Clinical Records OF THE LOCK HOSPITAL.

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III.—LYMPHATIC ABSORPTION (*continued*).

IN a very able and scientific communication on the Carbuncular Type of Disease, published by Dr. D. Nelson in the *BRITISH MEDICAL JOURNAL* for March 30th, the learned author writes as follows:—"Lastly, and clearest of all, we have the syphilitic virus, with its manifestly visible existence, specific nature, and specific effects. Introduced into the frame at one point or another, we have, without any accompanying fever, the first local effect; then the *creeping of the virus through the absorbents from gland to gland*; next its entrance into the venous channels, and its diffusion through the general mass of the blood." (P. 330.)

This description of the way in which the syphilitic poison enters a patient's constitution is perfectly in accordance with the theory developed by Hunter, and is that which, upon Hunter's authority, is generally acknowledged at the present time. So frequent, indeed, is the absorption of the syphilitic poison associated in the periodical literature of the day with the occurrence of bubo, that any particular instance might well pass unnoticed; but the accurate and scientific tone which has been assumed by the *BRITISH MEDICAL JOURNAL* during the present year gives a peculiar influence and weight to the doctrines which are recorded in its pages. More than usual care, therefore, is required that nothing should there appear, which those who have not time or opportunity to investigate for themselves may not confidently receive as having had the sanction of its present editor.

Now, with regard to the point before us, is it true that the syphilitic poison does find its way into the blood through the absorbent glands and vessels? This point was considered at some length in my last communication (No. 11 of the *Records of the Lock Hospital*); and I believe that, both theoretically and practically, it is proved to demonstration that the syphilitic virus does not, as such, pass from gland to gland. The conclusion to which I have long arrived is, that the syphilitic poison, when it is absorbed, enters the system directly through the blood of the affected part, quite independently of the lymphatic glands or vessels. Like the vaccine poison, it exercises its influence first upon the inoculated point, and through it, by means of the circulation of the blood, upon the general system.

But it may be asked, If the pus from a syphilitic sore can be traced as far as the first lymphatic gland, does it never pass through that gland towards the general circulation? To this it must be answered, that in certain rare cases, in which the functions of the glands have in some way become impaired, the diseased action, if not the diseased secretion, is transmitted to the lymphatic glands second in order

within the body; and from these again to others, until the disease reaches the thoracic duct.

In such exceptional cases, what is the constitutional disease produced? It is not constitutional syphilis, but some form of blood-poisoning. The diseases produced are allied to those cases of pyæmia such as occur after childbirth, in which the lymphatic glands within the abdomen have been found in a state of suppuration.

From whatever source the morbid action is originally derived in such instances, the results, as far as the general system is concerned, are very much the same. These may develop themselves as in other cases of septic or purulent infection, in the formation of secondary abscesses, in the separation of large masses of fibrine from the other elements of the blood, or in the incipient decomposition of that fluid and the various organs to which, in its decomposing state, it is sent.

A well marked and remarkable case of the second form of disease here mentioned lately occurred at the Lock Hospital, in which, the first series of glands having been destroyed, the diseased action extended within the abdomen. The poisoned condition of blood was evinced by an attack of ill-developed erysipelas, and, as shown in the accompanying illustrations, was followed by the deposition of large quantities of tough decolorised fibrine in the cavities of the heart, in the aorta, and in the pulmonary artery.

CASE. Harriet C., aged 20, was admitted into the Lock Hospital on January 12th, 1861, having until within a fortnight previously been an out-patient at St. Thomas's. She stated that for eight months previously she had suffered from discharge, and had also had sores upon the labia. When she was admitted into the Lock, there was a sloughing ulcer within the vagina, and a sloughing bubo in the left groin. The parts around presented a dark erysipelatous blush, which extended over the right side of the stomach and down the right thigh. The erysipelas had at this time existed three days.

Jan. 13th. The erysipelas had spread rapidly, and extended over the back and thighs. It presented an ill-defined margin, the colour fading insensibly into that of the surrounding skin. She had suffered from diarrhoea during the night, and been slightly delirious.

Jan. 15th. The countenance was flushed and anxious; pulse full and quick; continual vomiting; pain in the abdomen, with great tenderness on pressure over its lower part.

Jan. 17th. The erysipelas continued to spread with an ill-defined margin. The sickness continued; no difficulty of breathing.

Jan. 18th. Pulse quick and very weak. She took very little notice of surrounding objects, except when roused. Pupils dilated; no difficulty of breathing. She died in the course of the day.

