abundantly deposited in the surrounding skin, so that, in fact, the margin was better defined than heretofore. The whole on each side was set in a dark brown framework. About this time, a single small patch of similar erythema was developed on the forehead towards the roots of the hair; and I had an opportunity of remarking that where it encroached on the scalp, the hair was shed precisely as in alopecia. The case seems to come under the head of morphea or vitiligo, and to stand in correspondence with the foregoing cases. They all seem remotely allied to that degeneration and decay which is evident in the vitiligo and loss of hair observed in drop evil and elephantiasis.

SYPHILITIC GUMMATOUS TUMOUR OF THE BRAIN: WITH REMARKS.*

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THE woman from whose brain the tumour here described was removed, died in the Chorlton Union Hospital. I am indebted to Drs. Walshe and Law for the following notes of the case.

Sabrina Bradbury, aged 30, was admitted into the Lock Ward of the Chorlton Hospital on December 18, 1872. She was then suffering from ulceration of the soft palate, and a node over the left frontal bone. She was dull and lethargic, as if weary, and, in short, presented all the symptoms of simple melancholia. At the end of a week, she had much improved, and assisted in the washing and cleaning of the ward. She relapsed on January 15th, when she complained of general pains over the body, and severe hemicrania affecting the left side of the head. She continued in this state till January 20th, when, on getting out of bed, she fell senseless on the floor; when Dr. Walshe reached her, however, she had recovered consciousness. From this date she became rapidly worse; but although she was very helpless, losing control over the sphincters of both bladder and rectum, she still remained conscious to a certain extent; thus, e.g., she could, when roused, still answer questions rationally, and, a week before death, Dr. Law expressly states that there was no aphasia. This heavy state however, rapidly deepened into coma, in which state she continued till January 31st, when she died, exactly eleven days after the first symptoms of grave cerebral disease had manifested themselves. After death, every organ in the body was found to be perfectly healthy, with the exception of the brain. In the brain, a tumour of the colour and consistence of new Stilton cheese, of the size of a pigeon's egg, and presenting all the usual histological features of syphilitic gummata, was situated behind the left frontal bone, occupying a space midway between the second and third tiers of frontal convolutions, whose configuration it had somewhat copied, though it was readily enucleated from them, growing as it did from the intercerebral neuroglia. The membranes over the site of the tumour were a sixth of an inch in thickness, and the inner and outer tables of the skull were slightly necrotic, although the scalp was apparently quite healthy. The greater part of the left hemisphere had suffered from the pressure of the tumour, very complete softening having taken place, which extended through the entire thickness of the brain, reaching as far as the fissure of Rolando superiorly, and the interpeduncular space inferiorly; it was further noted that, while the puncta vasculosa were normally present in the right hemisphere, they had entirely disappeared over the diseased area in the left; this, indeed, explains the softening, which was due to the pressure of the tumour on the walls of the small cerebral arteries.

The points of interest in this case, are the absence of aphasia and the extreme rapidity with which the cerebral symptoms were developed; the significance of these facts I should like briefly to review.

When we consider the locality and extent of the brain-lesion, the absence of aphasia is both interesting and important. It is quite true that some discredit, or rather doubt, has from time to time been cast upon the theory of Broca, that the function of intelligent speech is located in the third left frontal convolution; but it is nevertheless very generally entertained as a plausible theory, and has never been directly disproved. If this theory be true, it necessarily follows that, when the entire convolution is destroyed by injury or disease, this faculty must be abrogated. Now here we have a case in which the convolution was as thoroughly destroyed as if ablation had been performed; and yet, when the patient was roused to answer, she used words in their proper sense and sequence. It is true that some idea of the contour of the convolution was still preserved; but under the microscope nothing was visible but granular matter and fat-globules, all trace of nervous

tissue having disappeared. This being so, I do not see how Broca's theory can longer be entertained, as it is one of those cases in which a single proved negative must be destructive of the entire proposition.

