A LECTURE

ON

TERTIARY SYPHILIS, OR SYPHILITIC CACHEXIA.

Delivered at St. Mary's Hospital, London.

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GENTLEMEN,—I have been requested by those entrusted with your education, my former much esteemed colleagues, to deliver a lecture to you on some subject that I might consider likely to prove of advantage to you, either in your present studies or in your future career. I propose to occupy the hour allotted to me by making some practical observations upon a branch of surgery which appears to me less understood, not only by the student, but by the profession generally, than almost any other I could name, and with regard to which many years of experience at the Lock Hospital warrant me in speaking with some degree of confidence. The subject to which I allude is what is termed Tertiary Syphilis, or Syphilitic Cachexia. In consultation with surgeons who have brought to me patients suffering from different forms of constitutional syphilis, and also at the College Pass Examinations both for the membership and fellowship, I have been much struck by the confused and unsettled state of opinion manifested, both as to diagnosis and treatment, in these affections. The difficulty does not appear to be in the recognition of the case under notice as one resulting from syphilis, but in deciding whether it should be classed with the group of secondary or of tertiary symptoms; and, when this is settled, to know whether iodine or mercury should be the remedy to be depended upon. The answers I obtain to my questions also would lead me to suppose that it was considered immaterial which of these two remedies should be administered, and that each was equally beneficial, or almost so, in either of these groups of symptoms; or that a combination or an alternation of the two remedies was the best mode of treatment in the majority of cases. Knowing as I do that, in tertiary syphilis, mercury is especially injurious, while the iodide of potassium will act like a charm in alleviating the symptoms; and again, that, in the secondary state of the disease, while the iodide of potassium will be of little or no use, mercury will prove to be our sheet-anchor; it seems to me so essential that clear and distinct notions should be had on these points, that I have determined, at the very commencement of this lecture, to place before you tables of each group of symptoms, still further explained by drawings taken from patients in the Lock Hospital suffering from these two classes of affections respectively.

TABLE I.—*Morbid changes observed in Secondary Syphilis.*

Affections of Skin.	{	Erythematous—Roseola; Papular—Lichen; Tubercular—Tubercles that may desquamate, ulcerate, or encrust; Scaly—Psoriasis, Lepa; Pustular—Ecthyma.
		Superficial white aphthous-looking ulcers on the tonsils, soft palate and fauces; Superficial Ulcers on the sides of the tongue and angles of the mouth; Mucous Tubercle, or Condylomata, on semi-mucous surfaces; Deep excavated ulcers of tonsils.
Affections of Mucous and Semi-Mucous Membranes.	{	
Iritis; Muscular Pains; Arthritic Pains; Pains in bones; Periostritis; Nodes.	{	

The above table contains the principal affections of constitutional syphilis, termed secondary, in which the venereal poison still exists, and may therefore be communicated by cohabitation and transmitted to the offspring, and in which mercury is beneficial and iodine of but little or no service.

TABLE II.—*Pathological Conditions in Tertiary Syphilis, Syphilitic Cachexia, or Sequela of Syphilis.*

Inflammation of Fibrous Membranes.	{	Periostitis, resulting in nodes; Caries and necrosis of bone; Affecting fibrous tissues of joints—Arthritis; Fibrous tissues of testicle—Orchitis; Fibrous tissues of globe of eye—Scleritis.
		Rupia; Cachectic ulcers of skin; Rapid ulceration and sloughing of the soft palate, fauces, pharynx and larynx; of the rectum, vagina, nymphae, and labia.
Affections of Skin and Mucous Membranes.	{	

Deposits of fibro-plastic lymph, imperfectly organised.

Lardaceous and Waxy Deposits.

In the areolar tissue (subcutaneous or submucous tubercles); In muscular tissue, more frequently met with in the tongue, and occasionally in other muscles; Also met with as *post mortem* appearances in the liver, spleen, kidneys, lungs, and other viscera.

Occasionally found in the *post mortem* examination of the bodies of persons of dissipated habits.