Upon a *post mortem* examination, the superficial glands in the left groin appeared to have been quite destroyed by sloughing; the lumbar glands were much enlarged, and of a dark colour. When cut into, several of them discharged a thick brownish fluid. The peritoneal cavity contained a quantity of turbid serum. The structure of the different organs throughout the body was perfectly healthy, with the exception of the kidneys, which were larger, softer, and more vascular than usual. The right auricle was filled with firmly adherent decolorised fibrine. This was continued into the right ventricle, where it also had contracted some very firm adhesions. From the right ventricle it was prolonged through the pulmonary artery, taking an accu-

rate mould of the semilunar valves, into its smaller branches on both sides. (Fig. 1.)

The left auricle also contained decolorised fibrine in less quantity, and less firmly adherent, than on the right side. In the left ventricle was an elongated mass continuous with that in the left auricle, which, following the course of the circulation, ex-

Fig. 1.—Right side of heart, with adherent fibrinous prolongations extending into branches of both pulmonary arteries.

tended for a considerable distance into the aorta. As on the right side, the fibrine here retained an accurate mould of the semilunar valves. But perhaps the most interesting point about the case was, that continuous and adherent plugs of fibrine had been prolonged into both coronary arteries. (Fig. 2.)

In this case, then, the course of the disease could be sufficiently clearly traced. The suppurative action was continued from the original disease to the inguinal glands, where, in the very great majority of cases, it would have been arrested. But, these glands having lost their functions, the entrance of the morbid matter into the lymphatics beyond was no longer prevented. The door was forced; and the diseased action was continued to the lumbar glands, which were themselves found to be in a state of imperfect suppuration. The right side of the heart, which first received the contaminated blood, was found to contain large masses of fibrine, deposited in consequence of the admixture of morbid products. This fibrine had evidently followed the course of the circulation to the smaller pulmonary arteries. On the left side, the deposit of fibrine was less, and of a somewhat different character; but the results of the same diseased action were here fully shewn.

That the deposition of fibrine in this case depended upon the direct admixture of morbid pro-

ducts (traced in their course towards the heart through the lumbar glands), I conclude to be demonstrated by the fact that exactly the same result may be produced by the mechanical introduction of some morbid secretion into the blood. Several cases

Fig. 2.—Left side of heart, with firmly adherent fibrinous mass, extending into aorta and plugging coronary arteries.

of this kind are published in the introduction to my *Pathological and Surgical Essays*. The results are similar, whether the morbid matter be introduced to the general circulation through the absorbents, through the veins as in ordinary pyæmia, or by artificial means. Specimens of the deposition of decolorised fibrine, adhering firmly to the heart and branching into the pulmonary arteries, may be seen from each of the above mentioned causes in the museum of King's College. From whatever cause arising, this clogging of the circulation on the right side of the heart is generally attended with intense difficulty of breathing, or rather, with a struggling for more breath than is supplied to the lungs. One reason for this doubtless is that, the right side of the heart and the pulmonary artery being partly obstructed, the quantity of blood sent to the lungs to be purified bears an inadequate relation to the amount that is vitiated in the general circulation; and the sense of the imperfect purification of the mass of the blood it is that produces the gasping for breath which is so general in these cases.

But in the instance before us there was no particular difficulty of breathing. Now, this is accounted for by both sides of the heart having been similarly affected. The circulation through the lungs was, no doubt, greatly interfered with; but so was the general circulation through the body, and particularly through the heart itself; so that the balance

between the amount of blood vitiated and purified was tolerably well maintained. The patient then did not die, as is usual in such cases, from imperfect oxygenation of the blood, but from the gradual obstruction to the general circulation.

The plugging of the coronary arteries, by which a due supply of blood to the heart itself was prevented, probably contributed in the greatest degree to the fatal result.

The above case is given as an extreme instance of the result of the introduction of morbid matters into the circulation through the lymphatics. That minor degrees of blood-poisoning often take place, when the lymphatic glands have more or less lost their natural functions, is very probable. Thus, after sloughing or suppurating buboes, a patient will not unfrequently have a series of ill-developed boils, or an eruption of an anomalous character; but these must carefully be distinguished from the effects of the syphilitic poison, which, as has already been shown, does not affect a patient's constitution through the lymphatic glands.

Original Communications.

HYDROCEPHALUS OF FIFTEEN YEARS DURATION;

TUBERCLES AT THE BASE OF THE LUNGS ONLY: GANGRENE OF ONE LUNG.

By S. W. J. MERRIMAN, M.D., Physician-Accoucheur to the Western General Dispensary.

