AN ADDRESS SYPHILIS AS AN IMITATOR.

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MR. PRESIDENT AND GENTLEMEN,—An idea has much occupied my mind, during the last few years, which seems to considerably simplify our creed as regards the nature of the very various forms of disease which are caused by syphilis. It is, that we ought to recognise in syphilitic forms of inflammation imitations, with certain differences, of the other and more common types of diseased action which occur without any connection with specific taint. The fact, as a matter of clinical observation, must have been obvious to all for long; and the names which the various types of syphilitic eruption have received recognise it. As a rule, we are content to apply the adjective "syphilitic" to some substantive which designates a well-known form of non-specific skin-disease, "syphilitic psoriasis", "syphilitic roseola", and the like.

This recognition of the doctrine which I purpose to propound to-day, in some detail, is so general and so old, that I might, perhaps, almost need to apologise for making it the subject of a special discourse, were it not that I hope to be able to show that it has ramifications which have as yet scarcely received the attention they deserve. To my own mind, I may acknowledge that this general law of imitation or simulation has been of the greatest possible service; and that it has helped me to a clear view of much that was previously obscure. There is no difficulty in explaining why syphilis in its action upon the solids and fluids of the human body should be an imitator of old types, and not an originator of new ones, if we admit, as probable, that almost all possible forms of morbid process existed already independently of it. The introduction of the syphilitic virus into the system simply gives a tendency to derangement of cell-nutrition, resulting in local inflammation. All such derangements must be regulated in their development by anatomical conditions and physiological laws. Certain structures exist which will be attacked, and their number and variety is not unlimited. There are in the skin, for example, certain glands, papillæ vascular areas, and special appendages; and any of these may be attacked by disease; and the possible variety as to its anatomical location, although great, is still restricted. Syphilis cannot devise for itself any new set of organs, nor can it lay down any new lines along which morbid action, once originated, may spread. It must work in the old grooves, and travel by the existing paths.

A writer, much read in my youth, and now much neglected, remarks, respecting the so-called author of all evil, exactly what I wish to assert of syphilis. "He can mar, but he cannot make; for he is not antagonist deity." In thus denying the original ability of Satan, Mr. Tupper expresses in the language of theological metaphor that which is capable of easy explanation by natural laws. Our vices and our faults are only the results of unbalanced or insane instincts. There is not one of them but has a natural basis in something of itself perfectly laudable. Avarice is only exaggerated prudence; lust springs from virility; envy, covetousness, and the tendency to steal find their roots in the perception of what is desirable, and the too energetic zest of possession. Given a knowledge of virtue, and we can interpret vice. Now, it appears to be almost exactly so with syphilis amongst diseases. Given a knowledge of other types, and we can foresee on what plans it will work. The number of its simulations is wonderfully great. I will enumerate briefly some of the most remarkable of them.

In connection with what some name the dartrous diathesis—an unknown peculiarity of health or of skin which gives proclivity to skin-affections—we have several very definite and distinct forms of eruption: first, *common psoriasis*, an eruption consisting of increase of epidermal elements in patches, with vascularity and swelling of the derma beneath; next, *lichen-psoriasis*, or *lichen ruber*, consisting of grouped lichen spots, which may merge together and become smooth and polished, but are rarely very scaly; thirdly, *pemphigus*, the eruption consisting of bullæ, which contain clear serum. To these might be added a number of minor modifications less generally known, and which it would be tedious to describe. All these agree in that they occur to healthy persons, prefer young adults, never occur to infants, never get well of themselves, re-

lapse after apparent cure, and are always influenced for good by arsenic and tar. It is clear that they are modifications of the same malady; and although in external appearance very different, yet their essential resemblances (just enumerated) far exceed their apparent differences. We may suspect that their differences depend upon peculiarities in the individuals who become their subjects, and that their cause is in all the same. Now, it is of extreme interest to note that, in syphilitic secondary rashes, we have all these reproduced, thus proving that one and the same cause may in different persons produce very different results. Syphilitic psoriasis is well known; syphilitic rupia is the representative of non-specific pemphigus; and those familiar with lichen ruber will not unfrequently find in syphilitic eruptions an exact imitation of it. But the varieties of the syphilitic secondary rash are by no means exhausted by its reproduction of the common forms of the dartrous malady; for we have also imitations of the exanthems, and of some much more rare types of eruption. Syphilitic roseola is, so far as the anatomy of the lesion is concerned, measles; certain forms of diffuse erythematous lichen closely resemble scarlatina, and there is a pustular rash exactly like variola. This last imitation by syphilis is so remarkable, and may lead to such serious errors in diagnosis, that I must advert to it in more detail.

