

pus in seeking an outlet passed through the diaphragm, penetrated the spongy texture of the lung (where it gave rise to a low pneumonia), to be ultimately expectorated through the air-passages.

As soon as pus made its appearance externally, stimulants were increased and tonics superadded; quinine and nitromuriatic acid were administered, in order to support the strength, increase the appetite, and correct fœtor by their antiseptic properties; wine was simultaneously exhibited to the amount of eight or nine ounces daily, together with a good nourishing diet. The expectoration of matter continued in varying quantities daily for several weeks, but to such an extent that I feel certain I can conscientiously state the quantity discharged amounted to at least between three and four pints. Notwithstanding this drain upon the system, her appetite and strength kept up wonderfully. It is also a very remarkable fact that the pus, in passing through the lung, did not excite a fatal inflammation in that organ; for it was extremely foul, and gave off sulphuretted hydrogen in large quantities, so much so that her attendant was unable to remain at times in the room with her, and often anticipated the subsequent evacuation, owing to the suffocating odour that contaminated the whole atmosphere of the apartment, and which was with great difficulty suppressed, though the chloride of lime was used daily, and the chlorinated soda given internally in small doses. Owing to the quantity of pus that was discharged, it would appear to have been rapidly reproduced; the patient herself felt sensible of this occurrence on several occasions. The above treatment was continued perseveringly, with the addition of carbonate of ammonia and other tonics, until the pus began to assume a more laudable character, which it did about the 18th of May. After this date it gradually diminished in quantity, and shortly afterwards entirely disappeared, leaving the patient convalescent. She regained her former strength about the middle of June, and is now as strong and healthy as ever.

*Remarks.*—On cursorily glancing at this case, it will at once appear evident that we had to deal with one of the severest forms of acute hepatitis, and that the happy termination was principally owing to the patient having a good sound constitution. It may not perhaps be uninteresting to observe that a case of such severity occurred in a cold climate, and at a comparatively cold season of the year (the ground being covered with snow at the time she was seized), notwithstanding its predilection for attacking the inhabitants of tropical countries.

Fort William, 1861.

## A Mirror OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.*, lib. 14. Proœmium.

### GUY'S HOSPITAL.

#### HEMIPLEGIA FOLLOWING SHOCKS OF ELECTRICITY; COMPLETE RECOVERY.

(Under the care of Dr. WILKS.)

It is well known that when shocks of electricity are passed through any vital organ too strongly or too continuously, immediate death may ensue, the result of the sudden exhaustion of the whole energy of the nervous system. The bodies of animals or of human beings thus destroyed, undergo rapid putrefaction, and the blood (it is said) does not coagulate after death.\*

The non-coagulation of the blood in those killed by lightning, and also in those destroyed by electricity, has been questioned, and is not confirmed by observation. Dr. Taylor, in his work on "Medical Jurisprudence," states, that "Experiments care-

fully performed have shown that blood through which electric discharges have been transmitted will coagulate as quickly as that which has not been electrified; and, further, Sir C. Scudamore discovered, that on examining the bodies of animals killed by the discharge of a powerful galvanic battery, the blood in the veins was always in a solid state. There is obviously, therefore, nothing in the action of the electric fluid to retard or prevent the coagulation of the blood." (p. 567.)

We quote this extract as bearing upon the following cases, in which the paralysis followed upon shocks of electro-galvanism. We will not undertake to decide whether the palsy was really the result of the excessive shocks upon the nervous system, indirectly acting upon the blood; but the occurrence of hemiplegia in such young subjects under the peculiar circumstances detailed in the history of the cases, is very unusual, and well worthy of attention. May it be supposed that some coagulation of the blood took place, which, for the time, formed an impediment to the circulation through the cerebral arteries, thus giving rise to the hemiplegia? Notwithstanding the prevalent idea that electricity (whether atmospheric or induced) destroys the vitality of the blood, and hence its non-coagulability, experiments have satisfactorily demonstrated that a current passed through the blood in its vessels, does coagulate it. This fact has led to the trial of galvanism in the treatment of aneurisms, with the view of inducing coagulation within the sac. We would ask what is known of the action of electro-galvanism upon the heart? Do powerful and continued shocks create a tendency to coagulation in any of its great cavities? And if so, is it a vital or a chemical action? These are questions worthy of solution by investigation and experiment.

What gives a colour of reason to the cause of the hemiplegia in the first of the following cases being a clot or embolus in the cerebral arteries, derived or not from the effects of electricity on the blood, is the circumstance of probably complete absorption and recovery under the treatment pursued. It should be observed, however, that the boy had a bruit de soufflet, and from a history of a former attack of rheumatism, some would say that this was the cause of the hemiplegia. This was not so in the girl, in whom the hemiplegic symptoms persist, and are likely to become chronic. There is an analogy in the history of the two cases: both enjoyed good health before receiving the electric shocks; the boy became paralysed a day or two afterwards, and the girl in a week's time.