In this table will be found enumerated the pathological changes which present themselves occasionally in patients who have passed through the primary and secondary stages of syphilis, and whose constitutions have become changed and deteriorated thereby, but who are no longer syphilitic; that is to say, they do not contaminate those with whom they cohabit, and their children will be free from syphilitic taint. The remedies required in these affections are especially iodine and sarsaparilla, and mercury is injurious.

I shall have time merely to point to these drawings. Firstly, in tertiary syphilis: here a well-marked case of rupia in progress; here the same, a month later, cured. In these three drawings from one patient, at different dates, are shown destruction of the soft palate, diseased bone of head, and cachectic ulcerations of face. The remaining drawings show the varying aspect, in different patients, of necrosis affecting the skull and face, and of extensive ulcerations on the limbs and other parts, some of them spreading at their edges while healing in the centre. All these cases would be benefited by iodine, and mercury would prove injurious. And now, in secondary syphilis, you will see represented the various cutaneous affections ranged according to their severity; here a drawing of roseola; then several of lichen; the next three of tubercle; and again, two or three of ecthyma. These two are of infantile syphilis, and this one of condyloma or mucous tubercle. In all these cases, the iodide of potassium would be of no use, and mercury would be most beneficial.

There are, of course, exceptions to these general rules, requiring a few words of explanation; for instance, periostitis and nodes are placed in both tables. How are they to be distinguished, so as to judge of the appropriate treatment? The history and duration of the disease combined with its associated symptoms, will readily determine to which category it belongs. A periostitis and nodes occurring in the first two or three months after the primary disease, and associated with unmistakable secondary affections of the skin or throat, may be considered secondary, and treated by mercury. A periostitis with nodes occurring at a much later date, several months, or even years, after the original disease, and accompanied by destructive ulcerations or sloughing of the throat, by rupia, by fibroplastic deposits in the tongue, or by any other well-marked tertiary symptom, will require the administration of iodine, and would be seriously aggravated by the exhibition of mercury. Again, iritis may occur in tertiary syphilis, but will generally have been preceded by or be associated with scleritis, and will be accompanied by other evidences of syphilitic cachexia. In such cases, iodide of potassium and sarsaparilla will be of more service than mercury; in other words, the constitutional state, and not the local symptoms, must guide the treatment.

The same may be said of tubercular and ecthymatous syphilitic eruptions, which, in exceptional cases, rapidly and extensively ulcerate. It will be found that they occur at a late period of the constitutional disease, and, in fact, indicate the supervention of syphilitic cachexia, and must be treated accordingly.

To account for this unsettled state of opinion in the profession, of which I have complained, it ought perhaps to be mentioned that authors—and they are many—differ considerably in their views on this particular branch of surgery. “Quot homines tot sententiae” well applies here. Before I proceed further in explaining these different views, let me beg of you to separate well in your minds the difference between well ascertained facts and all proposed theories. I need not tell you that facts will not alter, however differently they may be accounted for. Do not mistake me; I am not recommending you to discard theories altogether; they are unavoidable; they will present themselves, and they are both useful and important; but bear in mind that they are theories or conjectures, and vary as our knowledge advances, or according to the different views of individuals; whereas facts that are true facts remain always the same.

After the above caution, I may proceed to tell you that some pathologists object altogether to the division of the symptoms of constitutional syphilis into the groups of secondary and tertiary; holding that, both being consequent upon the primary infecting chancre, the term secondary should include both classes.