In the form of syphilitic eruption which looks like small-pox, the rash is scattered symmetrically over face, limbs, and trunk; it may be discrete or confluent, according to its abundance; the pimples are hard and shotty at first; they have depressed centres, they form adherent scabs, and they leave scars. The eruption differs, of course, from true variola in the slowness of its evolution, in its long persistence, and its very slow decline; and it is only in its early stages that mistakes in diagnosis are likely to occur. Even in these, the comparatively small amount of febrile disturbance, and the absence of backache, will usually excite suspicions which may probably be converted into certainties by examination of the patients' genitals, and the discovery of a chancre. One of the most remarkable examples of this eruption came under my notice about twelve years ago. A young gentleman called on me with a conspicuous papular eruption on his face and other parts. "I have just had small-pox," he said; "and Mr. — says that I am cured; but the spots don't go away." He added that Mr. —, a gentleman of large experience, had kept him in bed a fortnight, and had since sent him into the country for a fortnight, and now said that he might return to his desk at a bank; "but," he continued, "the other clerks won't sit near me, and declare that I have small-pox still". He had a chancre, and the eruption was syphilitic. I have seen several cases which had been treated in the small-pox hospital for eruptions which were undoubtedly syphilitic. But I must not mention the mistakes of others, unless I am prepared to be candid about my own. I had many a time in clinical lecture mentioned the preceding facts, and enlarged upon the importance of distinguishing between the syphilitic simular of small-pox and the reality, when my own turn came. One day in the summer of 1877, I was hastily summoned to see a gentleman at his own house, who had just been landed from a sea-voyage, during the whole of which he had been very ill. He had been carried from the vessel to his house, and put to bed; and I found him covered from head to foot with crusts exactly like those of variola in the third stage. Some had fallen, and, where this had happened, deep scars were left. The eruption had begun to come out on the day that he went on board, and he had been feeling ill a few days before. The stages had been unusually long, but still had not exceeded possible limits. I questioned him as to syphilis, and examined his penis and his throat, but without finding any reason to doubt his denial. In a word, after a careful and sceptical investigation, I thought that the eruption was variola. The sequel proved that it was syphilis; the scabs took months to fall; and, just when he was recovering from the eruption, he had iritis, which I could not doubt was specific. At this stage, three or four months after I had seen him at home in bed, he came to Moorfields Hospital. His face was pitted all over, and I had much difficulty in convincing those who then saw him that he had not really had small-pox. I could not quote an instance more conclusive in support of the assertion that one of the forms of syphilitic eruption is exactly like small-pox in all its stages, and in its resulting scars. Slow progress is the one difference between the two exanthems. The similarity is produced, no doubt, by the fact that syphilis in these cases attacks precisely the same anatomical structures as those in which the variolous pustule is developed. It is scarcely needful to remark that this form of eruption always occurs in the secondary stage.

Syphilitic *roseola* is well known; and it is a very common form of rash, usually occurring in the very beginning of the secondary phenomena. We have a mottled congestion of the skin, in ill-defined crescentic patches, exactly like those of measles. As in measles, it is almost wholly an erythema—that is, a dilatation of blood-vessels in patches; and, if the skin be stretched, the vessels may be emptied, and the rash

vanishes. Syphilitic roseola is less bright in tint and less conspicuous than measles, but in all other respects the eruptions are alike; and no doubt they are produced under the same laws as regards the local vascularisation of the parts. In other words, there exists, no doubt, in the skin a certain arrangement of areas of capillary vessels which, under irritation, permits of temporary paralytic dilatation, with the result of patches of congestion peculiar as to size and shape. The poisons of syphilis and of measles alike possess the power (in common with certain other causes—copaiba, for instance) of so irritating the vaso-motor nerves as to cause the dilatation of these pre-existing tufts.