We avail ourselves of the notes taken by Mr. Pembroke R. J. B. Minns, clinical clerk:—

Walter C—, aged fifteen, an errand boy, residing in Finsbury, was admitted into John ward on the 21st of May last. He states that his previous health had been good, although subject sometimes to sick headaches; has never had scarlet fever, nor has there been any discharge from his ears. Last October he had an attack of rheumatism, which affected his wrist and elbow; but it was not known whether the heart was affected at that time or not. On Thursday, the 17th of May last, his master sent him with a jug to get some beer, and whilst returning he stopped to receive an electric shock from a man who kept a battery in the street. It seems that he had received a shock from the same person a week previously, but that no ill effects resulted from it. Subsequently he determined to try another. In this instance the man administered a very powerful shock to the boy, and continued its application in spite of his entreaties to desist. When he reached home with the beer it was noticed that he trembled violently, and in placing the beer-jug down he found that the power over his left arm was lost. He then walked home from his master's, and after reaching there he was still observed to be in a trembling condition, felt sleepy, and immediately went to bed. This was about half-past eight P.M. He slept soundly until about five A.M., when his father got up and found the boy retching and endeavouring to vomit. He immediately went across the room to obtain some water for the lad, and whilst doing so the boy fell out of bed, striking his head on the floor. He was observed to foam at the mouth, although he was not convulsed, so far as was noticed by his parent. After this he became hemiplegic and drowsy, and has continued in that state up to the present time. He lies in bed, quite unable to move his left arm and leg, but turns about restlessly; left side of the face slightly paralysed; tongue points a little to the paralysed side; no loss of sensation. Sensibility in the left leg and arm is very slightly (if at all) impaired; pupils act freely under the influence of light; there are also slight twitchings observable on the left side of the face; no paralysis of the sphincter ani and bladder. He is likewise salivated, which is attributable no doubt to a powder which was administered to him before his admission. There is a loud systolic bruit, which can be heard both in the

\* Thompson's *Materia Medica*, Third Edition.

axilla and back. He was ordered five grains of grey powder at night.

May 21st.—Seen by Dr. Wilks, who ordered a julep of nitrate of potassa three times a day (in the hope of its dissolving an embolon, should the hemiplegia be the result of it).

22nd.—His drowsiness seems to have gone off in great measure; otherwise he is much the same.

24th.—Complains of severe pain in the forehead and sickness during the night; restlessness much increased.

25th.—Passed a quiet night, and appears much better than yesterday; is able to move his left leg nearly as well as the right, inasmuch that the nurse said he walked quite steadily across the room; can move his arm by everting his shoulder; the sickness has ceased, and the twitchings of the face have not been observed since the first day of admission; salivation not so profuse.

27th.—Sensation perfectly restored in all parts; is able to move his arm in a great degree, and seems altogether much improved.

30th.—Improving steadily; is able to place his hand to his head.

From this date he gradually recovered the use of his hand and leg, and left the hospital about the middle of June, but the cardiac bruit still remained. He could not grasp so firmly with the affected hand as with the other.

### ROYAL FREE HOSPITAL.

#### HEMIPLEGIA FOLLOWING SHOCKS OF ELECTRICITY; PERSISTENCE OF THE PARALYSIS.

(Under the care of Dr. O'CONNOR.)

SARAH C—, aged fifteen years, by occupation an artificial flower maker. When admitted on the 7th of June, by Mr. G. Irvine, the house-physician, she was suffering from paralysis of the whole right side. She could not articulate, and when she made an effort to do so her mouth became full of froth, and an appearance of suffocation followed. She had not the power of swallowing solid food, and it was with difficulty fluids could be got down. The right side of the face was paralysed. The tongue pointed to the right side. She appeared quite unconscious, and had a vacant, idiotic look. She passed her urine in bed, but the bowels had not been relieved for three or four days. The right hand and arm, as well as the right lower extremity, were cold and clammy. The history of her state previous to admission, as given by her mother, was, that about seven weeks previously she went with some other girls for a holiday to Hornsey, and whilst there they were electrified. The patient, however, had more shocks than her companions, and she appeared to like them. In about a week afterwards her mother noticed that she walked lame. The lameness increasing, her feet were bathed in hot water, and whilst doing so the mother observed that the right hand and arm were cold and paralysed. A medical man saw her, and gave her some medicine. She continued under his care for six weeks; but she gradually got worse and lost her voice, but could eat and drink pretty well. Whilst at the watercloset one day she had a fit of about an hour's duration, upon which difficulty of swallowing supervened; her consciousness was more impaired, she moved about like one tipsy, and she always complained of being hungry. She never menstruated. Her pulse on admission was 110, small, and feeble. Has never suffered from rheumatism nor from disease of the heart.