Dr. Wilks, who has published a very able paper on the subject of

syphilis in *Guy's Hospital Reports*, vol. ix, 1863, is also not satisfied with this division, and adopts by preference the terms syphilis and the sequelæ of syphilis. Under the former term, he would comprise all the primary and secondary symptoms, including, however, fibro-plastic deposits. Under the latter, he would include all the tertiary symptoms of other pathologists, with the exception, as just stated, of the fibro-plastic deposits. It will be observed that I differ but slightly in the classification from Dr. Wilks as shown in the tables, and, practically, in one particular only; viz., that whereas he classes the fibro-plastic deposits with the group of affections requiring the administration of mercury, I, on the contrary, arrange them with that which is especially benefited by the administration of iodine. Again, very many practitioners who admit the classification of the symptoms into secondary and tertiary have not, from what I have observed, quite made up their minds, as regards some of the results of syphilis, to which of these groups they should be considered to belong. There are, however, good practical grounds in my opinion, and in that of most surgeons, for the separation of certain well marked pathological changes into a distinct class under the name of tertiary syphilis, or under the still better term of syphilitic cachexia as adopted in the second table.

Now, let us consider what is the nature of this cachexia which we term tertiary syphilis. We know its antecedents and its objective signs, but, with regard to its true nature, I fear, in the present state of our knowledge, instead of answering in direct terms, we must be content to theorise.

Is it a dyscrasia of the blood? or are the solid tissues, which manifest the outward morbid changes observed, primarily at fault? My own opinion is in favour of the former view. I believe the morbid condition of the blood to be the original or primary cause of the altered nutrition of the tissues.

The pale and sallow complexion of the skin, this structure taking its colour as we know, to a great extent, from the blood, both in health and in disease, tends, combined with the universal influence of this cachexia on the constitution, to show that the blood must be in an altered condition. If this be admitted, there is but little difficulty in understanding that the several tissues of the body must, more or less, suffer deterioration, depending as they do upon the blood for their continual supply of healthy nourishment; and we can no longer be surprised at the destructive and ulcerative processes observed under this cachexia. But can we explain by the aid of chemistry or the microscope, or by any other means, which constituents of the blood are most in fault, and in what way? I fear not. This is a point that must be left for the rising generation to elucidate by the light of advancing science.

Syphilisation has taught us that the poison of syphilis, like that of variola and vaccinia, cannot be produced in any animal, or in the human being, to an indefinite extent: the power of reproducing this poison sooner or later becomes exhausted, when the individual is said to be syphilised. Surely, then, something must have been removed from the blood or tissues upon which the formation of the venereal poison depended, and without which it can no longer be formed, or the symptoms depending upon it be manifested. Liebig's theory of the action of the venereal and other poisons in the human system is well known. He compares it to the formation of yeast by fermentation in a saccharine solution to which gluten has been added. So long as any gluten remains in the solution, yeast can be formed; but its formation ceases when the gluten is exhausted, and can be renewed only by the addition of more gluten. Founded upon the above view of Liebig, and upon the information derived from syphilisation, the theory I venture to suggest is, that in certain individuals the venereal fermentation, if I may use the expression, or the formation of the venereal poison in its primary and secondary states, has completely exhausted the blood of one or more of its normal constituents, which may, perhaps, be reproduced, but not readily; and that this deteriorated blood constitutes the syphilitic cachexia, or tertiary syphilis—the morbid condition now under consideration. I will venture further to add to this theory the suggestion that possibly mercury may, besides its usual effects on the gums and salivary glands, prey upon the same unknown constituents of the blood, and thus prove beneficial by taking from the venereal poison that upon which it fed and flourished. This view of the action of mercury would well support the opinion held by many pathologists, that syphilitic cachexia is the result of the joint action of the venereal poison and of mercury on the system, and would satisfactorily explain why mercury should not only cease to be beneficial, but should prove to be injurious, in these cases. This theory is the best I can offer in the present state of our knowledge. However imperfect, it may serve to account for many of the phenomena observed in tertiary syphilis; for instance, the inability of patients suffering from this malady to transfer the poison of syphilis to others; also the extreme difficulty of inoculating such persons with the primary venereal poison; again, why in these cases

mercury should cease to be beneficial, and that restorative remedies, such as sarsaparilla, iodine, steel, and quinine, combined with good living and stimulants, should be found beneficial.

