma itself, and of the subdermal layer; the irritant cause not only prostrates and exhausts the active power of the vessels, but it also exhausts the power which controls the function of the cell-organisms, and these latter profusely supplied, and as it were, saturated with blood, absorb its watery element so energetically as to become gorged with the excess, and so give rise to œdematous swellings of remarkable suddenness of origin, and sometimes of considerable bulk. To such a process we must attribute the circumscribed and rapid swellings of erythema tumescens, and the more extensive and diffused œdema of erysipelas.

You will observe that I have a number of new points of pathology to which to call attention in connexion with erythema that did not arise in association with the family of the eczemata. These being—the quality of the redness, the superficial and discursive character of the inflammation, and the tendency to œdematous accumulation. I may mention one point more, and a very important one. Throughout the eczematous family, the local phenomena may be said to be of almost primary significance, whereas the lesions associated with the erythemata are absolutely secondary; let me instance urticaria or even erysipelas. The first sign of disorder of health in eczema is the eruption; in erythema, more or less constitutional disturbance precedes or accompanies the eruption, and is relieved by the bursting forth of the latter.

Erythema offers for our inquiry a considerable variety of manifestation, and looking to the chief and the main features of the affection, we shall discover three prominent differences on which to found a division into as many heads; for example, the rash may be more or less *fixed* or stationary; or it may

be transient and *migratory;* or it may be characterized by that other peculiar and remarkable feature of the disease, namely, *tumescence.*

Forms of Erythema.

Fixed.

Traumatic or local.

Erythema ab attritu.	Erythema e frigore.
,, intertrigo.	,, ab acribus.
,, læve.	,, vaccinum.
,, caloricum.	

Hæmostatic.

Erythema mechanicum.
,, cyanodes.

Idiopathic.

Erythema simplex.

Hæmatolytic.

Purpura..... { Simplex. Hæmorrhagica. Urticans. Senilis.

Migratory.

Erythema fugax.	Erythema marginatum.
,, circinatum.	,, iris.
,, gyratum.	

Tumescent.

Erythema tumescens.	Erythema tuberosum.
,, papulosum.	,, nodosum.

If we take the first of these heads, the simplest and ordinary form of the rash, we shall find its

members chiefly distinguishable by the nature of the cause to which they owe their origin. The cause is either *traumatic*, which is synonymous with local, or it is *hæmostatic*, or *idiopathic*, or *hæmatolytic*. The traumatic forms are such as may be produced by pressure and friction; for example, ill-fitting clothing, certain kinds of exertion, such as walking, rowing, and riding; the rubbing together of folds of the skin, as in children and bulky persons; or of opposed surfaces, as in the instance of the nates and the thighs and pudendum; or prolonged pressure as in bedridden persons; or the pressure may come from within, as in the case of distension of the skin by œdema. In this latter instance, which is most frequently met with in the legs, the integument is smooth and glossy as well as congested, and the affection has received the name of *erythema lævе*. Heat and cold give rise to the lighter forms of burn, of scald, of chill, or of frostbite, including the homely chilblain. And *irritants* and *poisons* include chemical agents, bites and stings of insects, and irritation from abrasions, punctures, or slight wounds. One example of the latter kind being the *erythema vaccinum*.

Hæmostatic erythema is seen in its simplest form in relation with obstruction of vessels, as in the instance of varicose veins; and also in that form of interruption, both of circulation and oxygenisation of the blood, which is present in cyanosis or morbus cæruleus.

Idiopathic erythema is represented by erythema simplex, and includes those simpler but fixed forms of the affection which are due to constitutional causes, such as derangement of the digestive functions, of those of assimilation and elimination, or of the uterine functions.

Hæmatolytic erythema—that is to say, a state of hyperæmia accompanied with the escape of blood from the distended capillaries, partly the consequence

of an asthenic change in the blood itself and partly of a feeble state of the wall of the vessels—is termed "purpura." PURPURA, therefore, is to be recognised, not by the presence of blood within the vessels, as in the case of ordinary erythema, but by purple stains resulting from the escape of blood into the adjacent tissues, the stains ranging in size from a mere speck or *stigma*, to a circular spot as large as a flea-bite or *petechia*, and thence upwards to larger blotches, which sometimes resemble streaks, *vibices*, and sometimes *ecchymoses;* and the test of distinction between common erythema and purpura is the dispersion of the hyperæmia by pressure with the finger in the former and the permanence of the stain in the latter. The forms of the eruption are—purpura simplex, purpura hæmorrhagica, purpura urticans, and purpura senilis. The first, as its name implies, is the ordinary type of the affection; purpura senilis is a passive escape of blood from its vessels accompanying the feebleness of age. The remaining forms are both complicated, purpura hæmorrhagica with hæmorrhage from the mucous membranes, and purpura urticans with a prurigi-nous attack resembling urticaria.

THE MIGRATORY FORMS of erythema are either remarkable for their transitory character, as in the instance of *erythema fugax*, or for a tendency to expand from a centre, to spread into the surrounding skin, and to subside within the area while the circumferential border is still invading new ground. This it is which constitutes the annular form of the affection, *erythema circinatum*. The rings may be small or they may be large, they may be mere lines or they may be bands of variable breadth. When a number of such circles meet by their circumference, and are more or less broken, they suggest the term *erythema gyratum*, assigned to them by Fuchs. When they are all dispersed, with the exception of one or more broken lines, and when the original

circle is no longer to be traced, the term *erythema marginatum* is especially significant; and when the circle first thrown out from the centre throws out a second circle, and the second a third, and so on, we have the appearance which has been denominated *erythema iris*.

Tumescent erythema exhibits the swellings and enlargements already spoken of, and to the chief of its forms may be given the name of erythema tumescens; others, less considerably prominent and of smaller dimensions are distinguished as erythema papulosum, erythema tuberosum, and erythema nodosum. Impatient, doubtless, with so many names, Hebra includes under the general term—erythema polymorphicum or multiforme, the greater number of these varieties; for example, erythema papulosum and tuberosum, together with the annulate forms—namely, circinatum, marginatum, and iris.

Erythema *tumescens* presents the singular feature of a sudden swelling of the integument, without other warning than a little heat and tingling or itching; in a few hours I have seen a mass so produced, of the size of the hemisphere of a large orange or of a melon; the swelling occupies the subcutaneous as well as the proper cutaneous tissue, and in four or six hours may have disappeared completely without leaving behind a vestige of its previous existence. When this occurs in the neighbourhood of the orbits, it shuts up the eyelids completely; twice I have seen it in the tongue, where it threatened suffocation, and once under the tongue and in the fauces. Erythema *papulosum* makes its appearance on the back of the hands and elbows, while, on the lower limbs, the eruption assumes the larger proportions of erythema tuberosum and erythema nodosum. The papulous variety of the affection is, in general, very pruritic; the tuberous forms are tingling and tender; and erythema nodosum

often very painful. Upon their disappearance they are all apt to leave behind them the blue and yellow discoloration of a bruise.

Erysipelas is an intensified erythema, exaggerated in all its phenomena. *It is a superficial inflammation of the skin, involving the subcutaneous cellular tissue more or less deeply; it is attended with a feeling of burning heat, tingling, and weight; it is apt to spread, sometimes to change its place by metastasis; it is accompanied with swelling, sometimes considerable, with œdematous infiltration, and with the development of vesicles, generally of large size, containing a yellow or amber-coloured serous fluid, and it terminates by resolution and occasionally by gangrene.*

In this definition it will be seen that, as in erythema, the more striking features of the inflammation are its migratory and delitescent habits, and also its tumefaction; to which is superadded the effusion of serum on the surface of the skin, so as to produce vesicles.

We may therefore arrange the forms of erysipelas under four heads—namely, migratory, tumescent, phlyctenous, and gangrenous, as follows :—

Forms of Erysipelas.

Migratory.

Erysipelas erraticum.
,, metastaticum.

Tumescent.

Erysipelas œdematosum.

Phlyctenous.

Erysipelas miliare.
,, bullosum.

Gangrenous.

Erysipelas gangrænosum.
,, phlegmonodes.

The *migratory* form may be simply erratic in its character, as when it spreads from the periphery of the body towards the centre, from one side to the other, or from a spot of small dimensions, until it involves a surface of considerable extent, such as the entire head. This is *erysipelas erraticum.* Or it may disappear suddenly in one situation, and appear as suddenly in another, transferred, as it would seem, from one region to another, sometimes, unhappily, from the exterior to an internal organ. This is *erysipelas metastaticum.*

Swelling is always present in erysipelas, but is sometimes the predominating character of the affection. The swelling is due to distension of the cell-organisms of the connective and fibrous tissue with a serous fluid. The tissues are said to be infiltrated ; and in this condition the integument sometimes resembles brawn more closely than anything else with which it can be compared. This is *erysipelas œdematosum.* At other times, and in any of the preceding forms, but more conspicuously in the œdematous variety, serous fluid may be poured out on the surface of the skin beneath the epidermis, attracted, probably, to that locality by the cells of the rete mucosum. In this case the epidermis is raised up into vesicles, sometimes small, constituting *erysipelas miliare ;* but usually phlyctæ or bullæ of larger size, erysipelas phlyctænosum *seu* bullosum.

I have previously remarked that the sudden accumulation of fluid in the cells of the connective tissue in erythema tumescens must be attributed to nerve exhaustion, and, as a consequence of the deprivation of nerve-force, to a lowered vitality of the implicated tissues—in fact, to a kind of irritability ; and we have only to follow this idea a stage further to arrive at positive death of the tissues, which is the character of *erysipelas gangrænosum.* Another form of erysipelas, of deeper locality, and commonly attended with gangrene—an erysipelas sometimes

penetrating the connective tissue of the greater part of the limb—is known as *erysipelas phlegmonodes*, and derives its name from a supposed association of the attributes of erysipelas with those of common phlegmon.

As in the case of erythema, erysipelas is sometimes *idiopathic* and sometimes *traumatic*, and it evinces an elective preference for certain regions of the body; hence the very name of erysipelas calls to our mind the face and the head. It is also common in the mamma of women recently confined, or in the neighbourhood of the umbilicus and pudendum of infants and children.

From erysipelas as an exaggeration of erythema we retrace our steps to bring under consideration an erythema which is associated with an excess of pruritus and also with a high degree of the migratory and delitescent element; the itching is peculiar, it has a tingling character, it gives rise to a knotty kind of spasm of the skin, and from a comparison with the itching and other phenomena occasioned by the sting of the nettle, it is denominated *urticaria* or nettle-rash. The Greeks called the nettle *cnide*, and the erythema at present under consideration, cnidosis.

Urticaria, therefore, or cnidosis, is *an erythema attended with a hot, pungent itching and tingling; with a disposition to migrate from place to place; or, suddenly, to disappear and reappear; it is accompanied with prominent white tubercles, sometimes with white ridges or wheals, contrasting strongly with the erythematous base, sometimes rising in the midst of red blotches and sometimes forming their boundary.*

The irritability of the integument in urticaria is often so considerable that the lightest touch will excite spasm of its muscular structure, and wheals may be seen to rise up instantly and follow the tracing of the point of a finger or of a style upon the skin.

It may be worth while, in this place, to review

the chief features of the erythematous group ;—there is redness in all; the redness is migratory and delitescent; there is pruritus, which reaches its acme in urticaria; there is swelling also, which is sometimes considerable in urticaria, but greatest in erysipelas. It must be admitted that a strong family resemblance pervades the group; and that the mind is enabled to pass easily and without effort from one member to another, while it embraces the whole, as of one common disease. In erythema, redness is the predominating sign; in urticaria, redness is associated with intense itching and muscular spasm; while in erysipelas we find redness, with swelling and œdema, or vesication.

Like other forms of cutaneous disease, urticaria presents some varieties of manifestation. The *migratory* character is common to all, and the arrangement the best adapted to embrace its varieties is one which shall divide them into acute, chronic, and tumescent. Under the head of acute urticaria, we may place urticaria febrilis and urticaria ab ingestis. Chronic urticaria is chiefly remarkable for its evanescence on the one hand, or its persistence on the other, and also for the degree and extent of spasm of the skin, as shown by the number and bulk of the wheals. The members of the group, therefore, are—urticaria evanida, urticaria perstans, and urticaria conferta. The *tumescent* division is represented by urticaria tuberosa and urticaria subcutanea, both of which trench upon the territory of erythema tumescens and serve to cement the alliance between the two forms of erythematous affection.

Forms of Urticaria.

Acute.

Urticaria febrilis.
„ ab ingestis.

Chronic.

Urticaria evanida.
„ perstans.
„ conferta.

Tumescent.

Urticaria tuberosa.
„ subcutanea.

If we look to the essentials of urticaria, we shall find them to be — nerve irritation and muscular spasm; and both of these symptoms of irritation of the skin are sometimes met with associated with other cutaneous diseases, as, for example, with eczema, with lichen as in lichen urticatus, and with erythema.

Group III.—Phlyctenous Affections.

Our third group of cutaneous affections we denominate *phlyctenous* or *pemphigous*. In the language of Hippocrates the word phlyctis and its diminutive phlyctæna, signify a blister and smaller blister or vesicle; or, according to the Latins, bulla and bullula or vesicula; the same terms we render in English by blister and vesicle; and from the word phlyctis is derived phlyctænodes or simply phlyctenous. The present group, therefore, is distinguished from the two preceding by having for its predominant lesion a large or a small blister; there is a certain amount of erythema, and upon the erythematous base the blister or vesicle is produced, just as a blister would succeed the application of an epispastic of any kind, the epispastic in the present instance acting from within, and being in fact an irritated nerve. In one of the examples before us the phlyctæna is small and comparable in size to a milium or millet seed, hence its name *miliaria*. Another is larger, and has been compared to a water-bubble or pemphix, hence

the term *pemphigus*. While a third of intermediate size has been denominated *herpes*.

Miliaria, the kengchrias of the Greeks, is *an eruption of small transparent vesicles, of about two lines in diameter, developed chiefly on the trunk of the body in association with heat and perspiration, and scattered more or less widely apart.*

The vesicles are commonly met with, therefore, in the clinical state of the body, and especially in association with fevers. In a work antecedent to the time of Hippocrates, the "coacæ prænotiones," from which that great Physician drew some of his views with regard to disease, it is said that "sweats attended with a miliary eruption are bad," whereas, "sweats in the form of drops are good." And Hippocrates in his own book "on prognostics" observes, in reference to the bad symptoms accompanying fevers, that "small phlyctænæ occur over the body." And, this association of the small vesicles of miliaria with sweats has gained for them the additional name of "sudamina." Miliaria has been a rare affection in this country since the time of Sydenham, to whom we are indebted for the rule of keeping the body cool in its clinical state, but it may still be met with occasionally after parturition, in rheumatism, and especially during the hot season of the year. The erythema is frequently inappreciable, or, if it exist at all, it is found in the state of hyperæmic puncta, corresponding with the pores of the skin. The vesicles seem to spring from the skin in its normal state, and are chiefly remarkable for their glass-like transparency; when seen in their vertical diameter the hyperæmic vascular plexus at their base gives them a red appearance, hence the term *miliaria rubra;* but by degrees, the transparent serum which they contain becomes opalescent and milky; and then they are in the condition which is termed *miliaria alba.* As the vesicles are developed in succession, these differences of appearance are

generally visible in the same eruption at the same time; some being colourless, others red, and others pearl-like and white. After a short period the fluid dries up and a thin film-like scab is all that can be perceived.

Forms of Miliaria.

Miliaria rubra.
„ alba.

Pemphigus *is an eruption of large vesicles or blisters filled with a serous fluid, and arising upon a hyperæmic base; the blisters or bullæ range in dimensions from a few lines to an inch or more in diameter; they are preceded by an erythematous blotch, often of small size, and upon this blotch the bulla gradually but rapidly expands.*

The bulla is transparent at first, then becomes opalescent and milky, and later on, yellowish or purplish; at its acme it is fully distended; subsequently it becomes wrinkled and collapsed, and subsiding on its base, dries up into a thin, brownish or blackish scab.

