CLINICAL ILLUSTRATIONS OF DISEASES OF THE NERVOUS SYSTEM; AND OF OTHER AFFECTIONS SIMULATING THEM DURING LIFE.

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NOTWITHSTANDING the rapid advances which medical science has made of late years, the subject of CEREBRAL DISEASES lies still wrapped in considerable doubt and uncertainty. The pathology of such affections is often ill-defined, the diagnosis obscure, and the treatment very unsatisfactory. It is therefore with great diffidence that I offer my humble contribution to this department of practical medicine; and I am compelled to admit, *in limine*, that the cases and the remarks which I am about to offer will, in some instances, rather increase than diminish the difficulty of investigations connected with the Diseases of the Brain. But I believe, that a full confession of ignorance is one step towards the acquisition of knowledge; and that a careful consideration of *facts*, although it may increase our scepticism as to the opinions and theories developed in some books, will not make us less efficient practitioners of the healing art. I believe that medicine, as a science, is far from being complete; and that, like geology, it consists, at present, of a vast multitude of *facts*, collected by the labours of faithful observers, which are now being grouped together and arranged, and may some day be reduced to a definite system.

With these observations, I proceed to the immediate purpose of this paper; and I may mention, as an apology for entering upon so difficult a subject, that I have had considerable opportunities, during many years' connexion with a large public practice, of investigating the Diseases of the Brain and Nervous System, during life and after death; and the difficulty of the subject has, in my mind, invested it with particular interest. The remarks which I am now about to offer, are altogether practical, and I shall relate only such cases as have come under my own notice.

The *Diagnosis* of cerebral disease is exceedingly difficult, and no very definite rules can at present be laid down for the guidance of the practitioner. The most formidable symptoms are sometimes unaccompanied with any perceptible organic lesion; while at other times, the most serious and extensive alterations of the cerebral structure have given rise to no symptoms whatever during life. These remarks will be illustrated by the two following cases:—

CASE I. EXTENSIVE DISEASE OF THE BRAIN, WITHOUT ANY SYMPTOMS DURING LIFE. F. C., æt. 61, a pauper in the Islington Infirmary, had always enjoyed good health, and never applied for medical relief, except upon one occasion, for a slight ulcer on one of his legs, which was speedily healed. On Monday, March 21, 1842, he was in his usual state of health, when, after taking his tea, he complained of general pain and uneasiness; and, before any assistance could be rendered, he expired. A post-mortem examination was made four days after death, when the following appearances were observed:—*Head*. There was considerable congestion of the scalp; the dura mater was in some parts

adherent to the inner surface of the skull, and congested. On the surface of the left hemisphere, beneath the dura mater, and above the arachnoid membrane, there was found an adventitious membrane, perfectly organized, of a tough consistence, similar to the buffy coat of blood, thick in the central portions, and gradually becoming thinner at the sides and ends. In the thickest part, the thickness was about three lines: the whole membrane was seven inches long, and two and a half broad, and completely concealed the left hemisphere of the brain, which was flattened and compressed where it lay beneath it. On the upper surface, this adventitious membrane exhibited a dark red appearance, the under surface was more pale. On closer examination, it was found to consist of two layers, enclosing a cavity of considerable size between them. Both the upper and under surfaces were perfectly smooth and polished, and corresponded to the two layers of the arachnoid membrane. The arachnoid membrane beneath this adventitious formation, and also on the other side of the brain, was thickened and opalescent; and a considerable quantity of thin, serous fluid, was found lying beneath it, as well as in the ventricles. The minute vessels of the brain were congested, but the substance of the organ itself was of healthy structure and consistence.—*Chest.* The left lung exhibited some old adhesions, and the cavity of the right pleura contained a considerable quantity of thin, serous fluid; the bronchial tubes were congested. The heart was rather above the natural size; and the parietes of the left ventricle were thickened; there was also a slight thickening of the aortic valves, but the aorta itself was quite healthy; as were also the other valves. The viscera of the abdomen were all generally healthy.

REMARKS. Whatever may have been the cause of this man's sudden death, it is evident that a large adventitious growth must have existed for some years upon his brain, without producing any symptoms during life. It appears to me that the above case was, originally, one of true arachnitis, attended by the effusion of coagulable lymph, which eventually became organized, then separated from the membrane by which it was first secreted, and formed the adventitious growth above described; but Mr. Solly, who describes a somewhat similar case, considers the appearance to be due to a coagulum of blood, the colouring matter of which has been absorbed.

