SCHEDULE B.—*Vaccination Register.*

No. in this and Register of Birth.	Christian and Surname.	Residence.	Date of Birth.	Date of registration of vaccination, permanent exemption, or death.	Name of persons signing certificate, and of vaccination gratuitously performed, Yes or No.	Date of registration of temporary exemption.	Date of re-vaccination. If gratuitously performed. Yes or No; and by whom.

Original Communications.

CURIOUS CASE OF EPILEPSY.

By HUGH ROBINSON, M.R.C.S., L.A.C., Pershore, Worcestershire.

W. G., aged 23, a strongly made but bilious-looking subject, had never had a day's illness (not even fits during dentition) until he was ten years old, when he was thrown from a horse, and fell on the *right* side of his head, and was insensible for some time, but gradually recovered. He has held for the last three years the situation of groom, and has led a somewhat dissipated life.

On July 23rd, 1863, while riding, he felt a peculiar tingling sensation down the left side. This passed off; but, on awaking next morning, he was seized with a most violent epileptic fit; and on the following morning had another. He then came home, and for some few days had no return of the fits, but was exceedingly depressed, and was treated accordingly with stimulants, and appeared to be much better.

July 30th. I was sent for, and found him in a most violent epileptic convulsion; the *left side* only being attacked, the right side not being affected in the slightest degree. The left eyebrow was firmly contracted; the left eye was drawn upwards and towards the left side; the left hand was firmly clenched, with the thumb drawn inwards towards the palm; the left arm and leg were most violently convulsed, requiring three persons to hold them. The tongue was severely bitten; and the mouth, which was drawn to the left side, was covered with bloody foam. The diaphragm was most violently convulsed, contracting and relaxing on the abdominal viscera, causing a most curious noise, which could be heard in the room below. The breathing, at first embarrassed, became for some seconds completely suspended. The face became turgid and livid; he fell back as if dead. I thrust my finger into his mouth, and hooked up the epiglottis, which I found firmly pressed down on the top of the larynx. He gave a sort of spasmodic gulp, and gradually recovered. He then became perfectly motionless, and had the appearance of a person in a deep sleep. After remaining with him for about ten minutes, I noticed a slight twitching of the left eyebrow, which gradually extended downwards to the face, arm, side, and leg; and then followed the same symptoms which have been described before. The pupils were slightly contracted; the tongue was furred; the bowels confined; and the pulse moderately strong. I ordered the head to be shaved, and cold lotions to be applied to it; mustard poultices to the calves of the legs; hot-water bottles to the feet; flannels wrung out of boiling water to be applied to the nape of the neck, and to be immediately followed by hot flannels steeped in a liniment composed of strong liquor ammoniæ, extract of belladonna, and soap liniment; a calomel and

jalap purge; an assafoetida and turpentine enema; with sal volatile and effervescents; beef-tea and brandy; and I directed a piece of cork to be placed between the teeth each time that the fits occurred.

August 1st. He appeared much the same. The number of fits had varied, being sometimes three, sometimes six, sometimes more, during the hour. The pupils were natural.

August 2nd. The number of fits from 7 P.M. to 7 A.M. was 80. He talked quite incoherently; and had taken the most peculiar fancies into his head, one of which was, that his father would not give him enough to eat, although this was anything but the case. The liniment was ordered to be discontinued, and a blister to be applied to the nape of the neck.

August 3rd. The fits were so numerous that it was quite impossible to keep an account of them; in fact, he never appeared free. No sooner was one over than another was present. In other respects, he was much the same.

August 4th. The fits were still as numerous.

August 5th. He was much the same. He was placed under the influence of chloroform for three-quarters of an hour. After being under for about twenty minutes, allowed him partially to recover; but the twitching immediately appeared, commencing, as before, in the left eyebrow. I therefore reapplied the sponge, and kept him under its influence for the remaining thirty minutes. On its removal, he had a very strong fit.

