

Dr. Sachs, closing, said while he agreed entirely with Dr. Patrick in regard to the consideration of the subject by the neurologists, the point is that we do want to influence legislators and in order to have this matter assume some public bearing and have some distinct merit if presented to the legislature or if presented to the general public, he thought it would be very desirable if statistics could be brought forward. If we can prove beyond the shadow of doubt that the passage of laws has increased certain diseases we shall be doing good to the communities in which we live and that would be another aim of the discussion.

*(To be continued).*

## THE PHILADELPHIA NEUROLOGICAL SOCIETY

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The President, DR. ALFRED REGINALD ALLEN, in the Chair

### CASE OF UNILATERAL OPTIC ATROPHY AND CONTRA-LATERAL HEMIPLEGIA CONSEQUENT UPON AN APOPLECTIC ATTACK

By Williams B. Cadwalader, M.D.

M. M.—35 year old, was admitted to the Orthopedic Hospital and Infirmary for Nervous Diseases, in the service of Dr. J. K. Mitchell, January 8, 1911. Syphilis and alcohol were denied. About six weeks previous to admission he had had an acute illness which was said to have been influenza. During that time, while confined to bed, he suddenly developed a partial loss of consciousness, lasting a few minutes, with weakness of the right side of the body including the face, arm and leg; accompanied with dimness of vision in the left eye and aphasia. Previous to this attack his vision had been normal. Physical examination showed nearly complete motor aphasia, but no evidence of sensory aphasia, marked weakness of the right side of the face, cerebral in type, with spastic paralysis of the right arm and leg. The tendon reflexes were increased and there were ankle clonus and Babinski sign. Vision of the right eye was normal, but the left eye was totally blind. Sensation was impaired for touch throughout the paralyzed side of the body. The other cranial nerves were normal. The heart was normal in size and regular, the sounds though fairly good were lacking in muscular tone. Dr. Langdon who repeatedly made examinations of the eyes reported that the right eye except for slight grayness of the disc was normal. This was not the grayness of true atrophy. In the left eye the arteries were cut down to mere threads, indeed the inferior temporal branch appeared like a fibrous cord. This with the macular changes can readily be caused by occlusion of the central artery.

The Wassermann reaction was negative.

This syndrome, unilateral optic atrophy and contralateral hemiplegia was undoubtedly caused by occlusion of the middle cerebral artery and also of the ophthalmic or the central artery of the retina on the left side.

TUMOR OF THE RIGHT OCCIPITAL LOBE WITH PRESSURE  
UPON THE SENSORY AND MOTOR FIBERS OF THE  
SAME SIDE AND EXTENSION INTO THE OCCI-  
PITAL LOBE OF THE OTHER SIDE

By T. H. Weisenburg, M.D.

Laborer, 50 years of age. Negative specific history. Wassermann reaction negative. The first symptom began at the age of 46 when the man saw objects one above another. At the same time he had irritating visual phenomena, that is, he saw all sorts of colors jumbled up, comparing it to scenery, darkness, glass and a lot of bricks smeared up in different colors and of carpets, always in his left visual fields. These were constant and lasted for two weeks when they disappeared and have not recurred. He stated also that he saw these visual phenomena out of his left eye only because if he shut the left eye he could see clearly out of the right with no flashes; whereas, if he shut the right eye the flashes reappeared. At the same time he noticed he could not see to the left. He fortunately consulted a competent oculist, Dr. Alfred Cramer, who referred the patient to Dr. Weisenburg. Dr. Cramer found at that time a left lateral homonymous hemianopsia.

At the same time the patient complained of headache and dizziness, the latter appearing only when he got up and walked. He described it as a sensation as if he were spinning, lasting for two or three minutes. At the same time he would stagger or lurch to one side, generally the left. These acute attacks of dizziness were present only a few months and did not return. The patient not only staggered when he had these attacks of dizziness but at other times, the gait being likened very much to that of a drunken man. At no time did the patient have roaring in his ears, fainting spells or nausea and vomiting.

Very soon he began to complain of pains in his left arm, which subsequently involved the whole left side and was limited to it. These pains increased and he is always conscious of them. He feels that the skin is drawn, the limbs feel dead or cold and stiff, and at times he has sharp, jagging, stinging pains. He says that he has never been weak in his limbs but he cannot use the left limbs as well as he should because of the numbness and pain.