The next point of interest is the extreme rapidity with which the symptoms were developed. Without attempting to prove too much, we may fairly conclude that the greater part of the very extensive change in the brain took place in a week. Now, the significance of this statement lies in the fact that, side by side with this fatal case, many others might be related which, although to all appearance of an equally grave character, have yet yielded to treatment as rapidly as this one passed on to a fatal issue. In illustration of this statement, it will perhaps suffice to quote two cases; the first of which, taken from Gambaco, is related by Mr. Berkeley Hill; the other was observed by myself. "A man had, in 1843, general syphilis; in 1847, he had nodes. Mercury was taken at both periods with benefit. In 1851, he felt pains about the body most intensely in the right leg; after a while these disappeared, leaving muscular weakness and stiffness in the limb, and loss of tone in the bladder. General tonic treatment was of no service; on the contrary, the feebleness of the right leg extended in some degree to the arm and side. In 1852, the patient passed under Ricord's care, who gave him mercury endermically, and iodide of potassium internally; after five weeks' treatment, great improvement ensued; nevertheless, he suffered relapses of his paralysis for four years more, complete recovery being ultimately obtained by large doses of iodide of potassium. Twelve days after his discharge, the patient again returned to Ricord, with strabismus of the left eye, diplopia, and mental confusion. Iodide of potassium removed these disorders in one month, whereon the patient omitted his medicine for a few days. His recovery was then interrupted by hemiplegia of the left side, and quiet continuous delirium. Specific treatment for three months again removed all symptoms of the disease. Sometime afterwards, the patient died of cholera. At the *post mortem*, no disease of the brain or its membranes was to be found." (*Syphilis and Local Contagious Disorders*, by Berkeley Hill, 1868, p. 178.)

The case which I myself observed was that of a gentleman who contracted syphilis in 1860, and who in 1870 was attacked with persistent hemicrania, inequality of pupils, rapidly recurring epilepsy, and great impairment of intellect, all which symptoms yielded in three weeks to a mixed course of mercury and iodide of potassium.

As a matter of fact, however, it is among the poor that we chiefly see the ravages of syphilis; and thus it happens that, while among the out-patients of our hospitals and dispensaries syphilis is a truly formidable disease, not unfrequently tending to death, it is the rarest thing in the world for syphilis to run on to a fatal termination among the better classes; indeed, it is very uncommon for it even to lead to extensive visceral or bone-lesions. This great difference is doubtless partly owing to the miserable hygienic conditions of the poor. Syphilis hits a man when he is down, and its poorer victims are thus peculiarly prone to suffer from its attacks, as they are already more or less prostrate: they eat too little, they drink too much, and they never wash, and so it comes to pass that they too often, when syphilised, suffer from the unholy trinity of drink, struma, and syphilis; but I venture to affirm that their low state of health is not the sole, or even the chief, cause of their suffering so terribly, but rather the want of proper treatment, and especially the want of proper mercurial treatment. Some time ago it was currently believed that the use, or perhaps I ought to say the abuse, of mercury was answerable for some of the most terrible lesions of syphilis. For some years I have tried to ascertain if there was truth in this statement, and I do not hesitate to say that it is about as groundless and mischievous a theory as any promulgated, and would be comparable to stating that the gravest evils of small-pox are due to the use, or abuse, of vaccination. My utmost care has generally failed to elicit the history of any mercurial treatment in the worst cases of bone and visceral syphilis which I have met with; and it is also true that these very cases, which certainly do not present the best field for showing the good effects of mercury, yet do nevertheless almost invariably improve under its cautious but continued use. It seems to me very desirable that we should be more concerted in our method of treating syphilis: nothing therapeutically is more certain than the powerful influence which mercury exercises over this dread poison, yet in spite of this the majority of patients are either not treated with it at all, or, what is nearly as bad, it is given up far too soon; for, if relapses are to be avoided, it is almost as important to keep up its action for some months as to begin it in the first instance. There are, it must be admitted, considerable difficulties in carrying out this plan in the out-patient departments of hospitals: patients come and go—go more often than come, as a rule, and so are lost sight of; they will not take their physic regularly; they fall into the hands of quacks; should inunction be ordered, they will not take the trouble of practising it. For similar reasons, it is impossible to carry out the treatment by mercurial baths; but, despite all these diffi-

* Read before the Manchester Medical Society.

culties, much more may be accomplished than is done at present. If, too, what is said in its favour be true, we have in the subcutaneous injection of mercury an efficient mode of treating these cases; for it is stated by the advocates of this method, that about a dozen injections, which of course the surgeon would personally administer, are all that are required to effect a cure; and for these reasons I have myself resolved to give this plan a fair trial in the out-patient department of the Manchester Infirmary.