The changes of colour of the bullæ admit of the same explanation as that already given in reference to similar alterations taking place in miliaria. At first the effused serum is colourless or yellowish and transparent; then the serum becomes opalescent as it is apt to do out of the body; pus is sometimes mingled with the serum and renders it opake, and the purplish tinge it occasionally assumes is due to admixture with blood. If the bulla be broken by pressure or friction, an inflamed surface is brought into view, the exposed derma is irritable, often bleeds and suppurates, and sometimes yields to gangrene.

The varieties of pemphigus are founded upon certain variations in the phenomena of the affection. In its ordinary mode of manifestation, it is developed in clusters in one or several parts of the body; this

is *pemphigus vulgaris*. Sometimes a single bulla only is produced, which is then termed *pemphigus solitarius;* and occasionally the solitary bulla may attain very considerable dimensions. When, instead of healing directly or in a short time, the vitality of the skin is exhausted, we have before us a case of *pemphigus gangrænosus*. An extensively spreading form of the eruption accompanied with bullæ which collapse quickly and dry up into thin leaf-like scabs, has been denominated *pemphigus foliaceus*. And another form of the disease, associated with severe itching, has received the name of *pemphigus pruriginosus*.

FORMS OF PEMPHIGUS.

Pemphigus vulgaris.
„ solitarius.
„ gangrænosus.
„ foliaceus.
„ pruriginosus.
„ circinatus.
„ iris.

In the whole of these forms the mode of development of the bulla is the same, namely, an erythematous blotch, the gradual but somewhat rapid evolution of the bulla from the centre, or from the whole surface of the blotch; the occupation of the entire of the hyperæmiated disk by the bulla, with the exception of a narrow margin of redness which surrounds its circumference; and the increase in size of the bulla by the concurrent creeping onwards of the red marginal border and of the blister. But we are prepared for variations, and I shall now mention two which give an altered character to the eruption; the one is, where the erythematous disks are circular and the phlyctænæ are developed around, but within the border of the disk, *pemphigus circinatus*, sometimes described from the small size of the bullæ as

herpes circinatus; and the other is a form of eruption which I have already noticed, namely, erythema iris, but with a bulla in the centre instead of simple erythema, and surrounded by a halo of lines of various colour, this is *pemphigus iris*.

It is evident that, in these phlyctenous forms of inflammation—namely, in miliaria and pemphigus—we have before us an illustration of depressed innervation and lowered vitality of the skin. In the one instance, heat and prolonged sweating, acting upon a debilitated frame, are the cause of the serous effusion; in the other—namely, in pemphigus, exhaustion originating in other causes may always be detected as the *causa morbi*, even if the local affection were not sufficient for the purpose. But, in these instances we are unable to fix upon any single nerve or set of nerves as the prime mover of the subsequent phenomena. Now, however, I have to call your attention to an affection in which such a connexion is directly traceable; which may be referred to an individual nerve or nerve district or to the peripheral distribution of the nerve of the morbid part. The affection in question is herpes, and herpes must be regarded as a local exhaustion of innervation, consequent upon an intense irritation of the offending nerve. It is no longer a broad expanse of the general surface or the whole of that surface which is attacked, as in miliaria and pemphigus, but a surface limited to the district supplied by one or two nerves in the midst of the healthy and unaffected integument. Moreover, as the irritation is more concentrated than in the previous forms, as it is localized in an organ of sensation and one of great sensibility, we have an addition to the symptoms already investigated. There are phlyctænæ as in miliaria and pemphigus, but larger than the one and smaller than the other. They are developed at once instead of in succession; they exhibit a higher form as well as a greater degree of

inflammation; they are attended with more pain and suffering, and, above all, they have a strictly limited course.

HERPES *is an eruption of large vesicles on a patch of inflamed skin, occurring upon any part of the body. The patches are sometimes single, sometimes multiple. They range in size from a few lines to several inches in diameter. Upon each blotch a cluster of vesicles is developed, the number of vesicles ranging between three and thirty, or more. The eruption is unilateral, following the direction of a nerve or branches of a nerve, and has a regular course of five to ten or twelve days, ending by resolution of the inflammation and drying up of the vesicles into hard brown or black scabs, the latter, at their fall, leaving behind them indelible cicatrices.*

Herpes occurs commonly in the course of one or two of the lower intercostal nerves, occupying the portion of skin supplied by its, or their, posterior, middle, and anterior cutaneous branches. In consequence of partially encircling the waist, this form of the eruption has been denominated zona and zoster, from the Greek words signifying a girdle or belt; or, according to the Latins, cingulum; and, from the corruption of cingulum, we get the popular term *shingles*. The extreme rarity of the manifestation of the eruption on both sides of the trunk at the same time has given origin to the aphorism attributed to Pliny:—"Zoster appellatur, et enecat, si cinxerit." And one of its symptoms, burning heat, has gained for it the additional name of zona ignea.

The development of herpes on other parts of the body, besides the waist, has been suggestive of the various appellations by which the eruption is known; but the distinction between the affection of a trunk, or large branch, of a nerve and that of its peripheral ramuscules is sufficiently manifest to permit the division of its varieties into two groups. In the

group representing the trunk or chief branches of the nerve, we may place—herpes facialis, herpes cervicalis, herpes humeralis, herpes intercostalis or zoster, herpes lumbalis, and herpes cruralis; while the peripheral or ramuscular group has for its members—herpes labialis, nasalis, palpebralis, auricularis, and progenitalis.

In a tabular form they may be presented as follows:—

Forms of Herpes.

Trunk Group.

Herpes facialis { ophthalmicus. / maxillaris superioris. / maxillaris inferioris.
„ cervicalis.
„ humeralis.
„ intercostalis *seu* zoster.
„ lumbalis.
„ cruralis.

Ramuscular Group.

Herpes labialis.	Herpes auricularis.
„ nasalis.	„ progenitalis.
„ palpebralis.	

Group IV.—Furunculous Affections.

Furunculous or dothienic affections are more deeply seated in their position than those of the eczematous, the erythematous, and the phlyctenous groups, and are characterized by an inflammation and condensation of the skin giving rise to a hard tubercle of greater or less bulk, and terminating in suppuration, ulceration, and gangrene of a portion of the derma. To this form of disease it would seem that the word *dothiēn* was assigned by the Greeks,

and dothiēn I therefore assume as the title of the present group. The Latin synonym of dothiēn, namely "furunculus," is more common and familiar, but its meaning is obscure; and as I have adopted the Greek terminology heretofore; as being the language of the fathers of Medicine—of those men to whom we are indebted for the greater number of our dermatological terms, I shall endeavour to adhere to it as far as may be practicable and convenient throughout my present synopsis of cutaneous diseases.

The members of the dothiēnic group are—ecthyma, pustula maligna, furunculus, hordeolum or crithe, anthrax, and pustula Aleppensis.

Ecthyma is the true pustule of the skin, and its leading characteristics are—*A large pimple of a deep red colour, hard to the touch, evidently sinking into the fibrous structure of the corium, surrounded by a halo of inflammation of greater or less extent, and terminating in a pustule; sometimes in an ulcer covered by a thick crust, and sometimes in a gangrenous ulcer.*

Ecthymatous pustules or ecthymata, are especially characteristic of debility, and are associated with some form or other of cachexia. They are scattered more or less sparsely or abundantly over the surface of the body, and are met with in association with want and misery; sometimes they originate in septic irritants, sometimes in tissue-debility simply, and sometimes in the cachexia of scrofula or syphilis. Although the disease is essentially chronic, we recognize certain varieties which are more acute in the degree of inflammation than others, and therefore establish an acute and a chronic group. Of the former, the varieties are ecthyma vulgare and ecthyma gangrænosum; and of the latter, ecthyma infantile and ecthyma cachecticum or luridum.

Pustula maligna, or pustula gangrænosa, is a

gangrenous ecthyma taking its origin in septic irritation, and occurring on regions of the body exposed to the contact of putrid animal substances; such regions being the face and neck, hands and arms, feet and legs. It begins as an inflamed spot, in the centre of which a sanguinolent vesicle shortly appears, the skin around the vesicle is red and swollen, and beneath the vesicle a small gangrenous disk is developed, which ripens into a black eschar. In more severe cases phlegmonous erysipelas is set up, and involves the neighbouring tissues; while in the most serious cases of all the local mischief is less marked, but the septic process sinks into the organism and produces internal gangrene and pyæmia.

Furunculus, the dothiēn of the Greeks, is *a prominent inflammatory tubercle deeply implanted in the corium, indolent in its progress, often excessively painful, suppurating slowly at the summit, and displaying a cylinder of gangrenous cellular tissue termed the core* (cœur); *the walls of the cavity or ventricle of the boil gradually separate from the core; the core becomes isolated, eventually disconnected, and then expelled through the opening, which more or less speedily heals and leaves behind it a cicatrix.*

A boil varies in size from that of the hemisphere of a pea to that of a walnut; it varies in colour, being sometines red and sometimes purple or livid; it varies in the size of its core, and has in general but one external opening; when it presents several openings, it approaches in character to an anthrax, and has thence been named *furunculus anthracoides.* I have already mentioned the indolence of the boil, and when it fails to show an external opening and recedes without expelling its core, it is termed a "blind boil." The boil is sometimes idiopathic, sometimes results from irritation of tissue, as is shown by its frequent association with eczema; and at other times is epidemic, when it probably takes

its origin in some kind of septic influence. It is no uncommon thing to find boils interspersed with ecthymata.

HORDEOLUM or crithe, is the small inflamed boil which is met with on the edge of the eyelids; it is generally solitary, and has received its cognomen from a comparison in size with a grain of barley; while, in popular language it is termed a "stye."

ANTHRAX, or carbuncle, is the largest kind of boil, ranging in bulk from two to six or eight inches in diameter. It is deeply seated in the skin, circumscribed, very hard, not very prominent, and of a deep red colour, darkening to livid and even black. In the latter state it vesicates over the surface, the vesicle being filled with a sanguineous serum; and a number of openings are formed, through which pus and gangrenous cellular tissue make their way to the surface. The perforations are generally so numerous as to suggest a comparison with a colander; and sometimes it sloughs very extensively.

There are other forms of boil which belong to the dothienic group, but which are natives of other countries than our own; for example:—the Delhi boil; the Scinde boil; and the Aleppo pustule or boil.

LECTURE IV.

Group V.—Traumatic Affections.

MR. PRESIDENT AND GENTLEMEN,

There are certain affections of the skin which originate in causes which are exterior to the body and which belong to the category of external injuries or traumatic affections. Of these, some are the consequences of temperature, such as the group of burns and scalds; and also that of chills and frostbite; while others proceed from the presence of animals upon, or in, or under the skin, and sometimes from bites and stings.

The effects of excessive heat and cold upon the human economy are to produce depression of the vitality of the tissues; and the degree of depression will be manifested by a variety of results, ranging in importance from simple hyperæmia or erythema to absolute death of the part. In the simplest kind of burn or scald the most prominent feature of the injury is redness,—hence the term *ambustio erythematosa;* a more severe form of injury is attended with vesication,—hence another term, *ambustio vesiculosa;* and a burn or scald accompanied with destruction of the life of the skin is *ambustio gangrænosa.* The same subjective terms are applicable to *gelatio* or frostbite; and to that more homely consequence of chill—namely, *pernio,* or chilblain; hence we have also *pernio erythematosus, pernio vesiculosus,* and *pernio gangrænosus.*

In illustration of the effects of *chemical* and *mechanical irritants* I may refer to peculiar forms of

eruption met with in certain trades and as a consequence of the handling of acrid or caustic substances; for example, sulphuric acid, sulphate of quinine, cyanide of potassium, etc.; and I may further draw your attention to one of the very beautiful models on the table, exhibiting a remarkable form of ulceration occurring to artisans employed in the manipulation of arsenical salts.

The PARASITES of the human skin present us with a somewhat extensive catalogue: in the first place there is the *Steatozoon;* secondly, the *Acarus;* thirdly, the *Pediculus;* fourthly, the *Pulex;* and then follow the *Cimex*, the *Œstrus*, and the *Filaria Medinensis*.

The STEATOZOON FOLLICULORUM or *Entozoon folliculorum*, called by Gustav Simon, who first described it, *Acarus folliculorum*, and by Owen *Demodex folliculorum*, gives rise to no morbid affection of the skin. Its existence would seem to appertain to that law of nature which provides—that where there is food there also will be found living beings to consume and to transmute that food. These steatozoa are met with near the apertures of follicles wherein sebaceous matter is accumulated in considerable quantity, especially in the follicles of the face; and within the sebaceous substance they deposit their ova, and the ova pass through a series of metamorphoses before the perfect evolution of the animalcule is achieved.

ACARI occur very extensively in the animal kingdom. Scarcely a single genus of animals exists that has not its special acarus, and several have been noticed in connection with the skin of man. Of these, the most important is the acarus that excites scabies in the human skin, the *Acarus scabiei;* while, not less troublesome, in the autumn season and on certain soils, is the *Acarus autumnalis*, the harvest bug, or mower's mite.

The *Acarus scabiei* of Linnæus, the *Sarcoptes*

hominis of Latreille, makes use of the skin of man as its dwelling-place, and also as the source of its food. The female excavates tortuous burrows in the epidermis, in which she deposits her ova, in which the embryos pass through their transformations and the young attain their maturity. At an early age the young have only three instead of four pairs of legs, and when their development is complete, the sexes are distinguished by the presence of a pentelobate foot on the posterior pair of legs in the male, and the absence of that appendage in the female. Acari scabiei are most abundantly met with in the hands, the thicker epidermis and many folds of that region contributing to their protection and facilitating the excavation of their cuniculi. These last are discovered by their whiteness, and by a succession of dilatations or flutings corresponding with the daily rests of the animal for the deposit of ova; while in the most distant of these dilatations the animal itself may be discerned. The males do not burrow, but take advantage of the broken cuticle as a shelter by day, and at night rove about upon the skin in pursuit of young females and of food. It is at this period, and in consequence of the nocturnal habits of the creature, that contagion is most commonly effected.

The disease scabies is a consequence of the irritation caused by the acari. The eruption, as is well known, is one of a multiple lesion, consisting of erythema, of papulæ, of vesiculæ, and pustulæ, and, in degree, it is proportioned rather to the susceptibility of the individual than to the number of the acari. It is most abundant usually upon the hands and wrists, and in the next place upon the abdomen and buttocks, in the neighbourhood of the pudendum, and upon the front and inner side of the thighs; its copiousness in the latter regions being explained by the transference of the animalcules during the night from its principal habitat, the hands.

The *Acarus autumnalis* or harvest bug, is a minute red spider, scarcely larger than the *Acarus scabiei.* Under the name of harvest bug or mower's mite, it is a well-known torment of the country at the autumn season of the year. It attacks the human skin only for a full draught of blood, and occasions by its bite erythematous and sometimes swollen and glossy blotches that are excessively itchy and painful.

The PEDICULUS or louse, presents us with three varieties of parasite : the *Pediculus capitis*, *Pediculus corporis* seu *vestimentorum* and *Pediculus* or *Phthirium pubis*. The first and last of these seek the protection of the hairy regions of the body for their operations ; they maintain their position by holding on to the hairs, and to the shaft of the hairs they agglutinate the *nids* which hold their ova. The *Pediculus corporis* clings to the smoother surfaces of the body, but deposits its ova upon the clothing, and very probably attaches itself to the clothes, excepting at feeding-time. On certain persons they are sometimes found in vast numbers, creating great irritation of the skin, inducing scratching and laceration of the derma, and so laying the foundation of an irritative cutaneous affection. Such a disease has been termed *phtheiriasis*, and also morbus pedicularis.

The PULEX or flea, is another not uncommon source of irritation of the skin and a good example of the degree of irritation that may be excited in different persons by one and the same cause. The flea penetrates the skin deeply with a double lancet, and by means of these lancets, employed as a sucker, draws up its supply of blood. A single flea will often pierce the skin a considerable number of times ; and the marks, or petechiæ, grouped closely together, may suggest the idea of an eruption, and the form of eruption may be confounded with purpura. It is important, therefore, to remember that the central punctum produced by the lancets may

always be detected, and may be thoroughly relied on as a means of diagnosis. Our common and accustomed flea is termed *Pulex irritans*, to distinguish it from another of more mischievous character, met with in the Southern States of America, in the West Indies, and in South America. This latter, the *Pulex penetrans*, the chigoe or chiggre, burrows into the skin for the deposit of its ova; it selects as the seat of its operations, the lateral wall of the nails of the toes, and often gives rise to such serious inflammation as to render amputation of the affected part, and sometimes of the entire limb, a necessary consequence. The negroes have the credit of being very expert in the extraction of the sacs in which the ova are contained; and, after the operation, they are in the habit of squirting a little tobacco-juice into the wound.