The patient was given potassium iodid and he improved considerably, that is, the diplopia, visual irritations and dizziness disappeared, but the left hemianopsia and the stinging feeling in the left side persisted, and he went back to his work which he kept up for three years after the onset of his symptoms. Then he began again to have headache in the back part of his head and to stagger as he once did, the pains in the left side increased and he noticed his sight was not as good as it had been. He again consulted Dr. Cramer who found that the patient not only had loss of vision in the left lateral field but also in the right upper quadrant. Ophthalmoscopic examination was as follows: O.D. media clear. No gross changes in fundus excepting arteries slightly contracted. Disc slightly pale, deeper layers. O.S. media clear, broad scleral ring. Disc pale, deeper layers. Arteries slightly contracted. Veins full and slightly tortuous. Pupils irregular. O.D. reacts sluggishly to light. O.D. vision 6/12, O.S. 6/12 obtained by effort.

At this time Dr. Weisenburg first saw the patient, that is, three years after the onset of his symptoms. The left palpebral fissure was narrow.

Ocular movements were normal with the exception that both voluntary and involuntary movements to the left were not as promptly performed as to the right. No ocular palsies. Cranial nerves normal. Power in limbs was normal but the resistance in the left arm and leg was not as good as in the right. All the tendon reflexes were prompt on both sides, more so on the left, and a Babinski was present on the left. The patient had distinct but slight ataxia in the left arm and leg. Sensation to pain, touch and temperature was normal over the left limbs, and while he recognized objects promptly in his left hand, a coin did not feel as distinct to him as it did in the right. With his eyes closed he swayed considerably. His gait was normal with the exception that he had a tendency to incline his head to the left and when he shut his eyes he was inclined to stagger somewhat to the right.

The diagnosis in this case rests either between a tumor in the right occipital lobe which has grown anteriorly, pressing upon the sensory and motor fibers and which also has involved the left occipital lobe below the calcarine fissure, or a subcortical tumor involving the posterior part of the thalamus in the region of the pulvinar. It is also necessary to exclude syphilis, but against this is the fact that the Wassermann reaction was negative and the symptoms are too focal, indicating a definite lesion. The points against a tumor of the occipital lobe are that the patient very early had diplopia and staggering gait, but all the other symptoms can be accounted for by a tumor growing from the occipital lobe with gradual pressure upon the sensory and motor fibers. The most acceptable diagnosis would be a subcortical lesion situated so as to cut off the optic radiations from the right occipital lobe, at the same time irritating directly or by pressure the motor and sensory fibers of the posterior limb of the internal capsule, with pressure upon either the red nucleus or its continuation in the thalamus, this accounting for the staggering, and also partial involvement of the third nucleus, this giving diplopia. Against this diagnosis, however, is the fact that the patient since then has developed loss of vision in the right upper quadrant. This would of course argue that the lesion has extended from the right thalamic region to the left and has implicated part of the visual fibers coming from the left occipital lobe. There is of course always a possibility that this may have occurred and yet this would be most uncommon.

Dr. W. G. Spiller said there were several features of the case that were particularly interesting, one was the visual hallucinations in the left fields. For a number of years he had been uncertain whether visual hallucinations were always on the side opposite to the occipital tumor. He had one case some years ago in which he diagnosed tumor in the occipital lobe opposite to the fields in which visual hallucinations occurred. The tumor was found in the occipital lobe on the same side as the visual hallucinations. Another clinical case had presented a similar condition. If we accept the teaching of Henschen the position of the visual fibers is very simple. Henschen holds that the fibers of the upper calcarine lip represent the upper half of each half retina, and those of the lower calcarine lip represent the lower half of each half retina, if we accept Dr. Weisenburg's explanation the loss of vision in the right upper quadrant would indicate that the tumor has grown over into the left lower calcarine lip. Dr. Spiller said he could hardly understand how the pain could be produced by a tumor confined to the occipital lobes.

Dr. Weisenburg said he was very much inclined to accept Dr. Spiller's view. Dr. Weisenburg said that the way in which he tried to explain the

case was in the manner that Dr. Spiller did, that is, a tumor involving the post thalamic area, but it seemed difficult for him to explain the loss of the upper quadrant in such a lesion. The patient had not had hemiplegia.