August 7th. He appeared much the same. The fits were quite as frequent, but not nearly so violent.

August 8th. He slept the previous night for about three hours, without having a fit. He appeared better.

August 9th. The fits were not as frequent, but not they seemed perfectly changed in character. No longer was there insensibility while they were present, or sleep while they were absent. The left side was still the affected one. He explained where there was most pain, and, even while the attack was the most severe, he pointed to the muscle most affected. Some fits seemed to be more severe than others. During the slightest ones, he frequently asked the persons holding his leg and arm to "hold them tighter down". He said that, while he could keep his eyes still, fixed on an object, the fit did not occur; but this he said he was unable to do for any length of time; but the moment he moved them, he was then seized. He had no foaming at the mouth, neither did he bite his tongue. He had lost power over his bladder and rectum; and, while the fits were absent, he had neither use nor sensation in the left side, but complete in the right. These attacks still commenced with the twitchings already described. A blister, three inches by eight inches, was ordered to be applied from the nape of the neck down the spine; and a mixture composed of chloroform and extract of belladonna, to be taken every three hours.

August 12th. The blister had been kept open. The fits were not so numerous or as violent. Sensation was beginning to return in the arm and leg. He had regained the power over his bladder and rectum; and his peculiar fancies and craving for food had left him. He had about two fits during the hour.

August 20th. During the past week he had been improving; but this day the fits seemed to be increasing in severity, and slightly in number. Tincture of lobelia was substituted for the extract of belladonna.

August 22nd. He seemed much improved; had perfect sensation in both his arm and leg, and some power in each. When he put out his tongue, it inclined to the left side; and he talked as if he had not complete power over it.

August 24th. He was not so well; and was extremely restless. The fits were increasing in number. Tincture of henbane was added to the tincture of lobelia and chloroform.

August 26th. He was much improved. The restlessness had disappeared. The fits were gradually decreasing in number and severity. He had regained the entire use and sensation in his arm and leg.

September 4th. All that remained now was slight occasional twitchings of the left side of the face. He was much stronger, and went out daily. He was ordered to take small doses of sulphate of zinc and extract of henbane three times a day.

October 20th. He had now lost all traces of the twitchings, excepting very occasionally, and then only very slight. He has perfect use of his arm and leg.

October 27th. He returned to his situation, as he said, "as well as ever he was".

PATHOLOGICAL AND PRACTICAL RESEARCHES ON THE VARIOUS FORMS OF PARALYSIS.

By EDWARD MERYON, M.D., F.R.C.P.

[Continued from page 451.]

PARALYSIS FROM DISLOCATIONS AND FRACTURES OF THE VERTEBRÆ.

The functional disturbance of the spinal cord which attends almost all cases of dislocations and fractures of the vertebræ imparts an interest to such particular injuries, which the same accidents to other bones do not possess.

The shortness of the vertebræ, the intricate manner in which they are interlocked, the large surfaces by which their bodies are connected, and the small amount of motion admitted between any two of them, render it almost impossible that either dislocation or fracture can occur without considerable violence and mischief being done to the spinal marrow; and yet we do occasionally hear of fractured spines without paralysis, but they are exceptional cases.

Paralysis of every part of the body which is supplied with nerves proceeding from the spine below the seat of injury is the all-important symptom, and in almost every case it will be found that retention of urine and difficult defecation exist also. The former of these symptoms, however, is not dependent on a palsied state of the muscular fibres which surround the bladder, for that organ empties itself perfectly when a catheter is introduced. The detrusor urinæ is a voluntary muscle, and its loss of power would in some degree account for the difficult micturition; and it is chiefly to the loss of voluntary relaxation of muscles which surround the urethra and the rectum to which the symptoms in question are due. Like all other voluntary muscles of the body, they are under the influence of the spinal cord, and, as we have seen in most of the cases thus far recorded, retention of the excretions results from a severe injury or division of the cord. Incontinence is a common symptom when disease of the cord comes on gradually. It implies either irritation of the cord or of the bladder, in which latter case it is simply a reflex action, and as such, appears when the sphincter muscles of the bladder and rectum have lost their contractility shortly before death takes place.

