

PHILADELPHIA NEUROLOGICAL SOCIETY.

October 22, 1900.

The President, Dr. William G. Spiller, in the chair.

A CASE OF PROBABLE CEREBELLAR TUMOR.

Dr. David Riesman presented a patient, a married man forty years of age, by occupation originally a forester, but now a tailor, without neuropathic family history. Venereal infection is denied. There is no history of injury, nor of the abuse of alcohol or tobacco.

Nine years previously, after much exposure, the man began to suffer from severe headache, which lasted a year and a half, and was finally relieved by a remedy that appears to have been iodide of potassium. Five years ago a subjective vertigo developed, which of late has become intensified, so that on several occasions he has fallen, whether to any particular side he does not know. Vision is good, but at times he sees double. Since the beginning of the vertigo there has also been difficulty in walking, the gait being staggering to such an extent that he has frequently been accused of intoxication. Two years ago difficulty in walking developed.

He has never vomited. Headache is rare; when it occurs, it is occipital. Intelligence and memory are unimpaired. The left side of the trunk and left leg are a little numb, and the occasional seat of pricking sensations. Sexual power is greatly diminished. On percussion the skull is tender along the lambdoid suture and over the occipital bone. The pulse is persistently rapid. There is a well-marked lateral, and to a less extent oblique, nystagmus. The pupils are equal and react promptly to light, and there is no ocular palsy. Examination of the eye-grounds shows some atrophy of the optic nerve. Hearing is much impaired on the left side. Motion of the soft palate is somewhat imperfect, but there is not a complete paralysis. There is no ataxia of the arms whatever, nor any loss of power. The gait is reeling in character: the feet are not lifted high, as they are in locomotor ataxia. He sways a little on standing with closed eyes, and cannot walk with the eyes closed; when urged to do so he lists toward the right. He has to rely very strongly upon the balancing action of his arms, and on that account cannot carry anything in his hands without causing his gait to become more staggering. He can stand on either leg for a few moments without much difficulty. There is no ataxia of the legs whatever in the recumbent posture, and the knee-heel test is executed

without difficulty. When lying down the vertigo disappears. There is no impairment of power in the lower extremities. The knee-jerks are both exaggerated. Ankle-clonus is incessantly present. The plantar reflexes are present; the cremaster and abdominal reflexes absent. The sphincters are undisturbed. Sensation is good everywhere except in the left leg and in the left side of the trunk up to the costal border in front and to the neck behind. In these places there is slight hypesthesia, both for touch and for heat and cold. There is no curvature of the spine, nor any tenderness. Electric examination shows that the left side can bear a stronger current than the right; the muscles respond properly.

Dr. Riesman thought that the vertigo and reeling gait in this patient are suggestive of a cerebellar lesion—one involving the middle lobe. The lesion must be small, as the signs of pressure are not marked. The numbness of the left side is not easily explained. There might be pressure upon the sensory tracts of the medulla or on portions of the cerebellum through which afferent fibers pass from the direct cerebellar tract or from parts of the posterior columns and the anterolateral ground bundles. The differential diagnosis between tumors of the prefrontal region and of the cerebellum is difficult. The absence of all mental impairment is in favor of the cerebellar lesion, although by no means conclusive. A tumor in the mid-brain region, involving the quadrigeminal bodies, might produce many, if not all of the symptoms present in the patient; but the ocular, and perhaps the auditory, symptoms would be more pronounced if the tumor sprang from this region. On these grounds the lesion is believed to be in the cerebellum.

As to the nature of the lesion, it is possible that the man had a gunnua, which subsided and left a cicatricial process in its place. The absence of specific history, as is well known, does not exclude the existence of this disease. On the other hand, iodides often cause improvement, even in the absence of syphilis, so that the nature of the lesion must be left undecided.

Dr. F. X. Dercum agreed with the speaker that this probably was a case of cerebellar disease, but he thought it doubtful that the lesion could be attributed to a specific cause. It is well known that cases of cystic glioma often get better under the use of the iodides. He, however, thought that in this case the nature of the lesion was a secondary matter.

