B R A I N .

APRIL, 1885.

Original Articles.

CASES OF RECOVERY FROM SYMPTOMS POINTING TO THE PRESENCE OF PROGRESSIVE ORGANIC CEREBRAL DISEASE.

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INTERESTING as all cases of intracranial disease are from many points of view, those are specially interesting to the practical physician in which recovery ensues from symptoms which former experience had led him to regard as indicative of progressive mischief tending to a fatal result. Of recovery, more or less complete, from all kinds of so-called "functional" disorders we have, of course, ample experience. Of recovery also more or less complete, from small hæmorrhagic effusions or from small patches of softening, again clear evidence is sufficiently abundant. Simple inflammation of the surface, or even of the substance, of the brain, no doubt subsides, leaving little or no clinical trace of its pre-existence; and, probably, this is of more common occurrence than most of us suspect. Syphilitic affections, again, are not unfrequently benefited, and sometimes cured, by appropriate treatment. Nevertheless it cannot be denied that symptoms indicative of obvious inflammation of the cerebral meninges, symptoms pointing to the presence of cerebral tubercle, symptoms characteristic of tumours of the brain, and even symptoms apparently referrible to progressive degenerative processes,

are properly regarded as of the gravest omen, and in the great majority of cases foretell a fatal issue.

The cases which I am about to narrate derive their chief interest from such considerations as have inspired the foregoing paragraph. Two of them impressed me greatly; because from their symptoms and progress I had gradually been confirmed in the belief that they were hopeless, when lo! amendment took place, and before long the patients were restored to health.

The first case was that of a young woman, who, when she came under my care, had been complaining for three weeks of abdominal pain; who on her admission into hospital was suffering from subacute peritonitis, with fluid effusion into the abdominal cavity; and who during the next seven weeks presented symptoms which were ascribed, and I think rightly ascribed, to tubercular peritonitis. She had general pain and tenderness of the belly, with more or less fulness, constant sickness, hectic temperature, progressive emaciation and debility, which appeared to be uninfluenced beneficially by any kind of treatment that was adopted. Then she began to squint, from partial paralysis of both external recti, and of the left internal rectus, to present oscillation of the eyeballs, to lose memory, and to have delusions. It was naturally, and I still think correctly, surmised that intracranial tuberculosis had been added to the abdominal tuberculosis; it was also, I think, naturally surmised that the condition of the patient, previously sufficiently grave, had now become hopeless. In the course of a few days, however, to my surprise, the aspect of affairs began to brighten. By degrees, yet rapidly, the temperature became normal, the abdominal symptoms subsided, the sickness ceased, appetite returned, and the patient began to sit up and take interest in all that was going on around her. A little later her squint also disappeared, and she lost her delusions; and six or seven weeks after the first appearance of squint, she left St. Thomas's for a convalescent hospital, still forgetful and still presenting slight nystagmus, but in all other respects perfectly restored to health. I saw her on February 3rd of the present year; she came to see me at my request. I found that for the last twelve

months she had been working at a laundry, that she had had good health, and no recurrence of her former symptoms, and that she looked well, but that she had never recovered her previous good memory. The following is a detailed account of this case:—

CASE I.—*Tubercular peritonitis (?)—Tubercular meningitis, or tubercular tumour of the brain (?)—Recovery.*

ARABELLA D., an unmarried woman 23 years of age, was admitted under my care on the 4th of October, 1883. Her health had been good up to three weeks ago, when, as she was carrying a heavy tray, she felt a sudden sharp pain in the umbilical region. She has suffered from abdominal pain of varying severity ever since; and her abdomen has enlarged.