CASE II. ACUTE MENINGITIS WITHOUT ANY SYMPTOMS OF CEREBRAL DISEASE DURING LIFE. Sarah C., æt. 20, was attacked with peritonitis on the 8th of March, 1842, and was discharged cured, on the 20th of the same month. She was again attacked with illness on the 26th of April, when I was called to see her. She was then lying in bed, complaining of great pain in the abdomen, which, however, was not aggravated, but relieved, on pressure; pulse feeble; tongue slightly furred. She was ordered to take five grains of calomel and fifteen of jalap, and a draught every four hours, consisting of half a grain of emetic tartar with Epsom salts and infusion of senna. She was much relieved by taking these medicines, and seemed to be rapidly recovering. On the 29th of April, she again applied for medical relief. She was now sitting up, and complained only of pain in the abdomen, not increased, but relieved, upon pressure. As I felt pretty certain that the pain was not owing to a

fresh attack of peritonitis, I treated it as if it were neuralgic, and ordered a draught to be taken every four hours, consisting of ten minims of tincture of opium, with half a drachm of Epsom salts and an ounce of infusion of senna. On the 30th, she was worse; pain in the abdomen still very severe, but relieved upon pressure; bowels confined, much vomiting, some thirst, pulse feeble. She was now ordered to take four grains of calomel in sugar, every four hours. At half past six the same evening, she was much worse; she screams out in consequence of the severity of the pain, which, however, is still relieved upon pressure; pulse 120, not full or strong; has vomited all the powders and the mixture, and cannot retain even toast and water on the stomach; tongue white and furred. To take immediately, a pill, consisting of five drops of croton oil with five grains of rhubarb. This pill was rejected in a quarter of an hour. At half past nine the same evening, is worse; has constant vomiting, but no alvine evacuations, and still complains of excruciating pain. Under the impression that the symptoms were owing to some obstinate intestinal obstruction, she was ordered to have a clyster administered, consisting of gruel and salt; she was also ordered to take a minim and a half of hydrocyanic acid (Scheele's strength) immediately, and, if rejected, to be repeated until the vomiting should be allayed. A blister was also applied to the epigastrium, and a powder was given, consisting of ten grains of calomel and one of opium. The blister caused a little vesication; the clyster brought away no feculent matter; the hydrocyanic acid draughts were nearly all thrown up: and the powder of calomel and opium was likewise rejected. She continued in great pain during the whole night, but retained her intellect throughout; and when asked if she felt any pain in her head, she replied that she did not. She died at eight o'clock the next morning, only two days from the fatal seizure. A post-mortem examination was made twenty-three hours after death, when the following appearances were observed:—

Head. The scalp, skull, and dura mater, presented no morbid appearances. The vessels of the arachnoid membrane and of the pia mater were very minutely injected, presenting a highly inflammatory appearance. The former membrane was thickened and opalescent, and a quantity of serous fluid was poured out upon making an incision. There was about an ounce and a half of thin serum in the cavity of the skull and theca vertebralis. The ventricles contained rather more than the natural quantity of thin, serous fluid. The brain itself was of natural colour and consistence, except that, on cutting into the white matter, a great number of small bloody points were discernible.

Chest. There were no remarkable appearances in the cavity of the chest, with the exception of some congestion of the bronchial tubes, connected with an attack of bronchitis, for which I had attended her about a month before her death. The heart was perfectly healthy throughout.

Abdomen. The liver was quite healthy; there were some adhesions between this organ and the parietes of the abdomen, resulting, of course, from the attack of peritonitis above mentioned. The stomach contained only some gruel and toast and water; its mucous membrane was generally quite pale, with the exception of a few patches of congestion. The intestinal canal was healthy throughout, and contained only a moderate

quantity of gas, and some feculent matter in no great abundance, and of the natural appearance. No ulceration, constriction, or dilatation, could be discovered anywhere, after the most minute and careful examination. The peritoneal surface of all the viscera was generally healthy, with the exception of a few slight adhesions, the results of the attack of peritonitis from which she had entirely recovered. The pancreas, spleen, and kidneys were healthy. The uterus was small and healthy; the right ovary was very much dilated, being as large as a hen's egg, and when opened, it was found to contain about an ounce and a half of pus, which was enclosed in a sac lined by a smooth membrane. There was no effusion whatever into the peritoneal cavity.