Dr. Dercum said that it seemed to him that the question of pain in this case must decide the lesion in the thalamus, unless we have two lesions, which would be possible. He did not see how we can escape from the very positive symptom of pain. We all know of pressure on the parietal lobe without pain. It seemed to Dr. Dercum that in some way the thalamus was involved in this case and in bilateral involvement it is a matter of detail whether there would or would not be interference with the opposite tract.

Dr. Weisenburg stated that regarding the Wernicke pupillary inaction sign Dr. de Schweinitz had so thoroughly determined that the test cannot be relied upon, although some do not agree with him, that it had not been attempted.

Dr. Langdon said he hardly thought that in the late field of vision too much value should be given to the loss of vision in the right upper quadrant. There is secondary atrophy and it is perfectly possible that atrophy of the optic nerve and not the growth has produced that defect of the field of vision.

Dr. S. Wier Mitchell made some remarks on Sleep Symptoms and the Predormitium.

Dr. Charles K. Mills said it was difficult to discuss a paper like Dr. Mitchell's unless one could bring here, as Dr. Mitchell had brought, his personal experiences or experiences obtained from his patients or friends. Dr. Mills said that he had had visual images of the predormitium in his early life and, very transitorially, in his later life. He believed that his experience was that of many others; that while these visions of the predormitium are very vivid at the time and while we have a recollection that we have had them, they are, as a rule, quite elusive to our memory as they are vivid to our consciousness at the time of their appearance. Now it is true, as Dr. Mitchell has recalled, in giving certain cases with the names of the individuals reporting to him, that certain of these images remain with some very permanently, but Dr. Mills believed that this was not the case with the vast majority. So far as the ability to recall them is concerned, they have made but slight impression; memory cells have not been deeply indented. One is likely to recall predormitial visions as actual dreams without sharpness of outline or elaborateness of detail.

Dr. Mills had had one or two periods in his life, the last he thought about fifteen years ago, in which for some months or perhaps a year he had quite positive visual images before passing into sleep. He had visions of faces very much as had been described by Dr. Mitchell, as he recalled them they were the faces not especially of those around him, at least not usually, but sometimes historical characters or persons in books which Dr. Mills had read. In some instances they were of unknown faces. They had one characteristic which Dr. Mitchell had described as common—the visualizations were never of more than the face or of very little more than the face. Dr. Mills said he got a little uneasy about these experiences at one time, but they ceased entirely after recurring now and then, as indicated for about a year or so.

Dr. Mills ventured to say that the majority of those present who believed that they had had these experiences in the predormitium, had not been able to record them, unless they did this immediately or very soon.

Dr. Mills remembered that in one of Dr. Oliver Wendell Holmes' books an incident of the predormitium, somewhat to the point, is described. The person mentioned had had visualizations so beautiful, not to say poetic, that he thought if he could catch them on the wing sometime, he would record something altogether worth while. He provided himself with pencil and paper and on one of these dreamy occasions wrote down the impressions of the moment. The next morning he found he had written "a smell of petroleum prevailed throughout," or something like this—the speaker did not fully recall Holmes' story. This story has an evident moral.

One of the speaker's friends had told him that in the predormitium she sometimes had "shocks" of various sorts similar to those to which allusion had been made. She had a feeling that she had stepped back from some sort of a platform into space and then would arouse or awake with a start. The same person often had auditory predormitium impressions or experiences. They were not hallucinations in the sense in which we speak of the hallucinations of the insane because she was able to correct them even in the state preceding sleep in which they occurred. She had indistinct recollection of incoherent words, or repetition of words, which she could not put together at the time.

Dr. Mills said he thought sometimes in the state prodromal to sleep we recall phrases which we had used in trying to put ourselves to sleep on previous occasions, and this without making the effort to recall them.

Dr. Mills said he was sorry he could not add from experience anything of real value to Dr. Mitchell's paper. This was in part, at least because the experiences of the predormitium like the dreams of real life were as elusive to memory as they were vivid to consciousness at the time.

Dr. William G. Spiller said that these visions sometimes are extremely painful. He had an opportunity some years ago of observing an elderly lady who was developing cataract. She dreaded to go to sleep because whenever she passed into the predormitium she saw extremely painful objects, she could not describe them, and they often kept her from going to sleep. Dr. Spiller said he thought it might be interesting to determine whether the hallucinations which occur from irritation of the visual system are more frequent in the predormitium.