She is a dark-complexioned, good-looking, fairly nourished girl, complaining of abdominal swelling, and of pain referred chiefly to the hypochondriac regions. The belly is uniformly distended, and measures 35 inches in girth at the umbilicus. It is resonant in front, and dull in the flanks, as she lies on her back; and the relations of the resonant and dull areas vary with position. There is some tenderness on pressure; but no evidence of tumour, or of enlargement of liver or spleen. No anasarca in legs or elsewhere. The thoracic organs are normal, excepting that the heart's apex beats a little higher than natural, and that there is some crepitation at the bases of the lungs. There is no evidence of mischief at the apices. Appetite bad; tongue furred, but moist; pulse 80; respirations 20; temperature varying from 98·4 to 99. Urine, sp. g. 1024; no albumen.

During the next week there was little change in her condition, excepting that the ascites gradually increased, until the girth of the abdomen measured more than 40 inches, and resonance disappeared excepting on deep pressure. The impairment of appetite continued; she complained constantly of pain and tenderness in the abdomen, which were not always referred, as at first, to the hypochondriac regions; her temperature rose daily above 100, but varied between 98·4 and 100·6; and her urine was of high specific gravity, and contained abundant urates.

On the 11th she had an attack of diarrhoea, and her bowels were moved eight times; she vomited a good deal, complained of much epigastric pain, and her temperature rose in the morning to 102·2. The tongue was covered with brown fur.

The diarrhoea continued off and on for a week; during the first

two or three days of which she still vomited. She complained during the week of pain and tenderness of the abdomen, chiefly in the epigastric region, and also of pain between the shoulders; her appetite was very bad, her tongue brown and inclined to be dry, and her urine presented a little albumen and a few granular and hyaline casts. The temperature reached 102·8 on the 12th, and subsequently varied between 98·4 and 101. The ascites remained unaltered.

From the end of this week to about the 22nd of November, the patient got steadily weaker and thinner, and suffered from profuse nocturnal perspirations. Her bowels were variable, but on the whole inclined to constipation. She suffered from sickness, and often vomited several times in the day. Her tongue was coated; her appetite very bad. The pain and tenderness in the abdomen never left her; and at times the pain, which was paroxysmal and referred mainly to the umbilical and epigastric regions, was very severe. But during the last fortnight of the time the ascitic fluid disappeared, and the girth of the abdomen became reduced to 27½ inches. The reduction, however, was not attended with any diminution of pain or tenderness, and the abdominal walls became rigid. The temperature varied for the most part between 99 and 101, occasionally becoming sub-normal, and at times rising above 101. From the 13th of November onwards, however, it never reached 100, and was usually normal or sub-normal. The pulse, which was always feeble, ranged from 80 to 116. The urine continued scanty and high-coloured, and usually contained a trace of albumen. The catamenia, which were due about the time of her admission, did not make their appearance either then or subsequently. She had no cough or sign of disease at the apices; but the sub-crepitation, audible at the bases on admission, was audible from time to time subsequently.

On the 24th of November it was noted that for a day or two she had been complaining of double vision; and it was found that she had an internal squint with both eyes (the left external rectus being the weaker), and nystagmus. But she had no headache, giddiness, tremors, or colour-blindness.

On the 26th she was examined by the ophthalmic surgeon, who observed that there was defective movement of both eyes outwards, and slight impairment of inward movement in the left eye, and that the internal structures of the eyes were healthy. There was still nystagmus. Still also she complained of dull aching pain across the upper part of the abdomen; she vomited a little at night; and the urine contained a trace of albumen. Her temperature was normal.

28th.—The condition of the eyes is unaltered; and there is still some pain across the epigastrium. But the patient has been improving in all other respects during the last few days; she is bright and cheerful, and hungry; sickness has ceased; and her abdominal uneasiness has so much diminished that she has been able to sleep without the hypodermic injections of morphia, to which she has been accustomed almost ever since admission. Pulse 114; temperature normal; urine 1030, many oxalate of lime crystals, and a trace of albumen. Ever since the eyes have become affected the patient has suffered from loss of memory (cannot recollect the days of the week, the times of my visits, whether she has had her dinner, &c.) and from delusions (such as that her mother has brought her a pineapple; that her father, who has long been dead, has been sitting beside her).