The ŒSTRUS BOVIS, so well known for the habit of burying its ova in the hide of the ox, will sometimes do the same in the skin of man; and burrowing for long distances under the skin, give rise to much pain and inconvenience.

The FILARIA MEDINENSIS or Guinea worm, is a resident beneath rather than within the skin, and after a while occasions pain and inflammation of the integument. An inflamed spot indicates the presence of an abscess, and a puncture of the abscess gives exit to a coil or considerable length of the worm. The worm is then slowly wound out of the cavity in which it lies imbedded, and the patient is relieved. Sometimes so much inflammation is occasioned by the presence of the Guinea worm that it dies, and a spontaneous cure of the patient takes place; and sometimes the worm is converted into a solid calcareous mass. The *Filaria Medinensis* is a native of the hot regions of the East, and takes its origin in impure drinking-water. Very commonly it is met with in the lower extremities

only, but sometimes in other parts of the body; it is usually solitary, but occasionally a considerable number have been observed in the same individual.

In addition to parasites, we may also include under the present head, the sting of insects, as of the wasp, the hornet, the bee, and the mosquito; the bite of snakes, and of wild and domestic animals; the sting of medusæ and polypes; and that of certain plants, such as the nettle and the poison-oak or vine of the United States of America.

INFLAMMATION FROM SPECIFIC POISONS.

Group VI.—Exanthematous Affections.

Inflammations of the skin originating in specific poison have a general family resemblance with each other, which enables us on the one hand to consider them together, and, on the other hand, to separate them by a well-defined margin from those diseases which are the result of the operation of common inflammation. The poison, whatever its source, when brought in contact with the tissues of the body, whether of the exterior or of the interior, remains apparently inactive for a while. After a period of seeming rest or latency, symptoms arise which show that the nervous system has taken alarm at the presence of the enemy, and a rash or exanthema suddenly appears upon the skin, beginning with the head, and moving onwards from the centre to the periphery, the feet and the hands being some time later than the face in manifesting the presence of the eruption. Moreover, the evidence is before us that the skin is not the only part in a state of hyperæmia; for the mucous membranes throughout the whole body are more or less congested, and the congestion of the conjunctivæ, of the nasal membrane, and of the fauces, is especially manifest.

You will perceive how accurately this brief sketch of the specific inflammations represents the eruptive history of rubeola, with its ephemeral satellite roseola, of scarlatina, of variola, in fact of the exanthematic fevers, and also of dermatosyphilis and elephantiasis. But let us give a little more attention to the eruption. At its first appearance it is punctated—that is, it is follicular. The folliculitis continues to increase, and then an inter-follicular suffusion takes place, which is more or less restricted or extensive. If we could perceive the approach of the exanthema from the beginning, we might detect it first at a considerable depth in the skin. By degrees it rises to the surface; the follicular plexus up to the aperture of the pore is congested, then the pore is rendered more or less protuberant, and a minute papule is developed. Moreover, the congestion is sometimes confined to nerve districts of small extent, so as to produce patches or blotches, sometimes is scattered, and sometimes is more or less general.

The next thing that strikes us in the exanthemata caused by blood-poisons, is the venous tint of colour which the eruption assumes. This it is which has suggested the terms roseola and rubeola, and the same kind of colour is observable in dermatosyphilis and elephantiasis. Scarlatina, with its arterial tint, and variola must be regarded as exceptions in this particular; but it is not easy to say on what cause the exception depends. There is one other pathological feature which is conspicuous throughout the whole series—namely, desquamation of the cuticle, the consequence of disturbed nutritive function of the skin.

A glance at the table before us will show the order in which I propose to treat of these affections.

SPECIFIC POISONS.

6. *Exanthematous Affections.*

Roseola.	Scarlatina.
Rubeola.	Variola.

7. *Syphilous Affectioms.*

Dermatosyphilis.

8. *Elephantous Affections.*

Elephantiasis [Græcorum].

ROSEOLA I have termed a satellite of rubeola, and I have done so, because there is one form of roseola that so closely resembles rubeola as to be altogether undistinguishable from it, and has received the name of "false measles." It would have been more correct to have called it "mild measles;" for, with the exception of severity, it is identical with rubeola in every essential respect. We need not trouble ourselves with the question as to whether it originate in the same poison as rubeola, because upon that matter we have little or no information. The form of roseola which resembles rubeola is that in which the eruption appears as small clusters or corymbi of red puncta, more or less completely united by an erythematous base, *roseola corymbosa*. Sometimes the corymbi and sometimes individual puncta throw off narrow rings from their circumference, and the eruption has an annulate character, *roseola circinata*. A third form is that in which the follicular congestion is the most remarkable feature of the exanthem, constituting a *roseola punctata;* while in a fourth, the eruption appears as a circular blotch of uniform redness, fading at the circumference, and entitles itself to the designation of *roseola orbiculata*.

In RUBEOLA the corymbous form is the ordinary

type of the eruption; the small patches have been termed "crescentic," but an oblong cluster is all that can usually be discovered. On certain parts of the surface, as on the face, the patches are more or less completely blended, and in this situation, as in others, the follicles are very commonly raised up into minute papulæ.

In SCARLATINA the exanthem is more general than in rubeola; it is less confined to nerve districts, but, like rubeola, is usually papular, the papulæ having a similar origin—namely, in congestion of the follicles.

In VARIOLA, the exanthema, which is also punctated and papular, is the starting-point only of a further progressive development; the papulæ soon become vesicles at the summit, and shortly after, pustules, and beyond the pustular period there occurs an ulcerative period.

The diseases just named are the acute exanthemata or exanthematic fevers; they all have their regular mode of development, their acme, and their decline; they run their appointed course in a definite period; they leave behind them in the constitution no perceptible traces of their existence, and, in general, they manifest themselves only once in a lifetime. And I may further remind you that a roseolous exanthem is a common feature of continued fever.

But I have now to direct your attention to certain exanthemata—for example, dermatosyphilis and elephantiasis, which are chronic instead of being acute, which have no decidedly mature form, whose regular course extends over months and often years, and which leave behind them in the constitution lurking traces that at any subsequent time may be manifested by destructive changes in the economy.

Group VII.—Syphilous Affections.

Let me instance DERMATOSYPHILIS: a chancre, the focus of inlet of the poison, has run its course and healed up; six weeks afterwards an exanthema, which is identical in appearance with roseola, is developed in the skin; after the lapse of some days or weeks the epidermis exfoliates, and the skin returns to its natural state without other sign than a brownish stain. Another six weeks passes by and a second exanthem appears, no longer a roseola like the first, but an eruption of papulæ of a size corresponding with common lichen. The former attack we should call *dermatosyphilis erythematosa* or *roseolosa;* the latter *dermatosyphilis papulosa;* or if you choose you may employ the terms roseola syphilitica, and lichen syphiliticus. Then another interval of six weeks transpires, and the eruption may appear for the third time, but with dimensions still further augmented, namely,—as a large papule or tubercle, *dermatosyphilis tuberculosa* or *tuberosa.*

Therefore the history of dermatosyphilis is somewhat different from that of the acute exanthemata, but perfectly alike in principle,—at first an erythematous exanthem, then a papule, and thirdly a larger papule or tubercle. The erythematous exanthem has the purple tint of roseola, and may be corymbous, or orbicular, or annulate. The papular eruption, which is an exaggeration of roseola, has similar characters, but is chiefly corymbous and disseminated; and the same observation applies to dermatosyphilis tuberculosa, in which the tubercles may vary in size, in distribution, and in mode of growth. Some are simply scattered over the surface; others are gathered into clusters; some are annulate; others are stationary; and others, again, grow by the circumference while they subside at the centre to the natural level of the skin. Conjoined with

the whole of these forms is more or less desquamation; with the papular and tubercular forms sometimes suppuration; and with the tubercular forms, sometimes ulceration. A dry scale surmounting the flat, orbicular, or annulate tubercle of dermatosyphilis, has received the objectionable name of *lepra syphilitica;* and a thick crust composed of desiccated purulent secretion, and covering a syphilitic ulcer, is denominated *rupia.*

Group VIII.—Elephantous Affections.

We have some knowledge of the so-called "poison" of syphilis, but we have none whatever of that of ELEPHANTIASIS. There is reason to believe that the latter poison is of malarious origin, and that the disease which it engenders is under certain circumstances susceptible of transmission by contagion. One of the early manifestations of the affection is by the skin, where it throws out a purplish exanthem, consisting of circular spots. At a later period, as we have already seen to be the case in dermatosyphilis, the maculæ become papulæ and tubercula, and the tubercles very frequently fall into ulceration. Thus, it may be shown that an important analogy subsists between all the exanthemata; that, beginning with the simplest and humblest, roseola, we are imperceptibly led onwards to the most complex and the most grave, namely, elephantiasis; and that between these extremes we find dermatosyphilis manifesting every variety of form and degree, a range of variety, in fact, that renders the distinction between simple idiopathic roseola and syphilitic roseola, a matter often of difficult diagnosis, and at the same time, that between syphilitic roseola and the roseola of elephantiasis an equally obscure problem.

INFLAMMATION FROM SPECIFIC CONSTITUTIONAL CAUSES.

There are certain states of the constitution in which there exists an inherent and spontaneous tendency to disease; I may use the words "constitutional tendency," or I may employ a more technical expression, and speak of *diathesis* and *diathetic diseases*. The diathetic diseases of the skin are three in number, and admit of arrangement as follows:—

SPECIFIC CONSTITUTIONAL CAUSES.

9. *Leprous Affections.*
   Lepra [Græcorum].

10. *Strumous Affections.*
   Dermato-struma.
   Lupus.

11. *Carcinomatous Affections.*
   Epithelioma.

GROUP IX.—LEPROUS AFFECTIONS.

LEPRA is a constitutional tendency to the production of *spots* or *blotches* on the integument, consisting of *a base of inflamed skin, more or less red, circumscribed, and thickened, and covered by a scale of white and spongy cuticle.* The patch of lepra begins as a point or punctum, corresponding with the aperture of a follicle; it may first be perceived, either as a red spot or as a white spot, according to the predominance of the vascular element, or of the epidermic element. Both of these spots increase in

bulk, the former to the extent of producing a small prominent tubercle; the latter to that of a snow-white scale. The next thing that happens is, that a similar action takes place at the summit of the immediately adjacent follicles; the red bases of several tubercles unite, and a common scale covers the whole. The spot, at this time, instead of being a punctum, *lepra punctata*, or a papula, *lepra papulosa*, has grown to the size of a drop of water, *lepra guttata;* the energy of growth has also rapidly increased, and in a short interval the spot has enlarged to the diameter of half an inch, of an inch, or even more, and forms a disk which is perfectly circular in figure, *lepra orbiculata* seu *discoidea*. The spot or disk is now at its height; the scale is laminated, and, in consequence of its peripheral growth, is also imbricated. Moreover, the centre of the scale is somewhat depressed below the level of its circumference, and if the scale be removed, a corresponding inequality of surface will be perceived on the derma. The surface, deprived of its scale, is red, and somewhat tumid and smooth towards the circumference, and pressure with the finger makes known to us that the disk of morbid skin, although it occupies only the surface of the derma, is considerably thickened.

After an uncertain period of growth, the scale disappears from the centre of the disk, the skin beneath recovers its normal character, and the circumference continues to enlarge; the disk is now converted into a ring, *lepra circinata*, with a greater or less breadth of border; next, the ring breaks at one or several points, and slowly and by degrees the segments of the ring disappear, and nothing remains of the eruption but a brown stain, and sometimes neither discoloration nor trace of any kind. In the progress of growth it is not unusual for a ring of this description to run over a considerable extent of surface; sometimes two rings meet by their circumference, and form

a figure of eight; or three in like manner may come in contact, and the figure produced be a trefoil: or there may be a confusion of circles and broken circles, giving rise to an appearance which is denominated *lepra gyrata*.

The form of lepra now under consideration may be termed *figurata*, and is by far the most common mode of manifestation of the disease; but occasionally larger irregular patches are produced, which are diffused over a greater extent of surface, *lepra diffusa*, sometimes covering an entire limb, the whole of the scalp, or a very considerable expanse of the surface of the trunk. Lepra is also remarkable for having its special seat of selection; it is rarely met with on the uncovered parts of the skin, with the exception of the nails, where it is common, and possibly you may consider the nails a sort of clothing, for the disease is equally common on the scalp, where it is favoured by the protection of the hair. But its most frequent seat of occurrence is the convexity of the larger joints, as of the elbows and knees, the external and muscular portions of the limbs, and the trunk of the body.

Lepra acquires additional interest from the fact, first pointed out by myself, that the disease is the homologue of tubercle of the lung. A careful inquiry into the antecedents of patients affected with lepra shows that it is frequently hereditary, and that in cases where it is not hereditary, phthisis, or struma, or cancer, may be discovered to exist in the parents or blood relations. And, again, that the children of leprous parents are predisposed to phthisis as well as to lepra. In these facts we have an explanation of the diathetic nature of the disease, and of its very common outbreak in persons who are sound and healthful in every other particular; in fact, the presence of lepra would seem to carry with it an immunity against either phthisis or cancer.

Viewed after this manner, we may regard lepra as

the consequence of a nutritive debility, and we may be led on from it to the consideration of another nutritive affection which is generally hereditary and often acquired, and which gives rise to those pathological phenomena which are known under the name of struma and scrofula. Struma manifests itself in the skin by indolent ulcers, and by a form of degeneration of the cutaneous tissues which is termed lupus.

Group X.—Strumous Affections.

Dermato-struma or dermato-scrofula generally makes its invasion of the skin by abscess; the skin covering the abscess becomes red and tumid; the abscess breaks, and an indolent ulcer is left in its place. The abscess often becomes sinuous. The ulcer is covered with fleshy indolent granulations, the edges are raised and also fleshy; the surface secretes a serous or sero-purulent fluid, and so it goes on for months without showing a disposition to heal. At a later period, when it does heal, either spontaneously or under the pressure of treatment, a thin, unhealthy, depressed, or puckered cicatrix is left behind, possibly an irregular accumulation of white fibrous tissue from hyperplasia and that state of hypertrophy of the white fibrous tissue which has received the name of "false," or, more properly, of "traumatic" cheloma or cheloides.

I may call to your mind that the nutritive debility of lepra exhausts itself in hyperæmia of the derma, in hypertrophy of the papillæ cutis and of the epidermis, and possibly in the production of abnormal cell-tissue in the substance of the thickened skin; but there is no destructive change, no loss of substance, and lepra may endure for a lifetime without leaving behind it any trace of a cicatrix, and, indeed, any trace of its existence; but the strumous and scrofulous affections are noted for their tendency to

the production of tissues, which from the very first are destined to destruction. Such is the case in the instance of dermatostruma, to which I have just drawn attention; and more conspicuously still, in an affection, which from its more destructive nature has gained for itself the name of *lupus*. Thus we have lupus exedens or vorax, lupus non exedens, and a third form admitted by courtesy only into the same group, namely, lupus erythematosus.

The leading characters of *lupus* are the production of a new cell-tissue, which takes the place of the skin and subcutaneous tissues, which, by excessive and uncontrolled growth, gives rise to tubercles and granulations, and which, as a consequence of enfeebled vitality, softens and breaks up; the disorganized material is removed by discharges and sloughs, and so produces ulcerations, the ulcerations extending deeply into the immediately affected, as well as into the surrounding tissues. In this way a lupus exedens of the nose may destroy the whole of that member and the neighbouring part of the face; and cartilages and bones fall equally under its destructive progress.