REMARKS. It is very difficult to explain the cause of the symptoms and the rapid death of the patient; and I can come to no other conclusion upon this very curious and anomalous case, than that this young woman's death was caused by an attack of meningitis, the peculiar symptoms of which were wholly absent during life. In the heart and lungs, there was no morbid appearance sufficient to account for the fatal result; nor was there detected in the abdominal cavity any indication of disease, which could explain, satisfactorily, the horrible pain which she experienced in the abdomen, to which region she referred the whole of her malady. The suppuration of the right ovary, which was probably contemporary with the previous attack of peritonitis, was the only important morbid appearance in the abdominal cavity; and, as this abscess did not in any way communicate with the surrounding parts, it cannot, I think, be considered as the cause of death. The greatest pain was felt at the epigastrium, and pressure over the whole of the abdomen was attended with relief, not with aggravation of the symptoms; and I therefore refer it to nervous sympathy with the diseased membranes of the brain.¹

After relating the above cases, in the first of which there were no symptoms at all during life, and in the second the symptoms were referred to a totally different region, I need hardly refer to others where the most excruciating pain has been felt in the head, and where, nevertheless, upon the death of the patient, no cerebral disease whatever has been manifested. In the following case, it will be perceived that the most marked symptoms of cerebral disease existed during life, and yet no structural disease of the brain was discovered.

CASE III. DISEASE OF THE KIDNEY WITH ALBUMINOUS URINE, SIMULATING CEREBRAL DISEASE. Elizabeth W., æt. 70, an inmate of the Islington Infirmary, was first seen by me on the 6th of January, 1848. I found her labouring under symptoms which appeared to indicate a cerebral affection. She was occasionally violent, uttering loud noises, and complaining of great pain in the head; pupils fixed, somewhat dilated; tongue brown, dry, and cracked; great thirst; pulse about 104, very weak and irregular. The limbs were in a state of spasmodic rigidity, resisting every effort to change their position. I recommended her head to be shaved, and a blister to be applied to the nape of the

¹ I confess that I have still some doubts as to the real nature of this case; but whatever may be its true pathology, I can vouch for the strict accuracy of all the facts. R. H. S.

neck, and one to each temple. On the 8th of January, she was rather better, and more quiet; the rigidity of the right arm had disappeared, and the left was now rigid, with the fingers extended and separated. Her urine was passed under her, and none could therefore be collected for examination. On observing this woman, on several successive days, it was found that the rigidity of the limbs was not constant, but varied on different days, sometimes existing on one side, sometimes on another. She remained in a hopeless state, with a fluttering, irregular pulse, and dry cracked tongue; the intellect was wandering, but she sometimes put out her tongue when asked to do so, and sometimes she answered questions. She lingered till January 15, when she died.

Post-mortem examination. *Head.* The scalp and skull were healthy; the dura mater was rather congested; the arachnoid membrane presented no morbid appearance; the surface of the brain was healthy. The brain itself was found to be healthy throughout, and of firm consistence. *Chest.* The heart and lungs presented no peculiar appearance, except that the former was somewhat thickened, and the mitral valves were slightly diseased. *Abdomen.* The liver was of natural size, and of nutmeg appearance. The kidneys were small, and their proper coat easily separated, exhibiting a pale, mottled appearance beneath; the substance of each kidney was firm, but granular and pale. Some urine was taken from the bladder and examined. I should here observe, that there was no opportunity afforded for examining this fluid during life, as it dribbled away from her without any apparent consciousness on the part of the patient. The urine was turbid; and on the addition of nitric acid, a copious deposit was produced, which was increased by heating the mixture. Corrosive sublimate also threw down a copious white precipitate. A small portion of the urine was examined by the microscope, and it exhibited the tubular casts which are frequent in albuminous urine accompanying renal disease.

REMARKS. This case, therefore, which during life exactly resembled one of structural disease of the brain, was really one of poisoning of the blood by urea. There can be no doubt that the *simple apoplexy*, as it is called, is the result of albuminuria; the albumen of the blood in that disease being excreted by the kidneys, and the urea of the urine remaining in the blood, and acting as a poison to the nervous centres. This case is remarkable for the spasmodic rigidity exhibited by the muscles, a symptom which is often described as characteristic of cerebral softening; whereas in death from albuminuria, the patient is generally in an immoveable or comatose condition.

