Clinical Records

OF

THE LOCK HOSPITAL.

BY

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II.—LYMPHATIC ABSORPTION.

IN a clinical lecture delivered by me at the Lock Hospital in 1853, and published in the ASSOCIATION MEDICAL JOURNAL for the following year, the following general observations on the subject of lymphatic absorption occur.

"If we reflect upon the different ways in which foreign substances can be taken into the living body, we shall find that every such way is furnished with certain sentinels or guards which oppose the entrance of materials which, if admitted, would prove injurious. Whenever any irritating matters are applied to the skin, which might, by being absorbed, become injurious to the system, I need scarcely say how the delicate sense of touch reminds us of what is going on, and urges us to get rid of the offending material. This is a sense common to the whole body. But the parts through which foreign matters are usually taken into the system are guarded in an especial manner. Thus, in addition to the sense of touch, we see the mouth guarded by the sense of smell and that of taste: three out of five senses concentrated around the opening by which the food enters into the system; and one at least of the other two always ready to assist in affording information of its nature. If we trace the food onward, we find that it has to pass the double row of teeth, which are acutely sensible to the presence of any hard particles which may have become accidentally mixed with the food. Should any fresh flavour be produced in the process of mastication, there are the means provided for appreciating it as the food passes through the posterior fauces. The stomach we find ready, in its turn, to reject that which is injurious; and, throughout the alimentary canal, there is an apparatus composed of a multitude of different parts, all combining to hurry on and eliminate from the system any materials which, if left, would be detrimental to it."

Now, the lymphatics distributed over the body, equally with the lacteals coming from the intestines, convey fluids to the general circulation, to be again used for the purposes of nutrition and secretion. The materials which the lymphatics take up have as much to be assimilated as animal matter taken fresh into the stomach. The bone, the tendon, the muscle, the nerve, which are thus removed, can no longer be recognised as such after they have been acted upon by the absorbents. All the different tissues that undergo this process form a single fluid, which ultimately becomes a part of the general circulating mass; and they can then in no way be distinguished from similar products derived from the process of ordinary digestion. The action which converts foreign animal matter into blood, and that which converts parts of the living body into blood by the agency of the absorbents, are then analogous; and they agree in

having the very remarkable property of converting into harmless agents some substances which, when introduced in any other way, act as poisons upon the system. It has been shown by the Abbé Fontana, that the poison of the viper, when introduced into the stomach, undergoes some change which prevents its poisonous effects upon the system. It has also been shown by two French physiologists, that the same thing happens with regard to the Woorara poison; and we have it upon no less authority than that of Sir B. Brodie, that opium may be digested in the stomachs of some animals, and that in that process its poisonous qualities are destroyed. "I have injected", says Sir B. Brodie, "a strong watery solution of opium into the stomach of a rabbit; but no poisonous effect was produced, although a similar solution, injected into the cellular membrane, occasions stupefaction and death."

If, then, we find the lacteals so carefully guarded lest any deleterious matter should find its way through them into the general circulation, it is not surprising that the more generally distributed lymphatic system should be provided with similar means of rejecting that which would be injurious. This power is illustrated in a very remarkable way in some forms of venereal disease, and especially in that form in which the syphilitic poison is taken up as such by the lymphatics of an infected part. The poison thus introduced into the lymphatic system may produce its peculiar and characteristic effect upon any part of the channels through which it passes, between the part originally affected and the first absorbent gland that it meets. In any part of this course the poison may be arrested, and may there produce a fresh syphilitic ulcer; and that the absorbent glands themselves, into which the lymphatics first empty their contents, may become similarly affected, we have daily proof from the secretions of those glands being inoculable so as to reproduce the disease.