Lupus non exedens is more superficial and slower, limiting its destructive action to the upper layer of the derma, and leaving the deeper fibrous layer as the chief constituent of the cicatrix. It is termed "non exedens," from the fact that it is capable of effecting all this mischief, of producing a life-long cicatrix, that may seam the whole cheek with a white fibrous-looking web, nibble away the edges of the nose, and produce permanent deformity, without ever once having exhibited a solution of continuity; the destruction has all been carried on under the unbroken cuticle. The disease begins very commonly as a small round tubercle in the middle of the cheek of a healthy-looking child, most frequently a girl; it very slowly enlarges in diameter; it is yellowish in tint of colour, probably without hyperæmia, resembling a bleb of jelly under the

cuticle, but nevertheless firmer than jelly, and traversed by a minute venous radicle. From this small beginning all the serious consequences may proceed to which I have just alluded, an annoyance of many years' standing, probably a deformity for life, and, moreover, on a face that nature intended to be beautiful, and, but for so serious a drawback, would indeed have been beautiful. Just as the crude, bloated, and fungus-like tissues of lupus exedens break down and dissolve, leaving in their place cavities and chasms, so the degenerated cell-tissue of lupus non exedens gradually disappears, and only a scar remains behind; the papillary layer of the derma is slowly undergoing a process of devitalization, a new and temporary material is deposited in its place, this temporary material is withdrawn, and the deep layer of the corium is seen through the transparent epidermis, as though it were dissected, and the surface had been shaven away with a sharp blade.

Just as lupus non exedens may be regarded as a milder type of lupus exedens, so *lupus erythematosus* may be looked upon as the least destructive form of lupus non exedens. It begins with hyperæmia, hence its subjective name, erythematosus; is very slow in its progress, lasting many months and even years, and is apt to fix itself upon the nose, upon the cheeks, or upon the head; and is very commonly associated with a similar state of disorder of the fingers. After a while, where there was previously nothing but redness and some degree of thickening of the skin, a differentiation may be noted between the longest standing portion of the complaint—namely, the centre, and the circumference. The peripheral border has a fresher and more active-looking tint of redness, while the centre is covered with a concretion of desiccated epithelial and sebaceous substance, the concretion thinning as it approaches the peripheral border. Moreover, a very

curious feature of the disease is the prominent and dilated state of the follicles, which are obviously filled to distension with dry epithelial exuviæ. And, furthermore, the papillary layer of the derma is gone; while the fibrous network of the corium is clearly visible, as are the sebiparous glands surrounding the follicles. It is evident that the sebiparous glands are enlarged, possibly from detention of their secretion, and a vascular plexus is apparent, spreading like a network between the follicular pores. It is obvious that the function of the follicles is suspended; that the corium is thinned; and, when the disease occupies a region furnished with hairs, another phenomenon is apparent—namely, the loss of the hair.

Group XI.—Carcinomatous Affections.

In lepra, I assume that a morbid action, the consequence of nutritive debility, is set up in the corium, equivalent to that which in the lungs would produce tubercle, but which, in the derma, issues simply in hyperæmia with an excessive formation of altered epidermis. In dermatostruma and lupus the morbid change takes place in the tissues of the derma, possibly in the connective tissue, and results in the production of a substance of low organization and low vitality, incapable of higher transformation, and wanting in the power necessary to maintain and preserve its own integrity. In the next place I have to direct your attention to another consequence of lowered vitality and defective nutrition—namely, the production of cells similar to those of the epithelium, but in inordinate quantity, and in a situation calculated to interfere with the normal integrity of the derma; the small globular masses developed in the skin under this abnormal process being termed *epithelioma*. The first impulse to the morbid ope-

ration is very probably given by the cells which constitute the epithelium of the follicles or of the sebiparous glands; for it is there that the morbid change would seem to begin and thence to spread superficially into the surrounding tissues. At first, and for a considerable time, an epithelioma is a small transparent nodule or tubercle streaked by the ramifications of a minute venule. Later in its history the nodule has the appearance of being lobulated and indented in the centre; and at a period further advanced the central umbilication is occupied by a small scab. The scab indicates a softening and breaking up of the central portion of the epithelioma; this process goes on increasing, and at the same time the rounded and nodulated border creeps further and further upon the neighbouring skin. The area of the ulcer covered by the scab increases with the peripheral growth of the prominent transparent border; the surface of the ulcer when the scab is removed is pale and smooth, it bleeds easily and exudes a serous or sero-sanguinolent fluid, and the desiccation of this fluid constitutes a scab of continually enlarging dimensions. A special characteristic of epithelioma is its extremely slow growth and the indolence of the ulcer; it is many months before it has advanced to the softening stage and forms a scab; and it is equally slow in its gradual propagation to the surrounding healthy integument. Its favourite seat of development is the face; sometimes on the cheek or the nose; and sometimes beneath the lower eyelid or at the inner angle of the eye.

LECTURE V.

Diseases of Functions and Apparatuses.

MR. PRESIDENT AND GENTLEMEN,

In pursuing my inquiry into the nature of the diseases of function and of the apparatuses of the skin, the plan of my remarks may be traced on the accompanying table. I commence with aberrations of nutrition, sensation, and pigmentation, and in the next place bring under consideration, and in their turn, aberrations affecting the epithelium, the hair-system, and the secreting glands. An examination of the table will make the intention of this arrangement sufficiently obvious, and will enable my hearers to follow with facility an otherwise tedious detail.

IV.—Aberrations of Nutrition.

12. *Nutritive Affections.*

Dermatoxerasia.	Acrochordon.
Ichthyosis.	Molluscum.
Sauriosis.	Dermatolysis.
Cacotrophia.	Cheloma.
Cornua epidermica.	Morphœa.
Verruca.	Dermatosclerosis.
Clavus.	Striæ atrophicæ.
Papilloma.	Spargosis.
Angiectasia.	Adenoma.
Angioma.	Xanthoma.
Nævus cutaneus.	Melanoma.

V.—Aberrations affecting Sensation.

13. *Neurotic Affections.*

Hyperæsthesia.
Anæsthesia.
Dysæsthesia. { Pruritus. Prurigo.

VI.—Aberrations of Pigmentation.

14. *Chromatopathic Affections.*

Melasma.	Lentigo.
Chloasma.	Cyanochroia.
Ephelis.	Leucasmus.
Xanthochroia.	Achroma.

VII.—Aberrations affecting the Epithelium.

15. *Epidermic Affections.*

Phytosis *seu* tinea tonsurans.
„ „ „ circinata.
„ favosa *seu* favus.
„ versicolor.

16. *Onychopathic Affections.*

Scabrities unguium.
Onychia.

VIII.—Aberrations affecting the Hair System.

17. *Trichopathic Affections.*

(*Hair.*)

Trichosis.	Poliothrix.
Spili.	Trichiasis.
Trichorrhœa.	Trichatrophia.
Madesis.	Trichoclasia.
Alopecia.	Phytosis tonsurans *seu* tinea.
Area.	
Phalacrotes.	Trichosyphilosis.
Trichodyschroia.	Trichopathia plica.

(*Follicles.*)

Comedo.
Tumores folliculares.
Cornua setosa.
Cornua sebacea.
Tubercula miliaria.
Tumores cystici.
Papulæ corneæ.
Epithelioma.
Phytosis favosa *seu* favus.
Folliculitis.
Xerasia capitis.
Acne.
Gutta rosea.
Sycosis.
Kerion.

IX.—Aberrations affecting the Secreting Organs.

18. *Steatopathic Affections.*

Steatorrhœa.
Chromosteatodes.
Asteatodes.
Hypertrophia glandularum.
Molluscum *seu* tuberculum adenosum.

19. *Idrotopathic Affections.*

Hyperidrosis.
Anidrosis.
Osmidrosis.
Chromidrosis.
Hæmatidrosis.
Hypertrophia glandularum.
Atrophia glandularum.
Hydroadenitis.

Aberration of nutrition opens up to us an extensive and important field of observation and research, and examples of this pathological state are very numerous; the aberration being due in some instances to defect of nutrition; in others, to excess, constituting hypertrophy; in others, again, to arrest of nutrition or atrophy; and, in a fourth series, to a morbid nutrition or dystrophy, giving rise to alteration of structure.

Defect of nutrition of the skin is generally congenital; it may be hereditary; or it may become

manifested during growth or at a later period of life. If you endeavour to realize the idea of a deficiency of nutrition of the skin, you will have to trace in imagination the consequences to the skin of a deficient vitality, a deficient circulation and innervation, and deficient formative and glandular function. In such a case the skin will be thinner than natural; it will be pale; it will be more or less hard and consequently wrinkled; it will be dry from the absence of its normal lubricating secretion; it will be rough from abnormal desquamation; and there may be present, also, the evidence of a want of symmetry with the deeper parts, especially the osseous system. Such a state of the skin as I am now describing, is, however, no fiction of the imagination; it is a stern reality, and will be recognised at once by any one who sees it for the first time, by the description which I have now given. Its most conspicuous character of all is the general dryness, the parched state of the integument, and on this account I have named it *dermatoxerasia* or xeroderma; but another striking feature in its appearance has gained for it the name of *ichthyoides* or *ichthyosis*, from a fancied resemblance between the scale-like conformation of the cuticle and the scaly covering of a fish.

Sometimes, with a dry and abnormally nourished skin, the sebaceous secretion accumulates on the surface, and breaks up into little compartments, corresponding with the area included between the lines of motion of the integument. These little masses, attracting dirt from the atmosphere, become more or less dark in colour and generally assume a deep brown or greenish tinge; they suggest very forcibly the armour-like covering of the saurian reptiles, and the skin so affected may be termed *saurioides* or *sauriosis*. Sometimes, by successive accretion, the scales become thickened and lengthened to the extent of producing short horny spines, *ichthyosis cornea;* hence we note two forms of sauriosis—

namely, *sauriosis squamosa* and *sauriosis spinosa*. The body has been sometimes seen to be more or less completely covered with the scales and spines just described; the latter, fashioned on the area between the lines of motion of the skin, subjected to mutual attrition and to the friction of dress, become rounded at the edges and ends, and polished on the surface, and have suggested an exaggerated comparison with the quills of the porcupine; hence the term "porcupine men" and the no less extravagant scientific term "*ichthyosis hystrix*," or porcupine fish-skin disease. It is just possible that, in a protected situation, these spines, composed of epidermic exuviæ and sebaceous substance, may reach a length of half an inch or more, but, in general, they barely exceed a quarter of an inch.

In this same group of nutritive affections, consisting of dermatoxerasia with its more highly-developed forms ichthyosis and sauriosis, I also place an alteration of the skin, consequent on deficient nutrition or malnutrition, from whatever cause it may proceed. Dermatoxerasia is usually congenital, not unfrequently hereditary, and I have known it to be the sequela of congenital eczema. But the *cacotrophia*, to which I now allude, is of accidental origin, dependent on exhausted nutritive power, and occurring in young persons, more particularly of the female sex. At a time when freshness and beauty should be the prevailing characteristics of the individual, the skin, generally of the face, is yellow or discoloured, resembling parchment as nearly as skin, often wrinkled, and, in one word, cacotrophic. A similar state of the skin of the face is commonly associated with dermatoxerasia.

In dermatoxerasia, there is present, conjointly with defective nutrition of the skin, an accumulation of epidermis amounting to hypertrophy; but, the epidermis in excess being the production of a weak organization, is of an unhealthy character. It is

harder and drier and more opaque than natural. There is met with occasionally, however, a state of hypertrophy of the epidermis which is independent of any pathological alteration of the integument and arises from simple hypernutrition. The only alteration of the skin that is recognizable is a higher degree of development of its papillary layer associated with a corresponding vascularity, the development in excess giving rise to a positive hypertrophy of the papillæ cutis. This is the history of *epidermic horns*, of which there are several specimens in the Dermatological Collection of the College Museum; one, of large size, resembling a thick nail developed on the under surface of the last phalanx of the great toe; another, which grew from the glans clitoridis, and a third from the glans penis. These productions, resulting as they do from a state of hypernutrition of the papillæ cutis, may be properly distinguished as *thelomatous* growths.

In the next place the hypertrophic state of the papillæ is still further advanced, and thelomatous growths are produced which may be termed *ecphymata*. We are indebted to Mason Good for the term *ecphyma*, which is applicable generically to simple hypertrophic outgrowths or excrescences of the skin, whether they be limited to the papillæ cutis as in the instances of warts and corns, or involve the deeper tissues of the integument as in the example of common tegumentary nævus, of acrochordon, or molluscum.

Verruca or wart, is a state of hypertrophy of the epidermis resulting from hypertrophy of the *papillæ* of the derma and their consequent more active function. As we know the verruca upon the fingers and hands, *verruca vulgaris*, it is isolated; in some situations, as on the forehead, verrucæ are often minute and abundant, *verrucæ minimæ;* occasionally, besides being minute, they are confluent, and con-

stitute a warty layer ranging in extent from a few lines to an inch or more, *verrucæ confluentes;* a fourth kind, met with on the scalp, may be named *verruca digitata,* from its singular finger-like papillæ; and a fifth variety is presented to us in those remarkable vegetations which are so common about the pudendum and anus, and whose growth is kept up by the moisture of that region, *verrucæ vegetantes.*

Clavus or corn, is closely allied with verruca, being partly due to hypertrophy of the papillæ cutis, and partly to augmented function of the derma from hyperæmia. Where the action, instead of being limited to a small extent of surface, is more widely diffused, it gives rise to that broader accumulation of hardened and hypertrophied cuticle which has received the name of *Callus.*

When hypertrophy once breaks through the barrier of law and order, it is impossible to set limits to its progress otherwise than by restoring the balance of healthy vitality. The common wart is familiar to us all; it is the representative of the simplest form of hypernutrition. When we see it on the scalp, throwing out long conical processes like feelers or like the legs of insects, we perceive that a greater amount of metamorphosis lies before us than that which is present in verruca vulgaris. If we go a step further and examine a similar hypertrophy of papillæ, or papilloma, as it occurs upon an irritated or inflamed surface, we change our language, and call them not simply warts, but vegetations. Such are the warty growths of the pudendum already referred to; but in certain affections of prolonged irritation of the skin, such as old ulcers of the legs or chronic eczema, *eczema papillomatosum,* we sometimes find a luxuriant crop of such vegetations which have a development resembling that of the cauliflower, and which may be very appropriately named *cauliflower vegetations.*

Hypertrophous papillæ cutis or papillomata, are, however, sometimes met with in a congenital form. Such a case is described in the first volume of the *St. Bartholomew's Hospital Reports.* A girl of fifteen years of age had discoloured blotches on the skin; they were thickly papillated, the papillæ cutis being hypertrophous, and each invested with a pigmented cuticular sheath. To this peculiar case the term *ecphyma papillosum*—a term well suited for distinguishing the growths occasioned by hypertrophous papillæ—seems peculiarly applicable.

Amongst the component parts of the skin that are liable to hypertrophy, there is none of more importance or of greater interest than its blood-vessels. Sometimes the capillaries increase in size and become more numerous than natural without prominence; this is the state which we term simple *angiectasia* or *teleangiectasia*; and sometimes the growth of new vessels proceeds to such an extent as to form tumours of various size, *angioma* or *angiomata.* In certain instances the angiectasia is simply arterial; at other times it extends from the capillaries to the veins, in which case the term *phlebectasia* more correctly expresses the pathological condition of the part. And the vascular hypertrophy is sometimes congenital and sometimes acquired or accidental. In this form of hypertrophy the vascular structure takes the place of all the other tissues of the skin, and when the angioma is cured either spontaneously or by art, it leaves behind it a relaxed and atrophic condition of the integument.

Of the accidental angiomata we meet, not unfrequently, on the face of young persons, with a kind which is termed *nævus araneus* from a comparison in figure to a spider. The body of the spider is constituted by a dilatation of a minute artery, and from it there radiate in several directions small veins which are supposed to resemble the legs of the animal. In general, these radiating veins are in-

dependent of each other, but sometimes they are more or less intimately united by an intervening vascular plexus. In elderly persons, and in a cacotrophic state of the skin, there is frequently seen another form of accidendal nævus ; it is hemispherical in shape and resembles a drop of blood effused beneath the cuticle. But more careful examination shows it to be a bunch of small vessels with thin coats, and largely dilated. To these small angiomata may be assigned the name—*nævus sanguineus*, their chief characteristic being their colour, and their chief interest their association with an impoverished and ill-nourished skin.

From mere defect of nutrition of the integument the transition is simple to that form of aberration of nutrition, or perverted nutrition, in which there is increase of bulk of the skin, a partial excess of nutrition, in other words, a state of *hypertrophy*, or *dermatoma*, and the hypertrophous growth is sometimes simply physiological, and at other times pathological, sometimes it involves the whole thickness of the skin, and at other times only individual parts or separate tissues.