Syphilitic *pemphigus*, a bullous eruption, in the first instance exactly like common pemphigus, rapidly changes into what is more usually styled rupia. Under the latter denomination, it is attended by heaped scabs, and by ulcerations at the base, and differs much from any non-syphilitic eruption. It is, however, of the initial lesion that I chiefly speak; for it is to be admitted that all syphilitic imitations are most close in their beginnings, and that they all develop peculiarities after lasting for a time which much facilitate their differentiation. These peculiarities are mainly a tendency to persist long, a tendency to suppurate and to ulcerate, and, third, a tendency to be serpiginous—that is, to infect the adjacent tissues, and thus to creep over considerable areas.* This latter feature belongs especially to diseases in the tertiary stage, and is seldom seen in the secondary.

The eruption described by Wilson under the name of *lichen planus*, and by Hebra under that of *lichen ruber*, and for which I much prefer that of *lichen-psoriasis*, is a peculiar and interesting one. An adult in good health suddenly becomes the subject of a symmetrical eruption, which consists of dusky lichen spots, arranged in groups which are often linear, and never round, and which tend to coalesce and form patches, which become smooth and polished. It is not syphilitic; it is curable by arsenic and tar, just as psoriasis is, and, like it, it is liable to relapse. Clearly the two are very closely related, differing chiefly, perhaps solely, in the local anatomical lesions. Now, although, as stated, the original type of this malady is certainly non-specific, and requires arsenic and not mercury for its cure; yet a syphilitic imitation of it, in which the resemblance is most close, is very common. I have myself many more opportunities for studying syphilitic lichen ruber than the original malady. I show here an excellent portrait of it, taken from Mr. Wilson's *Atlas*, and to which is affixed the name lichen syphiliticus corymbosus. It was published before lichen ruber was recognised, and is a good proof of the originality and accuracy of Mr. Wilson's observation.

It would be tedious to enumerate all the minor varieties of the eruption which occurs as part of the secondary stage of syphilis, and to attempt to find their parallels. It may well suffice to say that there are several less frequent forms, both in relation with the dartsious diathesis and the syphilitic state, and that their laws of similarity appear to be just the same as in the definite examples which I have quoted. I will pass on to consider certain affections which occur in the later periods.

A disturbed state of nutrition of the skin in the palms and soles, resulting in breaking up of patches of epidermis, the formation of fissures, etc., is a common condition some years after syphilis, and is usually called *psoriasis palmaris*. It has nothing to do with true psoriasis. So frequent is it in association with a taint of syphilis, that I believe many think that it is in itself a conclusive evidence of it. Such, I am convinced, is a great mistake. So-called psoriasis palmaris is often a senile change, and is much helped by local irritation, the use of tools, etc., and it may occur in connection with nerve-disturbance, as for instance, in locomotor ataxy; not, perhaps, in more than half its examples is it of syphilitic origin. The fact that there exists such a widely spread creed as to its being always specific, is conclusive in support of my proposition, that its syphilitic imitation is exceedingly close to the original. Only by very minor features, appreciable only to the most experienced, can the differential diagnosis be made. In many instances, it cannot be made at all, and nothing but the patient's history can help us in the conjecture as to its real cause. Often, no doubt, syphilis predisposes, and other influences help.