Up to this point, then, we have unequivocal evidence of the presence of the syphilitic poison, and of its power of contaminating fresh parts. Beyond this, the poison can no longer be traced. The fluids in which it was before contained now neither possess the power of irritating the vessels through which they pass, nor, when extravasated from these vessels, of infecting other structures. Here, then, some wonderful change is produced. The specific characters of the poison can no longer be detected either by its morbid effects or by inoculation. Hunter noticed this circumstance. He says, "We never find the lymphatic vessels or glands that are second in order affected." And he remarks that, when the disease has been contracted from a cut upon the finger, he has seen the bubo come on a little above the bend of the arm, upon the inside of the biceps muscle. In such instances, no bubo has formed in the armpit, the most common place for glands to be affected by absorption.

Neither observation nor experiment, then, afford any proof that the syphilitic virus is conveyed, as such, through the absorbent glands; all the direct evidence which we have points to an opposite conclusion. The particles in which the poison resides here undergo some change, become perhaps disintegrated; and in that process the existence of the poison appears to cease.

The evidence upon which it has been assumed

that the syphilitic poison enters the system through the absorbent vessels must, therefore, be regarded as most inconclusive. Arrived at the first lymphatic gland which it meets, and there undergoing some change, it becomes incapable any longer of producing, either locally or constitutionally, its specific effects; and we cannot therefore admit that this is the way in which the system becomes infected.

When syphilitic matter is conveyed, as such, along an absorbent vessel, it is very generally arrested at the first lymphatic gland that it meets with, and here reproduces its specific and peculiar action—the formation of pus, which is again inoculable. Now, suppuration of the inguinal glands may doubtless occur in every stage of syphilis, as it may in patients whose diseases are not syphilitic; but the peculiar form of suppuration above described—viz., that which furnishes an inoculable pus—is peculiar and characteristic. The primary disease which produces this does not give rise to constitutional syphilis. Cases are from time to time recorded in the journals in which secondary syphilis has followed a suppurating bubo.* No one would deny the existence of such cases, or maintain for a moment that suppuration in an inguinal gland (which may arise from a great variety of causes) is any *preventive* against constitutional disease; but, nevertheless, I am bold to say that, where a primary syphilitic sore has been directly followed by a suppurating bubo producing an inoculable pus, that disease will not be followed by secondary symptoms.

During the year 1853, I collected together and arranged in a tabular form, forty-nine consecutive cases of suppurating bubo. Of these, five only are recorded as having been accompanied or followed by any secondary affection.

In one of these five, there was a distinct history of previous disease, both primary and secondary. In another, the cervical glands were enlarged, and the suppuration in the groin may, therefore, probably have been of a strumous character. In two cases, the secondary eruption was tubercular; an affection most obstinate in its nature, and most liable to recur after having once disappeared, and comparatively seldom occurring as the first symptom of cutaneous disease. The suppuration of the lymphatic glands in these instances, then, I regarded in all probability, like that in the first of the five cases, as the result of some previous syphilitic infection, or of some co-existing non-specific disease. This analysis would thus leave only one case out of forty-nine in which a suppurating bubo was apparently even followed by secondary symptoms. In this exceptional

case, the secondary eruption appeared a month after the occurrence of the bubo, and may, like the others, have depended upon previous disease, or upon some accidental cause, such as the existence of gonorrhœa or some other cause of irritation.

On the other hand, I collected and tabulated in the same way thirty-one consecutive cases of secondary syphilitic eruption. In one only of these cases did the history afford any mention of a suppurating bubo; and in that one case the history is not satisfactory upon the point. Had the notes of cases of other years been collected and tabulated in the same way I do not doubt that they would have afforded similar results. Such facts appear to establish indisputably the proposition that the chances of the infection of the system, in cases of syphilis, are inversely in proportion to the degree of irritation and inflammation of the absorbent vessels leading from the primary seat of disease. As this doctrine might probably appear to many to be contrary to the opinions usually entertained, I thought it well for the satisfaction of others to collect some independent evidence on the point; and, for this purpose, I have used the register of the Lock Hospital, which is kept by the house-surgeons as they successively come into office. I found here recorded eighty consecutive cases of suppurating bubo. Of these, eleven were mentioned as having had some other syphilitic affection besides the strictly primary disease, during the time that they remained under observation. In four of these cases, this affection consisted of condylomata alone; in four, of a tubercular eruption; and in three of psoriasis. It is to be remarked that here there was an entire absence of any mention of the presence of lichen or lepra, affections of the most common occurrence as presenting themselves after infecting syphilitic sores. The condylomata, especially when they occur in female patients, are of such doubtful origin that they cannot be received as affording any evidence of the affection of the general system, at least as a consequence of the primary affections with which they are associated. Omitting, therefore, the cases in which they have been mentioned as occurring without any other symptom of constitutional disease, we have seventy-six consecutive cases of suppurating bubo from all causes, and in these mention is made of secondary affections in seven only.