The simplest example of hypertrophous growth that can be adduced is that of the common tegumentary *mole*, which is sometimes congenital and sometimes acquired—that is, it may become developed at any period of life; it is nothing more than a simple outgrowth of the skin limited to a circumscribed spot, and ranges in size from one or two lines in diameter to as many inches, having an elevation rarely exceeding a line. Sometimes the mole corresponds in appearance with the neighbouring skin, only differing from it in bulk, *nævus cutaneus simplex;* at other times, its most striking characteristic is an accumulation of dark, and frequently black, pigment, *nævus pigmentosus;* while, in a third instance, it may be remarkable for a tuft of hair growing from its surface, *nævus pilosus*.

When these aberrations of nutrition take place congenitally they must be referred to a want of proper harmony of the vital powers of the individual, to a deficiency or weakness of the controlling power; they are not examples of redundant vigour, but of a loss of the power which controls and fashions the tissues and organs of the body into their normal configuration and structure. Of this we have an interesting illustration in the cacotrophic and dystrophic condition of the skin of elderly persons; the skin is not simply wasted from deficient nutrition, but it exhibits a tendency to abnormal growth in a variety of ways. One of the most common of these is the growth of the superficial portion of the integument into the form of a thread-like cylinder, varying in size from a mere rounded shining papilla to a pendulous thread two or three lines in length; this is the *acrochordon*, sometimes termed verruca acrochordon; but we abandon the latter term as calculated to establish an analogy between the acrochordon and the verruca, and therefore to mislead. Acrochordones are most commonly met with on the integument of the neck of elderly persons, and particularly on that of women, in consequence of the greater fineness of their skin. You will find them on the neck of the first elderly lady whose skin you may have an opportunity of observing, and they are worth a little study from conveying an important lesson as to the nature of hypertrophy of the integument. They are identical in general appearance with the rest of the skin, and evidently consist of a fine process of the same integument as that from which they grow; they may be seen arising from the lip of a follicle, sometimes they surround a pore and carry it forward in their growth. They begin as a rounded papilla; sometimes this rounded papilla assumes a globular figure, but sooner or later longitudinal growth is established, and then they are more or less pendulous, the rounded head dilating

somewhat into the shape of a pouch, and being larger than the stem. In this state they resemble a little flaccid pouch or bag, and are evidently nothing more than a process of attenuated and flaccid integument containing in its interior a portion of loose and spongy connective tissue together with a minute vessel to supply the tissue with the requisite nutrition.

You will perceive that in acrochordon we have all the elements of a tumour of the simplest structure; a sac of integument filled with a loose and spongy connective tissue, and furnished with a minute vessel to maintain its lowly organization; a mere increment of the normal textures of the skin, without further pathological change; a mere accumulation, by growth, of a low form of tissue, where, to preserve the integrity of the skin, a higher tissue should be present, a substitution of quantity for quality; too much integument, too much connective tissue, and, as a consequence, a deficiency of the highly organized papillary layer of the derma. You will also note that the change which I am now describing is located at the surface of the derma; it may be properly said to be upon the skin rather than in the skin, or to affect only the uppermost stratum of the derma.

I am now going to ask you to imagine the form of degeneration of tissue before us to increase to the extent of producing small tumours, which no longer require the lens for their examination, as in the case of acrochordon, but which may be handled and felt. These tumours may range in size from that of a mustard-seed to that of a billiard-ball; they are always prominent, sometimes merely sessile and more or less embedded in the integument, and sometimes pedunculate. Exteriorly they resemble the adjacent integument; to the touch they are compressible and soft—hence their name "mollusca." This is the affection to which the term *Molluscum*

has been applied. In structure and in the phenomena of its formation, molluscum is identical with acrochordon, only differing from it in bulk and somewhat in the precise seat of its origin, the acrochordon being more superficial than molluscum; and molluscum, from its mere size, intruding itself upon the deeper structure of the derma. Molluscum, like others of our terms, has in course of time undergone corruption; it has been applied to tumours of the skin of various kinds, particularly to those of a pendulous figure, and a necessity has arisen of distinguishing the molluscum under consideration by the name of Molluscum simplex, or perhaps better, as conveying an idea of its structure, *Molluscum areolofibrosum*.

It is a curious and interesting fact, that the kind of hypertrophy which I am now describing is sometimes met with not confined to mere points of the skin, but affecting a region of considerable extent. I mean that the integument grows to an inordinate degree, and is thrown into folds like the wattles of a turkey or the neck of a bull. Alibert seems first to have given this affection, this cutis pendula, this chalazoderma, a niche in dermal nosology, and termed it *dermatolysis*, or relaxation of the skin. He noted and distinguished five varieties of the affection, viz., dermatolysis palpebralis, facialis, collaris, abdominalis, and genitalium. A very remarkable example of this disease is recorded by John Bell in the third volume of his "Principles of Surgery," in the section devoted to the "unlimited growth of tumours;" and another by Dr. Wright in the *Transactions of the Pathological Society of London* of the session 1864-65; while more recently a similar and very interesting case of this affection has fallen under the observation of Mr. Weeden Cooke.

The white fibrous tissue of the derma is liable to hypertrophy, and the hypertrophous tissue may present itself in the form of rounded masses—namely,

tubercles or tumours; or in the form of cords or flattened growths. Conjoined with molluscum, which is a state of hypertrophy of the connective tissue giving rise to soft superficial tumours, we sometimes meet with hard flattened tumours resulting from hypertrophy of the white fibrous tissue of the deeper portion of the derma. These are simple fibrous tumours (fibromata), and we also meet them alone and without any trace of molluscum. When these tumours assume a longitudinal growth, when they produce ridges under the skin, sometimes by extension of growth and sometimes by union with other masses of a similar kind, they constitute the tumour which is known by the name of *cheloma* or *cheloides*. Cheloma admits of a primary division into idiopathic and traumatic. The forms which the idiopathic kind assumes may be inferred from the names which have been assigned to them; for example, cheloma cylindraceum, clavatum, ovale, and radiciforme. The traumatic kind very frequently takes on the appearance of a network of fibrous cords, and may result from any foregone irritation of the skin, that of most common occurrence being burn or scald.

Another strange form of disease originating in a kind of hypertrophy or proliferation of the white fibrous tissue and connective tissue of the derma is termed *morphœa*. In morphœa, after a temporary hyperæmia, the connective tissue of the derma begins insensibly to proliferate and increase in quantity at the expense of the more highly organized tissues, the vessels and the nerves. It is probable that the connective tissue of the coats of the vessels, as also of the sheaths of the nerves, takes on a similar proliferating action, until, in the end, the part attacked has the appearance of a smooth white cicatrix. With the loss of capillary vessels the part becomes pale; with the loss of nerves it is insensible. It is dense and hard from the increase of white fibrous tissue, and the hardness sometimes extends in cords through the

neighbouring structures. Its smoothness and whiteness have suggested to different observers a comparison with dead skin, with ivory or alabaster, or with a skin infiltrated with wax. The disease occurs in patches of various size and extent, sometimes stretching along a part of a limb; and, after a time, the skin either returns by degrees to its normal condition, or falls into a state of permanent atrophy, the part looking withered and dead.

In another pathological state, without any apparent change of structure, and without alteration of colour, the skin becomes so hard and rigid as to warrant the use of the term *dermatosclerosis*, or hardening of the skin; and no less conspicuous than the hardness is a remarkable state of contraction of the affected integument. As a consequence of contraction, the lines of motion and wrinkles of the skin are completely obliterated; the surface is as smooth as polished horn, the skin adheres firmly to the structures beneath it, it seems as if it were incorporated with the fasciæ and bones; the joints of the affected region are rendered inflexible, and the prominences of the bones, particularly the extremities of the phalanges, are pressed upon with such continued force that they are apt to be forced through the integument. While, in the region of the face, I have seen the lips and eyelids drawn asunder, and the teeth held closely together; in morphœa this extreme degree of induration, and this equally extreme degree of contraction, are absent; in it the most remarkable change of the skin is one of deterioration of structure, the substitution of connective tissue for more highly organized tissues; while in dermatosclerosis the secondary change is atrophy, extending through the soft parts even to the bones.

A local form of dermatosclerosis is met with in the lower extremities, and most commonly in association with varicose disease of those members. The varicose state of the veins causes impeded

circulation and venous transformation of the blood within the dilated capillaries. Nutrition is retarded, and not unfrequently suspended. The more highly organized parts of the skin, such as the papillary layer, fall into a state of atrophy; the place of the latter becomes occupied with tissues of a lower type of organization, such as connective tissue and fat, and the entire thickness of the skin is converted into a smooth, dense, and fibrous stratum extending inwards to the fascia of the limb, with which it becomes identified, and coated externally by a thick horny layer of epidermis, and more or less pigment. Sometimes the skin has the density of horn or cartilage, and one instance I have recorded in which it contracted upon the subcutaneous tissues and around the limb like a clasp of metal. The morbid affection was situated just above the ankle; this part of the limb was very considerably reduced in size, while above and particularly below the hardened band, the integument was œdematous. Mr. Gay, who has carefully investigated and made many dissections of this form of disease of the integument, compares the sensation communicated to the touch with that of handling india-rubber.

There remains for us only to note, in connection with diseases of the integument dependent on altered nutritive function, the occasional presence of *atrophy of the skin*. I have met with instances in which the atrophy was so extensive as to occupy almost every region of the body, while, in general, it is restricted and often very limited in extent. Sometimes it would appear to depend on general constitutional causes; at other times to be due to a special affection of a nervous twig, or again, to a condition of the tissues themselves. It is well known that distension of the skin by the growth of the body as in pregnancy, or by the increment of fat or fluids in its substance, will induce a partial rupture of the corium; these ruptured lines will show a slight

effort to inflame, and when the causes of distension have ceased, we shall find, in place of the red waving line which betokened inflammation, a pearl-white and bluish streak, presenting all the characters of a cicatrix. These *lineæ* or *striæ atrophicæ* are met with on the abdomen and mammæ of pregnant women, on the mammæ of women who have become thin after being previously fat, and on the abdomen of corpulent men. But on the other hand, they are also found, not unfrequently, in persons and under circumstances in which distension cannot be alleged as a cause, and which render it sufficiently obvious that two factors are present as contributing to the morbid affection; one of these being a state of debility of the tissues of the individual, and the other the mutual compression of adjoining parts. I was struck, on one occasion, by seeing the mammæ of a girl of 17 strongly marked with striæ atrophicæ; and the case had a double interest from the presence of morphœa, another disease of deranged nutrition of the skin, in the same individual; and I have published several cases of a similar kind, among others, one which was shown to me by Mr. Nunn, and affected the integument of the back, in the neighbourhood of the spine, in a young lady suffering under spinal disease.

I have more than once seen a condition of integument which I should describe as a *cellulitis*, extending in depth through the whole thickness of the subcutaneous cellular tissue. It begins as a slight and transient erythema, the erythema being accompanied with a feeling of weight and stiffness of the part. The integument is not so much swollen as filled out and rendered dense throughout its substance; to the hand it communicates the feeling of hardness and solidity, and although the enlargement and hardness must be due in some measure to infiltration, there is no evidence of œdema. The morbid state is altogether a peculiar one, and no

doubt corresponds with an affection which in some parts of the West Indies is termed "the rose," and is the precursor of the "Barbadoes leg," bucnemia, the elephant leg of the Arabians.

A chronic cellulitis with infiltration and hypertrophy of the white fibrous and cellular tissue, would be the proper pathological expression for the elephant leg of the Arabs; but as this affection, so far from being limited to the leg, is met with in other regions of the body, a better and more correct appellation is *spargosis;* a word employed by Dioscorides, and as a verb, by Hippocrates himself. We should thus have "spargosis cruralis" the equivalent of bucnemia, together with spargosis brachialis, scrotalis, penis, clitoridis, etc.

Just as in our review of the disorders of nutrition, we have seen the epithelium, the vascular tissue, and the fibrous tissue asserting a predominance over the other tissues of the skin and assuming the character of new formations or neoplasmata; so also, we occasionally meet in the integument with other tissues, which in its normal state are foreign to its organization. Such is the explanation of adenomatous formations in relation with the skin giving rise to *adenoma*, and most remarkably so, in a curious form of disease which has received from Alibert the name of *mycosis*, and of which a striking illustration lies on the table before us, and is numbered 405, 406, and 407 in the dermatological collection.

Another form of nutritive disease of the skin is a degeneration of tissue accompanied with the production of a yellow colouring matter in the affected part; the yellow colour being due, as far as we know at present, to "a deposit of oil in the substance of the cutis," and taking place most abundantly in the neighbourhood of the follicles. This curious affection was described and delineated by Rayer under the name of "plaques jaunes des paupières," in consequence of its usual occurrence in the eyelids;

subsequently a relation was shown, by Addison and Gull, to exist between this disorder and a form of disease of the liver attended with jaundice; and more recently this relation has been confirmed by Dr. Hilton Fagge and Dr. Frank Smith; while a more exact determination of the inquiry has been effected by the researches of Dr. Murchison. From its appearance as a spot or spots, the name of vitiligoidea was given to it by Addison and Gull; I have, however, ventured to propose for it another term, namely, xanthelasma or yellow lamina, as expressive of its colour and its more frequent development in the form of a lamina of moderate thickness. But it has also been found elsewhere than in the eyelids; for example, as tubercular prominences upon different parts of the skin; on the arms for instance, on the hands, among the subcutaneous textures, and in the mucous membrane of the mouth. Hence, a term so constructed as to convey the idea of a tumour-like mass seems desirable, and the word *xanthoma* fulfils very adequately this intention.

Sometimes, instead of yellow tubercles developed in the skin, we meet with small masses of a deep brown or black colour; and to an affection so constituted the name of *melanoma* has been given. The pathological structure of the morbid tissue is probably similar to that of the tubercles of xanthoma; but the colouring matter, instead of being oil-globules, is a black or melanic pigment.

Aberrations of Sensibility.

13. Neuropathic Affections.

The sensibility of the skin manifests several varieties of morbid alteration, which may all be referred to the three heads of—hyperæsthesia or excessive sensibility; anæsthesia or loss of sensibility; and dysæsthesia, painful and perverted sensibility.

In HYPERÆSTHESIA the sensibility is sometimes exalted to so extreme a pitch, as to render the mere pressure of clothing unbearable, and sounds even painful to the skin.

ANÆSTHESIA is found associated with other kinds of disease, such as area, morphœa, and elephantiasis, and may be more or less complete.

DYSÆSTHESIA, or painful sensibility, presents itself in the form of *pruritus*, in which no organic change in the skin is to be detected, or associated with a cacotrophic condition of the integument. In the former state we call it simply pruritus, and pruritus may attack any part of the skin without any visible indication of its presence—in fact, as a mere derangement of innervation. We distinguish several situations in which simple pruritus is often very annoying and distressing; for example, pruritus ani, scroti, præputii et urethræ in the male, and pruritus ani et vulvæ in the female.

PRURIGO is a pruritus associated with an organic change in the tissues of the skin. It is a neurosis and liable to paroxysms, and is very much aggravated in character by the advance of age. Hence, a distinction into prurigo *mitis* and prurigo *senilis*. Prurigo mitis may occur at any period of life, but the eruption which is present is due to the secondary irritation of the skin caused by scratching, rather than to the force of the neurotic affection. Prurigo senilis is generally accompanied with more or less discoloration and hardness of the skin, as well as by a papular eruption excited by scratching, and also by lacerated streaks and abrasions of the skin.

ABERRATIONS OF PIGMENTATION.

14. CHROMATOPATHIC AFFECTIONS.

Affections of the pigment system of the skin have their seat within the rete mucosum; the colours

which are produced are simply a modification of the normal pigment of that structure, and their claim to consideration as a pathological condition is founded chiefly on their appearance in excessive quantity and in abnormal situation. The black of the human skin is always more or less mingled with yellow, giving rise to various shades of black, brown, and yellow, with an occasional variation in favour of green; the colour blue, which is occasionally met with, being the only tint which appears to be wanting as a normal pigment of the skin. In a tabular scheme we might arrange the chromatopathic affections as follows:—

GROUP XIV.—CHROMATOPATHIC AFFECTIONS.