I shall now direct your attention to the treatment of syphilitic cachexia. In considering this part of our subject, it will be necessary to bear in mind what has been before mentioned, viz., that the venereal poison is no longer present in these patients, and that in them the power of transmitting the disease or of reproducing the poison no longer exists. The theory also which I have advanced, followed to its legitimate extent, would lead me to say that our endeavours should be directed to restore to the blood those normal constituents of which by the formation of the venereal poison and by the action of mercury on the system it had been deprived, and to bring the blood to its normal state, in which, unfortunately, after fresh inoculation, the individual would again be capable of generating this poison. Certainly, in a case of a syphilitic cachexia which I saw treated in the Lock Hospital by syphilisation, all inoculations failed to take until the health was considerably improved by generous diet and by the administration of the iodide of potassium.

It is to the absence of certain unknown constituents of the blood, you will remember, that I attribute the debilitated and asthenic condition of the sufferers, as well as the various symptoms they manifest. You will not be surprised to hear me say, then, that all evacuates, and especially preparations of mercury, all debilitating influences, all wear and tear of the system, such as over-exertion of mind or body in business or pleasure, should be avoided; and that, on the contrary, tonic, stimulant, and restorative measures, combined with good generous diet and judicious hygienic regulations, are the most likely means to prove beneficial. Such, in fact, are the principles upon which the treatment should be conducted whatever theory you may adopt, and whether that which I have advanced be right or wrong.

It must be confessed that the ordinary tonics, bark, and especially preparations of iron, are not to be depended upon, and must give place to special remedies employed empirically, such as iodine and sarsaparilla. Of the *modus operandi* of these medicines, we must confess our ignorance; but so valuable are they, that I shall occupy a few minutes in stating some facts which long practice has taught me concerning them. My experience of the salts of iodine would lead me to say that they are powerfully stimulant, and have even a tendency to produce inflammation. I could give you several instances of this. One will suffice. I attended a gentleman, in conjunction with the late Mr. Tyrrell, for a preternatural protrusion of the eyeball, unconnected with syphilis. There were no inflammatory symptoms present. We prescribed the iodide of potassium in three-grain doses. A violent inflammatory attack of the globe of the eye supervened. The remedy was omitted, and the ordinary antiphlogistic treatment soon restored the eye to its former condition. The patient attributed the inflammation to the medicine which we had prescribed; but, being assured by us that the remedy had nothing to do with the attack, he was persuaded to take it again. In twenty-four hours, a similar accession of inflammation took place. This was again treated, and again readily subsided. A third time, with great reluctance, he consented to take the iodine, with the understanding that he might leave it off immediately any inflammation showed itself. It occurred the following day. We were obliged to relinquish the iodine. Mercury was afterwards given with marked benefit, and no inflammatory symptoms subsequently occurred.

With regard to the large doses in which the iodide of potassium is occasionally prescribed in the present day, I may remark that many years ago, having heard that it was administered by French surgeons in two drachm doses, I gave this quantity thrice daily to a patient in the Lock Hospital for three or four successive weeks, without noticing any more marked effects, beneficial or otherwise, than from the ordinary five- or ten-grain doses. Some caution, however, I am convinced, is necessary in administering this remedy in large doses, as the following case clearly shows. A gentleman had suffered for years from syphilitic cachexia, and especially from painful ulcerations, the most extensive I have met with, which spread at their edges while they healed in the centre. He depended for his comfort, and almost for his existence, on the iodide of potassium. He purchased it by the pound, and took it of his own accord for years in ninety-grain doses thrice daily, generally without inconvenience; but three separate times, at long intervals, I was called to see him for sudden attacks of illness. The first two attacks consisted of violent pains in the feet, which were excessively tender to the touch, and so like gout, except in the absence of redness, that I prescribed colchicum. The iodide of potassium was not suspected as the cause, but it was omitted; and on both these occasions the attack subsided in a few days. But the last attack, which occurred four years ago, was much more serious and alarming; there was not only pain, but paralysis of the lower extremities. He

could neither stand nor walk. The ninety-grain doses of the iodide were now suspected; and the treatment consisted in leaving off the iodide, and taking saline aperients. He recovered perfectly the use of his limbs in a week or ten days. He was advised never to exceed fifteen-grain doses for the future. He has adhered to this advice, and has had no attack since.