CASE IV. EPILEPSY ATTENDED BY HYPERTROPHY OF THE CRANIAL BONES. Margaret Y., æt. 46, formerly a servant, was obliged to leave her place, many years ago, in consequence of frequent attacks of Epilepsy. She was for many years a patient in the Islington Infirmary, and under constant medical treatment for the above disease: the fits were frequent, occurring at irregular intervals, and of a very violent character. In the intermissions between the fits, her health was tolerably good, with the exception of occasional headache; her intellectual faculties were quite unimpaired. As she always derived benefit from blood-letting, her disease was considered to be of a congestive character, and a strict anti-phlogistic regimen was adopted and maintained. She was on several

occasions cupped between the shoulders; blisters were applied, and kept open in the same situation, and purgatives were administered. Her diet was of the lightest character; no solid food or beer was allowed, and she derived her support entirely from milk, eggs, bread, and thin broth, or beef-tea. This treatment continued for several years with some advantage, but no decided improvement. In May 1842, the fits became more frequent and severe, typhoid symptoms supervened, and she died.

Post-mortem examination. The body was plump and well-formed, and there was a layer of fat beneath the skin, about three quarters of an inch in thickness over the abdomen; a rather remarkable fact, considering the tenuity of her diet. *Head.* The scalp was natural. The skull externally presented no peculiar appearance, and no difficulty was experienced in sawing it through. On removing and examining it, however, it was found that there existed a remarkable want of uniformity between the two surfaces of the skull in some parts, owing to thickening of the osseous structure, particularly of the internal table, which, instead of being thin and brittle, was thick and solid. Along the line of the circular incision made by the saw, the skull was of about the average thickness. The os frontis was then sawn through, immediately in front of the coronal suture. Along the line of incision made in the usual process of removing the calvarium, the thickness of the cranium was one line and a half; but the part corresponding to the right frontal eminence was half an inch thick; and the same part, on the left side, was five lines in thickness. All the prominent bony processes were much increased in thickness and asperity, as the crista galli, the posterior clinoid processes, the bony ridge of the petrous portion of the temporal bone, the ridges on the internal surface of the occipital, etc. The dura mater was congested; the vessels of the arachnoid membrane were also congested, and the membrane itself opaque and thickened; beneath the arachnoid there were two or three drachms of bloody serum. The brain was flattened in front, the flattening exactly corresponding to the thickening of the internal table of the skull. The substance of this organ was very firm in its consistence, and the grey part was of an unusually dark colour; in other respects it presented no remarkable peculiarities. The other organs were carefully examined, but no morbid appearances of importance were discovered.

CASE V. HYDATIDS LYING BENEATH THE ARACHNOID MEMBRANE. Elizabeth B., æt. 46, an inmate of the Islington workhouse, of diminutive stature, of bloated, leucophlegmatic appearance, and of rather torpid intellect, who, although long a resident in the workhouse, had not suffered from any remarkable ailment, was brought to the surgery on Monday, Dec. 28, 1846, in consequence of serious illness. At that date, her face was swollen, the lips were livid, and the whole body was anasarcaous. She complained of cough and difficulty of breathing, and general uneasiness. On examining her chest, I found no morbid sound over the region of the heart; but sibilant râles were heard over the region of the lungs. She was ordered some medicine, and to be removed to the infirmary. The next day, she was much worse, the bloated anasarcaous appearance still remained, and, in addition, she seemed to be sinking into a state of coma, her breathing being sterto-

rous, her pulse very feeble, and her extremities cold. An attempt was made to administer some medicine, but she was unable to swallow. Mustard poultices were ordered to the feet. The pulse, however, became wholly imperceptible, the breathing quiet, the pupils in a fixed state between contraction and dilatation, and she died Thursday, Dec. 31.

Post-mortem examination. The body, generally, was œdematous; the subcutaneous areolar tissue being infiltrated with serum.—*Head.* The scalp and skull presented no morbid appearance, but the surface of the dura mater exhibited considerable congestion. The arachnoid membrane was generally healthy and transparent, and only a small quantity of fluid was effused between its layers. On examining the surface of the brain beneath the arachnoid membrane, I observed some semi-transparent masses in one or two places: I at first considered them to be local effusions of serum, but on examining them more closely, I found that they could readily be detached from the surrounding tissues, and were, in fact, hydatids, each consisting of a flask-shaped mass, having a thick skin and gelatinous interior. I now instituted a diligent search for these hydatids in all parts of the brain. Many of them were found on the exterior, lying between the sulci, and overlapped and hidden by the convolutions, all being beneath the arachnoid membrane. One hydatid was found lying free and unattached in the left ventricle; this was much softer than the others, and resembled a small oval mass of jelly of a yellow colour; another, much smaller and rather hard, was found lying upon the optic nerve, on the right side, at the part where the nerve winds round the crus cerebri. Altogether, about eighteen of these hydatids were collected, varying in size from that of a bean to that of a small pea; there were also a number of others scattered about in various parts of the brain, but so small, that they could not be extracted entire. They did not exist so abundantly in the white as in the cineritious substance, and they were wholly wanting in the cerebellum. No hydatids were found in any other part of the body. *Chest.* The heart was quite healthy. The lungs were also healthy, except that the mucous membrane of the bronchial tubes was thickened and reddened, and contained a considerable quantity of frothy mucus. *Abdomen.* The viscera of the abdomen were all healthy. As the bloated anasarca appearance of this woman gave rise to some suspicion of renal disease, the kidneys were carefully examined, but were found perfectly healthy.