Dr. D. J. McCarthy said that in some psychological investigations made at the Phipps Institute in tuberculous patients they found almost uniformly in cases of advanced pulmonary tuberculosis, where the blood pressure was low and the cardiac system weak and a good deal of intoxication was present, the dreams were almost uniformly of a disagreeable type. Clouston refers to the fact that in conditions of lack of nutrition of the brain due to deficient blood supply from organic heart disease or anemic or toxic conditions, the mental condition is one of suspicion. Dr. McCarthy said they found in investigating the psychical atmosphere in patients at the Phipps Institute that the mental attitude in pulmonary tuberculosis was frequently one of suspicion and that this condition was simply a transitional one to a delusion of persecution. In other words, these patients went into an atmosphere later of actual persecution. In a few the patients belonged to the class of cases to which Dr. Mitchell has referred, in which the actual delusions were determined by the dream state. That is the actual condition and the dreams were transferred over into the waking state, and lasted a certain time, and then included the entire 24 hours, and finally became permanent hallucination, or actual de-

lusion. A not uncommon condition of these tuberculous patients coming out of sleep was (it occurred so frequently as to attract attention) that they would say they had seen some of their relatives, usually dead relatives, around the bed, and that these relatives conformed to the description that Dr. Mitchell gives of simply a face and the upper portion of the body and a blank space below.

Sometimes in the paranoiac the same condition is found. A regicide at Blockley, the man who attempted the life of General Grant and later went down and tried to see Grover Cleveland, developed his primary delusion from a dream, a very complex dream in which he symbolized the dream and transferred it into a delusion, and read the dream into a distinct order from the Almighty to attempt the life of General Grant. When the tone or type or dream atmosphere is studied pathologically it will be found, as Dr. McCarthy found in some studies of the cardiac condition, that the type of the dream, usually repulsive, is decided by the patient's circulation of the brain. An actual anemic blood supply, as in aortic regurgitation failure of compensation; or in altered states of the blood with intoxication, dreams of a horrible or repulsive type are frequent, and the patients often maintain that that they never sleep without dreaming.

Dr. Alfred Gordon said he wished to relate a case. In the last five or six years he has had a case of a chronic alcoholism in a man of 45. He had outbreaks of hallucinations, no delirium. Passing in the street he would hear people talking about him. These hallucinations lasted six months. They finally totally disappeared about a year ago and two months ago he came to consult Dr. Gordon for peculiar symptoms. Before he goes to sleep in a dark room he hears voices and sees faces. This occurs at night when he wants to go to bed, but not during the day. Whether these predormital symptoms are signs of an oncoming attack of the former hallucinations is difficult to say, but it is curious to see that this predormitium is characterized by hallucinations of hearing and sight.

Dr. Dercum said he thought it was very refreshing to hear this paper by Dr. Mitchell, especially as we have been recently flooded with the Freud interpretation of the dream states. He thought it was refreshing to have our attention called especially to this predormitium and most of us can recall from our own experiences—and it seemed an experience meeting tonight—the experience of our own childhood. Dr. Dercum said he remembered very clearly in his own case seeing in the twilight state preceding full slumber vast seas, of being immersed in great depths, drifting constantly up without bodies. Never did he hear a sound. Dr. Mitchell has made no mention of auditory occurrences of any kind nor did Dr. Dercum remember having had smells or hearing things, his were merely visual experiences. As was the custom with many children, Dr. Dercum had fairy tales read to him and even these visions would occur to him late in youth. As he reached adult life his state of consciousness has passed suddenly into sleep, there has been no twilight and there is no twilight now. Very rarely does he have the predormitium. If it is, it is a very vague period filled often with restraints, of being unable to do the things he wants to do. The Germans speak of sensations of inhibition. Dr. Dercum believes that when these states are coupled with the hearing of voices we have to deal with pathological hallucinations and not the subject under consideration in this discussion. As regards the quality of being able to visualise, Dr. Dercum said he

had always had that himself and he has been able to do so very vividly and had always thought that everybody had the same faculty.