The efficacy of the iodide of potassium is admitted by all surgeons, but many think lightly of the powers of sarsaparilla in this disease. I am not sorry of the opportunity of expressing my decided opinion of its value in all the symptoms of syphilitic cachexia. I am old enough to remember the time before the introduction of the salts of iodine, when sarsaparilla was almost the sole remedy depended upon in the treatment of tertiary syphilis. During this period, I tested fully the powers of sarsaparilla, as compared with those of steel, bark, and other tonics, by treating cases in the Lock Hospital, under the same hygienic conditions, alternately by the latter remedies and by sarsaparilla, with the result of convincing myself that they possessed little or no efficacy, and that sarsaparilla was the most powerful remedy then known in tertiary syphilis. Indeed, most of the cases treated by bark or steel, or by both these medicines, remained nearly stationary until sarsaparilla was taken, when a rapid improvement set in. Pains in the bones disappeared in a week, and the other symptoms in succession; and in the majority of the cases the patients were apparently well after a six weeks' or two months' course of the medicine. In fact, the patients recovered as certainly and almost as quickly as they do now under the iodide of potassium. They were, of course, as liable to relapses, but not more so than now under the latter remedy. Yet I am frequently told by surgeons that they never give sarsaparilla, as they think it an useless remedy. The only fault I find with it is, that it is expensive, and not always well prepared.

After these general observations, and having laid down the principles upon which the treatment should be conducted, a few words will suffice to explain the details of the plan which I find of most advantage in syphilitic cachexia, whatever may be the existing symptoms of the complaint. It consists in the administration of iodide of potassium in from three- to ten-grain doses, taken in a third of a pint of the simple or compound decoction of sarsaparilla as a vehicle, alternating with a pill of two grains of quinine and three grains of confection of opium, also taken thrice daily. Exceptional cases may require the iodide to be increased to fifteen or twenty grains, and an additional dose of opium at night will often be found necessary. I have been disappointed, as I have before mentioned, with the preparations of steel or other tonics in these affections. Opium has appeared to me beneficial in two ways—firstly, by soothing pain and allaying irritability; and secondly, by moderating the amount of the several secretions, and thus preventing all unnecessary waste. I may mention here that these patients are very liable to occasional attacks of diarrhoea, by which their symptoms are invariably aggravated. Under these circumstances, larger doses of opium, and the ordinary astringent remedies depended upon for checking diarrhoea, may be required; and, in fact, any concurrent disturbance of the general health must be met by its appropriate treatment.

I need not here repeat what I have just stated as regards regimen, generous diet, abstaining from over-exertion, and proper hygienic regulations, which must be carefully attended to throughout the treatment, and even after the patient is apparently well; otherwise relapses are almost certain to occur. Indeed, under the most careful management they will recur; and it requires great confidence in the principles of treatment to refrain from altering the plan. Many surgeons are disposed to leave off the iodine, and to give mercury; and I have frequently had great difficulty in persuading both patients and surgeon that the accession of fresh symptoms constituted a reason the more for persevering with the iodine and increasing its dose.

The local treatment is of secondary importance, and I do not feel warranted in occupying your time with it; suffice it to say that, the general principles of surgery will sufficiently direct you.

I should like, before we separate, to relate to you one case of the destructive ravages of tertiary syphilis. I have selected it on account of its severity, and because it is so well illustrated by this wax model representing the destruction of the soft parts, and by the skull of the same patient, which shows the devastation effected by the disease on the bones of the palate, nostrils, and cranium, as well as by this large sequestrum of os frontis, os nasi, and part of the superior maxillary bone, which separated in one mass while the patient was in the hospital.

