been cut out of circuit. When, unfortunately, an accident has happened, artificial respiration should be put in practice as soon as possible, in the hope that the injury has not been severe enough to arrest the heart permanently; and if the heart show signs of beating, however feebly, the artificial respiration must be persevered in. By the enterprise of the *Electrical Review*, a card of directions for the best method of giving first aid to victims of electric shock has been issued, and is likely soon to find a place in all central stations. It is drawn up on the lines of the well-known card of the Royal Humane Society for the restoration of the apparently drowned.

A CASE OF FUNCTIONAL DEAF-MUTISM.

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THE following case appears to me of sufficient interest to merit publication.

A. H., aged 19, a miner, was brought on November 16th, 1894, by his father to the General Hospital with a letter from Dr. Dykes Robson, of Somercotes, to whom I am indebted for the history of the case. It appeared that three weeks earlier he had gone to bed in his usual health, but woke up in the morning unable to hear or to utter a sound. The deafness was so complete that the loudest and most sudden noises made near him were unnoticed, and he gave no sign of hearing a cannon let off close to him on November 5th. Not only had speech entirely gone, but he had not been able to make any sound at all. He could neither talk, whisper, nor utter inarticulate noise. The intellectual faculties had apparently remained intact, and he had communicated with his friends by reading and writing, in which processes he had had no difficulty. His conduct had been rational, and he had shown no signs of undue emotion or of hysteria. He had slept rather badly, and had complained of some pain in the occipital region and in the temples. The special senses had appeared normal, as had general sensation, and there had been no paresis, fits, sickness, vertigo, or tinnitus.

In regard to his past history, the father said that he had been in no way peculiar, not at all nervous or hysterical, and of average intelligence and conduct. The only important point in the history was that a year earlier he had suddenly lost the use of his right arm, which had remained paralysed for three weeks. Whether recovery was gradual or sudden was not ascertained. The patient's mother had died of paralysis of a year's duration. She was said to have lost the use of both legs, and towards the end to have become slightly demented. Death came by sudden coma. She had had several miscarriages, but no definite history of congenital syphilis could be made out in regard to the patient. When the lad walked into the out-patient room there was nothing unusual about his appearance or manner. He was well developed, of healthy aspect, and showed no signs of a neurotic or hysterical tendency. It was not till we obtained no response to questions that anything abnormal became evident. On testing hearing further I found he was obviously deaf, but when I spoke in very loud and distinct tones into either ear a simple order, such as to shut his eyes or put out his tongue, that the order was in some instances obeyed; the more sudden and peremptory the command the more chance there seemed of the responsive movement being elicited. The father thought that the deafness was not now quite so intense as at first. He could not hear a watch through air or bone. All attempts, however, to make him speak or utter any sound failed. He promptly did whatever he was told to do in writing, except this; he could not repeat a word spoken to him, or read aloud what he clearly understood or had himself written; nor did moderate pain produce any cry. A severe test of a painful nature was not then applied. He wrote in a good hand intelligent replies to written questions.

On the objective side of the nervous system things were practically normal. The movements of the eyes, face, lips, tongue, and limbs were normal; there was no stridor and no cough. There were no paresis, inco-ordination, tremors, or spasms. The gait was normal, and there was no swaying with eyes open or shut. The right knee-jerk was but slightly

marked, and the left was not obtained. The pupils were a trifle large, but reacted normally.

Vision appeared normal, both as regards acuity and extent, but no exact perimetric examination was made. The fundi of the eyes were normal, except for one small pigment spot in the nasal half of the left retina. There was no cephalic or mastoid tenderness; there never had been an ear discharge, and the drums of the ears were normal, except for a little dried cerumen attached to them. The teeth were not pegged or notched, and the pharynx, lungs, abdomen, and generative organs appeared healthy. The pulse was regular, but jerky, and rather soft; the artery was not thickened. The cardiac apex was displaced half an inch outwards, but there was no other sign of disorder of the heart or aorta.

A fortnight later the patient presented himself again, the symptoms having remained unchanged. He now, however, showed also anæsthesia of the palate and loss of the palate reflex; and a sudden movement of the hand before his eyes failed to make them blink.

The diagnosis of "functional" or "hysterical" deaf-mutism being now fairly certain, the faradic current was sent through the larynx by means of an intralaryngeal electrode and one on the front of the neck. The result was a kick and a yell. He was then told that he could speak, and at once answered, "Yes, I can." The next minute he could answer questions uttered in a whisper. He went home hearing and speaking normally, after having been deaf and dumb for five weeks.

Hysterical mutism has been well described by Charcot¹, who has pointed out its existence as a clinical entity, and its differences from aphasia and aphonia of organic origin. In the third volume of his lectures are reports of twenty cases, but in only two of these was the mutism associated with deafness as in my patient.

The diagnostic points are: (1) Sudden origin; (2) existence of absolute aphasia and aphonia; (3) absence of signs of labio-glossal paralysis, and usually of any paralytic phenomena, though hysterical hemiplegia may coexist; (4) preservation of intellectual faculties and the power of writing; (5) frequent coexistence of hysterical stigmata; (6) usually rapid recovery, though it may be gradual. These characteristics distinguish the affection from simply hysterical aphonia, from aphasia due to lesions of Broca's convolutions, or from aphemia due to disease of the medulla or its nerves.

The question of diagnosis from wilful simulation is perhaps one which will impress itself upon English minds; but, as Charcot points out, the clinical picture of mutism is not such as would probably suggest itself to a malingerer, while certain of the coexistent stigmata, such as contraction of the visual fields and anæsthesia of the palate, could not be counterfeited by one ignorant of the symptoms of organic disease.

The present case is remarkable for the deafness as well as the mutism, and although the former was not absolute when the patient came to hospital, yet severe tests, such as the cannon, showed it to be real.²

The onset of the affection in this case was a little unusual, as there seems to have been no antecedent shock or emotion, and the patient could not say exactly when it began. All he could say, in answer to questions after his recovery, was that when he woke up in the morning he found himself unable either to hear or speak.

This case also was peculiar in presenting hardly any ordinary symptoms of hysteria. Neither his family nor Dr. Robson considered him inclined that way. Previously to the occurrence of the deaf-mutism and anæsthesia of the palate, the only evidence of a liability to functional nervous disease was the history of a temporary paralysis of the right arm.

The mode of cure is of interest inasmuch as a severe shock applied to the organ of voice not only restored speech, but hearing at the same time. The intimate association of the ideational centres is thus well illustrated. Perhaps excitation of the ears would have restored speech as well as hearing.

¹ Charcot's *Lectures*, vol. iii, Syd. Soc.

² It may be noted that the character of the deafness was quite unlike that of a malingerer; for he never started at the loudest noise made unexpectedly behind his back, whereas he did seem occasionally to comprehend simple orders made before his face, such orders being those that the doctor might be expected to give. A malingerer would have done exactly the reverse.