DISTURBANCES OF SENSATION IN THE FACE IN A CASE  
OF SYRINGOMYELIA, INDICATING THAT THE UPPER  
BRANCH OF THE TRIFACIAL NERVE DESCENDS  
LOWEST IN THE MEDULLA OBLONGATA

By William G. Spiller, M.D.

The patient, a man, presented the following condition: Voluntary power in the lower limbs was good, and these limbs were not atrophied. The patellar reflex was exaggerated slightly on each side. The Achilles reflex was prompt on each side with abortive ankle clonus. The upward movement of the great toe on each side was present in the Babinski reflex. The muscles of the trunk were not wasted.

The upper limbs were well developed, but the fingers showed numerous deformities with loss of some of the joints. The biceps and triceps tendon reflexes were not obtained on either side. The disturbance of sensation of the trunk and limbs was of the syringomyelic dissociation type.

The sensory disturbance of the face was peculiar in that in the left forehead near the hair, tactile sensation was somewhat diminished but pain, heat and cold sensations in this part were entirely lost. As the left eye-brow was approached sensations for heat, cold and pain were preserved in minor degree, and the condition was about the same in the left cheek below the eye. On the left chin and over the neck the sensations of pain, heat and cold were lost.

Touching the left scleral conjuction gave a feeble reflex closure of the lids, and a little stronger lid reflex was obtained by touching the left cornea. The reflex in the right eye from touching the eyeball was very prompt.

The important findings in this case were the symptoms of syringomyelia with loss of pain, heat and cold sensations and preservation of tactile sensation extending over the neck and left chin. The pain, heat and cold sensations were lost also in the left forehead, but just above and below the left eye those sensations were much impaired although not lost. It was very evident that the cavity extended upward into the medulla oblongata. The complete loss of pain and temperature sensations in the distribution of the first branch of the trigeminal nerve indicated that the fibers representing this distribution extended lowest in the medulla oblongata, and the impairment of those sensations in the second and third branches indicated that fibers of this distribution in the spinal root of the fifth nerve did not reach the same low level in the medulla oblongata as did those representing the first division. The absence of sharp definition between the loss of these sensations in the distribution of the first branch and the diminution of these sensations in the distribution of the second and third branches is explicable on the ground that in the spinal root of the fifth nerve the fibers representing the first division do not all terminate in the lowest portions of this root, but some of the terminations of the fibers representing the second and even the third division must be close to those representing the first division, even though the chief mass of the fibers of the second

and third divisions has a higher termination in the spinal root than those of the first division.

The view that the highest distribution of the fifth nerve in the face has the lowest termination in the medulla oblongata has been accepted by a number of investigators, and is explicable on phylogenetic grounds. In the lower animals the forehead is not so far in advance as the snout, and the first division of the fifth nerve is nearer to the medulla oblongata than the other divisions.

Dr. Dercum said he thought the explanation which Dr. Spiller gave admitted of no question. It was an entirely satisfactory explanation.

Dr. E. H. Erney presented a Case of Thrombosis of the Left Vertebral Artery.

Dr. Weisenburg said he remembered the patient when he first came to the dispensary. He had diplopia in which objects were one above the other and to one side, involvement of the left motor fifth at first, loss of function of the left seventh, not of the sixth, then of that of the left ninth, tenth and twelfth nerves and some motor weakness of the arm and leg upon the right side and disturbance of sensation to pain and temperature, but not to touch on the whole right side. On the left side of the face he simply had disturbance for touch sensation.

Dr. Langdon said that the ophthalmological side of this case was that the man had a seventh palsy and a ptosis. The eyeball was rotated down and in, the superior rectus and inferior oblique both being supplied by the third nerve. Just why the superior oblique was supposed to have been affected he did not know. With the ptosis, with the palsy of the levators of the eye one would expect the semi-dilated pupil. Dr. Langdon said he would like Dr. Weisenburg or Dr. Erney to explain as to the contradiction of these two.

Dr. Spiller said the ptosis and the contraction of the pupil might be the result of paralysis of fibers of the sympathetic system, the partial ptosis being caused by weakness of the fibers of Müller. These are not uncommon findings in thrombosis of the posterior inferior cerebellar artery, and indicate that sympathetic fibers pass through the medulla oblongata.

#### A PATIENT WITH STAB-WOUND OF THE MUSCULO-SPIRAL NERVE IN WHOSE CASE NERVE SUTURING HAS BEEN PERFORMED

By John B. Roberts, M.D., and J. Hendrie Lloyd, M.D.

