A C A S E
OF ALL BUT
UNIVERSAL PARALYSIS IN A CHILD,
FOLLOWING EXPOSURE TO HEAT;
WITH COMPLETE RECOVERY.

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CATHERINE DIGRAINE, æt. 2½ years, was brought to St. Bartholomew's Hospital on the 28th of July, 1876. She lay helpless and incapable of movement in her mother's arms. She was a small pallid child, with fair hair, brown eyes; was somewhat rickety, but fairly nourished.

On admission the face was a little flushed. The pupils were large and equal. Tongue clean and red. She was quite conscious and could speak as well as most children of her age. Respiratory movement was mainly abdominal, jerky and irregular, about 56 per minute. The

chest was everywhere resonant, and the breath-sounds weak. The position of the heart was normal, the sounds clear, and the pulse 156 per minute, regular and compressible. The abdomen was natural, save that the liver was palpable for one inch below the ribs on the right side. Axillary temperature 102·2° F.

It was observed that she had complete loss of motor power both in her legs and arms. She could move the left scapula, but not the right, could not raise her head from the pillow or support it when held up, but rotation from side to side was possible in the recumbent posture.

Observations as to the sensory condition were rendered difficult because of her age, and her habit of answering "yes" to almost every question; but there appeared to be anæsthesia of all parts affected with motor paralysis. She sometimes cried when one of the toes was pinched hard.

The muscles of all the limbs were extremely soft, wasted, and flabby. In the legs a strong Faradaic electrical current excited only slight reflex movements, but no muscles responded directly to this stimulus in any of the extremities.¹

The child lay on her back and passed both fæces and urine involuntarily, the bowels being frequently moved. No urine could be saved for examination. There was troublesome spasmodic cough, especially in the morning. The appetite was good, and there was no sickness.

The history of her case as elicited from her mother, after repeated cross-examination at different times, was as follows:—She was born in America, of Irish parents, and was always a healthy child till her present illness began. While travelling by rail to New York in very hot weather on the 23rd of June (1876), the child complained of severe headache and was very sick. The same night she had pains all over her, was sick, delirious, and very

¹ It was unfortunate that no constant-current battery was at hand at this time, and thus no information could be obtained as to the effect of continuous or interrupted Voltaism.

thirsty. The parents remained in New York for a week, and during this time the child got better. She had no loss of power and walked about.

On July 1st, while walking on the quay before embarking, during a very hot day, the child fell on her knees and suddenly lost all power over her limbs. There was no loss of consciousness. The same evening she was delirious and had no control of the sphincters. On the voyage homewards she slept a great deal, was frequently delirious, and took very little food. She had diarrhoea, but was not sea-sick. Her temper was irritable, and she used bad language.

The daily notes of the case after admission, including the conditions of the pulse, respiration, and temperature, carefully drawn up by Mr. W. S. A. Griffiths, the clinical clerk, are appended. From these are condensed the following particulars of the progress of the case. Light diet, with milk and arrowroot, was given at first, and half a drachm each of cod liver oil and syrup of phosphate of iron was ordered thrice a day. Some meat was soon after added to the diet.

In five days it was noted that no change had taken place in the child's condition. No sickness and no delirium occurred. A strong Faradaic current produced only slight muscular contractions in the arms, none in the legs. The motions and urine were passed involuntarily, but some of the latter was secured and found to be void of albumen.

On the 2nd of August Dr. Gee saw the case in consultation, and confirmed all the conditions previously noted. Upon his suggestion, belladonna was prescribed in doses of one third of a grain of the extract, in the form of a sweetened mixture thrice a day, and a strip of belladonna plaster was placed down the whole length of the spine. The steel and cod-liver oil were continued, and two ounces of port wine were added to the dietary. Faradization to the limbs was practised daily.