The presence of secondary symptoms in this small proportion of cases may with justice be attributed to the recurrence of previous disease, or to a disease which did not produce the suppurating bubo. This view is materially supported by the kind of eruption observed. In four out of the seven instances the eruption was tubercular, agreeing in this respect with the results obtained from my own case books. The facts presented in both collections of cases, therefore, point to the conclusion that, in the comparatively rare instances in which secondary syphilis is found in conjunction with a suppurating bubo, it depends upon the system having been infected previously to the disease which has given rise to that suppuration; or upon the co-existence of a suppurating gland (from a non-specific source) with an infecting sore.

Since the period to which these records refer, upwards of seven years have elapsed, during which my attention has been particularly directed to the same point; and I have also had the assistance of some

* An instance was mentioned in the *Lancet* five or six weeks ago, in which a suppurating bubo was said to have followed an indurated chancre on the lip. The case was in St. Bartholomew's Hospital, under the care of Mr. Holmes Coote. Now, if I am rightly informed, it appears very doubtful whether this was a chancre at all; for, in the first place, although the sore was surrounded by a considerable amount of induration, yet the surface of the sore itself was not indurated; secondly, the sore was extremely painful, a condition not at all usual in indurated chancre; and thirdly, although the case has continued now for a very considerable period under treatment, there has, I believe, been no symptom of any constitutional affection. But even supposing the case to have been one of chancre, it is quite evident that the suppurating gland was not produced by the absorption of the syphilitic poison; for, had it been so produced, a true inoculation of the gland and surrounding parts would have taken place, and an open poisonous sore would have remained. In the case in question, as soon as the matter was discharged, the abscess healed; and this, in my opinion, proves that the suppuration was not originally produced by the lymphatic absorption of syphilitic matter.

most intelligent and able house-pupils, who have every now and then brought me cases which afforded, at first sight, apparent exceptions to the law; but which, upon investigation, were found not at all to invalidate its correctness. The result of our observation has been that, during the whole of that time, we have not met with one unequivocal case of a primary sore which was accompanied by a suppurating bubo (furnishing an inoculable pus) and which produced secondary symptoms.

Illustrations

OF

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

BIRMINGHAM GENERAL HOSPITAL.

ON SLEEPLESSNESS.

By JAMES RUSSELL, M.D.

THE importance of sleep in the economy of nature is well understood alike by the physiologist and the pathologist. By suspending for a season "the life of relation", it affords to the nervous centres an opportunity of repairing that waste in their nutrition which is involved in the performance of their active duties; and such an opportunity is essential for their integrity. Our great dramatist finely sums up the office of sleep:—

"Sleep, that knits up the ravell'd sleeve of care,
The death of each day's life, sore labour's bath,
Balm of hurt minds, great nature's second course,
Chief nourisher in life's feast."

Hence persistent absence of sleep is justly regarded as one of the most serious symptoms of disease.

My design is to illustrate a particular form of sleeplessness of very common occurrence; a form which affords excellent illustrations of the injurious consequences of that state, and exemplifies the pathology of a disorder which it is especially necessary to recognise at an early period.