MELASMA.

Fuscedo *seu* nigrities.
Chloasma (maculæ hepaticæ).
Ephelis.

XANTHOCHROIA.

Flavedo cutis.
Maculæ luteæ.
Lentigo.

CYANOCHROIA.

LEUCASMUS.

Achroma *seu* albinismus.

MELASMA, dermato-melasma, or melanoderma, is the name which we give to the darker shades of the skin, whether they be deeply black or a simple *fuscedo* or duskiness or swarthiness of hue. Occasionally the brown blended with yellow has a greenish tinge, as in the instance of *chloasma*, and sometimes the yellow is in excess, producing *xanthochroia;*

cyanochroia, or blueness of the skin, has been seen occasionally, though rarely; while the absence of colour, or achroma, *leucasmus* or *dermato-leucasmus*, is an exhaustion of pigment-formation, and is far from being uncommon.

Melasma has acquired a new interest of late years from its association with diseases of viscera supplied by the organic system of nerves, with diseases in which sanguification is impaired; as, for example, in disease of the capsulæ suprarenales, as pointed out by Addison; in affections of the solar system of nerves, resulting from shock, as observed by myself; and in affections of the uterine system, such as disordered menstruation, pregnancy, and organic disease of the uterus. Occasionally it is met with as a general swarthiness of the skin, *melasma universale*, but more commonly is partial, *melasma figuratum*. When the patches of the latter kind have a greenish or greenish-yellow tint they are denominated *chloasma*, and when they result from the stimulus of the sun's rays *ephelis*. Undue stimulus and exhaustion of power are active causes in the production of melasma, as in the instances of simple hyperæmia from the application of a blister or other irritant to the skin, the prolonged continuance of lepra, the exhibition of arsenic, and the presence of cachexia from whatever cause—for example, syphilitic, cancerous, or rheumatic.

Xanthochroia is the term applied to the yellow discolorations of the skin produced by pigmentary change. It is not uncommon to find on the legs below the knees a mottled discoloration of a bright reddish-yellow colour, consequent on a slight pre-existing hyperæmia; and in most instances the hyperæmia may be traced back to congestion of the capillaries from varicosity of veins. A more common manifestation of xanthochroia is met with in *lentigo* and *lentigines* or freckles, which, although

in general of a golden-yellow tint, are sometimes greenish, like chloasma, and sometimes also black, *lentigines nigræ*. Moreover there is reason to believe that these yellow discolorations are occasionally due to the deposit of fatty globules in the cells of the rete mucosum.

Cyanochroia, or blue discoloration of the skin, chiefly rests for its authority on a case recorded by Billard d'Angers. It was observed on the forehead, face, front of the neck, chest, and abdomen of a young girl; and he remarks that the little maiden who was the subject of the affection blushed blue instead of blushing red.

Leucasmus, dermato-leucasmus, or leucoderma, like melasma, may be more or less general or partial, the partial form being termed *leucasmus figuratus*. Leucasmus figuratus is a pathological loss of colour of the skin from arrest of pigment-formation, and is very commonly associated with a blanched and debilitated state of the derma. It is also very generally accompanied with melasma, the skin immediately bordering the white patches being more deeply pigmented than the remainder of the surface.

In those members of the human family with whom colour is highly developed, to the extent of becoming a characteristic of race, achroma is a somewhat common manifestation of disordered function of the skin. Leucasmus figuratus is far from being rare in tropical countries, as in Hindostan and South America, and is not unfrequently seen in the black skin of the negro. In volume xx. of the "Histoire Naturelle, Générale et Particulière" of Baron de Buffon, may be found certain communications made to that distinguished naturalist by M. Taverne, burgomaster and sub-delegate of Dunkirk in the year 1772. He says, "I send you, sir, a portrait which was found in an English prize, captured in the last war by the corsair *La Royale*,

in which I was interested. It is that of a little girl who was partly black and partly white. The hands and feet are entirely black; the head is the same, with the exception of the chin, including the lower lip and a part of the forehead; the front hair or wool is also white, and there is a black spot in the middle of the white blotch upon the forehead. All the remainder of the body, arms, legs, and thighs, is marked by black spots of various size, and upon the larger black spots are seen smaller ones of a blacker tint still. From the figure of the spots, the child may be likened to a dappled or piebald horse, and the black and the white are blended imperceptibly by a mulatto tint."

A few weeks later M. Taverne, writing to Buffon again, observes:—"The original of the portrait of the black-and-white infant was discovered on board *Le Chrétien*, of London, bound from New England to London; this ship was captured in 1746 by the vessel *Comte de Maurepas*, of Dunkirk, under the command of Captain François Meyne."

That original picture having lately come into my possession, I have the opportunity of exhibiting it here on the present occasion. I may remark upon the admirable painting of the work, and I especially call your attention to a scroll in the right-hand corner, on which is inscribed the following legend:—

"The true picture of Mary-Sabina, who was born Octr. 12, 1736, at Matuna, a plantation belonging to y^{e} Jesuits, in y^{e} City of Cartagena, in America, of two negroe slaves named Martiniano and Patrona."

But our little variegated damsel has a more recent rival in George Alexander Grattan, the spotted negro boy, exhibited for several years at country fairs by the celebrated Richardson. A portrait of the spotted negro boy, by Coventry, is hung in the vestry of the church of Great Marlow, in Buckinghamshire, where also may be seen a monument, with an inscription:—

"To the memory of George Alexander Grattan, the spotted negro boy, a native of the Caribbee Islands, in the West Indies, who departed this life February 3, 1813, aged 4 years and 9 months: this stone is erected by his only friend and guardian, Mr. John Richardson, of London."

The spotted negro boy was born of negro parents, on the plantation of Mr. Alexander, in the island of St. Vincent, about June, 1808, and was conveyed to London soon after, reaching Bristol in September, 1809; he was then fifteen months old, and was consigned to the "showman" for three years. His skin and woolly hair were particoloured, transparent brown and white. There were several figures of triangular shape, one within the other, on the head; and a broad band of white descended from the crown of his head over the forehead, nose, and lips to the chin, while the cheeks and the rest of the face were black. On the limbs the white predominated over the black, the latter presenting a large blotch over the scapula, another over the deltoid, one of considerable extent upon the forearm, a large patch around the knees and ankles, and scattered minor spots in the intermediate space and upon the back of the hands and fingers. He was well proportioned in figure, a bright and intelligent child; but, being attacked with swelling of his jaw, he shortly after died. It is recorded that, with a wholesome dread of the anatomists and "resurrection men," Mr. Richardson kept him in his house for three months before he allowed him to be interred.

LECTURE VI.

Aberrations affecting the Epithelium.

Group XV.—Epidermic Affections.

MR. PRESIDENT AND GENTLEMEN,

There is an aphorism of Cabanis which is well known to us all:—"*Pour connaître l'homme malade, il faut connaître l'homme sain.*" It is unnecessary for me to press the truth of this axiom in this place, and simply sufficient that I should point for its application to the subject at present under our examination—namely, *the diseases of the epithelium of the skin.* The epithelium of the skin, or, more exactly, the epidermis, offers for our consideration three principal features—its horny layer, the nails, which are a part of the horny layer, and the rete mucosum; and the diseases of this organ are comprised in two groups, the epidermic affections and the onychopathic or ungual affections. In a critical inquiry into the epidermic affections of the skin we should naturally cast an eye upon the rough and broken condition of the epidermis which accompanies dermatoxerasia, ichthyosis, sauriosis, lepra, vesiculæ, pustulæ, and desquamation in general. But there is only one morbid state of the epidermis at present known which deserves to be considered as a special affection of the epithelial tissue. That morbid state is an altered nutrition of the epidermis consequent on a low form of inflammation, and its marked operation on the epidermis is to bring about

an alteration of structure. In the normal state the epidermis is composed of cells, and the cells are composed of minute globular granules possessing a certain size and a certain consistency, and the destiny of these granules is to be converted into the horny element of the cuticle. But the altered nutrition of the epidermis already alluded to arrests the completion of this developmental process; the cells retain their albuminous character, they augment in bulk, they take on a proliferating action like that of mucus or pus; some retain their original figure, others grow into elongated shafts and throw off buds and branches; in a word, the elements of the epidermis have undergone degeneration from their normal animal type, and have fallen into a state which may be termed *granular degeneration*. If we examine the spot where the morbid transformation has taken place, the cuticle is no longer visible, it is gone; it is not pushed aside by the new formation, for then we should see its relics, but it is metamorphosed into the new formation.

However, the most interesting phenomenon of this process is that the epidermic granules in their new character so closely resemble in appearance and behaviour minute plants of the class of fungi, that the term *phyton* has been applied to them; the diseases in question have been termed *nosophyta*, and the botanists who claim these granular elements as real plants have assigned to them a place in their classification, and have given to them a variety of names; for example, one is termed *achorion*, another *microsporon*, and a third, *trichophyton*. The believers in this vegetable doctrine admit of no question as to the vegetable nature of the degeneration just referred to; they go the length of calling the diseases in which they are found "*parasitic diseases*," and accredit the diseases with an origin, not in the individual affected, but in the external world. With them the granules are spores or seeds, and these

spores floating in the atmosphere and attaching themselves to the skin of man are the presumed cause of the diseases to which they belong, while the disease itself, upon the same reasoning, is the simple vegetation of the so-called plant.

That the granular degeneration of the epidermis assumes the appearance of a plant-like or phytiform growth, and in this respect puts on a pathological form different from other diseases of the skin, there can be no question; and, in conformity with this idea, I have assigned to the group of diseases included under this head the generic term *phytosis*. And the members of the genus phytosis are—*phytosis tonsurans*, or common ringworm; *phytosis favosa*, or favus; *phytosis circinata*, a ringworm of the hairless skin, and *phytosis versicolor*. These diseases are consequently four in number, while the number of fungi declared to be distinct are only three—the trichophyton or hairplant, so named from being found in the shaft of the hair as well as in the epithelium of the follicles, is the pathological cause of phytosis tonsurans and circinata; the achorion is the fungus of phytosis favosa, and the microsporon of phytosis versicolor, the pityriasis versicolor of Willan.

In a tabular form the phytiform diseases of the epidermis may be arranged as follows:—

Phytosis *seu* tinea tonsurans.
„ „ „ circinata.
„ favosa *seu* favus.
„ versicolor.

These affections all agree in the two conditions to which I alluded on opening the subject; in all there is inflammation of the derma; in all there is perverted nutrition and alteration of the epidermis; but beyond these two conditions a strict analogy is

wanting between them. Phytosis or tinea tonsurans is contagious among children, but is not communicable to the adult, or if it appear in the adult it would show itself in the form of phytosis circinata. But phytosis versicolor is not contagious under any circumstances whatever. The sensitive organisms of children assembled together in schools and under bad hygienic conditions, are known to be active in taking up a variety of morbid states with which they are brought in contact. Hence, contagion among children is no proof that the agent of contagion is a sporule or a seed, or that the disease itself is the mere propagation of a mouldy condition of one individual to the integument of another. Again, the principle of therapeutics which is directed against this supposed parasitic disease, is of the most barbarous character; where the trichophyton is concerned, the whole of the hairs of the affected part, and for some distance around, are to be plucked out; and, when this barbarous act has been completed, the denuded surface is to be saturated with a solution of corrosive sublimate: the remedy, and corresponding remedies, *pro hâc vice*, being designated by the name of "parasiticides."

We have pretty clear evidence that the morbid alteration of the epidermis now described begins in the epithelium of the follicles, and extends by degrees into the adjacent rete mucosum; and it is to be presumed that a similar morbid change may be met with occasionally in other forms of disease in which the follicles are especially concerned. This presumption has been verified by the discovery of a similar phytiform metamorphosis of the epithelium of the follicles in some cases of sycosis; and more recently in that remarkable form of lichen, which has been denominated eczema marginatum, or lichen marginatus, and is popularly known as the Burmese or Indian ringworm.

Group XVI.—Onychopathic Affections.

Onychopathia, or disease of the nails, brings under our notice disorder of nutrition affecting the structure of the nails, and diseases of the skin and soft parts immediately related to the nail, together with errors of development. In a tabular plan they might be arranged as follows :—

1. *Diseases of the Nail.*

Flores unguium (mendacia).	Mollities unguium.
Selene unguis.	Fissura unguium.
Lapsus unguis.	Ungues fibrosi.
Alopecia ungualis.	Onychogryphosis.
Scabrities unguium (defœdatio, degeneratio).	Eczema unguium.
Tinea unguium.	Lepra unguium.
	Phytosis unguium.

2. *Diseases of Appurtenances.*

Pterygium unguium.
Agnails.
Ficus unguium.

Onychia..... { Idiopathic. Strumous. Syphilitic.

3. *Errors of Development.*

Arctura unguis.	Unguis bifidus.
Ungues adunci.	Ungues spurii.

The colour of nails is sometimes abnormal. They vary in hue and in transparency; sometimes they are dotted over with small white opaque spots, which are termed *flores unguium* and *mendacia*, while the general appearance of the nail when the spots are numerous or diffused, is designated *selene unguis;* and at other times circular spots of a yellow

horn-like colour are perceptible on the matrix of the nail, as we find to be the case in lepra unguium.

Defective nutrition of the nail is evinced by the occurrence of loss of the nail, or *lapsus unguis;* while the permanent absence of the nail has been termed *alopecia ungualis.*

During illnesses affecting the nutrition of the general system, there is often a suspension of growth of the nail, but more frequently a deficiency of growth. Hence we find the nail traversed by grooves corresponding in depth and breadth with the severity and continuance of the predisposing illness. Roughness of the surface of the nail from irregular growth has received the names of *scabrities unguium, degeneratio unguium, defœdatio unguium,* and, where the nail has the appearance of being eroded, of *tinea unguium.* From the same cause the nails are sometimes softer than natural, *mollities unguium;* sometimes they crack longitudinally, *fissura unguium;* and occasionally they have the appearance of being fibrous in their structure, *ungues fibrosi.* Certain differences also result from the seat of operation of the morbid process. Thus, where the posterior wall of the nail is chiefly concerned, the surface of the nail principally suffers; but where the morbid action is present in the matrix, an accumulation of crude epithelial substance is apt to take place, which separates the nail from its bed more or less completely, and raises the extremity of the nail, causing it to curve upwards in an oblique and sometimes almost vertical position; hence the term *onychogryphosis.* The nutrition of the nails is often interrupted in cases of eczema of the fingers, *eczema unguium,* and they are left rough and deformed; and the nails are frequently partially separated from their matrix by an opaque and crumbling mass of epithelial substance (onychogryphosis) in lepra, *lepra unguium,* and by phytiform substance in *phytosis unguium.*

The cuticle of the posterior wall of the nail is sometimes carried forwards on the surface of the nail, giving rise to an appearance which has received the name of *pterygium unguis*. At other times the margin of cuticle of the posterior wall splits into shreds, and the shreds, leading on to fissure of the derma, are often the cause of considerable pain; these are the so-called *agnails*. And, again, the posterior wall of the nail is sometimes inflamed and infiltrated, and at the same time everted, and in that manner forms a prominent ridge, which has been termed *ficus unguis*, "ficus" being a common appellation of the Latins for a growth of any kind, and in that sense compared to a *fig*, as in the instance of the tubercular growths accompanying sycosis.

Onychia is an inflammation of the matrix and walls of the nail, attended with suppuration and fungous granulations, and generally followed by the loss of the nail. It is sometimes *idiopathic*, proceeding from external injury, but is occasioned most frequently by scrofulous disease or by syphilis.

Deformity of the nails dependent on faulty development sometimes results from their contraction longitudinally, *arctura unguis;* and at other times they are curved at the tip, *ungues adunci*, as in the clubbed finger of the consumptive. Occasionally they are *supernumerary*, as in cases where a tendency exists to the bifurcation of a phalanx, *unguis bifidus;* and at other times they are found at the extremity of an amputated stump, whether of a finger or of a limb, *ungues spurii*.

It is rare that the nails manifest a complete suspension of growth; but their excessive growth as a consequence of neglect is by no means unusual. To this head we must refer those extraordinary specimens of lengthened and twisted nails which are so numerously preserved in our museums, and which are procured from bedridden persons.