Two instances of dislocation are contained in the *Leçons Orales* of Baron Dupuytren (*On the Injuries and Diseases of Bones*. Translated and edited by F. Le Gros Clark. Sydenham Society.) These typify all dislocations at the lower part of the cervical region, and tend to illustrate the fact, as stated by that illustrious surgeon, that the cause of death is, apparently, "the upward extension of disorganisation of the spinal cord, so that the origin of the phrenic nerves is ultimately involved, and death takes place from asphyxia."

MM. Hamon and Mercier have related two cases of fractured sacrum, in each of which, together with partial paralysis of the lower extremities, there was retention of urine and feces. So also in a patient of Dupuytren's, who threw himself from a third story window. "There was deformity and abnormal mobility near the lumbar region. The paralysis did not at first extend above the lower parts of the thighs, but the bladder and rectum were included. There was a temporary improvement, but soon the paralytic condition involved the whole of the lower limbs; an extensive slough formed on the sacrum, and the patient sank, preserving his intellectual faculties to the last. The spinal cord was found more voluminous than natural, especially at its lower part. Opposite the tenth dorsal vertebra was a cyst filled with pus, and formed in part by the medullary substance reduced to a fluid consistence; the body of the second lumbar vertebra was fractured" (*Ibid.*, p. 365.)

The subject of the following case, also described by Dupuytren (*Ibid.*, p. 358-9), gives us some idea of the time required for the restoration of nerve-fibre after it has suffered solution of continuity.

CASE. "Charles Millié, aged 21, carman, was admitted into the Hôtel Dieu in 1825, with paralysis of the bladder and extremities, caused by a fall on the neck. The paralytic condition was more marked on the left side than on the right, and in the lower than in the upper extremities. After two months and a half of entire rest, combined with blood-letting from the arm, as well as by cupping and leeches, he was convalescent, and quitted the hospital with only slight weakness in the left leg, and the head a little bowed forwards.

"In spite of injunctions to be very cautious in taking exercise, he undertook a long walk, and whilst out was attacked with paralysis; he fell down, and remained in the open air all night. When conveyed to the Hôtel Dieu on the following day, the paralytic condition was much more complete than on the former occasion, involving the lower extremities, which were entirely powerless and insensible, and also the arms from the shoulders to the hands. At the lower part of the neck there existed a pain which extended to the left shoulder; neither bladder nor rectum acted.

"The patient was bled twice and the catheter passed. Some days afterwards, he was affected with spasmodic contractions of the limbs and bladder, and the catheter was no longer required. A moxa was applied between the shoulders, but without benefit; the skin over the sacrum and trochanters began to slough, diarrhœa set in, and the patient sank exhausted thirty-four days after the fall.

"On examining the spine, a fracture through the lower part of the body of the fourth cervical vertebra was found; it extended obliquely downwards and forwards, but the parts were prevented from being displaced by the articular processes. The left transverse and articular processes of the fifth vertebra were fractured, so as to permit the fourth to slip forward and compress the cord at this point. The intervening fibro-cartilage between the fourth and fifth vertebra had disappeared; and along the line of fracture in front of their bodies was an osseous deposit, resembling callus; which itself presented a fissure, as if consolidation had taken place, but the parts had again yielded to violence.

"Opposite the point of compression the cord exhibited an annular constriction, abrupt and well marked, and very analogous to that presented by the intestine in some cases of strangulated hernia. When incised longitudinally at this spot, the colour and consistence of the cord were found altered to a brownish hue, and the density and firmness of fibrous tissue; a small circumscribed spot, about a line in extent, was especially characterised in this way. The membranes were also more adherent here than elsewhere. It was inferred that the seat of this peculiar change was that of the original