It is essential, for perfect sleep, that the mind should suspend its activity. Mere intellectual effort can generally be terminated at will, and, therefore, does not often interfere with sleep, unless, indeed, it have been carried to the extent of damaging the nutrition of the brain; but the emotions will not subside at our bidding, and hence become most potent causes of sleeplessness. "Susannah, in *Tristram Shandy*," says Sir Walter Scott, "thinks that death is best met in bed; I am sure trouble and vexation are not. The watches of the night press wearily when disturbed by fruitless regrets and disagreeable anticipations. . . . Is it not odd, I can command my eyes to be awake, when toil and weariness sit on my eyelids, but to draw the curtain of oblivion is beyond my power?"

In investigating the cause of sleeplessness in our patients, we are very often able to trace it to one of the emotions; to grief "which claims the hours of solitude and of night for its empire"; to remorse; to care respecting worldly concerns; to the designs of ambition, the schemes of avarice, the responsibilities of business; and, above all, to the various forms of suspense, whether embodied in the shape of anxiety or of hope; and as these are passions which are inseparable, to a certain extent, from our commerce with the world, it is of the highest importance that we should recognise their presence, and provide, if possible, against their injurious influence.

CASE I. An elderly gentleman was engaged in a very

extensive business, the whole responsibility of which devolved on himself. He toiled incessantly; and used to rise at four in the morning to look after his men. His mind was constantly on the stretch. He would sit over his work late at night, nodding with sleep, till his wife took it from him. His nights were disturbed and sleepless, and he started and talked constantly in his sleep. He at length manifested evident signs of failing; he became restless and irritable; his spirits were uncertain, often very depressed; he had indefinite fears about himself, and lost his appetite. Three times he had an attack of impaired power in his hands, with some loss of sensation. He became quite unable to look after his accounts; and but for his wife's supervision would have lost hundreds of pounds. He mended greatly under the influence of opium, but a year afterwards died with all the symptoms of sanguineous apoplexy.

CASE II. Anne Bamford, aged 35, a healthy looking woman, but affording evidence of a nervous temperament, was perfectly healthy, and free from nervousness, till two years and a half ago, when she became subject to great domestic trouble. For some time her husband was very unkind to her, and irregular in his habits; he struck her, and she "never seemed to forget it." Her mind became impressed with her troubles, and she was unable to forget them. She lay awake at night, and for three days never tasted food. During the night she used to see strange things around her bed, and does so still; once she thought she saw the devil. She used to awake in a fright and in "a cold sweat." Her spirits have been low, and even now she bursts into tears when speaking of her sorrows. Ever since that time, she has been subject to dreadful headaches, to vertigo, short breath, and palpitation, and lately she has lost flesh.

These disturbing influences do not act upon all persons alike; many circumstances modify their operation; none more powerfully than temperament or mental constitution. The seeds of worldly care find, in the mind of some persons, a soil ready prepared for their reception, in which they germinate rapidly, and bear melancholy fruit. Such is the case with individuals of an anxious temperament, or of a fretful disposition, who are ever ready to meet trouble half way, and possess a wonderful talent for entertaining, at a single view, every consequence possible and impossible, or who accept the discipline of life in a spirit of opposition, and offer resistance, where it would be their duty as well as their policy to accommodate themselves to it.

To all such the trials which are inseparable from active life are intensified greatly; and even daily duties, to the well regulated mind a source of healthful exertion, become multiplied fourfold in the trouble they occasion. "The bowl that rolls easiest along the green goes farthest, and has least clay sticking to it. I have often noticed that a kindly placid good humour is the companion of longevity, and, I suspect, frequently the leading cause of it."

The same effect is not unfrequently the result of an unhealthy state of nervous system, produced, too often, by defective education; in a large number of instances, however, existing as a substantive disease, quite independent of the operation of care and trouble. Patients of this class fall into a state of nervous depression, in which fancied evils take the place of real ones, and operate equally to wear the mind, and to disturb repose. The complaints which are made by such persons are often quite incomprehensible, unless explained by a morbid state of mind, rivetting the attention upon some sensation, or creating some supposed malady, upon which the imagination feeds; and it must be always remembered, in regard both to pathology and to treatment, that the imaginary evils have to the patient all the substance of reality, and, consequently, produce the same effects upon mental and bodily health. For example, a