On the following day the tongue was clean and moist,

the pupils somewhat dilated, and the cough was more frequent. The respiration and pulse were quickened, and the temperature had risen from 99.2° to 102° . The urine contained abundance of lithates. The chest and abdomen were covered with a scarlet erythematous rash which faded on pressure. The same night the temperature rose to 103.6° . Next day the pupils were widely dilated, the rash had extended to the neck and thighs, and was fading on the chest and abdomen. A lumbricus, seven inches long, was passed *per anum*.

On the fourth day of the belladonna treatment it was noted that she could move the left hand a little. She took nourishment and slept well. The rash extended to the head, and some redness appeared over the sacrum. Her mother stated that the child had previously passed round worms; several doses of santonine were therefore given, but no more came away.

The belladonna treatment was now administered to the extent of one and one third of a grain in the twenty-four hours.

At 10 p.m. on this night—the fourth of the belladonna treatment—the temperature reached the highest point recorded during her illness, 104.5° .

Two days subsequently some dulness was noted at the bases of the lungs with moist sounds and rhonchus, but the temperature fell to 101.3° .

Next day a marked increase of power was noted in the left arm, the child being able to raise it to her mouth and to feed herself; there was also increased sensibility in the left thigh.

In a few days there was commencing power in the right arm and leg, but there was no control as yet over the sphincters. The temperature rose about one degree each evening, and reached 101° .

On the 12th of August, sixteen days after admission, the child could raise both hands over her head and feed herself; there was increasing power in the right leg, and sensibility in both legs. The pupils continued fully

influenced by the belladonna, but the tongue never became dry. The temperature varied from 99.4° to 100.6 .

On the twentieth day she was first able to control both sphincters.

A powerful Faradaic current only caused very slight muscular contraction in the limbs, and on the twenty-fourth day stronger response was noted, equal in the arms, but more marked in the right leg.

After being employed for twenty-one days, and on the twenty-fifth day from admission, the belladonna was omitted.

Little further improvement was observed in the course of the following week, but on being taken out of bed it was found that she could put one foot in front of the other when held up. When lying down she was unable to crawl.

On the 29th of August the report was that her pulse was 156 (it had varied from 120 to 160 during the previous five weeks), respirations 44, and temperature 100.6° . The urine was natural.

A drachm of the syrup of phosphate of iron and lime, with one minim of liquor strychniæ, was ordered thrice daily.

On the 5th of September she was not so well. Her face was very pale and slightly puffy. The urine was "smoky," and contained one tenth of albumen, also granular casts and blood-discs. The pulse was 76 and irregular, respirations 28, and the temperature was observed to be normal for the first time. The tongue was clean and the appetite satisfactory. The cardiac and respiratory sounds were clear. Sensibility was improved in the arms.

In two days the pulse was more irregular, and the amount of albumen in the urine was larger. No pyrexia. Some sickness occurred at times.

On the 14th of September, ten days after the albuminuria was noted, there was only a trace of albumen in the

urine, and the child could stand erect with a little assistance.

A fortnight later Mr. Power examined her eyes with the ophthalmoscope, but found nothing abnormal.

On the 10th of October, seventy-five days after admission, she could stand and walk by herself round her bed. The urine was free from albumen.

Ten days later she could walk about the ward, in ten days more she was able to run, and in three months from the date of admission, and four months from the onset of the illness, she was in good general health, and enjoying perfect use of all her limbs and sphincters.

This case presents several features of interest and importance, which may be more particularly expressed under the heads of diagnosis, prognosis, and treatment.

Firstly, as respects diagnosis, it seems certain that the symptoms betokened an affection of the spinal marrow and muscular system, and not one involving the brain in any marked degree.

It may be stated at once that the case was at first regarded as an example of essential infantile paralysis, and for the following reasons:—The age and previous health of the patient, the character of the early symptoms, and the specific condition of the affected muscles.

It was, however, not easy to reconcile with this view of the case the sensory paralysis and the implication of the sphincter muscles.