A case of a man stabbed in the left arm in the neighborhood of the musculo-spiral nerve, the wound apparently injuring the brachial artery, for his hand was cold and no pulse could be felt at the wrist. Bleeding had been so free that some one before he came to the hospital had put a tight band or bandage around the arm. Therefore, when first seen it was thought possible that the musculo-spiral paralysis which was evidenced by wrist drop might have been due to the pressure of this encircling band. The wound was dressed aseptically, the hand and arm kept wrapped in cotton for the purpose of maintaining heat. After a few days the wound was opened, the clots turned out, and the musculo-spiral nerve found to be about three-fourths divided. The wounded nerve was sutured without cutting the intact portion and the wound dressed aseptically. For some reason there was suppuration in the wound and healing



delayed. When the man was presented to the Society there had been no improvement in the wrist drop nor, if remembered correctly, in the sensory paralysis. When examined a few days ago there was evidently some return of power in the extensors of the wrist; there had been none previously. It looks as if in time motion may be recovered without further operation.

Dr. Weir Mitchell thought if Dr. Roberts had divided the nerve and then caused union he would have done a better operation. Dr. Mitchell said he would advise a delay of two or three months before attempting another operation. He thought Dr. Roberts operated under very unfavorable circumstances.

Dr. Mills said there seems to be some impairment of sensibility, although this is not marked, according to the reporter. The explanation he would make of that retention of sensibility is to be found in the researches of Weir Mitchell on nerve anastomosis and of Head and his collaborators on epicritic and protopathic sensibility. He thought the explanation must be that of retention by overlap of protopathic sensibility with loss of epicritic sensibility.

Dr. Byrnes said that frequently the brachial artery divided just below the axillary space, usually on the inner side of the head of the biceps, it is quite possible that the radial mass might have been somewhat displaced. He tried to see if he could detect two lumps in the arm, but did not believe he could.

### A CASE OF TOPOAGNOSIA

By Alfred Gordon, M.D.

A man, 48 years of age, tailor by occupation, was suddenly stricken with an apoplectic seizure about two years ago. There was loss of consciousness for half an hour. The man lost his speech, and the right upper extremity was paralyzed. The aphasia lasted but 48 hours. The paralysis of the arm lasted 6 weeks. At the end of 2 months he came under Dr. Gordon's observation and the following symptoms were noticed; There was a slight asymmetry of the face, the right naso-labial fold was less marked than the left. The power of the right arm and forearm was good, but the grip of the right hand was weaker than that of the left. There was some ataxia in the right hand. The skin of this hand was cyanosed and some wasting of its muscles was noticeable. The lower extremities were normal. The reflexes were normal. Otherwise the patient presented nothing pathological, except an accentuation of the second aortic sound. The condition of sensations presented the following peculiarities. The superficial sensations were normal. Among the deep sensations only the spacing of two joints on the thumb and forefinger was altered. Stereognostic sense was intact. Recognition of the nature of an object was deficient. About five months ago improvement in the sensory phenomena began. The patient was kept under a systematic re-education. Now there appears to be no change in the superficial as well as in the deep sensibilities. He can recognize objects, but he is unable to find objects or places with his right hand (thumb and forefinger). Asked with eyes closed to place his forefinger on the upper button or button-hole, or touch a certain spot of his vest or coat, he cannot find the place. He is therefore suffering from topoagnosia (*τοπος*—place). This

sense is apparently independent of other sensations, as the patient recovered the latter.

A Wassermann test proved to be negative.

Dr. Alfred Reginald Allen asked Dr. Gordon whether he thought it was a good test to have the man find something in his clothes which was not a natural landmark of the body and for which there was no natural nervous mechanical irritant.

Dr. Gordon said that if the man were asked to touch the button with his left normal hand he could easily find it. He knows how to find objects with his left hand but he cannot do so with his affected hand. Dr. Gordon thought this a fairly good test for the phenomenon.