Some of the hydatids were sent to my friend Dr. Sharpey, who recognised them as examples of the *cysticercus cellulosæ*; and the specimens are now preserved in the museum of University College, London.

REMARKS. The presence of hydatids in the brain is, no doubt, a very rare occurrence; and although the fact of their existence in that organ has been mentioned by some writers, yet it would appear that they have often been confounded with common cysts, and that, in particular, a beaded or vesicular appearance of the choroid plexus has sometimes been mistaken for a cluster of hydatids. I have, however, seen a coloured plate, by Dr. Carswell, in the museum of University College, which represents a number of subarachnoid hydatids, similar to those which I have above described. Dr. Copland, in his excellent *Dictionary*, article "Brain," mentions the fact of the existence of hydatids on the surface of the brain, but does not quote any case from his own experience.

Dr. Abercrombie, in his work upon the *Diseases of the Brain and Spinal Cord*, alludes to the existence of hydatids on the brain, but gives no case from his own investigations; and he moreover appears to include the vesicular appearance of the choroid plexus among hydatid growths, or at least he considers that this appearance has been mistaken for hydatids by those who have described such formations. Mr. Solly, the most recent writer upon the brain, alludes also to the existence of hydatids in that organ, but gives no case from his own practice. Cruveilhier states that he has met with hydatids beneath the arachnoid membrane, but gives only one illustration, which appears, however, more like a large cyst, than a true example of a cysticercus.

CASE VI. CONGESTIVE DISEASE, AFFECTING THE FIFTH PAIR OF NERVES ON THE RIGHT SIDE. Elizabeth B., ætat. 54, a healthy-looking woman, has generally enjoyed good health, with the exception of suffering occasionally from indigestion, and once from an attack of pneumonia, two years ago. About six weeks from the date of the present report (early in October 1841), she first experienced slight dimness of sight in the right eye, which, however, on examination, did not present any peculiar appearance. At that time she also complained of a pricking, shooting pain in the same eye, together with pains in her forehead, face, and right ear. Since that time the pain has become gradually worse, and her health has been much impaired.

On a careful examination, on the 13th October, the following were the features of her case. She complains of a shooting, throbbing, burning pain in the right eye, and a sensation, as she expresses it, as if the eye-ball were too large for its socket. The same kind of pain extends to the forehead as far as the vertex, backwards to the ear and occiput, and down the neck; to the right side of the nose, as far as the external aperture of the right nostril, and to the upper maxillary bone; the pain originating at the situation of the infra-orbital foramen. The upper eyelid is completely drawn over the ball of the right eye, so as entirely to obstruct vision. She has no power to lift it up; and the attempt to draw up the lid causes excruciating pain and violent action of the orbicularis palpebrarum. When the lid is elevated, although this is done with great difficulty, she is able to see very distinctly; there is no peculiar appearance presented by the eye itself, except that the pupillary aperture is oval instead of round.

She states that, since her illness, her hearing on the right side has been impaired: the power of smelling and of taste are, however, quite perfect. The pain in the parts above described is not constant, but subject to remissions and violent exacerbations, and is much increased by pressure on the regions affected. She complains of derangement of her general health; she has a sour taste in her mouth; no thirst, nor any desire for food; she has vomited several times this morning; bowels moderately open; urine scanty and high-coloured; tongue covered with a thick white fur; pulse 84, regular.

From a review of these circumstances, I came to the conclusion, that this woman was suffering from a neuralgic affection of the fifth pair of nerves, the ophthalmic division of that pair being chiefly concerned. The pain of the surface of the eye was evidently neuralgic, the spasmodic

closure of the lid was produced by reflex action ; the oval shape of the pupil was due to sympathetic irritation of the lenticular ganglion. At that time, I considered the case to be a combination of neuralgia and dyspepsia, and perhaps hysteria ; but its progress convinced me that the disease was more deeply seated, and affected the origin, not the extremities, of the nerves. Acting under the impression that the disease was neuralgic or dyspeptic, I directed a blister to be applied to the right temple, and she was ordered to take, every four hours, a draught composed of ten grains of carbonate of magnesia and one drachm of sulphate of magnesia, in peppermint water.