There is one other point to which I should like to allude, which is this: we have satisfactory evidence—amounting, indeed, to demonstration—that syphilitic gummata, which untreated rapidly lead to a fatal issue, are quickly absorbed under treatment by mercury and iodide of potassium. We also know that, although these special tumours are not prone to soften in the centre, after the manner of cancerous and tubercular growths, yet they and other syphilitic lesions possess many features in common with cancer, one of which is the tendency they both show to cell-proliferation. Is it not, then, rational to hope that we may discover some drug or drugs which shall exercise as powerful a control over the so-called malignant growths, as mercury and iodide of potassium exercise over the poisoned products of syphilis?

Since the above was written, I have employed the treatment by subcutaneous injection of mercury in about a dozen cases of constitutional syphilis, and so far am by no means satisfied with the results obtained. The injections, administered as a rule three times a week, give considerable pain both at the time and afterwards; they sometimes, though rarely, produce abscesses; the patients become dissatisfied with the mode of treatment, and the symptoms do not yield so quickly as under the treatment by inunction or internal administration. The preparations employed have been corrosive sublimate in doses of one-sixteenth and one-eighth of a grain, and the cyanide of mercury one-tenth of a grain.

REMARKS ON THE PATHOLOGY AND TREATMENT OF CONTINUED FEVER.

By CHARLES MACLEAN, M.B., Applecross, Ross, N.B.

UNDER the above heading, I venture to make some observations, in order that a subject which I consider of importance may be properly ventilated in the profession, and in order that they whose opportunities for investigation are greater than mine can possibly be, in a scattered country practice, may give it some consideration. I feel great delicacy in coming forward, especially with anything like new views; and my apology, if any be demanded, is that I am influenced entirely by a sincere desire after truth.

Enteric fever, of a bad type, became epidemic in the filthy villages on the north-coast of this parish. I treated it at first in the usual way in every respect; but the remedies seemed to me to have little good effect, and altogether the mortality was rather high. This caused me to think of the pathology of the disease, and of the physiological action of medicines in connexion therewith. I considered what an important part the tendency to congestion played, and how frequently the immediate cause of death was traceable to the local manifestation of this tendency to capillary congestion; and I asked myself if there were nothing available either to prevent or to cure these baneful results. In considering the question, it occurred to me that, as bromide of potassium has been used, and with success, in engorgements of the internal organs analogous to that often present in fever, I was warranted in giving it a trial here. Pulmonary congestions were almost universally constant in greater or less degree. In one case, with well-marked bronchial congestion, and some indications also of commencing retardation of circulation in the proper lung-tissue, along with the usual cerebral symptoms, I tried the bromide, with the most satisfactory result. I gave two scruples of it, in divided doses, in the twenty-four hours. The uneasiness, dyspnoea, anxious and hurried breathing, and nervous tremors, gradually gave way, and the pulse became more normal in character when the drug took effect; the patient recovered well.

I have used this medicine frequently since then in this disease, and the effect has almost uniformly been, after a day or two of its use, marked amelioration in the nervous symptoms, as headache, subsultus, anxiety, and muttering delirium, usually with diminution of the pyrexia, and removal of the symptoms of congestion generally, indicated by the dicrotous pulse becoming less so in character, and more normal in other respects. Indeed, all the symptoms—general as well as connected with particular complications—have often appeared to be quickly modified for the better, after the full action of the drug. The patients, as a rule, got quiet sleep, whatever might have been their wakefulness,