Lupus is one of the maladies which syphilis often simulates. Common lupus has, I must hold, no connection whatever with syphilitic taint, either inherited or acquired, but is certainly an appanage of the scrofulous dyscrasia. Overwhelming evidence on this point, and in confutation of those who think it always due to such taint, might easily be given, but would require more time than is at my disposal, and I must ask to be allowed to assume the fact as proved. Now, the lupus process consists essentially in the growth of cell-structures (possibly adenoid) in the true skin, which destroy the tissues, and, when they

retrograde, leave a scar. It is a necessary part of lupus that it should spread serpigiously. Lupus presents us with many varieties; sometimes it ulcerates easily, and sometimes scarcely at all; often it occurs in a single patch, and now and then it is multiple. Now, syphilis mimics it in all its varieties. There is a rare form of eruption usually seen at the end of the secondary stage, in which multiple patches appear in various places on both sides, but rarely symmetrically. These patches look, at first sight, like psoriasis, but, on closer inspection, it is observed that they spread at their edges, and that they leave scars. They are in reality lupus, and have their prototype in the form of lupus illustrated in this portrait, in which it occurred in a scrofulous child as a multiple eruption. The common horse-shoe ulcer of syphilis is of the lupus type, being attended by new growth, spreading serpigiously and leaving a scar. It is usually tertiary. There is yet another form in which the resemblance is to ulcerating lupus. The nose is the part usually attacked, and it destroys a large part of the organ very rapidly. In bygone years, I have known it diagnosed as escharotic lupus, a term which denotes its rapidity of spreading. In it, the ulceration is at times phagedenic. I show some photographs illustrating this malady. It occurs both in the acquired and inherited disease, but is most common in the latter. It is most important to distinguish this imitation from true lupus, for it may be cured at once by the proper measures, and if neglected, rapidly effects great destruction. It may be distinguished from common lupus, alike by its rapidity, and by the fact that, after it is cured, the scar soon assumes a perfectly healthy state, and that there is no tendency to relapse.

I have seen some rare forms of serpiginous non-ulcerating syphilitic lupus, in which, even with the aid of the history, I have never been able to feel sure of the diagnosis until helped by the results of treatment. But such close counterfeits as these are rare. Let me insist that, in all these varieties of simulated lupus, a correct diagnosis is most important, for there is the greatest possible difference in the results of treatment.

Before leaving this part of my subject, let me ask attention to the fact that syphilis can simulate such peculiar conditions as those presented by Jacobs' ulcer or *rodent cancer*. This ulcer occurs almost solely in the upper parts of the face, and is known by its hard sinuous edge, which is usually free from warty growths, and presents a smooth, even roll of induration. It may heal in the centre, or may be attended by a tolerably clean excavated ulcer. The simulation of these conditions by syphilis is rare, but sometimes very close. I am tolerably well experienced in the diagnosis of rodent ulcer, having seen hundreds of cases; but I may admit that I have two or three times seen hard-edged syphilitic sores which so much resembled it, that, for a time, I was in doubt as to the diagnosis. Here is the portrait of one such, in which I was obliged to write to the surgeon who had known the antecedents of the patient before I could feel sure. The ulcer healed quickly under specific treatment. This simulation of rodent ulcer occurs, I think, only on the parts on which rodent ulcer is common, and in patients past middle age. I have even seen a few cases in which the realities of rodent ulcer and of syphilis seemed to be mixed.

We will pass now from the skin to the eye, and use that as a bridge of connection, from which to enter upon a brief notice of syphilitic counterparts in connection with the nervous system. That syphilitic iritis is so like other forms of iritis that, excepting by its history and concomitants, it is, in nine cases out of ten, indistinguishable, is a point too well known to need insistence. Only in a small minority of cases do the tubercles, which, when present, are so valuable for diagnosis, show themselves. Interstitial keratitis, syphilitic in nineteen cases out of twenty, and almost always so when both-sided, may, in rare instances, find its type in the results of other causes; and the same is the fact respecting punctate keratitis, and some of the more peculiar forms of keratoiritis. But the more noteworthy simulations occur in respect to choroiditis disseminata and retinitis pigmentosa. I show you, first, some drawings illustrating the non-syphilitic forms, and ask you to compare them with others of the latter class. In the two, the process is essentially similar, as closely so as we have just seen to be the case in the instance of lupus-disease of the skin. Patches of choroidal tissue are atrophied at the seat of deposit, which undergoes absorption and leaves areas of denudation. In both, the process is very liable to relapse and to spread. The syphilitic form is by far the more common, and this fact may often help the diagnosis. The imitation of retinitis pigmentosa by syphilis occurs almost solely in the inherited form of the latter disease, and the diagnosis may usually be made by observing that it is not symmetrical, but that one eye suffers much more than the other. When this malady is definitely non-symmetrical, syphilis should be suspected. Some interesting facts, illustrating the closeness of this simulation, have been published by Dr. Fitzgerald of Dublin. In retinitis pigmentosa, whether syphilitic or otherwise, we have an example of slow changes,