From this time forwards there was progressive improvement. The patient had no return of sickness, and enjoyed good appetite; her abdomen became more and more flaccid, and free from pain, which finally disappeared wholly; the diplopia gradually diminished, and had quite subsided by the 16th of December, but nystagmus (especially when she looked to the extreme left) continued; her temperature ranged from about 97 to 98·2; she put on flesh, recovered strength, and became lively and happy. On the 2nd of December, and for a few days subsequently, she complained of pain across the forehead, and slight giddiness; but these symptoms did not recur. The fundi of the eyes, before she left the hospital, were carefully examined by Mr. Nettleship, who failed to discover any choroidal tubercles, and reported them as being quite healthy.

On the 9th of January she was sent to a convalescent hospital. At that date she expressed herself as feeling, and looked, quite well; she was enjoying her food, and helping in the ward; the abdomen was soft and void of pain, tenderness, or tumour; the urine was free from albumen; she had no headache or double vision; but slight nystagmus was still observable when she looked out of the corners of her eyes; and she was still forgetful. There was no evidence of pulmonary disease. She weighed 6 stone 11 lb.

During her stay in the hospital she was treated mainly with morphia, administered subcutaneously, and tonics.

There is, no doubt, much that is difficult to understand in the narrative which has just been given. It is especially difficult to comprehend how or why the abdominal symptoms should have subsided just as the cerebral symptoms came on, and how or why the latter should in their turn have passed

away, leaving the patient apparently healthy. I think that no one who watched the case during life doubted, and that few of those who read the notes carefully can doubt, that the girl was suffering from tubercular peritonitis. The symptoms and progress of the case were exactly what one constantly witnesses in that disease, and, so far as I know, in no other. Moreover recovery from the symptoms of tubercular-peritonitis, though certainly rare, is not unprecedented. But if she had tubercular peritonitis, it is difficult to believe that her cerebral symptoms could have been due to anything else than intracranial tuberculosis. I do not see how the combination of double internal squint, nystagmus and loss of memory, could have been merely functional. There was no ground whatever, from the antecedents of the girl, to suspect syphilis; moreover she recovered without the use of antisiphilitic treatment. No doubt inflammation at the base of the brain may be idiopathic; and this might furnish the explanation of her symptoms. But the arguments which might be adduced against the presence of simple meningitis are of the same kind as those that might be adduced against the presence of tubercular meningitis; and it is the less likely of the two explanations in this case, inasmuch as there was strong evidence in favour of the presence of tubercles elsewhere. I believe that the patient was suffering from cerebral tuberculosis; but whether this was in the form of slight basal meningitis, or of tumours in the substance of the cerebellum or elsewhere, I cannot venture to decide. The absence of optic neuritis, which is not uncommon in either of these affections, does not help the diagnosis.

In connection with this case I may briefly advert to another which came under my notice some years ago, and which has some kind of relation to it.

CASE II

On the 5th of May, 1875, a servant-girl, 15 years of age, came under my care. She had had good health up to three weeks before I saw her. Then she began to suffer from pains in the head, back and abdomen, giddiness, drowsiness by day and restlessness at night. Also she began to see double.

On admission, she was a fairly healthy-looking girl, complaining

of headache, giddiness and double vision. She was very drowsy, and indisposed to answer or take notice. Her pulse was 48, her respirations 24, her temperature normal. She had paralysis of both external recti, and well-marked double optic neuritis of recent origin. For some days afterwards she remained somewhat drowsy and torpid, with slow pulse, and at times irregular respiration of the Cheyne-Stokes character; her temperature at the same time being slightly below the normal. Then she gradually improved, her squint disappeared, and at the end of four weeks from her admission left the hospital well, excepting for the persistence of optic neuritis.