Dr. Spiller asked whether Dr. Riesman had taken into consideration the possibility of internal hydrocephalus and of disseminated sclerosis; and also whether the patient had had vertigo more intense when lying on one side or the other. Dr. Spiller had had a patient

with symptoms of cerebellar tumor, who had intense vertigo when lying on the left side. Shortly after this two similar cases were reported by Schmidt. In Schmidt's cases necropsy showed the tumor to be on the opposite side from that the lying on which occasioned the vertigo.

Dr. David Riesman said that his patient had no vertigo on lying down. He had considered disseminated sclerosis, but in the absence of intention tremor, scanning speech, and impairment of power, he had felt warranted in excluding this. He did not see how it was possible to differentiate in adults between internal hydrocephalus and cerebellar growth. A number of cases had been reported in which operation was done for tumor and internal hydrocephalus was found. In regard to the nature of the lesion, he did not wish to assert positively that it was syphilitic. It might be a sclerotic or a cystic process.

A CASE OF MULTIPLE NEURITIS OF THE UPPER LIMBS, POSSIBLY THE RESULT OF HYDRO-FLUORIC ACID POISONING.

Dr. W. G. Spiller presented a man, aged fifty-eight years, who had been perfectly healthy until last March, when he worked two days in a glass manufactory with some acid, the name of which he did not know. Another man who worked with him, and who was better informed of the danger of the occupation, wore rubber gloves. The patient's hands, especially the right, came in contact with the acid. Dr. Lupin had seen him when the neuritis first developed, and at that time the hands were swollen, hard and white, and were without sensation. When the patient was seen by Dr. Spiller in August, 1900, right-sided musculo-spiral palsy was present, and the right hand could not be raised at the wrist. Sensation for pain and touch was normal on the palmar and dorsal aspects of each hand. The flexion of the right hand was very feeble. Resistance to passive movement at the right elbow and right shoulder was good. The right hand and forearm were painful on slight pressure. Flexion of the left hand was good, and extension of the hand was better than that of the right hand, but was very much impaired. Tenderness to slight pressure was felt in the left forearm and hand. At a later examination the electrical reactions of the extensors on the right forearm were quantitatively diminished. No signs of implication of the lower limbs were found.

Dr. Spiller regarded the case as one of polyneuritis caused by the local contact of some acid, *possibly* hydro-fluoric.

Dr. F. Savary Pearce said that the atypical distribution of the palsy, and the fact that the right hand was more markedly affected, reminded him of a case of lead palsy seen in the Medico-Chirurgical Hospital. He at first thought that it was a case of pressure paralysis.

but more careful examination showed the blue line on the gums. The man was a painter. The palsy was localized chiefly in the right arm. The middle finger of the left hand was involved, and the grasp of the left hand was lessened. Perhaps in neuritis the result of poisons from without, the overworked peripheral neurones usually in the right arm, are earliest made vulnerable to the toxic substance.

Dr. A. A. Eshner suggested that as hydrofluoric acid is volatile, there was a possibility that the poison had been absorbed through the respiratory tract. In a case of this kind one would expect to find a constitutional rather than local manifestations. It has been stated that in some cases of lead-poisoning the toxic agent has been absorbed through the respiratory tract. The late Dr. Da Costa* reported a case of hemiplegia which he attributed to lead-poisoning after exposure for only three days in a freshly painted house.

Dr. Simon Flexner remarked that the suggestion of Dr. Eshner was supported by what is known of poisoning from arsenical wall papers. The arsenic is converted through the agency of fungi into arseniuretted hydrogen, which is absorbed by the respiratory tract, causing the poisonous effects.

Dr. James Hendrie Lloyd considered the fact that this was a case of local poisoning a point of special interest, as most cases of neuritis are due to poisons ingested. In this case there appears to be only a local effect. Some years ago Manouvriez, a French observer, called attention to what he considered "local saturnism"—an affection characterized by local symptoms due to the external application of lead. In quite a large number of cases the local effects corresponded to the local application of lead to the skin. Some workmen, for instance, had used their feet to stamp lead, and had loss of power in the legs. Anesthesia has been known to occur in an area upon which lead had been applied.

