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Lecture on General Dermatological Diagnosis.*

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GENTLEMEN:—By some authors dermatological diagnosis is said to be very easy; others say it is very difficult. Do not let the dictum of one side lead you into the slovenly methods of not a few physicians, who place all the hundred and more diseases of the skin under the two headings of syphilis and eczema, and treat them with mercury, arsenic and oxide of zinc ointment. Nor should you be disheartened by the dictum of the other side, for when you have once mastered the main diseases of the skin, the others will easily come to your knowledge by practice.

You have done very wisely to avail yourselves of the facilities for observation which only a large city can afford, because to learn our specialty many cases must be seen, so much in the diagnosis of skin diseases depends upon the general make up of the disease, little points in the way of color, location, configuration, etc., which cannot be well described. It is a good thing, first of all, to master the lesions of the skin. After you have once familiarized yourselves with

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skin diseases, you will, probably, not stop to think whether a given one is papular, vesicular, pustular, or not, but will name it from its physiognomy. Nevertheless in doubtful cases the recognition of the most prominent lesion will aid you in diagnosis; and, in describing a case, time will be saved and clearness gained by using the proper phraseology.

The lesions of the skin have been divided into two classes, namely: primary and secondary. The primary lesions are the macule, the papule, the vesicle, the pustule, the bleb, the wheal, the tubercle, and the tumor. The secondary lesions are the crust, the scale, the excoriation, the fissure, the ulcer, and the cicatrix. In running its course, whether uninfluenced or influenced by treatment, almost every disease of the skin exhibits more than one lesion, and we can only speak of it as a macular, papular, or other disease from its most prominent and characteristic lesion.

A macule is a spot or stain in the skin which is not raised above the surface level, which may be of any size from a pin point up to the palm of the hand or larger, and of any color from white to black, according to its cause. It is due to hyperæmia, as in erythema simplex, to inflammation as in eczema and erysipelas, to a deposit of pigment, as in freckles and chloasma, to a parasite growth in the skin, as in chromophytosis, tinea, or pityriasis versicolor, to a hemorrhage into the skin as in purpura simplex, or to a staining of the skin as from iodine. The principal

macular diseases are chloasma, erythema simplex, lentigo, morphœa, nævus simplex and spilus, purpura, scleroderma, chromophytosis, vitiligo, xanthoma, xanthelasma, melasma, leukopathia.

The macule may be evanescent or permanent; may remain as a macule during its existence or may give place to a papule, vesicle, or pustule. It is the simplest of all the lesions of the skin, and is met with as a primary lesion of many of its disorders.

The papule is a circumscribed elevation of the skin, in size varying from a pinhead to a split pea; of various colors, most generally some shade of red; and firm to the touch. It is acuminated, rounded, flattened or angular in shape. It is sometimes inflammatory as in eczema, it is sometimes due to an hypertrophy of normal structures, as in the papillæ of warts; sometimes the heaping up of epidermic cells about a hair, as in the lichen pilaris, will give rise to it, and sometimes an effusion into the skin as of blood in purpura or of serum as in papular urticaria will cause it. The acne papule, comedoe, and milium are illustrations of papules due to retention of sebaceous matter.

The papule may remain as such throughout its course, and finally be absorbed, or it may change into a vesicle or pustule, or soften and break down. The papular diseases have received the name of lichenoid diseases, and the various lichens are the types of the disease. Thus we have lichen simplex (now called

papular eczema), lichen tropicus (prickly heat), lichen strophulous (tooth-rash or gum), lichen ruber acuminatus and planus, lichen scrofulorum or scrofulosus, lichen pilaris or keratosis pilaris, and lichen urticatus or papular urticaria. Besides these, other papular diseases are comedoe, erythema papulatum, lupus, prurigo, and psoriasis.

Like the macule, the papule is met with in the course of many diseases which cannot be classed as papular, as in syphilis, scabies, etc. As a rule, papular diseases are itchy, and often they are scaly.

The vesicle is a circumscribed elevation of the skin, which contains fluid. In size it is from a pinhead to a split pea; in shape pointed, rounded or flattened. Its color varies. When only serum is present, it is crystalline, but as the serum becomes mixed with purulent matter or blood, it will become opaque or of different shades of color. As a rule, vesicles are superficial elevations of the epidermis, and readily rupture and pour out their contents upon the skin to dry up into light yellowish crusts. Sometimes they are below the mucous layer of the skin, and sometimes they do not rupture, but are absorbed. They are in most cases inflammatory as in eczema; but in sudamina they are due to retention of sweat. They either remain as vesicles or becoming purulent change into pustules. They are discrete or form patches. The vesicular diseases are eczema, herpes, sudamina, and dysidrosis. Dermatitis from

rhus poisoning is also vesicular, as is ringworm in certain stages. The vesicle is a more distinguishing diagnostic landmark than the papule or the macule.