Aberrations affecting the Hair.

Group XVII.—Trichopathic Affections.

Trichopathic Affections—that is to say, diseases of the hair and hair-follicles—constitute a large and important group, in reference to which the physiological phenomena of the hair have to be considered, and their divergence from the normal standard separately distinguished. Thus we may find:—

a. Errors of quantity.
b. Errors of colour.
c. Errors of direction.
d. Errors of structure.
e. Disease of follicles.

And we may arrange in a tabular form the diseases of the hair proper as follows:—

a. Errors of Quantity.

Trichosis *seu* hirsuties.
Spili *seu* nævi pilosi.
Trichorrhœa *seu* defluvium.
Madesis.
Alopecia *seu* madarotes.
Phalacrotes *seu* calvities.

b. Errors of Colour.

Trichodyschroia.
Poliothrix *seu* canities.

c. Errors of Direction.

Trichiasis.

d. Errors of Structure.

Trichatrophia.
Trichoclasia *seu* fragilitas.
Phytosis tonsurans *seu* tinea.
Trichosyphilosis.
Trichopathia plica.

In reference to *quantity*, the hair may be in excess, and the *trichosis* or hirsuties or hairiness, may be general or partial. Cases are on record of marvellous shocks of hair, of hairy men, and of the occurrence of hair in patches of different size, and dispersed more or less numerously over the surface of the body. In smaller quantity, and in the shape of tufts growing from a base of hypertrophic skin, a partial trichosis is manifested by *spili* or hairy moles.

On the other hand, the hair may be diminished in quantity, and may be presented to our observation as a *trichorrhœa* or defluvium capillorum, a simple fall of the hair; as a *madesis*, or coming baldness; as an *alopecia* or *madarotes*, a confirmed but incomplete baldness; or as an utter baldness—namely, *phalacrotes* or *calvities*. The ancients are profuse in terms applicable to the varying stages of loss of hair; hence we may infer, as would seem to be the fact, that they bestowed considerable attention on the subject, and they have left us a long series of names, each representing a stage in the progressive change; for example, there is trichorrhœa, followed by madesis and madarotes or alopecia, and beyond alopecia we come upon phalacrotes.

The term alopecia is derived from αλωπηξ, a fox, and would seem to be intended to represent a kind of baldness with scattered hairs, which we meet with in animals suffering under the mange; for instance, the canine genus, of which the fox is an example. And, in practice, we distinguish two

varieties of alopecia—for instance, *alopecia vulgaris* or common baldness, and *alopecia areata*, or baldness in circular patches varying in number and size. Alopecia vulgaris is in general a failing of age, but alopecia areata may occur at every period of life, and is the consequence of an arrest of nutrition from exhaustion of nerve-power.

Disorders of *colour* of the hair are represented by alteration or variation of the natural pigment of the hair and by absence of colour or whiteness of the hair. Hence we are provided with the terms *trichodyschroia*, or discoloration of the hair, and *poliothrix* or *canities*, that is, greyness or hoariness of the hair, leading onwards to the silvery white of age. Numerous cases are on record of a complete change of colour of the hair during illness, and it is also recorded that in a very old person who had been for some time bald, the hair grew again, but with the colour of youth instead of that of age. I am enabled to show you a lock of hair, once of an average brown colour, which has been changed to a deep black in association with the melasmic bronzing of the skin of Addison's disease. It was presented to me by Dr. Greenhow, under whose care the patient was treated. Another very extraordinary example of trichodyschroia exhibits an alternation of white and brown bars from one end to the other of the hair. A specimen of this kind of *banded* or *ringed* hair is preserved in the Museum of St. Bartholomew's Hospital. I now show you a lock of hair of a similar kind that I obtained from a patient of my own. There is reason to believe that these bands or rings of colour represent the alternations of day and night, the brown disk being produced during the day and the white during the night; the white and the brown taken together representing a period of twenty-four hours. A careful examination of this hair discovered that there was no real absence of pigment in the white disk, but

simply an excessive accumulation of minute air-globules by which the pigment of the hair was concealed. It is, therefore, to be concluded that, with a certain irritable condition of the nervous system, air-globules may be generated in the hair in a brief space of time, and that in this fact we have an explanation of the sudden blanching of the hair, such as we read of frequently, and of which one striking example has fallen to my own share to observe. In *poliothrix*, or true canities, there is an absence of pigment, and, with this absence, either a deposit within the cells of the hair of a white calcareous matter or a horny transformation of the fibres of the hair, or both of these conditions at the same time.

Altered direction of the hair is distinguished by the term *trichiasis*, which is applied to the eyelashes when, from misdirection, they rub against the conjunctiva and excite inflammation; and also to the hairs of the head, when from neglect, as in long illnesses, they become inextricably intermingled and entwined, and form masses which it is impossible to unravel. The former of these kinds of misdirected hair is termed *trichiasis ciliorum*, also *phalangosis;* the latter, *trichiasis coacta*. The entanglement of the hair in plica polonica is doubtless in some degree due to the same process as that which gives rise to trichiasis coacta.

In reference to *diseases of structure* of the hair, it may be premised, that the hair, as an organ, and in its relations to the vital powers of the individual, differs in no respect from other appurtenances of the economy. It may be fully nourished, or partially nourished, or not nourished at all; it may be perfectly or imperfectly elaborated; and it will be found to participate very closely in sympathy with the rest of the organism. In alopecia areata there is an arrest of nutrition of the hair as well as of the skin. In the centre of the patch the hair ceases to be pro-

duced, while the skin falls into a state of partial atrophy; but in the circumference of the patch there may generally be discovered a few short stumps which are club-shaped in figure, broad at the end, where they possess the diameter of the normal hair, and where they are broken off, and then becoming finer and finer as they approach the follicle and sink into its cavity; this is *trichatrophia*. It is clear from such an observation that the hair had become altered in structure, soft, and brittle, before atrophy had set in; then that atrophy of the bulb had been the cause of the attenuation of the hair to the finest possible thread. I may mention another example to illustrate the changes of texture, that is, of structure, which are sometimes met with in the hair. If you pass through the fingers hair of a perfectly healthy kind, it communicates to the touch the sense of pliancy, of softness, of silkiness; but if you treat the apparently unaffected hair in a case of ringworm in a similar manner, you will find it stiff, and harsh, and wiry, like the hair of a Skye terrier; and similar differences may be noted on different parts of the same head. And, moreover, you will remember, that on the morbid parts of the skin, in that disease the hair has either broken off close to the scalp from sheer brittleness, or it may have been laid flat with the skin, like a wheat crop battered down by a summer thunderstorm. To those who have given attention to the subject, there is scarcely anything in physiology more remarkable and interesting than the differences in the texture of the hair dependent on its healthy or on its unhealthy condition.

It is no very uncommon thing to meet with cases in which, from imperfect nutrition, imperfect assimilation, and imperfect elaboration of the thicker hairs of the beard, their texture is so far altered that they break through with the simple manipulation which is necessary to keep them in trim. Sometimes they break through completely, but at other times the

break is only partial; the cuticle cracks, together with the outer layer of the fibrous portion, but the central fibres retain their integrity, and hold the ends together. Seen with the lens, the break has the appearance of two brushes brought in contact end to end, while with the naked eye the breaks have the semblance of white specks. There may be many such breaks on a single shaft, and then the general appearance will be that of particles of scurf scattered through the hair; and, in fact, it is this appearance which first of all attracts the attention of the patient. I was made acquainted with this affection originally by receiving from an unknown correspondent, a medical man, a specimen of hair of this kind, which he termed *jointed*. I have since seen the affection many times, and have given to it the name of *trichoclasis* or *trichoclasia*, κλασις, being "a breaking;" or in the Latin we may term it *fragilitas crinium;* and it has also been described and figured by Dr. Beigel.

Ringworm, or *tinea tonsurans*, or *phytosis tonsurans*, affords a peculiarly interesting example of altered structure and texture of the hair. The morbid hair is brittle, and breaks off close to the scalp, suggesting the idea of being eaten away, like the hair of a lady's muff, by the grub of the tinea moth. But, sometimes, instead of breaking off, it is thrown prostrate on the surface, and becomes a part of the crust which covers the diseased spot; moreover, besides loss of texture and structure, there is also loss of colour, and the hair has the character of *tow* rather than that which belongs to it properly. Ringworm is to be referred to the group of diseases of the epidermis and its dependencies, seeing that it consists in a degeneration of the elementary components of that tissue; in a *granular degeneration*, as I have termed it, and, in consideration of its phytiform appearance, a *phytiform degeneration;* or, according to those with whose opinions I do not

agree, in a real fungus plant, to which the term trichophyton has been assigned. According to the same believers, ringworm is a parasitic disease, and its transference from one individual to another a mere matter of the conveyance of a seed, and the germination of that seed in a favourable soil. When a diseased hair is examined with the microscope, the morbid granular texture is very visible, and to these granules the term "spores" has been applied.

Besides exhaustion of nutrition, such as we meet with in the clubbed and atrophied hairs of alopecia areata; besides the imperfectly elaborated and brittle hair of trichoclasia; and besides the incompletely developed hair of phytosis or tinea, hair retaining its incomplete or rudimentary condition and obeying the laws of that rudimentary state; besides this successive series of alteration of structure of the hair, there is yet another, of equal, and possibly of greater, interest—namely, one which is due to syphilis, and is a manifestation in the hair of the syphilitic dyscrasia such as it exists in other tissues of the body. In *trichosyphilosis*, as this state of the hair may be properly termed, the shaft of the hair is swollen from point to point; the swollen portions are dark-coloured, or even black; they dry up when exposed to the atmosphere, and either split longitudinally or break off transversely; and the microscope brought to bear upon these points shows that the structure of the part is altered; it is no longer fibrous, but is composed of cells like the medulla crinis, or like the original pulp. All that exists of the fibrous portion of the hair is to be met with as a thin layer at the surface; and the enlargement presents all the characters of a tumour, and consequently of a syphiloma of the hair.

The TRICHOPATHIA PLICA, or plica polonica, is not a disease of this country, but appears to consist of an alteration of structure of the hair, the exudation of a copious discharge from the scalp, and the matting

of the hair into a shapeless mass. In the museum there exist no less than three specimens of this singular affection, one of which was presented to the College by one of our Fellows, Mr. de Meric.

DISEASE OF THE FOLLICLES OF THE HAIR.

Next to the hair itself we have to consider such morbid changes as are referable to the follicle in which the hair is implanted. In one series of instances this change is a mere loss of tone, of contractile power of the follicle, and the contents of the follicle—that is, the exuviæ of its epithelium, together with the sebaceous substance poured into it at its neck, are *retained* instead of being expelled. In another series, the pathological process is *developmental*, consisting in the development and growth of imperfect and incomplete follicles under the influence of an abnormal stimulus, and producing what may be termed spurious follicles. Then the morbid process may be in its nature *nutritive*, affecting the epithelium of the follicles; and, fourthly, there may be inflammation of the follicles, in which the interfollicular tissues more or less participate. In a tabular form we may arrange the affections of the hair-follicles as follows :—

e. Disease of Follicles.

Comedo.	Phytosis favosa *seu* favus.
Tumores folliculares.	Folliculitis.
Cornua setosa.	Xerasia capitis.
Cornua sebacea.	Acne.
Tubercula miliaria.	Gutta rosea.
Tumores cystici.	Sycosis.
Papulæ corneæ.	Kerion.
Epithelioma.	

Retention.—Of retention of the proper excreta of the follicle tending to accumulation we have a familiar example in the *comedo* or grub, so commonly seen on the face, and so frequently associated with acne—in fact, giving a subjective denomination to one of the forms of the latter—namely, acne punctata. The most careless examination of the affection is sufficient to inform us that the epidermic and sebaceous substance constituting the chief bulk of the comedo, is one while soft and white and capable of being fashioned into a cylindrical mould by expression through the mouth of the follicle, and another while hard and yellowish and more or less globular, in fact, partially converted into horn by desiccation and long detention. This fact is important to the future development of our subject, inasmuch as it affords an illustration of the changes which the sebaceous excreta are capable of undergoing by simple inspissation, pressure, and desiccation, and confirms the analogy subsisting between sebaceous substance and horn. When the comedo is soft, it is very commonly the habitat of a minute animalcule, elaborately described by Gustav Simon, in 1842, under the name of *acarus folliculorum*, and afterwards by myself, in the same year, in continuation of the researches of Simon, as the *entozoon folliculorum* and *steatozoon folliculorum;* while to these appellations another name was contributed by Owen, in his lectures delivered in this College, in the spring of 1843—namely, *demodex folliculorum*. The number of these animalcules found in each follicle ranges between one or two and ten or twelve, or perhaps more; they are met with most commonly near the outlet of the follicle, with their heads directed inwards. They feed an the sebaceous substance; they deposit therein their ova, and the ova pass through a succession of transformations before the perfect development of the animalcule is attained. The origin of the animalcules is still a mystery.

They occur in quadrupeds as well as in man; they create no irritation; indeed, from their position, they can hardly come in contact with the lining of the follicle; and their purpose in creation would seem, in fact, to be the appropriation of the waste sebaceous substance, which otherwise might become a source of inconvenience and disease.*

The examination of the contents of comedones affords evidence of a resistance existing at the neck of the follicle which is absent at a greater depth, and consequently of the presence of a structure which will favour the accumulation of sebaceous matter within the follicles when the coats of the follicles are insufficient in power to expel their contents. In this physiological preamble we have the key to the explanation of the accumulation of sebaceous substance and epithelial exuviæ within the follicles. It is obvious that, as soon as the tube of the follicle is dilated to a breadth exceeding that of the mouth of the follicle, the impediment to the expulsion of the sebaceous substance will be increased, and will go on increasing in proportion to that of the mass of the accumulation. It is in this way that are produced *follicular tumours*, tumours which may vary in size from that of a millet-seed to that of the segment of a large orange. Originally they are a simple dilatation of the follicle from accumulation of sebaceous substance and the epithelial exuviæ of its inner wall. The follicle grows with its contents, and becomes hypertrophic. At a later period, the accumulation owes its increase to the epithelium rather than to the sebiparous gland, and the latter is very probably obliterated by the progress of growth and the continuance of pressure. Sometimes the aperture of the follicle is more or less dilated by the accumulation within; at other times it undergoes no perceptible change; but it may always be discovered

* Hebra informs me that the steatozoon was discovered by Henle in 1841 in the ceruminous glands.

by close examination, for it is never completely obliterated.

It may be worth while to retrace our steps a little, to assure ourselves of two points in connection with torpid follicles and their contents. The first of these is, that the contents themselves are twofold—namely, exuviated epithelium and sebaceous substance. The second is, that these contents may be soft and compressible, or they may be firm and hard and resemble horn. No doubt they will present modifications in different parts of the body; there may be a larger proportion of epithelial exuviæ in one place, and a larger proportion of sebaceous matter in another; but with this at present we have nothing to do. I simply wish to draw attention to the fact that the excreta of the follicles may, under certain circumstances, become dried up and hardened, and converted into dense horny cylinders, which one while resemble *horny spines*, or bristles, issuing from the pores of the skin, and another while *isolated horns*, which are small or large in harmony with the size of the aperture through which they are extruded, and the quantity of the inspissated contents. Within the cavity of the follicle the excreta may be sufficiently soft to admit of extrusion; the extruded portion desiccates and hardens, fresh matter is extruded successively and gradually, and in this manner the so-called *human horns* may be produced; and these horns are sometimes of considerable circumference and considerable length. There is one other way besides by which horns are developed, and is that which is usually in operation in the growth of the larger horns. The integument covering the follicular tumour is attenuated by continued distension from within, and is at the same time liable to be inflamed by exterior irritation; ulceration follows as a natural consequence, and then the contents of the tumour find a sudden exit and harden into a mass often of extraordinary size.