Dr. Cadwalader said that recently he had had an opportunity of examining two patients who presented conditions similar to those shown by Dr. Gordon's patient. Before Dr. Cadwalader had seen these patients, they had been frequently examined by various physicians and students, who had attempted to demonstrate astereognosis and other sensory phenomena in one hand. It could be shown in both these individuals that there was no organic basis for the condition present. When asked to place the finger on the nose or on the tip of the ear, or told to do the ordinary movements by which ataxia is usually brought out, and when tested for sensation and stereognostic perception, there was a certain awkwardness of movement and occasionally mistakes made in the recognition of objects; but after purposely confusing the patients, it was quite evident that there was not a real lack of function, such as is seen in organic disease. Both these patients could dress and undress and tie their own cravats without difficulty, using the affected hand just as well with the eyes closed as with them open.

Dr. Gordon's case impressed Dr. Cadwalader as being purely hysterical in origin, and like many others which had been repeatedly examined for signs of organic disease without due precautions being taken against suggesting such signs and symptoms.

Dr. Gordon replied that there was no question that hysterical asymbolia and astereognosis have been observed but in this case he found a history of hemiplegia with an apoplectic insult and finally this topoagnosia. In Dr. Gordon's judgment the case was organic.

## A CASE OF PROGRESSIVE DESCENDING HEMIPLEGIA

By Alfred Gordon, M.D.

A girl of twelve years, with previous good health had rapidly become inattentive to her usual work and unable to comprehend when spoken to. At the same time the mother noticed a deviation of the lower half of the left side of the face towards the right. Saliva dribbled from her mouth and her speech was somewhat indistinct. Two days later she came under Dr. Gordon's observation. He found a very marked mental hebetude and a distinct deviation of the lower face to the right. He was informed that the girl would sit in one place for hours, deep in her thoughts, would not ask for food. She was also exceedingly somnolent. The extremities were normal and there were no changes in the power, gait and reflexes, with the exception of the presence of the paradoxical reflex on the left. The heart was normal.

She was placed on ascending doses of iodides. Her mental condition

improved considerably and the somnolence disappeared. Five weeks later the mother noticed weakness in her left arm: objects would fall out of her left hand. Gradually a distinct spastic paralysis developed in the left upper extremity. The lower left extremity remained normal and the paradoxical reflex was still present. Four weeks later a rapidly developing spastic paralysis appeared in the left leg. Ankle clonus and Babinski sign made their appearance. The paradoxical reflex disappeared. The latter fact is in conformity with Dr. Gordon's previous observation on the antagonism between this reflex and the Babinski. Now a total hemiplegia is present on the left. There seems to be also a distinct tenderness in the left arm and leg. Astereognosis and asymbolia are present. The Wassermann test is negative.

As to the pathogenesis of the condition, a neoplasm is the most plausible explanation. Encephalitis can be eliminated in view of the absence of evidence of cortical irritation.

Dr. Mills said this case was interesting as one of the types of unilateral descending paralysis. It was not, however, he thought, distinctly of the character of the progressively increasing hemiplegias, both descending and ascending, which he had described. In one of his papers he had tried to explain all the lesions and conditions which would give rise to such paralysis including the cases of disseminated sclerosis and paralysis agitans in addition to the particular forms of degeneration of the pyramidal tract. He had also in his papers referred to the fact that some cases might be due to a gradually increasing cerebral lesion. At first sight it looked as if Dr. Gordon's case might be one of the last type. The paralysis came on, not gradually, but rather by steps. In a certain sense there was a progression of symptoms. Mental hebetude was present and the other symptoms looked rather towards an increasing cerebral lesion.

Dr. Spiller said he had reported a case of encephalitis, perhaps two or three years ago, in which about a week was required for paralysis to extend from one limb to the other limb of the same side. Operation had been performed on the brain by Dr. Frazier and encephalitis had been found. Dr. Spiller did not diagnose Dr. Gordon's case as one of encephalitis.

Dr. Gordon said there was tenderness of the left arm and leg of the left side in his case. The girl cannot recognize objects placed in her hands. In regard to the nature of her trouble, in view of the marked mental hebetude and somnolence, he was inclined to consider a neoplasm. In regard to the question of encephalitis, which Dr. Spiller mentioned,—Dr. Gordon said he must say that since there was no history of any convulsive seizures on that side at any time—it is rather difficult to explain those symptoms on the basis of encephalitis. If it is a neoplasm deeply seated she may develop yet eye symptoms. It is only three and a half months since the onset. A glioma should be thought of.