The cerebral symptoms at the onset were as little marked as they commonly are in cases of essential paralysis. There were no convulsions or loss of consciousness, but there were delirium, sickness, and irritability of temper. The rule is that sensation remains unaffected in this form of paralysis;¹ in this case there

¹ "Sensation is almost never disturbed," Volkmann, 'German Clinical Lectures,' 1st series, New Syd. Soc. Translation. "Sensory disturbances are always absent," W. H. Erb, 'Ziemssen's Cyclopædia,' English Translation, vol. xi, p. 446.

was decided impairment, if not complete loss in some parts, of sensibility in all the limbs during the first few weeks.

Implication of the sphincters has, so far as we can learn, never been observed in these cases.¹

The condition of the muscles in respect of Faradaic electrical stimulation was precisely that which is met with in cases of true essential paralysis of children after the second week of the disorder.

It is perhaps not too much to assert that the whole subject of infantile paralysis is as yet somewhat obscure, and requires further investigation. The following classification probably includes most forms of disease included under this name.

First, there is that form which may be described as Kennedy's paralysis.² In these cases the symptoms are observed at a very early period of life, and are for a short time severe. One or more limbs may be affected. Gastric or gastro-enteric troubles appear to be the exciting cause, and complete recovery is the rule within a few days or weeks.

Secondly, a form of infantile paralysis has been described which is due to exposure to cold, and is sometimes called rheumatic.³ Thus, an extremity, usually one of the lower limbs, is affected, the paralysis bearing perhaps no relation to any particular nerve or set of nerves. Muscular atrophy follows. In this form there is probably some trophic change in the substance of the muscles, and it is found that a slowly-interrupted Voltaic current shows signs of increased irritability in them, which Faradization hardly, if at all, evokes.

Thirdly, there is a class of cases occurring in young children, as well as in adults, where the mischief is

¹ "The bladder and rectum are never involved," Volkmann, loc. cit.

² Henry Kennedy, M.B., 'Dublin Medical Press, Sept., 1841; 'Dublin Quarterly Journal, Feb., 1850, and Nov., 1861.

³ 'Clinical Uses of Electricity,' J. Russell Reynolds, M.D., F.R.S., p. 42, London, 1871.

limited to one limb usually, and results from mechanical injury to the principal nerves. This paralysis may be termed truly peripheral. Violent pulling or dragging may cause it, and the symptoms betoken the effects of a local nervous concussion. Thus, pain with paralysis of motion and sensation ensue, also wasting of the limb.

Recovery commonly follows, but the cases may be tedious, and the extremity may never reach full development.

Cases such as these have been described by Sir James Paget.¹

Fourthly, there is the largest class of cases which includes the gravest and most unpromising features of infantile paralysis. In this the early symptoms are usually of sudden onset in children of the age of two or three years, and who have generally been otherwise robust. One or more extremities are found to be paralysed. The early history commonly throws no light upon the nature of the case. There may be only a day or a night of previous poorliness; but in a certain number of these cases there is at the outset a very painful condition of the affected members, and so much local disturbance as to bring the cases under surgical rather than medical observation. This painful phase, which may simulate deep-seated inflammatory trouble, soon passes off, and leaves the limbs in the ordinary limp condition. Such cases very rarely terminate in perfect recovery; generally one limb remains more or less affected for life.

The case described above does not seem naturally to fall into any of the classes just enumerated. There appears, further, to be no relation between any of these classes of infantile paralysis. Such knowledge as is possessed respecting the early pathology of the fourth or gravest class of infantile paralysis, points to a form of myelitis specially affecting the anterior horns of the grey matter, and the anterior and lateral columns of the spinal

¹ "Clinical Lecture on some Cases of Local Paralysis," 'Med. Times and Gazette,' vol. i, 1864, p. 331.

cord, and thus it appears almost too much to look for perfect recovery of all functions after so serious and extensive a lesion. Hence it seems fair to conclude that a less severe affection was present in our case. The special treatment by belladonna was certainly adopted in view of some such condition of the cord, and its results were not unnaturally held at the time to be sufficiently satisfactory, and as favouring the opinion held by therapeutists that this drug has an influence in checking spinal hyperæmia.