and other nervous symptoms, before. They felt, in fact, as well, as appeared to me, in a fairer way. I have never observed any (even temporary) bad effect to put down against the seemingly beneficial influence of the bromide; and all the cases in which I have used it have recovered, with the exception of one, the particulars of which I think it interesting to state, shortly, in connexion with this subject. It was that of a woman, with the usual bronchitic symptoms, diarrhoea, anxiety, and sleeplessness; pulse 130; temperature 103.5 deg. Fah. I gave the bromide, five grains every three hours, and found a marked improvement in two days. The pulse had come down to 115, and had not the quick irritable feel. Temperature, 101 deg. Fah. The breathing was calmer, and the nervous symptoms were improved; she expressed herself much better. Next time I found her much worse; all the symptoms had returned in force. I found, upon inquiry, that she had not taken any of the medicine for about thirty hours, because "she did not like it." I repeated it in another form, but with what regularity it was taken I cannot say, and the patient sank and died.

I was the more encouraged to use the bromide at first, because physiology and pathology seemed to teach that there were remedies in daily use in the treatment of fever that were either simply useless, or directly injurious. These that I have just used may appear bold terms, but I certainly felt convinced that we never can satisfactorily treat fever until we cease to treat symptoms (or names), and until we direct our energies to obviating or subduing the tendency to passive congestion of the blood in the capillaries, and thus defend life by concentrating our forces at those points at which we know it will be attacked.

Let me not be misunderstood when I say that life is endangered by this state of the circulation, for we cannot strictly say that the immediate cause of death in fever is always congestion of this or that organ, or even of a general nature; but I certainly believe that it is invariably traceable to it. For example, take asthenia as a cause of death, and a rather frequent one it is. First there is congestion, more or less general, of the capillary system. With this passive congestion there comes to be retardation—probably often almost amounting to complete stagnation—of the blood-current, and of course a deficiency in the supply of arterial blood to the part results, and the nutrition is impaired. Now this malnutrition will produce a corresponding impairment of function, including that of important parts in the economy, such as the nervous system, and this must react unfavourably on the circulation again, and so on, until a state of asthenia is induced; and as the heart itself, on account of its ceaseless duty, requiring an uninterrupted supply of blood, suffers early, and becomes weakened in action, can we wonder if asthenia comes on apace?

I shall state here what I believe to be the *modus operandi* of the cause of all the phenomena of continued fever (after the rigor, etc.) and I shall then call attention to the probable mode of development of this cause itself. The cells of the tissues in health are continually parting with azotised and non-azotised substances, the various elements of which compounds eventually become oxidised and go to form carbonic acid, etc., to be eliminated by the lungs and skin; and urea, uric acid, etc., to be excreted by the kidneys. It has been ascertained also, that the nitrogenous substance converted into urea and uric acid is derived not only from the products of the degeneration of the tissues, but also largely from superfluous albumen of ingesta; also that part of the said products of degeneration of cells eventually becomes again part of the solid structure of the body. To make up for this loss by degeneration, the cells are constantly taking up material from the arterial blood. Now in this disease the cells, though they go on degenerating as in health, are not able to replenish themselves, owing to the existing stagnation, and consequent want of renewal of arterial blood, in the capillaries. This same stagnation prevents not only the albumen newly formed from the food, but also that which the tissues have parted with, being taken up in anything like proper amount, by the exhausted cells. One of the obvious consequences of this is an increase of oxidation in the system, causing the rise of temperature, and an increased elimination. It is this circumstance that has probably given rise to the idea that there is an abnormal disintegration of the tissues in fever; but I ask, is not this increased elimination quite explicable by this theory of non-nutrition, as I may call it, or want of replenishing power in the cells, on account of congestion of capillaries supplying them, the degeneration being just as in health? This non-nutrition quite explains the softened appearance of organs, so invariably met with after death from fever of typhoid type. In short, is not the breaking down of this pernicious congestive barrier the one desideratum in the treatment of fever?

An accurate knowledge of the bearing and influence of this tendency to congestion in the pathology of fever must, I think, be of the greatest importance practically, and this must be my excuse for dwelling on the subject. If this be not the cause of the disease, what is? What