This unfortunate patient was a married woman, aged 38. She was admitted into the Lock Hospital in July 1856. Her statement was, that she had been married eighteen years, and had given birth, during the first seven years of her marriage, to three children, two of whom were living in good health, of the ages of sixteen and fourteen respect-

ively. Seven years after her marriage, she contracted disease from her husband. She was pregnant at the time, and gave birth to a diseased child, which died in a few months. From this period, eleven years before her admission into the hospital, she had suffered from repeated attacks of the secondary forms of the disease, and had taken several courses of mercury. She dated three years back the cachectic ulcerations on the face which had destroyed the alae nasi and portions of the cheek and lips, and laid bare carious bone in the nostrils and mouth. The extensively necrosed portion of os frontis commenced as a soft node about the same period, together with several cachectic ulcers on the legs, all of which symptoms she laboured under on her admission into the hospital. She was greatly emaciated, and unable to walk from excessive weakness. Her pulse ranged from 112 to 120, and she had lost her appetite. She was treated in the hospital by courses of iodide of potassium and sarsaparilla, and took opium and quinine. She soon recovered her health and strength under this treatment, combined with appropriate diet and stimulants. In three months, all the ulcerated surfaces had cicatrised, and all dead bone had separated, with the exception of this large sequestrum of the os frontis, with other bones attached. This did not separate till December 25th, five months after her admission. The surface of the dura mater exposed by its removal was covered with bright florid granulations, with the exception of one spot of the size of a half-crown piece, where the dura mater presented a slough. When this came away, a hernia cerebri resulted. In three weeks, it projected to the extent of three inches, and was about the thickness of two fingers. This protrusion was excised at the level of the dura mater, and was succeeded by others, which, however, were removed when they reached an inch in length. During the whole of this period—six weeks—notwithstanding the hernia cerebri, her health remained good, and there were no head-symptoms. The granulations of the dura mater became covered with skin quite to the orifice through which the hernia cerebri protruded. On February 8th, however, she was attacked with paralysis of the right arm, and, on the following day, of the right leg. She became drowsy, but could be roused to answer questions or to take her meals. In the evening, she became excited, and removed the dressings. On the 14th, her appetite failed; and she gradually sank, and died on the 17th, nine days after the accession of the paralysis, and seven weeks from the occurrence of the hernia cerebri. At the *post mortem* examination, it was found that the left lateral ventricle had been laid open by the disease, and that the finger could be passed from the external wound into it. Time does not allow me to do justice to this very interesting case. I shall take some other opportunity of publishing it in full, with the *post mortem* examination of the brain.

The task I set myself at the commencement of this lecture was to make clear to you, in any given case of constitutional syphilis, how it should be grouped, and how it should be treated. If I have at all succeeded in this endeavour, I shall have the satisfaction of feeling that your time and mine has not been altogether thrown away; and I have now only to thank you for the attention accorded me.

CLINICAL MEMORANDA.

CASE OF WOUND OF THE ABDOMEN, WITH PROTRUSION OF THE OMENTUM: RECOVERY.

C. T., aged 16, was getting over a gate, on the top of which were several iron spikes, when his foot slipped, and he fell on the top of one of them. He did not feel much pain or inconvenience at the time, but shortly afterwards became sick and faint; but, on recovering, he walked home, a distance of about thirty yards, and, as he then felt well, he did not mention the accident, nor did he examine himself to see if he were injured. He remained up until about ten o'clock, when, on undressing, he discovered, as he says, "that his bowels were coming out". About an hour after this my partner, Mr. Pridcaux, saw him, and found, in the left inguinal region, a wound about an inch in length, through which was protruding a piece of omentum, about the size of an egg, the neck of which was rather tightly constricted. The omentum, not being gangrenous, was speedily replaced by relaxing the abdominal muscles, and employing steady pressure. The wound was then closed by a suture or two, and a compress and bandage applied. He passed a good night, and in the morning seemed in good spirits, having no pain, nor was there any tenderness over the abdomen. He was kept perfectly quiet in bed and on low diet for a fortnight, at the end of which time the wound had perfectly healed, and he was allowed to sit out of bed on a couch. Three days afterwards he came down stairs, and on the next day I met him in the road, seeming perfectly well.

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