The fact of ultimate *perfect* recovery in our case might in itself throw grave doubt upon a diagnosis of true infantile paralysis. Volkmann and others of large experience in these cases declare that perfect recovery is hardly known, and it is at least possible that some of the alleged recoveries may have been in cases of peripheral or rheumatic paralysis.

Failing to establish an unequivocal diagnosis of infantile spinal paralysis in this case, it became necessary to seek some other explanation of the symptoms. It was not possible to attribute the paralysis to any distinct strumous affection, or to any nervous disease specially related to, or specifically dependent upon, the amount of rickets which was present in the child. Neither could the existence of lumbrici in the intestines be regarded as a cause, for no such symptoms are recognised amongst the reflex nervous phenomena due to these parasites. Moreover, the child had been subject to worms before her illness, and certainly no decided improvement took place in her case upon the expulsion of that one observed while she was in hospital.

We therefore came next to the conclusion that the probable etiological explanation of the case was to be found in the fact of direct exposure to the sun and severe thermal influences. The history was clear that the child had been exhausted, badly tended, and exposed to the sun in New York (which in the month of July is well known to be a particularly hot city), before she sailed for England.

The strongest argument that can be fairly adduced against this view of the case is, that there is no experience on record, so far as we are aware, of such nervous symptoms due to insolation. Such are, however, quite conceivable, and they may possibly occur and yet not be plainly recognised or traced to their true cause.

The condition of the muscles must not, however, be quite left out of view. It seems not impossible that the same thermic influences which induce disorder in nervous structures may also involve the muscular system independently, and with especial severity in the case of a frail and ill-nourished child. We are therefore disposed to regard this extensive paralysis as due to profound nervous exhaustion, the muscles being, perhaps, simultaneously affected, and thus the affection would seem to fall into the category of so-called functional rather than of distinctly organic disorders. The spinal marrow, and not, as occurs most commonly, the brain, suffered.

The lesions, whatever they may have been, were clearly recoverable ones.

The occurrence of albuminuria at the beginning of the third month, lasting as it did for five weeks, is not perhaps quite easy of explanation. This symptom is not met with either in cases of infantile paralysis or of insolation, and, so far as it goes, determines equally against either diagnosis. The presence of an erythematous rash at one period of the case, followed in some weeks by albuminuria, might not unnaturally suggest the possibility of an intercurrent attack of scarlet fever. But it is to be noted that the rash appeared immediately upon the employment of full doses of belladonna and its application to the spine, and no sore throat, desquamation, or other symptoms of scarlatina were observed. There were also no cases of that disease in that wing of the hospital at the time.

The albuminuria is not, therefore, to be thus explained. It seems not improbable that this symptom admits of the same interpretation as the other more prominent

phenomena of the case, viz. profound nervous exhaustion.

Prognosis.—Under this head there is little to be remarked. The case looked very unlikely to recover till some days had elapsed from its admission to the hospital, and for some weeks but small hope was entertained of even partial recovery of one or more of the extremities.

Upon the recognition of a similar condition, a hopeful prognosis might naturally follow, supposing that a favorable climate with supporting treatment and wholesome hygienic influences could be secured.

Treatment.—Respecting this, it may be briefly stated that the general debility and the condition of the child plainly indicated good nourishment and wine. Steel and cod-liver seemed called for.

During the progress of the case the temperature-curve followed a course in no special degree characteristic.

On admission the thermometer registered 102.2° , and at the beginning of the treatment by belladonna it was 99.2° . On the second day of this medication it rose to 102° , and an evening rise of about one degree occurred for the greater part of the time any pyrexia lasted.

The first symptoms of amendment were observed on the fourth day after taking belladonna, and gradual improvement ensued both in recovery of sensory and motor functions. The muscles were regularly stimulated with powerful Faradaic currents for several weeks till active response took place.

Strychnia was given in small doses at a late period.