Dr. Hobart A. Hare thought that in this case the diagnosis of peripheral neuritis had better basis than the diagnosis of the cause. He thought that the evidence of its being due to hydrofluoric acid was not conclusive. Nothing is known of the effect of this acid on the nerves. This might be a case of pressure palsy.

Dr. William G. Spiller said that he had not asserted positively that the palsy was due to hydrofluoric acid poisoning, but that this was probably the cause. The man's hands were exposed to some acid for two days, and it was said that men engaged in the same manufactory often became ill. The patient had used his right hand principally in working with the acid. If the poison had been absorbed by the lungs, we might expect that the lower limbs would also have been affected, although they could have escaped. The physician who saw the case in its acute stage said that the hands were swollen, hard and white, and without sensation.

A CASE OF PROGRESSIVE, ASCENDING, UNILATERAL PARALYSIS.

Dr. Wm. G. Spiller presented a man, forty-one years of age, a peddler by trade, without venereal disease, who four years ago while peddling became gradually weak in his left lower limb, and it was not until a year later that he experienced any weakness in the left upper limb. The man was

*Trans. College of Physicians, 1897, p. 1.

very positive in regard to this statement. This weakness has persisted until the present time. He was never unconscious and had never had convulsions, diplopia, headache or vomiting. His station was good. The muscles of the left lower limb were spastic, and in walking the toes of the left foot were inverted. The right knee-jerk was prompt, but the left was still more so, and ankle-clonus and Babinski's reflex were obtained on the left side. The left upper limb was held slightly flexed, but could be voluntarily extended, and the tendon reflexes in the left upper limb were exaggerated. Von Bechterew's scapulo-humeral reflex was very distinct on the left side. Sensation and muscular development were normal everywhere. The movements of the face on the left side were somewhat impaired. The man was paretic on the left side, but still had very fair use of the left extremities. The reactions to the electrical currents were normal. Dr. H. F. Hansell had made an ophthalmoscopic examination: "In the right eye the media were clear, the fundus was normal, and myopia 3 D. existed. In the left eye the media were clear, the arteries were small and the veins normal. The edges of the disc were distinct. The nerve head was white, the atrophy being probably spinal in origin, as there was no indication of a previous neuritis. Myopia 6 D. existed. Reaction of pupil normal."

Dr. Spiller referred to a similar case reported before the Society about a year ago, by Dr. C. K. Mills, in which an unilateral degeneration of the pyramidal tract was believed to be the cause of the clinical phenomena. Such a diagnosis would apply equally well to Dr. Spiller's case, although a degeneration of this kind has never been seen. The lesions that could produce such a symptom-complex were carefully considered.

Dr. Charles K. Mills said that the report of this case confirmed him in the view that such cases represent a new form of disease; that is, so far as the recording of cases is concerned. When the patient had reached the stage that this one had, he presented many of the symptoms of ordinary hemiplegia from focal lesion.

BELL'S PALSY. WITH ANESTHESIA IN THE DISTRIBUTION OF THE FIFTH NERVE ON THE SAME SIDE OF THE FACE.

Dr. James Hendrie Lloyd showed a patient with Bell's palsy in whom there was complete anesthesia in the territory of the fifth nerve, without paralysis of the motor branch. The case had occurred suddenly after exposure to cold. There had been a great deal of pain at first, with some stiffness of

the neck muscles and retraction of the head. The symptoms had already persisted for three months, although the paralysis of the facial nerve had greatly improved. The association of these two nerves in a paralysis without marked intra-cranial symptoms was unusual. The persistence of the anesthesia and its limitation to the territory of the fifth nerve indicated an organic lesion, while, on the other hand, the escape of the motor branch of the fifth nerve was rather against such a diagnosis. The patient had had several hysterical crises, and this fact suggested the possibility of the anesthesia being hysterical. The Bell's palsy, however, was unmistakably due to an inflammation of the seventh nerve.

Dr. Charles K. Mills thought that while the case was one of hysteria, it was not impossible that there was a conjoined rheumatoid inflammation of the sensory branches of the fifth and seventh nerves. The history would indicate such a possibility.