The pustule is a circumscribed elevation of the epidermis which contains pus. In size it runs from that of a pinhead to that of the nail. Its form may be round, flat, acuminate, or umbilicated. Its color is usually yellowish, and opaque; but if it contains blood with the pus it may be brown or reddish. It either originates as a pustule or developes from a vesicle or papule. Usually it soon breaks down and discharges its contents upon the skin, which drying forms a yellowish-green or greenish crust, the color running to blackish according to the amount of blood which may be present. Around the pustule there is often a well-marked inflammatory areola. They are discrete or confluent. They differ from vesicles mainly in the character of their contents. Sometimes if situated deeply in the skin when they break down they leave scars. Pustules are found in many diseases, but are characteristic of impetigo simplex and contagiosa, ecthyma, acne and sycosis.

The bleb may be defined as a large vesicle of irregular shape and with clear or opaque contents. Its size is from a split pea to a goose egg. It rises up suddenly, has a slight or no areola, is either fully distended or flaccid, and does not rupture easily. It either begins and ends as a bleb as in pemphigus, or it is formed from the coalescence of two

or more vesicles. Pemphigus is the only purely bullous disease, but bullæ are met with also in erysipelas, herpes, dermatitis, and rarely in syphilis and leprosy. They are occasionally seen in eczema.

The wheal is an evanescent, round, oval or elongated elevation of the skin, of a pinkish or whitish color, which is more or less firm to the touch. Around it there is generally an areola. In size sometimes they are as small as a pea, sometimes as large as the palm of the hand. They appear suddenly and disappear quickly in the course of a few minutes, rarely hours. They are due to a spasm of the capillaries and an effusion of serum into the meshes of the skin; the raised spot having the fluid under it and being deprived of blood, while the areola about it shows the site of the congested blood vessels. The wheal occurs only in urticaria from internal causes; it may be produced by striking the skin with the common stinging nettle, or by any sharp traumatism in those who are predisposed to urticaria.

The tubercle may be thought of as a large papule. It is a circumscribed elevation of the skin varying in size from a split pea to a cherry. In its general characteristics it resembles the papule, only it is larger and extends deeper into the skin. Tubercles may be absorbed and disappear; or they may break down and ulcerate and leave scars. Sometimes they remain permanent, as in molluscum. They are met with in many diseases

during their course, but may be considered as being peculiarly distinctive of carbuncle, epithelioma, erythema nodosum, keloid, leprosy, lupus vulgaris, molluscum sebaceum and fibrosum, syphilis, tinea barbæ (sycosis parasitica), xanthoma, and rhinoscleroma.

The tumor is a new growth which appears as a more or less prominent lump under or upon the skin. It may be of any size. It may lie deep in the subcutaneous tissues or it may be pedunculated. Many of the tumors which occur elsewhere may affect the skin, such as epithelioma, fibroma, sarcoma and the like. Tumors are also met with in scrofula and syphilis.

Such are the primary lesions of the skin. The secondary lesions do not require any extended description as they are familiar to you. But it is important that you should differentiate between the *crust* and the *scale*, two lesions that are often confounded. A crust is formed by the drying of some secretion or exudation upon the skin; while a scale is a dry, laminated mass of epidermis which has separated from the tissues below, the product of imperfected or perverted nutrition. Thus, in eczema vesiculosum when the secretion dries upon the skin we have light yellowish crusts, while in eczema squamosum in which the horny layer is not perfectly produced we have thin scales. In some cases the crusts are very thick, and their color will vary from light yellow to dark green or black according to the admixture of blood, pus, and extrane-

ous matter such as dust and dirt. Scales may be very scantily formed or may be abundant and heaped up into thick masses as in psoriasis. They are whitish or grayish, yellowish or dirty yellow. Both crusts and scales occur in many pathological conditions. Crusts are specially characteristic of ecthyma, some forms of eczema, impetigo, and seborrhœa. Scales are peculiar to dermatitis exfoliativa, pityriasis rubra, pityriasis simplex, psoriasis, icthyosis, and the lichens.