Oct. 15. Feels rather better ; and, on the whole, the pain is somewhat diminished. She can lift the upper eyelid to the extent of about a quarter of an inch, but with pain and great effort. The eyelid is very tender to the touch. The general health is much improved ; tongue much cleaner, but still slightly furred ; vomiting has ceased ; bowels open ; no sour taste in the mouth ; pulse 84, regular.

Oct. 16. Feels much worse ; has had no sleep the whole of last night, in consequence of excessive pain in the parts above described. As I now believed that the symptoms were owing to inflammatory action or congestion at the origin, or in the course of the ophthalmic division of the fifth pair of nerves, I ordered the following : five grains of pilula hydrargyri to be taken twice a day, and a draught to be taken every four hours, consisting of two-thirds of a grain of tartar emetic, half a drachm of sulphate of magnesia, and an ounce of infusion of senna.

7 P. M., *same day.* She has taken two doses of the medicine ; the first produced no marked effect ; the second excited copious vomiting, followed by a violent convulsive fit, attended with foaming at the mouth. On my visiting her soon after this attack, she was lying in a state of torpor, and could not answer the questions put to her. I could now lift up the right eyelid without apparently exciting any pain, but the eyeball was drawn in different directions by the convulsive action of the recti and obliqui muscles. The pupil contracted and dilated, but its margin was irregular, assuming a somewhat triangular appearance ; pulse 100, strong and incompressible. She was now bled to sixteen ounces. While the blood was being drawn, she was seized with violent attacks of rigidity of all the muscles, which ceased after lasting a few minutes. She appeared now to be only partially sensible, groaned occasionally, and drew her breath heavily and laboriously.

11 P. M. Breathing now hardly perceptible, except at intervals, when she takes two or three deep inspirations. There is constant rigidity of both lower extremities ; the upper extremities are also rigidly fixed, although they are now and then relaxed for a short time. The lower jaw is firmly closed, and any attempt to draw it down is opposed by the violent contraction of its muscles. The muscles of the face are not rigid, and both the lips and eyelids can be freely drawn in any direction. The pupil of the right eye varies very much in figure, but is never round. There is not much spasm of the muscles of the back or abdomen, although both appear slightly rigid when pressed upon ; pulse 80, soft and compressible.

Oct. 17. The rigidity of the muscles has continued with intermissions throughout the night, during a part of which she was delirious. Blood

not buffed nor cupped; pulse 80, soft. Since seven o'clock this morning, she has been sensible, and answers questions quite rationally. She has now perfect power over all the voluntary muscles, except that she is unable to raise the right eyelid. The pain caused by the attempt to draw it up with the finger is more intense than formerly; tongue dry, and covered with fur; no thirst; skin dry; bowels not relieved since six o'clock last night, when she had a copious foetid evacuation; has passed no urine for twenty-four hours; breathing natural. The following course was now adopted: a solution of the extract of belladonna (gr. v to ʒi of water) was dropped into the eye, poured upon the blistered surface on the right temple, and applied to the whole of the right eyelid, and adjacent parts, by means of a linen rag. The following was also ordered: calomel gr. ij, blue pill gr. iij; a pill to be taken every four hours. In three minutes after the application of the solution of belladonna, as above described, the pain in the eyeball ceased, and she expressed it as being benumbed.

Oct. 18. Feels rather better. The fits of spasmodic rigidity occurred last night nearly every ten minutes, but they ceased at 1 A.M.; and after that time she had some tranquil sleep. She is now quite sensible, and has passed about a pint of urine, which has deposited a copious white sediment. The pain in the eyeball is less; she says it is benumbed, but exposure to light gives considerable pain; there is pain in the left lumbar region; bowels confined; pulse 76, rather hard. To have half an ounce of castor oil immediately, and to continue the pills of calomel and blue pill.

8 P.M. Feels much better, and the pains are much relieved. The right eyelid can be lifted up without much suffering, but she cannot raise it by her own exertions. The bowels have been opened, and the stools are copious; she has passed urine once, which is dark-coloured and of an offensive ammoniacal odour; pulse 80, soft and compressible; tongue and skin dry; she is now quite sensible. She has had three spasmodic fits since the morning, but they lasted a very short time.