Dr. D. J. McCarthy had observed that in Bell's palsy the exit points of the fifth nerve are often sensitive to pressure. In Dr. Lloyd's case there had been no sensitiveness over these points. This he thought was against the rheumatic origin of the affection. The permanency of the anesthesia over the fifth nerve distribution could be explained by the permanency of the palsy on one side of the face. The patient's attention being fixed on the palsy would tend to keep the sensory disturbance confined to the same side, and the anesthesia he regarded as probably hysterical in character.

Dr. David Riesman expressed the opinion that the absence of trophic changes was a point in favor of the functional origin of the condition. If the anesthesia were organic, one would expect to find changes in the cornea after three months, especially in view of the fact that the eye was unprotected by reason of the facial palsy.

Dr. Lloyd said in conclusion that a careful observation of the case had led him to the opinion that we had here simply an interesting example of hysterical anesthesia, complicating seventh nerve paralysis.

BILATERAL FACIAL PALSY WITH HEMIPLEGIA.

Dr. C. S. Potts presented a case of hemiplegia involving the left side, including the face, with paralysis of all the muscles supplied by the seventh nerve upon the right side, and associated movements of the muscles about the mouth in the right side when attempts were made to close the eye or wrinkle the forehead on the same side.

The previous history of the patient was uncertain. He said he had had syphilis, the initial lesion appearing about three months before the onset of the present symptoms, which was two years ago. The paralysis of the right side of the face occurred first.

When admitted to the hospital there was marked weakness of the left arm and leg, with contractures; the angle of

the mouth was drawn to the right and the tongue was projected to the left. After being in the hospital a few weeks the mouth was drawn to the left, as it is at present. The tendon jerks on the left side were increased, and testing the plantar reflex caused marked extension of the great toe. There was inability to wrinkle the forehead and to completely close the eye on the *right* side. The mouth could not be drawn voluntarily to either side, but when he smiled it was markedly drawn to the left. The electrical reactions on the left side were normal, but on the right side of the face there were reactions of degeneration. There was no involvement of other muscles, and no sensory paralysis.

When the patient attempted to close the *right* eye or wrinkle the *right* side of the forehead the mouth was drawn markedly to the right. The explanation of this phenomenon seems to Dr. Potts to be as follows: There is a partial but not complete interference with the functions of the seventh nerve on the right side; there is also weakness of the muscles controlling the mouth on the left side. When the patient attempts to close the right eye or wrinkle the right side of the forehead the cortical centers emit stronger impulses than normal in their efforts to overcome the resistance to their passage in the diseased seventh nerve. These impulses are transmitted to the muscles about the mouth which are deprived of the antagonistic action of the muscles on the left side, they being also parietic, and contraction of these muscles on the right side results.

Dr. Wharton Sinkler remarked that this contraction of the lower facial muscles on attempting to close the eye was not infrequently seen in Bell's palsy of long standing, in which, after recovery of the power of motion, there is secondary contraction. He had at present under observation a young woman who had apparently recovered from an attack of facial paralysis, but when she attempts to close the eye the face is drawn over to the side that was paralyzed.

Dr. William G. Spiller said that the explanation given by Dr. Potts was that advanced for associated movements in hemiplegia. In Dr. Potts' case the associated movements occurred after injury of the peripheral neurones, whereas in cerebral hemiplegia the lesion is in the central neurones.

UNUSUAL TRAUMA WITH SECONDARY BELL'S PALSY.

Dr. F. Savary Pearce reported an unusual case of facial palsy. A young woman had come to Dr. Le Cates for treatment, with a jagged wound back of the right ear between the mastoid process of the temporal bone and the ramus of the inferior maxilla. From this open wound there was a discharge of fetid, sanguineous pus. The girl complained of

severe pain about the right ear, radiating especially toward the lower jaw. She had also marked constitutional symptoms: severe frontal headache, fever, etc. She had been a peacemaker in a quarrel, but persisted that she had felt nothing penetrate the wound she had received at the time she had taken part in the quarrel. The wound was probed, but nothing could be detected. In spite of careful antiseptic treatment the pain, tenderness and constitutional symptoms of fever and irritable heart action continued. One week later operation under ether revealed nothing, so singularly had the offending body been concealed in the deeper structures of this part of the infra-cranial region. A singular phenomenon was the sense of odor of tobacco that the patient complained of constantly from the date of the accident.