We cannot doubt that the proper early treatment for a case of this nature should consist of cold affusion, as in the more ordinary forms of heat-stroke, and it seems not unlikely that by this means paralytic sequelæ might be either reduced in severity or altogether averted.

The following are the daily notes of the case :—

Catherine D—, æt. $2\frac{1}{2}$, admitted July 28th, 1876.

Her mother brought her from Liverpool on the 28th, where they had just arrived from New York.

July 30th.—She is a small, pale, rickety child, fairly nourished, light brown hair and eyes. Pupils rather dilated, equal, face slightly flushed. Tongue clean, rather red. She is quite conscious, and can speak as well as other children of her age. Pulse regular, compressible, 156. Respirations, chiefly abdominal, irregular, jerky, 56. Temperature 102·2°.

Thorax.—Thoracic walls move but little with respiration. Respiratory murmur everywhere feeble, otherwise normal. Percussion note resonant everywhere.

Heart.—Position normal; action rapid; no bruit audible.

Abdomen.—The liver can be felt one inch below margin of ribs in the right hypochondrium. Abdomen otherwise normal.

She has complete loss of power in both legs and arms. She can move the left scapula, not the right. She cannot raise her head from the pillow, or hold it up when it is raised, but she can rotate it when lying down.

Owing to her age and her answering “yes” to almost every question, her power of sensation is doubtful, but there appears to be complete anæsthesia of all the paralysed parts. She sometimes cries when one of her toes is firmly pinched; as a rule she appears quite unconscious of pain.

She lies on her back in bed, able to rotate her head, but not to make any other movement. Motions and urine passed involuntarily.

The muscles of her arms and legs are very soft and flabby. Very slight reflex action is produced in the legs by a strong Faradaic current; none in the arms.

She has a troublesome spasmodic cough, especially in the morning. No sickness. She takes food well. Bowels loose. Urine cannot be saved for examination.

She was born in America, of Irish parents, and had been a healthy child until the present illness. The

parents were coming home to England, and on June 23rd, 1876, whilst travelling by train to New York, in very hot weather, the child complained of severe pain in the head and was very sick. Towards night she complained of pains all over her, was very feverish, thirsty, and became delirious. They remained a week at New York, and she got better. During that week she had no loss of power and could walk.

On July 1st, a very hot day, whilst walking on the quay to the ship about midday she fell on her knees, and from that moment without losing consciousness she lost all power in her limbs and control over her sphincters. At night she became delirious, and, according to her mother, throughout the voyage she took very little food, slept much, was frequently delirious, and when so used very bad language. She did not suffer from sea-sickness, but constantly from diarrhœa. At the end of the voyage she had made no improvement.

Since admission she has not been delirious, and her mother thinks she is more lively than she was a week ago. Half diet, with arrowroot.

℞ Syrupi Ferri Phosphatis;
Olei Morrhuæ, aa ʒss. Fiat mistura.
Ter die sumenda.

August 1st.—No improvement in power of movement. Strong Faradaic current produces only slight muscular contractions in the arms, none in the legs. She takes her food well. Motions and urine passed involuntarily. Urine free from albumen. Less cough. Pulse, fair volume, compressible, 132. Respiration 60. Temperature 99·2°.

2nd.—In much the same state. Wine ʒij.

℞ Extracti Belladonnæ, gr. ¼;
Syrupi Aurantii, ʒss;
Aquæ menthæ piperitæ, ʒj.
Fiat haustus, ter die sumendus.

Faradization to the limbs daily. Emplastrum Belladonnæ 2 by 12 to the spine.

3rd.—Pupils rather dilated. Cough more troublesome. Tongue clean and moist. She takes her food well. The chest and abdomen are covered with a red erythematous rash, disappearing on pressure. Pulse, same characters, 148. Respiration 64. Temperature $102^{\circ}0'$.

10 p.m.—Urine loaded with urates, no albumen. Pulse 156. Respiration 48. Temperature $103^{\circ}6'$.

4th.—Pupils fully dilated. Passed a good night. Tongue clean and moist. The rash has extended to the thighs and neck, fading on the chest and abdomen. Pulse 160. Respiration 40. Temperature $101^{\circ}6'$.