ALFRED LOADER was born in October 1845, the child of parents who appear to be healthy, are still living, and have had several other children before and after Alfred. All of them, however, present symptoms of scrofula; the eldest having a more or less imperfect sight, and forgetfulness of what he has to do, partially relieved on several occasions by good food and tonic medicines, combined with bichloride of mercury. Alfred is reported to have been healthy until the age of three months, when he fell out of bed, and was seized with a species of convulsion and with sickness. At about the age of eight months, a chronic form of hydrocephalus was distinctly visible.

My first knowledge of him was on January 22, 1849, when he was three years and three months old. He was brought to my house in a child's four-wheel chaise; certain it is that for a long time he was carried about in this way, until he became too long-legged to be contained in the chaise. He was troubled with convulsions, described as stretching himself on awaking; there was no foaming at the mouth. He had been suckled for two years. The head had become quite recently perfectly closed; and his mother was doubtful if it had increased in size lately. Its measurements were then 2½ inches round, 14 inches from ear to ear over the top of the head, and 17 inches from the bridge of the nose to the neck under the occiput. He was intelligent, liking toys, but having very little powers of mind. His legs were perfectly useless; so that he could only sit or lie, resting his head upon a pillow from which he was unable to move it, though he had some power of rolling it from side to side. The urine and fæces passed from him without his knowledge; and this defect lasted all his life, for, although he became aware of having passed his evacuations, he never had power over the sphincter

muscles. He had all his teeth; but they were decayed in the upper jaw. He preferred bread and milk, but would eat everything. If laid on his face, he would cry all the day after, as if he was hurt in his head. I ordered, with other things, friction of the back and hips with flour mixed with powdered nutmeg.

On February 13th I saw him again, and have recorded that he tried to sit up more, but in other respects was the same. I then ordered him one grain of bichloride of mercury in a four-ounce mixture, of which he was to take one teaspoonful twice a day, making thus one thirty-second of a grain for a dose. This medicine apparently purged him, and was omitted on the 16th; but on the 19th, as he complained of his head, I increased the mixture to six ounces, and ordered half a teaspoonful, thus giving one ninety-sixth of a grain twice a day, but was again obliged to discontinue it.

March 19. About this time he over balanced himself in a little chair in which he used to sit, resting his head upon a pillow, with his legs dangling, and perfectly useless. On this day he also ate pork, and had a convulsive fit at 6 P.M., for which he had calomel every two hours, and aperients; this treatment was succeeded, in April, by bark.

In May, he was as well again as ever; but in July, he had another attack of convulsions, requiring calomel, etc.

Dec. 17. On this day I find the following memorandum:—"Child grows stronger; can raise his head," for a single instant at a time. He never lost this increase of strength; but afterwards always held his head upright, not requiring a pillow.

Sept. 2, 1850. Age nearly five years. I was asked to visit him this morning, as his mother on getting up found him in a fit, with his arms and legs thrown about, his eyes fixed, the right side of his face working, and foam at the mouth. The fit lasted ten minutes after the mother rose. He was described as waking up at night screaming, as if frightened by a dream. He is described in my note-book as about 3½ inches high; as knowing pictures of a dog, a cat, and a bird, but not of a horse or a cow; but he had seldom or never seen any such animals, as he could not look out of the window. He noticed all that passed in the house.

On Sept. 4 he was pretty well.

Feb. 16, 1852. He was reported to have had a fit; which, however, passed off again.

I heard of him occasionally during the next six years, but was seldom asked to prescribe for him, his health continuing good, and his mind gradually developing itself, though never to any great extent.

March 2, 1858. Age twelve years and a half. This day I found him suffering from slight paralysis of one side of the face. I ordered him repeated doses of hydrargyrum cum cretâ, with compound chalk powder and soda, and visited him several times this month. He improved much; but there was still some flatness of the face on March 29th.

On July 27, he had another fit; and in August I have a remark that his mouth was still drawn. My notes at this period are very meagre. I was attending the child from the Dispensary, and did not, therefore, enter the case in my private note-book. There did not seem much the matter with him, but this flatness of one side of the face; and this lasted, for, on July 20, 1860, I find that I ordered him some bichloride of mercury. The distance of the parents from the Dispensary, and from my house, with the uniform condition of the child, prevented the treatment from being carried out quite as I desired.

I have now reached the year 1861, when his last illness was upon him.

On Jan. 3, 1861, his age being fifteen years and three months, he presented the appearance of being "baned" by the cold, being thin, miserable, and never warm. In