Development.—Our next investigation carries us back to the history of the development of the follicles. They begin by the aggregation of small masses of cells in relation with the rete mucosum, and these little masses grow inwards, pressing the derma before them and pushing its tissues aside, until they occupy their proper place in the substance of the corium. But this process is not restricted to the embryo or to the fœtus alone. It may be continued in infancy and youth, and it may be manifested at almost any period of life under the impulse of what I may term a developmental stimulus. When this developmental stimulus is present, as it is sometimes found to exist in young persons, and particularly on the face, a number of white pearl-like grains are seen in the skin—grains which have been compared to the millet *tubercula miliaria*, or to small seed-pearls, pearly tubercles. These little masses generally retain for a permanence their globular figure, they have no excretory aperture, and physiologically must be regarded as aborted follicles, folliculi spurii. In other situations, and especially on the scalp, they may grow into sacculi of considerable size; and these hypertrophic follicles, becoming distended by degrees with epithelial exuviæ and sebaceous substance mingled with hairs, are the *encysted tumours* with which we are familiar, the difference of their contents depending chiefly upon decomposing changes in the contained substance.

Nutrition.—Altered secretion of the follicles may best be considered with the group of steatopathic affections; but under the head of altered nutrition of the epithelium we have brought under our observation simple hypertrophy of the epidermis, and metamorphosis of the epithelium of the lining of the follicle. It sometimes happens that the little horny plug of epidermis which occupies the mouth of the follicle manifests an increase of growth, without any apparent change in the surrounding parts. I have

described this epidermic hypertrophy as giving rise to a papula larger than that of lichen, hemispherical in figure, yellowish, smooth, and transparent, and perforated in the centre by the aperture of the pore. The papulæ are distinctly horny, *papulæ corneæ*, *papulæ epidermidis*, and may be compared to minute corns, more especially when they occur upon parts covered by a thick epidermis, such as the palm of the hands, where they present the same relation to the pores of the sudatory ducts that, in other situations, they do to the hair-follicles. In one case I saw the forearms covered with some hundreds of these horny papulæ, without redness or any sign whatever of disturbance of the circulation of the skin; and they are besides, one of the consequences of the abuse of arsenic.

Another modification of nutrition taking its origin at the neck of the follicle, and possibly in close relation with the excretory duct of the sebiparous gland, is that more grave metamorphosis of the epithelium, or that tendency to development in excess of cells related in structure to epithelium, which is termed *epithelioma*. These cells increase in size by a slow process of proliferation, and give rise to round transparent tubercles, small at first, but gradually growing at the circumference, and crossed here and there by a scanty network of minute blood-vessels. Then the tubercles soften in the centre, and the softened matter dries into a thin scab, around the circumference of which the transparent hyaline-looking and rounded border of the epithelial formation is very perceptible. The subsequent progress of these tubercles transfers them to the group of carcinomatous affections, in relation with which they have been already mentioned.

Phytosis favosa, or simply, favus, is a phytiform degeneration of the epidermis, beginning in the epithelium of the follicle, and spreading for a short distance into the neighbouring rete mucosum. Sometimes the

disease attacks isolated follicles; at other times one or several clusters are formed, and spread by degrees to the greater part or to the whole of the head. In the case of a single follicle, the morbid matter forms a shallow cup, bordered by a prominent lip, and pierced in the centre by the hair issuing from the follicle; and in a cluster, where the cups are confluent, the concavities of the surface suggest the idea which has given origin to the name of the affection—namely, "honeycomb." The matter of favus is yellow in colour, whitening with age, and its quantity varies in amount. The disease is rare in this country, and still more rare in its attack upon the naked portions of the body. On the Continent of Europe and in America it is more common; and sometimes it spreads over the body and limbs more or less extensively. It was in favus that the phytiform character of the mass was originally discovered; and Gruby, its discoverer, was the first to treat of it as a fungus plant.

To the physiologist and to the pathologist all things appertaining to the organization are great, and small beginnings are known to be the source of the most stupendous results. The dermatologist will regard the minute hair-follicle of the skin with a sentiment akin to affection when he calls to mind its origin, its development, its growth, its structure, its dependencies, and, not a whit less, its diseases. The follicle is an organized individuality, with vessels, nerves, and tissues, and, like other parts, is subject to inflammation, which, for want of a better word, we may term folliculitis. The inflammation and hyperæmia of a single follicle may be a pigmy consideration in itself; but when those conditions are present in great number, and occupy a considerable extent, the case is generally troublesome, and sometimes very serious. Folliculitis is frequently chronic, but occasionally acute. As a chronic affection we meet with it on the face of young persons in the

form of a punctated rash, *folliculitis punctata*, and our patients are apt to speak of it as a rash under the skin; at other times it is seen on the back of the shoulders and arms, on the forehead, and especially in the eyebrows; there it occurs as an eruption of minute papulæ, each papula being the summit of a follicle loaded with epithelial exuviæ, and having a reddened base. Where the follicles of the eyebrows are attacked, the hairs are ejected, and cease to be produced, and this is especially the case in chronic folliculitis of the scalp, which is attended with itching, with desquamation, with dryness of skin, and loss of hair, constituting the form of affection which received from the ancients the name of *xerasia*, that is to say *xerasia capitis*.

Acne, or more correctly *acme* or *acmai*, is a folliculitis having relation to the augmented function of the hair-follicles which takes place at puberty. That the ancients were aware of the physiological signification of this disease seems apparent, from their use of the word ακμη, flos ætatis, the opening blossom of life, and also of that other word, a synonym of acne —namely, ιονθος, signifying the root of the hair. When the individual is strong, the function progresses without any sign of the physiological change; but where there is any feebleness of power, either in the individual or in the skin, a deformity or *varus* results, which is known by the name of acne. Sometimes the feebleness of vitality leads to nothing beyond a loss of power of expelling the contents of the follicle, and the impacted material appears at the aperture of a dilated and distended follicle in the shape of a round black point, forming the summit of a prominent elevation or pimple; this is *acne punctata*. At other times the impacted matter acts as an irritant and occasions inflammation of the follicle; the tissues immediately around the follicle become congested and infiltrated, and a conical pimple is produced, which becomes pustulous at the summit,

and is perforated by the duct of the follicle; this is *acne coniformis*. When a small cluster of adjacent follicles is inflamed, or when hyperæmia and infiltration extend further into the surrounding skin, so as to produce a tubercular prominence in lieu of a papula, the case is termed *acne tuberculosa;* and when the tubercle is still more infiltrated, and hard to the touch, forming sometimes an indolent chronic mass, and at other times issuing in a cutaneous abscess, the case is transformed into *acne indurata*.

GUTTA ROSEA, the rosy spot, is another form of folliculitis, taking its origin in a different cause, making its appearance upon the face, frequently on the nose exclusively, and occurring at the adult period of life, and most commonly in the female sex. At its first appearance it may be recognised as a simple punctum, resulting from hyperæmia of the follicle, and with or without surrounding erythema; next it shows itself as a papule, sometimes small and sometimes large, of a dull crimson or roseate hue, and presenting some variety bearing upon its inflammatory activity. Sometimes it is chiefly *erythematous*, an inflamed blotch studded with puncta or minute papulæ. Sometimes the *papulous* character is more decided; sometimes it is *pustulous*, the summit of the larger papules being occupied with pus; and sometimes it is *tuberculous*, and the tubercles are one while indolent and purple or livid in colour, and another while they become indolent abscesses. Gutta rosea has heretofore been confounded with acne, under the name of acne rosacea, and the physiognomy of the disease is made familiar to our mind by the words of Shakspeare, when he tells us with regard to Falstaff that—

"His face is all bubukles and whelks and knobs, and flames of fire."

And, in a few words, the rosy spot may be said to be a protest of the fifth pair of nerves against ill-

treatment received by the gastric portion of the eighth.

In the same category of folliculitis originating in irritant causes, whether internal or external, are to be placed the papulo-pustular eruptions which are associated with the use of iodide of potassium, bromide of potassium, and tar, the latter being the tar-acne of Hebra.

Sycosis is another example of inflammation of follicles attended with hyperæmia and infiltration of the surrounding tissues, and suppuration. It is generally confined to the hair-follicles of the face, but sometimes creeps up upon the temples into the scalp. On the face, it is most common on the chin, hence its synonym, *mentagra;* next, in the region of the whiskers and upper lip, and then in the eyebrows. Like other forms of disease of the follicles, the morbid follicles are sometimes isolated; sometimes they are united by an inflamed and thickened base; and sometimes they are confluent and constitute irregular masses and tubercles or granular protuberances, which have suggested the term συκον or ficus, a favourite appellation among the ancients for any prominence or growth of the skin. In its isolated form, sycosis is a conical papule, pustular at its summit, and pierced by a hair. Sometimes, in fact, it is simple and trivial, yielding easily to treatment; at other times it is chronic and obstinate; and a third form is recognized, which partakes of the character of lupus erythematosus, and, when it disappears, leaves behind it a fibrous cicatrix where no ulceration had previously existed. It is evident, therefore, that sycosis presents several varieties and degrees of disease, and among them has been observed the phytiform transformation of the epithelium which is consequent upon deranged development and nutrition of that tissue.

I may call to your mind that the hair-follicles and the hairs are the chief seat of the phytiform degene-

ration of the epithelium, as we have seen in phytosis tonsurans, in phytosis circinata, in phytosis favosa, in phytosis versicolor, in the annulate eruption termed eczema marginatum or lichen marginatus, and as we now see to be the case in sycosis; these, in fact, are the parasitic diseases of some authors—the diseases in which the so-called vegetable fungi termed trichophyton, microsporon, and achorion are found, the fungus of sycosis being the trichophyton, which occurs also in phytosis or tinea tonsurans, in favus, and in tinea circinata.

KERION is another term, which, like favus, takes its origin from the honeycomb, and is, in fact, the Greek synonym of favus, although applied to a totally different disease. For while favus must be regarded as a disease of abnormal development and nutrition, kerion is a true inflammation of the hair-follicles, accompanied with suppuration and elimination of the hairs. It is sometimes dispersed among separate follicles, *kerion dispersum*, but more frequently attacks a circular patch, *kerion confertum;* in the latter case the diseased plot is raised by tumefaction into a hemispheroidal prominence, and this prominence is studded all over with the dilated apertures of follicles, which give issue to a considerable quantity of fluid, sometimes transparent and glairy, at other times semi-purulent. Kerion is a much more common affection than favus, but, like favus, is limited to the juvenile period of life.

ABERRATIONS AFFECTING THE SECRETING ORGANS.

GROUP XVIII.—STEATOPATHIC AFFECTIONS.

STEATOPATHIC AFFECTIONS.—The distinction of trichopathic affections and steatopathic affections involves the separate idea of the hair-follicle and of the sebiparous gland; trichopathic affections including pathological states of the hair-follicle as well as of the hair, and steatopathic affections being limited,

as far as may be practicable, to the sebiparous gland itself and its secreted product. Steatopathic affections, therefore, may be divided into two chief groups—namely, diseases of *function* and diseases of *structure*. Under the head of diseases of function, we shall take under our consideration the unhealthy conditions of the secretion, and its abnormal distribution on the surface of the skin; and we may tabulate these affections as follows:—

a. Diseases of Function.

Steatorrhœa simplex.
,, flavescens.
,, nigricans.
,, cærulea.
Asteatodes.

b. Diseases of Structure.

Hypertrophia glandularum.
Tuberculum adenosum.

There can be no doubt that the sebaceous secretion is subject to variations in composition, the essential variations being the plus or the minus of fluid and solid matter, the former consisting of water and oil, the latter of cell-tissue and pigment. When the fluid matter—and especially the oil—is predominant, and the secretion is produced actively, we have before us an affection which is termed *steatorrhœa* simplex or oleosa. The diffluent secretion is poured out upon the skin in excess, and the skin consequently is greasy and foul. Such a state of disorder is sometimes met with on the face, and sometimes upon the scalp. The secretion is apt to inspissate and concrete, and then, especially on the scalp, there may be produced a discoloured adhesive stratum of considerable extent.

The steatopathic affection is sometimes remarkable for alteration of colour of the secretion—a state which may be termed *chromosteatodes;* and the secretion is one while yellow *steatorrhœa flavescens*, another while black, from excess of pigment matter *steatorrhœa nigricans*, and in some rare instances has been observed to be blue *steatorrhœa cærulea.*

On the other hand, instead of steatorrhœa, there may be present a state of *asteatodes* or deficiency of sebaceous secretion, and, with that deficiency, a reduced proportion of the fluid element of the sebaceous substance. In this instance, dryness of the skin is the predominant symptom of the affection, and this dry and parched state of the skin we meet with not unfrequently in association with chronic folliculitis. On the scalp, this dry and parched condition of the skin is termed *xerasia capitis*, and is associated with degeneration and loss of the hair.

The sebiparous glands, like other organs of the body, are subject to variations of nutrition, sometimes tending in the direction of hypertrophy and sometimes in that of atrophy. Occasionally an appearance of *hypertrophy of the glands* is produced by want of nutrition and consequent attenuation of the rest of the skin; the glands are thereby rendered prominent, and the whiteness of their contents occasions them to be strikingly visible. We not unfrequently meet with examples of this kind in the badly-nourished skin of delicate females. The anatomical arrangement of the glands is as evident as if the skin were transparent. Sometimes they are grouped in irregular lines, and sometimes they form an almost solid stratum, with a seeming absence of interglandular tissue.

But there is another form of hypertrophy of the sebiparous gland, which raises it up to the height of a small currant, and gives rise to a little mass that is not unlike a currant in shape. The most cursory examination of the prominence shows that it is an

enlarged sebiparous gland covered by a layer of stretched and attenuated skin; the lobes of the gland are distinctly apparent, distended by their cellular contents. The little tumour is depressed at the summit, where it presents a kind of hilum, the aperture of the follicle being filled with dry exuvial matter; and the protrusion of the gland is often so complete that the tumour is apt to be constricted at the base, and is, as it were, sessile and sometimes slightly pedunculated. The appearance of the semi-pedunculate tumour has suggested a comparison with the soft pendulous tumours of the skin termed molluscum, and the sebiparous tumour has also been named molluscum, and, from a suspected contagious proclivity of the disease, *molluscum contagiosum*. I prefer, however, to term it *tuberculum adenosum*, or, if the unscientific word "molluscum" be insisted on, then *molluscum adenosum*. The contagious nature of the disorder, although not improbable, must be considered for the present as *sub judice*.

Group XIX.—Idrotopathic Affections.

Idrotopathic affections are the disorders of the perspiratory system, and are both functional and structural.

The functional forms are *idrosis* or sudatoria, sometimes termed hyperidrosis, as signifying an excess of secretion; *anidrosis*, or a deficiency of the sudatory secretion; *osmidrosis*, fœtid perspiration, abnormal in odour; *chromidrosis*, or perspiration altered in colour; and *hæmatidrosis*, a term which is applicable rather to a sanguineous exudation from the unbroken skin than to an undoubted secretion of the sudatory glands.

Structural alterations are manifested in the sudoriparous glands by *hyperæmia* and *atrophy*, and, according to the French authors Verneuil and Bazin,

by a pustular affection which they have termed *hydroadenitis*, but which may possibly be nothing more than a form of folliculitis.

In arranging these affections in tabular order we may place them as follows :—

a. Diseases of Function.

Hyperidrosis.
Anidrosis.
Osmidrosis.
Chromidrosis.
Hæmatidrosis.

b. Diseases of Structure.

Hyperæmia glandularum.
Atrophia glandularum.
Hydro-adenitis.

This, Mr. President, completes the brief course of lectures in which I proposed to review the family of diseases of the skin, to take a synoptical or panoramic survey of an interesting branch of Medical science, to construct a framework in which every cutaneous disease and every variety of manifestation of cutaneous disease should have its separate and appropriate place; and, my present task being now accomplished, the only wanting, but very agreeable duty remains of thanking you and the Fellows and Members of the College for the attention which you have been so kind as to bestow upon my efforts. I should, however, feel that I had ill-fulfilled my duty, did I not at the same time endeavour, however inadequately, to convey to you, Sir, some expression of the gratitude that I entertain towards the Council for the protection which it has extended to dermatology; for allotting to dermatology an asylum within these walls, and for bestowing on dermatology the truly magnificent site which it now occupies for the display of its illustrations in the

Hunterian Museum, a position that can hardly be rivalled by any other in the world. The young plant which has now been so auspiciously planted by the Council will, I believe, thrive and grow stronger, so that, in times to come, British dermatology, fostered by the Royal College of Surgeons, may become one of the ornaments of British Medicine.

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Erratum—page 91, line 15 from bottom, for hypertrophia read *hyperæmia.*

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