Oct. 19. Improving; has had no spasm since the last visit; has slept from two till six o'clock this morning; the pain in the right eyeball and eyelid is diminished, and these parts are less tender on pressure; the attempt to raise the lid by the finger is also less opposed by the action of the muscle, but she is still unable to raise it herself; pulse 80, soft and full; gums rather tender. The solution of belladonna was again applied to the blistered surface of the right temple. To continue the pills.

Oct. 20. Considerably improved; she has had no spasms during the night; the pain is relieved, and she does not now suffer any inconvenience in any part of the body; the eyelid is still drawn down, and the tenderness of the eyeball remains, but not so remarkably as before. As her gums were sore, she was now directed to discontinue the pills, and to take some aperient and diuretic medicine. Under this treatment she rapidly improved: the secretions became natural, the tenderness of the eyeball wholly disappeared, and she regained the perfect power of raising the lid. She was discharged cured on the 26th of November; and although I had frequent opportunities of seeing her afterwards, she never had any return of the complaint.

OBSERVATIONS. I think that there can be little doubt, that this was a case of local congestion of the brain, involving the origin of the fifth pair of nerves on the right side. It will be seen that all the parts supplied by the ophthalmic branch of this nerve were acutely painful, and that the pain was also traced to the parts supplied by the superior maxillary nerve; the motor part of the inferior maxillary nerve was also affected, as was proved at one period of the disease, by the spasmodic closure of the jaw. The pain and spasms in other parts of the body are explicable, by recollecting the numerous communications of the ramifications of the fifth pair with other nerves. That it was not a case of mere neuralgia is, I think, proved by the foregoing detail of the general symptoms, by the *incessant* pain and tenderness of the parts supplied by the ophthalmic nerve, and by the decided benefit afforded by blood-letting, purgatives, and mercury; for it will be observed, that the abstraction of blood was attended by marked relief, and that as soon as the mouth became affected, the symptoms began to disappear. It is almost needless to remark, that the case could not have been one of hysteria, which, in some respects it nearly resembled; for the patient never had any similar attack either before or since, and she was of rather advanced age; and the reasons just adduced to prove that the case was not one of neuralgia, will *a fortiori* prove that it was not hysteria; for hysterical affections are not relieved by bleeding, purging, and mercury; nor do they allow of so complete a cure as that which was effected in the present case. The state of the pulse, the absence of heat of the head, and other obvious circumstances, preclude the supposition that the case was one of inflammation of the brain; and on the whole, I am inclined to adhere to the idea that it was one of local congestion; a view which, I think, will explain satisfactorily both the symptoms of the case and its successful treatment.

GENERAL OBSERVATIONS ON CEREBRAL DISEASES. I do not pretend to draw any general deduction from the foregoing cases, which are altogether of an anomalous character. They are quoted chiefly for the purpose of illustrating the extreme difficulty of investigating satisfactorily the phenomena of Cerebral Disease. But, while I reserve to myself, upon some future occasion, the further inquiry into the pathology, the diagnosis, the varieties, the classification, and the treatment of the Diseases of the Nervous System, I think I may add the following practical observations, which, though somewhat indefinite, are perhaps as precise as the nature of the affections, now under consideration, will allow.

1. *Symptoms.* It must be always borne in mind that cerebral symptoms, although exceedingly alike in their manifestations, proceed from causes wholly different from one another. *Convulsions* may arise from dentition, from inflammation of the cerebral membranes, from the pressure of exostoses, or of a spiculum of bone, from the presence of undigested or indigestible matter in the alimentary canal, from worms, from uterine irritation, or from toxæmia. The *abolition of sense or motion*, or that condition called *coma*, may be caused by narcotic poisons, by the inhalation of deleterious gases, by drunkenness, by congestion of the cerebral vessels, by effusion of blood or of serum within the cranium, by

softening of the brain, or by the presence of tumours or hydatids, and also by toxæmia. *The perversion of the intellectual powers* may be due to causes purely mental, as sudden and violent emotions of joy or sorrow; or to the immediate effects of alcoholic drinks, *coccus indicus*, and other drugs, as in *delirium ferox*; or to the abuse of intoxicating liquors, as in *delirium tremens* (a disease which depends upon the exhaustion of the powers of the Nervous System by excessive and long-continued stimulation); or to inflammation of the brain or of its membranes.