10 p.m.—This morning she passed a round worm (seven inches in length). Pulse 144. Respiration 44. Temperature $102^{\circ}4'$.

5th.—She continues in the same state. Takes food fairly. Sleeps well. Pupils rather dilated. Bowels act two or three times a day. She frowns a good deal. The rash has extended to the face and almost disappeared from the body. Some redness about the sacrum. She can move the left hand a little at the wrist. Pulse regular, 120. Respiration 60. Temperature $102^{\circ}5'$.

10 p.m.—Pulse 156. Respiration 48. Temperature $104^{\circ}5'$.

Repetatur Hst. Belladonnæ, 6tis horis;

℞ Santonini, gr. ij.

Hâc nocte sumend. et rep. cras mane.

7th.—Slept badly last night. She is more fretful. Cough more troublesome. Takes her food well. Pupils still dilated. Rash almost gone. No increase of power. Redness about the sacrum is increased. Resonance impaired at base of both lungs. Breathing harsh. Scattered moist sound and rhonchus. To have a water cushion. Pulse 136. Respiration 60. Temperature $102^{\circ}3'$.

10 p.m.—Pulse 152. Respiration 36. Temperature $101^{\circ}3'$.

8th.—Slept fairly well. Still very fretful. Takes food

well. Bowels open. Motions and urine passed involuntarily. Tongue clean and moist. There is a marked increase of power in the left arm and hand; she can raise it to her mouth and feed herself. Increase of sensation in left thigh. Urine loaded with lithates, no albumen. Pulse regular, compressible, 144. Respiration 40. Temperature $100\cdot6^{\circ}$.

10 p.m.—Pulse 144. Respiration 36. Temperature $100\cdot0^{\circ}$.

9th.—Rather more power in right hand. No more worms passed. Her mother says she has passed worms frequently before this illness. Pulse 120. Respiration 36. Temperature $104\cdot0^{\circ}$.

10 p.m.—Pulse 156. Temperature $101\cdot0^{\circ}$.

10th.—Better night. Less fretful. Motions and urine still passed involuntarily. Pulse 136. Respiration 36. Temperature $100\cdot5^{\circ}$.

10 p.m.—Pulse 150. Temperature $101\cdot3^{\circ}$.

11th.—There is great improvement in right arm. Some in right leg. Pulse regular, 132. Respiration 40. Temperature $100\cdot0^{\circ}$.

12th.—She can raise both hands over her head, and can use the fingers of both hands to scratch it. She can feed herself and can hold her head up. Sphincters still do not act. Power in right leg increasing. Sensation slowly returning in both legs. Pulse regular, compressible, 140. Respiration 40. Temperature $99\cdot9^{\circ}$.

10 p.m.—Pt. Emp. Belladonnæ. Temperature $100\cdot1^{\circ}$.

13th.—More cheerful. Sleeps well. Bowels open. Pulse 120. Temperature $99\cdot4^{\circ}$.

10 p.m.—Temperature $100\cdot6^{\circ}$.

14th.—Condition same. Pulse 150. Temperature $99\cdot9$.

10 p.m.—Temperature $100\cdot4^{\circ}$.

15th.—Motions and urine still passed involuntarily. General condition improved. Pupils dilated. Tongue clean and moist. Pulse regular, 132. Respiration 40. Temperature $100\cdot4^{\circ}$.

16th.—Pupils still dilated. Less cough. Fretful.

Pulse small, regular, 132. Respiration 40. Temperature 99.6°.

18th.—Yesterday and to-day she has shown signs of returning power and sensation about the sphincters, telling nurse when the bowels are about to act and when she wishes to pass water. Increased power in both legs. Feet kept extended. Very slight muscular contraction produced by very strong Faradaic current. Pulse compressible, regular, 132. Temperature 100.0°.

19th.—Continues to improve. Temperature 98.8°.