She was re-admitted twelve days later, suffering from weakness, pains in back, short breath on exertion, and slight cough. She also complained of a little pain in the right temple, weakness of eyes, and some giddiness when walking. She was suffering from slight bronchial catarrh, and while in the hospital had an attack of erythema nodosum, during which her temperature varied between 99 and 102, and on one occasion rose to 102·8. She remained in the hospital two months, and left fairly well. On leaving, there was still marked evidence of double optic neuritis but no other definite indications of cerebral disease. There was no clear indication of tuberculosis. But I thought at the time, and am still inclined to think, that her symptoms were due to tubercular meningitis.

The third case was that of a woman, 39 years of age, who in the midst of apparently good health was attacked with double vision and giddiness, followed in about three weeks by headache and inability to stand. Then she vomited, and complained of numbness of the right half of the upper lip. At the end of a month she had headache, staggered like a tipsy person when she had attempted to walk, suffered from distressing nausea, had incomplete paralysis of the right portio dura, paralysis of the right external rectus, and slight paralysis of the left internal rectus, horizontal nystagmus when she turned her eyes strongly to the left, and contraction of the right half of the field of vision. She had no other paralysis, no impairment of sensation, no affection of the internal muscles of the eyes, no optic neuritis, no colour-blindness, and no loss of taste or smell. Soon afterwards the left external rectus became paralysed. Then came numbness and tingling in the feet, with involuntary jumpings of the legs, tendency to

stiffness, and increase of tendon reflexes. A short time afterwards a little twitching of the left angle of the mouth was observed, which soon extended to the left eyelids and to the left hand. By this time too she had become colour-blind with both eyes. Lastly, numbness and weakness of the right arm supervened, followed by marked contracture. At the end of three months from the beginning of her illness, her symptoms were at their worst; and, looking to their gravity and their rapid progress, I must confess that I took a very unfavourable view of the patient's chances of recovery. Nevertheless amendment took place; one by one her symptoms disappeared; and in two months she left the hospital in all essential points restored to health. And now at the end of nearly two years she is, I believe, earning her livelihood as a nurse. The following is a full account of this case.

CASE III.—*Symptoms pointing to progressive disease in the neighbourhood of the fourth ventricle, coming on gradually, and finally subsiding under treatment.*

ELIZA N., a nurse, single, aged 39, was admitted into St. Thomas's under my care on the 17th of January, 1883.

Excepting that she had had an attack of enteric fever ten years previously, and subsequently occasional slight rheumatic pains, she had enjoyed excellent health, until her present illness began. There was no history or evidence of syphilis.

She had been attending on a private paralytic patient, when suddenly a month ago, while feeding him, she was attacked with double vision. This was accompanied by a sense of giddiness and nausea—a feeling of sea-sickness, as she termed it. These symptoms continued, and about three weeks afterwards she found on getting out of bed that she could not stand, and in fact tumbled while stooping for her slippers. On the 12th she first complained of headache over both the frontal and the occipital regions, a sense of pressure, and as if her head were too heavy for her. On the 15th she vomited, and noticed numbness and weakness of right half of upper lip.

She is a healthy-looking, well-nourished woman, complaining of headache, nausea, giddiness, and consequent inability to stand, and difficulty in using the upper lip on the right side. Her headache is severe and more or less general, but is referred mainly to the frontal region. There is an area of tenderness to percussion,