After her admission on the evening of the 7th of June, Mr. Irvine ordered her some opening medicine, and some nourishing food. The medicine had not acted when seen by Dr. O'Connor the following day. The state of the patient was the same as on admission. Dr. O'Connor ordered a blister to the nape of the neck; a stimulating enema of turpentine, olive oil, and table salt, to be administered directly, and a draught, composed of six grains of the sesquicarbonate of ammonia; one ounce of camphor mixture, one drachm of compound tincture of cardamoms, and one drachm of the tincture of valerian, to be taken every four hours. To have beef tea, arrowroot, and milk, with four ounces of port wine. In about an hour after the administration of the enema, the bowels were freely acted on; a quantity of black and hardened feces escaped, which appeared to afford relief, and in the evening the patient was more comfortable.

June 9th.—There was a marked change to-day; the articu-

lation was a little more distinct; the look was less vacant; she appeared to notice those about the bed. The blister was ordered to be dressed with savine ointment. The bowels were acted on in the morning, and the pulse was 120. The draught to be continued every four hours.

11th.—Continues in nearly the same state; the bowels have not been relieved since the afternoon of the 9th. The enema to be repeated, and the draught continued.

12th.—The bowels were freely acted on, and she appeared more cheerful, the pulse continuing the same.

15th.—Until last evening there appeared to be a gradual improvement, when she became drowsy, and this morning is in almost a state of coma; the pulse 140, but scarcely perceptible. Additional wine was ordered, sinapisms to the calves of the legs, the enema to be repeated as the bowels had not been relieved, and the draught to be continued.

From this date to the 23rd there was a gradual improvement; the bowels had been acted on freely by the enema, and she could move her right hand and arm a little.

On the 24th, however, she complained of headache, and was drowsy. A blister was directed to be applied to the nape of the neck, and the enema to be repeated.

25th.—She lies in a perfectly unconscious state in bed, and cannot be roused; tickling the soles of the feet causes no reflex action; the surface of the body is cold, the right side more especially. She was ordered a few ounces of wine, to be taken directly, in addition to her daily quantity, and the following draught every six hours:—Carbonate of ammonia, six grains; iodide of potassium, three grains; camphor mixture to one ounce; compound tincture of bark, one drachm.

On the 27th there was a considerable improvement; the patient could freely move her right hand and arm, and grasp anything put into the hand. The blister to be dressed with savine ointment.

28th.—The tongue, which before pointed to the right side, is now straight; articulation is distinct; she can swallow better, has a great desire for food, and wishes to be allowed to get out of bed; the bowels act without the use of medicine, and she sleeps well; has half diet, with beef-tea, arrowroot, and milk, as well as four ounces of wine. The iodide of potassium and ammonia to be continued.

July 5th.—Able to walk about the ward since June 29th, and can now move her right arm and hand freely; she speaks more distinctly, but with a little faltering. Dr. O'Connor, thinking that there might be some amount of hysteria present, and the girl had never menstruated, ordered galbanum pill and sulphate of iron to be taken three times a day, until the 11th, when the galbanum disagreed, and was, together with the iron, discontinued. The iodide of potassium and ammonia were, however, still persevered in with benefit until the 15th, when there was a disinclination to move; she complained of heaviness in the head; the tongue, which up to this time was perfectly straight, pointed to the left side, and there is slight paralysis of the left side of the face. The right hand and arm partially paralysed, and there is but little power of squeezing anything placed in either of her hands. The pulse was 110, and the respirations almost normal. One grain and a half of calomel, with two grains of extract of hyoseyamus, were ordered every six hours; the iodide of potassium and ammonia to be discontinued; the diet and wine the same.

On the 17th the bowels were not relieved, and a turpentine enema was administered, which freely operated, but caused sickness.

18th.—Speaks distinctly and with firmness; is perfectly conscious; the tongue is still directed to the left side; is able to swallow food and drink freely, and has complete control over the evacuations; on tickling the soles of the feet there is spasmodic contraction of the lower limbs; can move both arms freely, but cannot do so if her attention is taken off either; there is great tremulousness of the right arm; the pulse is 92, and respirations 22. The pills to be continued for another day.

### ST. GEORGE'S HOSPITAL.

#### HEMIPLEGIA SUDDENLY INDUCED BY SPONTANEOUS COAGULATION OF THE BLOOD IN THE ANTERIOR CEREBRAL ARTERIES; FATAL RESULT.

(Under the care of Dr. PITMAN.)

As forming an instructive companion to the foregoing cases, we include the following in our present series. The seizure was sudden, the symptoms were those of apoplexy, and a fatal