* This curious fact supports the belief that in the secondary stage the poison is free in the blood, and that in the tertiary it is the solid tissues which are altered. Thus in the secondary all parts are equally supplied by the poisoned blood, and individual patches do not creep.

which steadily advance during many years, disorganise the percipient structures, and are attended by widely-diffused pigment accumulations. It is rather of the nature of a progressive degeneration than of inflammation. The non-specific form is markedly hereditary, and is often in apparent connection with consanguineous marriages. That such a peculiar malady should find a close simulation as a consequence of inherited syphilis, is a very singular and instructive fact. The knowledge that such is the case helps, as I think, to interpret what occurs sometimes as regards the cranial contents. A certain proportion of the subjects of inherited syphilis become slowly almost idiotic, and, without showing positive paralysis, show evidences of some progressive degenerative change in the grey matter of the brain. These patients sometimes find their way into lunatic asylums. In the absence as yet of definite information as to pathological anatomy, may we not plausibly suspect that the changes are allied to those which attend retinitis pigmentosa?

The epilepsy which is such a frequent occurrence as a result of syphilis, both acquired and inherited, probably depends in different cases upon somewhat different local lesions. Sometimes there are other special symptoms which disclose the real nature of the case, but often there is nothing but the patient's history to help to a diagnosis, and to reveal the fact that a cure may be expected from the iodide of potassium.

[To be concluded.]

ABSTRACT REPORT OF LECTURES ON THE COMPARATIVE ANATOMY OF MAN.

Delivered at the Royal College of Surgeons of England.

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LECTURE I.

HUMAN anatomy is usually taught only in reference to the average structure of the type best known to us—the European. Deviations from that average structure may be of two kinds; either peculiar to the individual (when, if extreme, they become subjects for the teratologist), or inherited from one generation to another, and characteristic of considerable groups of mankind. It is of the latter that the present course of lectures treats. The comparison of the permanent structural modifications of groups of mankind one with another, and with the nearest allied animals, constitutes the comparative anatomy of man. This subject has been less studied in this country than in some parts of the continent, and rarely, if ever, forms a branch of academical teaching. In Paris, besides the old professorship at the Jardin des Plantes, there is now a special school of anthropology, in which seven professors teach as many different branches of the subject. The collections of skeletons and skulls on which mainly our materials for the study are founded, are also much larger and more rapidly augmenting abroad than in our own country, notwithstanding our far-reaching dominions, embracing subjects of almost every race, and our extensive commercial relations with all parts of the world. Our museum, although by far the largest public collection in the country, and containing about eleven hundred crania, is still extremely defective in many departments; but it may be hoped that our numerous members who have so many opportunities of filling up the deficiencies will come to its aid when the importance and interest of the subject are brought fully before them.

English skulls of the higher type, important as they would be for a standard of comparison with other races, are almost unknown in collections; and our ideas of the cranial characters of this race are derived from the very lowest specimens, morally and intellectually. As suggested in the last courses, what could be more interesting for such a collection as ours than a series of crania of individuals whose high character and intellectual attainments were known to all?—for example, the eminent men who have held the office of President of this College. In Paris, a society has been founded for such an object; and, since the suggestion was thrown out here, a skull has been received in our collection which was bequeathed by its former owner.