however, at the back of the left parietal bone. The forehead also is somewhat tender to percussion. The nausea is distressing, but is present mainly when she sits up in bed, or tries to stand. She is unable to walk without assistance, or even to stand; staggers like a drunken person, and has a tendency (she says) to fall over to the left rather than to the right side. There are no ataxic movements. There is slight, but obvious, paralysis of the right facial nerve; the right eyelids close imperfectly; the right upper lip evidently acts feebly; and the right side of the face generally is smoother than the other. Nevertheless, the right angle of the mouth moves freely when she laughs. The tongue is protruded slightly towards the left, but when the organ is drawn in again its left side looks plumper and lies higher than the right. There is no obvious difference in the appearance or action of the two sides of the soft palate; but the uvula is concave towards the right side, and its apex points in that direction. She presents a marked squint. The right external rectus appears to be completely paralysed; and the left internal rectus slightly paralysed; and there is well-marked horizontal nystagmus when she looks strongly to the left. Pupils normal. There is no optic neuritis. She can distinguish the forms of objects and colours perfectly; but there is apparently some contraction of the field of vision towards the right side. Smell and taste and speech are unimpaired. No affection of ears, excepting that she has slight deafness on the left side, which dates from childhood. No paralysis or anæsthesia of limbs; tendon and superficial reflexes normal; mental condition healthy; no hysterical symptoms. Thoracic and abdominal organs healthy; tongue clean; appetite fair; bowels open; catamenia regular; urine normal; temperature 99.6.

The presence of the symptoms above detailed were confirmed during the next few days by repeated and careful examination. And Mr. Nettleship not only concurred in the description of the eyes above given, but, by investigation of the field of vision, discovered that the right half was so largely contracted for both eyes, as almost to cause hemiopia. Her headache varied in severity, but was rarely if ever absent, and often intense. Her nausea remained for the most part in abeyance so long as she lay perfectly still, but became severe whenever she sat up in bed, and especially when she was made to stand. Her appetite was maintained. She continued quite unable to stand alone.

On the 23rd it was noticed that there was decided weakness of the left external rectus, in addition to the former ocular defects. This became more pronounced during the next four days.

On the 27th she first experienced a feeling of numbness and

coldness at the bottom of the feet, which in the course of a few days amounted to a sense of pins and needles. On the 12th of February she complained that her legs felt stiff, and that they jumped at times. She could move her legs pretty freely; but they tended to become rigid, especially at her knee- and ankle-joints; there was marked exaggeration of the tendon reflexes, and on the left side ankle-clonus. These phenomena continued for a time, the left leg being worse than the other. Ankle-clonus was obtained later on the right side, which also was somewhat more numb than the other.

On the 3rd of February it was observed that the facial paralysis had increased; although when laughing the right angle of the mouth was still drawn up, at least as much as the left; but it was also noticed that there were frequent twitchings of the left angle of the mouth. These twitchings continued; and about the 20th it was noted that she had also occasional twitchings in the left eyelids, and slight tremors in the left hand.

She had complained for a short time that her eyesight was not so clear as it had been; and on the 1st of March this was again carefully tested. At that time the ocular paralyses remained; the fields of vision were as before; and the discs were quite clear, but doubtfully pale. But now she was colour-blind. She could not distinguish greens or reds, and confounded them with brown, and sometimes with grey. Bright yellow was called white. Bright blue and lilac were both called dark blue. She was sure also that her vision was in other respects worse than it had been.

On the 30th of March, after she had been suffering for a day or two from much more intense pain than usual, she for the first time complained of a feeling of pins and needles in the right hand and arm, and of pain in the right shoulder. The arm also became weak, and in the course of a week or two slightly flexed at the several joints, the fingers especially suffering; and she had more or less pain from the shoulder downwards. This paralytic affection of the arm was never complete; but attained its maximum towards the end of April.

During the greater part of the time terminating with the last date, the patient had on the whole been getting slowly but steadily worse; the pain in the head (which varied in position, but became more and more localised in the neighbourhood of the back part of the left parietal bone, as time went on) was constant, but liable to severe exacerbations; the sense of nausea on the slightest movement continued; and from time to time (as has been shown) additional paralytic phenomena arose. Nevertheless during the month of April some favourable indications were manifested. On

the 11th she saw singly for the first time since admission. And on the 15th the following note was taken: "Has not seen double since the 11th, and now the movements of the eyes appear to be perfect. She distinguishes colours better than she did a little while back; she recognises bright greens and blues, but calls red black, and yellow dirty white. There is still nystagmus when looking to the extreme left. Also there seems some improvement in the facial palsy; at any rate she closes her eye better than she did, and says that the right side of the face is less stiff. Complains that left side of head is heavier than right." From this time forward there was no return of double vision; and her power of appreciating colours was slowly restored.