21st.—Sleeps well. General health improving. Power over sphincters gradually returning. Sensation generally improved. Muscles contract more with Faradization, arms equally. Right leg more than left. Urine 1018, acid, no albumen. Pulse 100. Temperature 98.7°.

R Olei Morrhuæ, ʒj;
Syr. Ferri Phos., ʒss. Fiat mistura.
Ter die sum.

22nd.—Continues improving. Omit Hst. Belladonnæ.

28th.—Cough troublesome. Sleeps well. Appetite good. Bowels open. Pulse 140. Respiration 40. Temperature 101.0°.

29th.—Improvement less marked. Usually calls for stool. When supported can put one foot in front of the other. She is not able to crawl on the floor. Urine normal. Pulse small, 156. Respiration 44. Temperature 100.6°.

R Syr. Ferri Phos., ʒj;
Liq. Strychniæ, mj. Fiat mistura.
Ter die sum.

September 5th.—She is not so well. Face very pale, slightly puffy. Appetite good. Bowels open. Tongue clean and moist. Heart sounds clear. Respiratory murmur clear. Improvement has been less marked during the past week. Arm more sensitive to Faradization. Urine smoky, contains a small quantity of albu-

men (about one tenth) with granular casts and a few blood discs. Omit Liq. Strychniæ. Pulse soft, irregular, 76. Respiration 28. Temperature 98·4°.

7th.—She did not sleep well last night. Takes food well. Tongue moist, thin white fur. No diarrhœa or sickness. Urine contains more albumen. Pulse more irregular, 80. Temperature 98·3°.

8th.—She was sick last night, but looks better. Regaining power in her limbs. Urine contains less albumen. Pulse irregular, 88. Temperature 99·3°.

12th.—She is better. Takes food well. Bowels open, action usually voluntary. Has not vomited since the 10th. Tongue clean and moist. Urine contains less albumen, excess of urates. Omit Ferr. Phos. Pulse soft, irregular, 134. Respiration 40. Temperature 99·4°.

R. Tinct. Ferri Perchlor., $\text{m}\nu$;
Glycerini, mxx ;
Aquæ ad ʒss . Fiat haustus.
Ter die sumendus.

14th.—Improving. Less pale and anæmic. She can stand with a little support under the shoulders. Urine contains a trace of albumen only. Pulse regular, soft, 108. Temperature 99·2°.

18th.—More power in arms and legs. Tongue clean and moist. Pulse regular, compressible, 120. Temperature 97·6°.

19th.—Urine still contains a trace of albumen with granular casts, much granular débris, and a few red blood discs. Pulse 120. Temperature 99·0°.

26th.—She continues improving rapidly. Complexion less pasty. Slight cough. Can sit up without support. Sensation of legs still much impaired. Urine slightly clouded with albumen. Pulse small, regular, 132. Temperature 99·7°.

28th.—An ophthalmoscopic examination was made to-day by Mr. Power, no intra-ocular change was found. Pulse regular, 140. Temperature 98·6°.

October 3rd.—She continues improving in both sensa-
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tion and motion. Bowels open. Appetite good. Tongue moist, thin white fur. Urine contains a trace of albumen. An egg. Pulse small, slightly irregular, 126. Respiration 22. Temperature 97.1° .

10th.—Improving. General health good. Can stand and walk round a bed by herself. Urine free from albumen. Pulse 124. Respiration 30. Temperature 98.6° .

17th.—She can walk across the ward with a little help. Pupils less dilated. Urine free from albumen. Pulse small, regular, 140. Temperature 99.2° .

20th.—Can walk across the ward by herself. Pulse regular, 106. Temperature 98° .

25th.—Continues improving. Urine, no albumen. Pulse compressible, 100. Temperature 98° .

31st.—She can run down the ward. General health good. Pulse, fair volume, 100. Temperature 98° .

November 5th.—Discharged well. Can run up and down stairs. Sphincters quite under control. Muscles have not regained their proper tone, but are still soft and flabby, though much less so than they were on admission.