2. *Classification.* It follows from the foregoing remarks, that the only true basis of the classification of the Diseases of the Nervous System is pathology; and that such terms as apoplexy, epilepsy, and hydrocephalus, (words embracing in each case a group of symptoms which may proceed from very different causes), should be discarded from our Nosology, and be employed only to conveniently express certain classes of associated phenomena.

3. *Pathology.* The pathology of the diseases of the Nervous System is to be diligently sought for by *post-mortem* examinations. In making this remark, it must be admitted that, in the present state of our knowledge, the seat of disease in the nervous centres cannot always be precisely determined by the scalpel of the anatomist. But in all fatal cases, the inquiry should be made; and I have no hesitation in stating, that no person can give a positive opinion upon a fatal case of Nervous Disease, unless such an examination have taken place. I should also add, that he who undertakes the task of investigating the morbid anatomy of the nervous centres, ought to prepare himself, by becoming thoroughly acquainted with the appearances and peculiarities of the healthy structures, and should likewise examine the phenomena presented by the brains and spinal chords of persons who have died without any *known* or *recognized* symptoms of Nervous Disease. *No post-mortem examination can be considered complete, unless the state of the brain at least has been carefully investigated, even although the patient has died of some disease apparently unconnected with the nervous system.* Chemistry and the microscope are probably destined to throw much new light on the morbid anatomy of the Nervous System.

4. *Diagnosis.* It is of the utmost importance that the diagnosis of cerebral diseases, although exceedingly difficult, should be as accurate as the circumstances will allow; for upon correct views in this particular, will often depend the life of the patient and the credit of the practitioner.

5. *Treatment.* It cannot be too strongly insisted upon, that the treatment must depend, *not upon the name given to the disease, but upon its pathology as indicated by its diagnosis.* One case shall be benefited by emetics and cold affusion; a second shall yield to opium and brandy; a third shall require physical restraint; a fourth shall be subdued by copious bleeding; a fifth shall require in addition the use of calomel and purgatives; a sixth shall with propriety be left to take its course. All these modes of treatment, judiciously pursued, are advisable in particular cases; but when erroneously applied, may lead to irreparable mischief. Upon the details of treatment, it is not my intention at present to enlarge; but I cannot conclude without emphatically condemning the indiscriminate employment of the lancet in all cases of

cerebral disease, attended with insensibility, or with perversion of the intellectual powers; while, on the other hand, I cannot too highly extol the copious abstraction of blood in appropriate cases. The state of the pulse I believe to be an unfailing criterion as to the necessity of blood-letting, which, when performed judiciously, *and in time*, has often in my own experience, and no doubt in that of many others, succeeded in averting the most formidable and fatal attacks of Cerebral Disease.

8, Torrington Square, March 1850.

ON THE PROGNOSIS AND TREATMENT OF ORGANIC DISEASES OF THE HEART.

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[*Concluded from last Number, p. 320.*]

WE find, then, that STRUCTURAL DISEASES OF THE HEART are by no means universally dangerous or fatal in their tendency; but that they are so in proportion as the circulation becomes seriously impaired, either through the extent of the cardiac lesion, or through the additional disordering influence of an ill-proportioned quantity, or a depraved quality, of the blood. It is therefore obvious, that it should be the object of the TREATMENT, in maladies of this nature, to counteract or correct, so far as is possible, those influences which may give to each case a formidable character, and to place the patient under circumstances that shall favour and aid the damaged organ in carrying on the work of the circulation. Nor are these objects so unattainable in the plurality of cases, as might be expected from the vital value of the organ implicated. I know of few instances of structural disease of an important viscus that admit of more mitigation, under judicious treatment, than many Organic Affections of the Heart; and the examples, to which I have already alluded, of these affections enduring for a very long period, gradually increasing to a prodigious extent without destroying life, and sometimes without greatly sacrificing the comfort of the patient, give further proofs that the powers of adaptation and endurance, in this most vital of all organs, are far greater than is commonly imagined.

It may readily be inferred from my former remarks on Organic Diseases of the Heart, that the benefit which the subjects of them derive from medical treatment, depends on neither the activity or energy of the practice employed, nor on any uniformity of plan. In this, as in most intelligible cases of disease, the best practice is that rationally adapted to varying elements of disorder, with a view to restore that balance of functions which is most favourable to the easy action of the defective organ.

I have already noticed the prevailing tendency among many practitioners to treat Organic Diseases of the Heart by sedatives, and other lowering or reducing measures; but, according to my experience, such treatment is applicable only to periods of excitement or exacerbation, and the plan most generally useful, is one calculated to sustain the