Late in April, or early in May, the patient began to improve decidedly. She still suffered from intense headache, giddiness, and nausea; but the attacks were not so frequent; and intermissions occurred which became longer and longer. Her appetite was better, and she felt stronger. About the 10th or 11th of May she began to sit up for a few hours in the evening; and a week or two later got up in the afternoons, and even began to walk about with assistance. It remains only to add, that her various paralytic symptoms gradually cleared up; and that, when she left the hospital on the 4th of June, there were scarcely any traces of nausea or headache, the right facial nerve was not visibly paralysed (although she said that side of the face was still stiff, and that there was still a little difficulty in retaining fluids within the lips), the right hand and arm had almost completely recovered their power, and could be used freely, there had been no starting in the legs for some weeks, and (though the right leg was still somewhat stiff) she could walk well.

She went for a month to a convalescent hospital; at the end of which time she presented herself for examination. She then seemed quite well, and expressed herself as being able to resume her occupation. There were no discoverable signs of paralysis, and her appreciation of colours was entirely restored. I saw her some months later, and she remained well. I may add that there was still a little twitching about the left angle of the mouth. I think it probable, however, that this was an odd affair.

During the greater part of the patient's illness her temperature varied between 99° and 100° ; but occasionally it rose to between 101° and 102° , and more frequently descended to the normal. I cannot say that it improved materially as her condition improved in other respects.

The treatment adopted was mainly the subcutaneous injection of morphia, repeated often two or three times a day, for the relief

of headache; and the occasional use of leeches behind the ears (the application of which was usually followed by benefit), of blisters and of ice.

For the first week or two I prescribed 5 grains of iodide of potassium, and 40 minims of solution of perchloride of mercury, to be taken three times a day. Then this was replaced for a time by bromide of potassium, in 20-grain doses. Then she was treated for reasons not referred to in the above notes, at one time with some stomachic mixture, at another time with some cough mixture. The iodide of potassium and mercury were resumed on the 15th April, and continued until she left.

What was the matter with this patient? Had she a tumor of the brain? Many of her symptoms—her localised headache, giddiness, nausea and rapid extension of symptoms—suggested this explanation. But the absence of optic neuritis and her final recovery seemed to negative this view. Was her disease a functional one merely? I think a decided “no” may be answered to this question. There was no history of hysteria and she was not at all emotional. Moreover the character of the symptoms and their mode of development were not in accordance with one’s experience of mere functional disorder. That her symptoms could not have been due to obstruction of arteries with consequent softening of some limited tract of brain-tissue, or to hæmorrhage, is clear from the fact that the development extended over three or four months. In many respects her case presented a close analogy to cases of ophthalmoplegia, presumably due to degenerative changes, or chronic inflammatory processes. In these we not unfrequently observe headache, giddiness, sickness, and (besides the paralysis of the eye-muscles) various other paralyses, anæsthesia of limited distribution, and involvement of one or more of the special senses without optic neuritis. But these cases, so far as I know, they are of much slower progress than hers, and do not tend to recover. I do not see, however, why such cases should not occasionally improve or even recover; and on the whole I lean to the opinion that, in this patient’s case, the symptoms were really due to some subacute progressive inflammatory process taking its origin somewhere about the floor of the fourth ventricle, and spreading thence in depth and surface.

her recovery under the use of iodide of potassium and mercury suggests a syphilitic origin to her symptoms. I never dared myself to ask her whether she had had this disease. She was a very healthy-looking woman; there was no lump or scar or stain about her body to suggest that she had ever had anything of the kind; and her demeanour was such as to disarm suspicion. Nevertheless the possibility of the affection being syphilitic cannot be altogether excluded from consideration.