Excoriations are familiar to you as scratch marks, and are superficial denudations of the skin. They are of value in informing us whether an eruption itches or not, as scratching is their chief though not their only cause. When we meet with minute excoriations scattered over a part we have to determine whether the disease is a papular eczema, a pruritus, an urticaria, a prurigo, scabies or lice. If the excoriations have a more or less distinct circular outline, they probably represent torn vesicles or pustules, and the disease is either a vesicular or pustular eczema, herpes, impetigo, pemphigus, or scabies. When scratching has continued for some time and the skin has been frequently torn, we often meet with pigmentation. Excoriations rarely leave scars.

Ulcers are irregularly shaped and sized losses of substance. They do not belong exclusively to the domain of dermatology. Sometimes they are quite small, but may reach enormous size. Sometimes they are shallow,

sometimes deep, sometimes excavated, sometimes scooped out. Their edges may be undermined, or everted, as in epithelioma, or sharp cut, as in the "punched-out" ulcer of syphilis. Their secretion may be scanty or abundant. They are usually chronic in their course, show slight tendency to heal, and are painful. They are met with as the result either of some painful skin lesion, or of some injury. They occur in many forms of cancer, in chancre, chancroid, lupus vulgaris, syphilis, scrofula, eczema varicosum, and sometimes with herpes zoster, ecthyma, dermatitis and antecedent pustular eruptions. They always heal with a cicatrix.

Cicatrices or scars represent the effort of nature to heal a deep loss of skin tissue by the formation of connective tissue. Any disease or injury which has destroyed the papillary layer of the skin, will leave a scar. It is a conservative effort of nature, but the tissue formed is devoid of the elements of the normal skin. Some scars are depressed, as those of small-pox, some raised and puckered, as those of lupus, some smooth and white, as of syphilis. When first formed they are of a bright pink or red color, which in course of time fades out and grows whiter. The deformity which they cause will also often grow less by the influence of time.

But there are other elements entering into the diagnosis. We are guided sometimes by the characteristic location of an eruption. Upon the face occur with special frequency

acne, comedoe, chloasma, eczema, epithelioma, herpes, lupus, milium, rosacea, seborrhœa, and sycosis. On the scalp we frequently meet with eczema, pediculosis, seborrhœa, trichophytosis, favus, and alopecia. On the chest acne, chromophytosis (tinea versicolor), molluscum, keloid, macular syphiloderm, and zoster are perhaps the most frequent. The back gives special lodgement to acne, carbuncle, and sebaceous cysts. Upon the abdomen we find lichen ruber acuminatus and lichen scrofulosus, miliaria, scabies, pediculosis corporis and pubis, sudamina, macular syphilides, and zoster. The extensor surface of the forearms and wrists is the favorite site for erythema multiforme, while upon the flexor surface lichen ruber planus occurs. Psoriasis affects the extensor surface of the elbows and knees, while eczema seeks their flexor surfaces. Upon the legs the various forms of purpura occur, as well as erythema multiforme and nodosum. As a general rule it may be stated that psoriasis affects the posterior and extensor surfaces of the body, while syphilis affects the anterior and flexor surfaces.

The color of an eruption is another element in diagnosis. Thus we have the raw ham color of the syphilides, the brilliant red of erysipilas and erythema, the inflammatory red of eczema, the dark red of purpura, the bright red of psoriasis, the brown of pigmentary deposit, et cetera. Yet another element is configuration, as shown by the circular

outline or scalloped edge of syphilis, the round patch of tricophytosis and alopecia areata, the peculiar map-like border of large patches of psoriasis, the oval or egg-shape of the lesion of erythema nodosum, et cetera.

The presence or absence of itching is another important guide. It is always present in eczema, pruritus cutaneous, urticaria, pediculosis, scabies, and prurigo; almost always in eczema, lichen, and trichophytosis; and generally in seborrhœa and psoriasis. Absence of itchingis on the other hand a characteristic of syphilis; though in some rare papular syphilides it is met with. The other subjective symptoms such as burning and pain are not so reliable, though the latter is usually pronounced in zoster and epithelioma. In some doubtful cases the microscope is to be appealed to for decision; and as it is chiefly in the diagnosis between parasitic and non-parasitic diseases, it is well early in your career to familiarise yourself with the appearances presented by the fungi of trichophytosis and favus. If you are a skilled histologist you will have a field before you in the question of the relation between lupus and tuberculosis.

Such, then, are the chief foundation stones upon which the structure of dermatological diagnosis is built, and I believe you will do well to familiarise yourselves with them at the beginning of the course, that you may gain a more perfect knowledge from the cases as they come before you.

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