About two weeks after the date of injury an operation revealed a piece of an old pipe, the tip of a pipe that undoubtedly had been in the possession of one of the combatants. This body was pyramidal in shape, quite blunt, and measured one-quarter inch in circumference at the smaller end, three-eighths inch at the larger end, and was an inch and a quarter long. It appeared to be made of bone, and had at one time a strong odor of tobacco. The wound, after removal of this foreign body, healed promptly, and the patient says the odor of tobacco at once disappeared.

About July 13, ten days after she had been discharged, and over three weeks after the injury had been inflicted, she reported complaining of the tears flowing over the cheek from the right eye. She was referred to the dispensary for nervous diseases September 1. She had complete paralysis of the right seventh nerve; the face was drawn to left, and she could not wrinkle the right brow nor close the right eye. There was no involvement of sensation or hearing, taste was normal, and the tongue was protruded straight. By October 4, 1900, there was still very marked seventh nerve palsy. The galvanic reaction was as follows:

{	R. 7th nerve.	{ AnCl C=6 m. a.
		{ KCl C=8 m. a.
{	L. 7th nerve	{ AnCl C=4 m. a.
		{ KCl C=3 m. a.

She steadily improved from galvanism employed three times a week.

The question of whether this patient could have been suffering from nicotine poisoning was worthy of mention. Dr. Pearce thought that such a filthy pipe stem could contain enough of the drug to cause poisoning, and that the neuritis

of the facial nerve probably was caused in this way rather than by direct trauma. The seventh nerve was not severed, and probably not injured at the time of extraction of the pipe stem. He thought also that the odor of tobacco perceived by the patient might be accounted for by the circulation carrying a solution of the tobacco to the olfactory centers, as Dr. Gleason had been unable to find in the pharynx any wound that was probably the result of a penetration of the pipe stem into the pharynx.

Dr. Van Epps read a paper on the Babinski reflex:

Dr. Frederick A. Paekard said he had investigated the Babinski reflex in children between the ages of three months and twelve years in the Children's Hospital. In children under the age of five years almost any kind of reflex could be obtained at different times and by holding the leg in various positions. The reflex often varied at the same sitting, according to the direction in which the stroke was made. He had concluded that in children no variation of the plantar reflex was of the slightest diagnostic value. The position of the limb made a great difference in the results and, as Collier insists, all the muscles should be relaxed.

Dr. D. J. McCarthy said that Babinski recommended the relaxation of the leg and the holding of the ankle rigid. The results varied according to the method of procedure. Dr. McCarthy referred to a case of spinal tumor in which the limbs had become so rigid that the knee-jerk could not be obtained, yet the Babinski reflex was present.

Dr. William G. Spiller said that Babinski was not so radical in his statements as some who had written on the subject. The Babinski reflex does not necessarily indicate degeneration of the pyramidal tract, and may be present when the function of this tract is impaired. Two cases reported by Babinski show the importance of this sign, if his diagnosis is accepted. There was loss of the Achilles-tendon jerk and the Babinski reflex was present. He therefore concluded that these were cases of combined systemic disease. The lost Achilles-tendon jerk indicated involvement of the posterior columns, and the Babinski reflex indicated disturbance of the lateral columns.

Dr. Spiller was interested in the report of one of Dr. Van Epps' cases in which the knee-jerk was lost in hemiplegia and the Babinski reflex was present, and the patient died within four days. He had observed two similar cases and thought that when this combination was present the prognosis was more serious.

Hyper-extension of the big toe occurs in Friedreich's ataxia. This may be due to a condition similar to that producing the Babinski reflex. Dr. Spiller had found this hyperextension in a case of infantile cerebral hemiplegia, and he thought that the relation of permanent hyperextension of the big toe to the Babinski phenomenon would afford an interesting study.

Dr. Spiller had had a case with the symptoms of myelitis in which there was loss of the knee-jerk, loss of the tendo-Achillis jerk, and presence of the Babinski reflex. He thought that in this case a lesion was present in the lumbar and upper sacral portions of the cord.