In last year's course, the anatomical characters of the Australian race were treated of in detail. Since then, six skulls of that race have been added to the collection. They all present the characters then pointed out; the comparatively small cranial capacity, the angularity of outline,

the dolichocephaly (the average cranial index—*i.e.*, the maximum breadth compared to the length, the latter taken as 100, being as low as 71); the prognathism or projection of the jaws; the low transversely elongated orbits; the prominent glabella and supraorbital ridges overhanging the short depressed nasal bones; the wide nasal aperture, small malar bones, ill-defined chin, and large teeth.

The capacity of the crania and size of brain in the different sexes and races, especially in relation to intellectual development, has been very fully treated of in the January number of the *Revue d'Anthropologie*, by M. Gustave le Bon. With regard to sex, the conclusion arrived at in this review is that, though the female is always smaller than the male brain, both absolutely and relatively to the size of the body, the difference is less great in low and uncivilised races, and in early times of high races; and that, as culture has advanced, the inequality of the sexes has gradually augmented, the male having advanced and the female remained stationary. Though this may be the case with the French, and perhaps all the Latin races, it does not appear to be true of the English or German; as extensive statistics, showing the average weight of the male and female brain, collected by English anatomists, but not referred to by M. le Bon, show that the difference between the two is very nearly in the proportion of ten to nine, which scarcely differs from the relation known to exist in many of the least cultivated and lowest races.

The relation of the size of the brain to intellectual capacity, both in races and individuals, is an exceedingly difficult and complex subject; but M. le Bon has given a valuable contribution towards its elucidation in the measurements of the circumference of a large number of heads, taken with the assistance of a Parisian hatter. Dividing all the persons included in the series into five groups, he finds that they may be arranged in the following order as regards the size of their heads: (1) men of science and letters; (2) men of business; (3) nobles of ancient family; (4) domestic servants; (5) peasants. Mr. F. Galton has shown that great energy often seems to compensate for want of size of brain in men who have distinguished themselves above their fellows.

To return to the recapitulation of the subject of last year's course. After the Australians, the aborigines of the island of Van Diemen's Land or Tasmania were treated of. Their social condition was, if possible, lower than that of the Australians; and they have now become entirely extinct, the last having died in 1876, and very few of their remains having been preserved. Although resembling the Australians in many respects, they belong to a different race, distinguished by the character of the hair, which is finely curled or "woolly", and also by peculiarities of the cranium, especially its greater breadth in the parietal region. The form of a Tasmanian skull is so characteristic, that it can readily be distinguished from all others. This probably arises from their long isolation, their home being completely out of the track of all commerce and civilisation; and their having no means of navigating the seas around them, from which circumstance it is probable that they have had no intercourse with any other races for ages. The Pacific Ocean proper is inhabited by two distinct races; first, by the Papuans or Melanesians, who are of black colour and have woolly hair, like that of the African negroes, with long, narrow, and high skulls; secondly, by the true Polynesians, found in their greatest purity in the Samoan and Tongan Islands; of light-brown or yellow complexion, long straight hair, straight high faces, round skulls, and altogether much resembling the Malays. These are more civilised than either the Australians or Melanesians. When first discovered, they were found to possess comfortable houses and tolerable clothing; cultivating the ground; possessing, as domestic animals, dogs, pigs, and fowls; and being very skilful navigators. Many circumstances lead to the belief that the black or Melanesian population, now confined to the western portions of the Pacific Ocean, had once a much more extensive distribution; and that the light-brown Polynesians, coming into these seas at a later period, probably from the Malay Archipelago, have in some cases completely dispossessed them from the islands which they occupied, and in others united with them to form a hybrid race. The latter circumstance accounts for the variety of complexion, difference of countenance, and form of hair observed by many travellers in many islands in the Pacific Ocean. The Maories of New Zealand, for instance, though possessing a Polynesian language and many of the physical features of that race, show strong evidence of a mixed origin.

MR. JOHN MELVILLE, a medical student, from the Cape of Good Hope, died in Edinburgh, on the 18th instant, of typhoid fever, at the age of twenty-four. Although he had been but a short time in Edinburgh (having previously been three years in Aberdeen), he had attracted notice as a hard-working student, and became a favourite with all around him. It was his hope to take his degree at the University of Aberdeen in the course of next month, and to return to practise his profession at the Cape.