NEW YORK NEUROLOGICAL SOCIETY

DECEMBER 3, 1912

The President, DR. L. PIERCE CLARK, in the Chair

CEREBRAL MANIFESTATION OCCURRING DURING THE
SECONDARY STAGE OF SYPHILIS

By M. S. Gregory, M.D., and M. J. Karpas, M.D.

The patient was a young man of twenty, single, a chauffeur by occupation and temperate in his habits. About six months prior to his admission to Bellevue Hospital, on October 17, 1912, he had contracted a chancre for which he was treated by a physician.

Upon admission to the psychopathic ward the patient was dull, drowsy, answered few questions and showed some evidences of right-sided paralysis. On the following day he became completely paralyzed and was unable to speak, but understood a few simple questions. Physical examination showed right-sided hemiplegia, with Babinski and clonus (right); irregular pupils, which reacted to light and accommodation; defective gait and station; Wassermann was strongly positive in the blood and spinal fluid; globulin content much increased and there was a very high lymphocytosis of the cerebro-spinal fluid. Under salvarsan, mercury and potassium iodide the patient had made a gradual and progressive improvement.

Dr. Smith Ely Jelliffe, who had seen the patient during the early stages of his attack, said he had hardly expected to see such a decided improvement in his condition. He was particularly interested in the presence in this case of the classical 4-phase reaction and considered it significant in that here was a patient who did not have paresis and yet had the so-called classical parietic reactions.

Dr. D. M. Kaplan said he was interested to learn of a case of this kind, with the initial lesion dating back only six months, in which the test showed over 600 cells. Ravaut was the first one to point out the importance of cell counts in the cerebro-spinal fluid of patients in the secondary stage of syphilis. In the case shown by Dr. Gregory and Dr. Karpas, in addition to the high cell count, there was also an absence of the Fehling reduction test, which was usually found in acute forms of cerebro-spinal syphilis. It is of interest to note in the work of Plaut that the Wassermann was negative in the spinal fluid in cases of cerebro-spinal lues and positive in the serum. In some cases of early general paresis, the Wassermann may be absent in the cerebro-spinal fluid, as observed by Marie. Dr. Dana believes that the high cell count in certain general paresis cases indicated a transitional stage between cerebro-spinal syphilis and general paresis, or that they were the precocious cases of general paresis where the soil had been prepared by cerebro-spinal syphilis. There were also cases, Dr. Kaplan said, where the serological or blood picture was modified by treatment to such an extent that a laboratory diagnosis was no longer possible. In the case under discussion, for example, the final serological test certainly pointed toward general paresis. This fact was entirely omitted in the work of Hauptman, who analyzed some 44 cases of cerebro-spinal syphilis, and in a goodly number of these there was no pleocytosis at all. This, and other facts, should have minimized the value of the "Auswertungs Methode" of the Hamburg worker.

Dr. Benjamin Rosenbluth said that two recent cases were brought to his mind by the presentation. In one there was syphilitic involvement of the brain, giving a right hemiplegia, which promptly yielded to mercury. The second case was one which gave well-marked premonitory symptoms which were unrecognized by the internists, and only when he had an apoplectic seizure was the nature of the affection realized. Though thorough antiluetic treatment was immediately instituted, it was of no avail. The lessons were that treatment should be thorough before destruction has occurred. The speaker has the greatest faith in mercury for cerebro-spinal syphilis.

Dr. Foster Kennedy said that while the patient presented by Dr. Karpas apparently made a prompt improvement under the use of salvarsan, he could recall and one should remember equally successful results under the older methods of treatment. In one instance a man was brought to the Neurological Institute a couple of years ago who gave a history of a syphilitic infection of six years' standing. He had had two thrombotic attacks, the second one producing a complete paralysis of one arm and leg. From this he had recovered to a considerable extent when he developed a gummatous meningitis in the left cerebello-pontine angle which produced left-sided deafness and a complete left facial paralysis. Subsequent to this attack he suffered from a thrombosis of the cord, with paralysis of both lower extremities. His temperature became elevated, and for a time his condition was very serious. He was given mercurial inunctions, and finally, in spite of these three severe attacks, one of the brain, one of the meninges and one of the cord, he recovered to a sufficient degree to resume his work.

Dr. S. P. Goodhart said that recently, at the Mt. Sinai Hospital, he saw a patient of Dr. H. Goldenberg, who, about two months after the initial lesion, showed distinct involvement of the cranial nerves after an injection of salvarsan. These symptoms cleared up under the use of mercury and potassium iodide. The case rather suggested that the cranial symptoms were due to the salvarsan, and offered a contradiction to the claim made by Ehrlich. Two other similar cases had come under his observation within a year.

HISTORY OF A CASE OF CEREBELLAR TUMOR, WITH PRESENTATION OF SPECIMEN. RECOVERY

By Max Mailhouse, M.D., and William F. Verdi, M.D., of New Haven

The patient was a girl of fifteen years, who in April, 1909, then in her thirteenth year, became dizzy while dancing, and fell, striking her forehead with considerable force on a hard floor. Aside from a marked contusion over the left eye, there were no immediate symptoms. Several months after this, however, she began to lose flesh; her appetite, previously good, became whimsical; she became constipated, suffered from nausea, especially in the morning, and occasionally experienced other digestive disturbances during the day. In November, 1910, she first suffered from headache; it began with nausea in the morning and lasted throughout the day. At this time she did not localize the pain. The vomiting became more frequent and the headaches were now of such severity that she would lie with her eyes closed for hours, entirely regardless of anything about her. There was tenderness over the entire scalp, more marked in the occipital

region. The vomiting was never of the projectile type. During this whole period of illness the optic disks and the vision were normal, and careful physical examination failed to reveal any signs of intra-cranial pressure. In March, 1911, after a severe attack of a week's duration similar to the others in its general symptoms, the optic disks began to show evidences of intra-cranial pressure, and the extra-ocular muscles signs of defective innervation. There now appeared slight swaying to one or the other side on walking a straight line, a moderate false nystagmus, and she held her head slightly cocked with the occiput leaning toward the right shoulder and the face looking toward the left; there was slight awkwardness in attempts at rapid pronation and supination of the forearms, but no difference between the two sides. The knee-jerks, at first quite feeble, were later obtained only by reinforcement; the Romberg symptom was not present. There were no changes in the tactile, pain and temperature sensations, and there was no astereognosis. The speech took on an explosive character; there was slight ataxia by the finger to nose test; there was no asynergy evidenced in the lower extremities. The attacks of headache were now recurring weekly and the ocular changes became more pronounced and threatening. Patient was operated upon in 1911 by Dr. Verdi. At first an occipital decompression was performed with pronounced benefit. Symptoms later returned and in 1912 a large cerebellar tumor was removed by Dr. Verdi, the patient surviving. The paper will appear in the JOURNAL.

Dr. William F. Verdi, of New Haven, who did the operative work in the case reported by Dr. Mailhouse, said the inability to locate the tumor in this case was due to the indefiniteness of the symptoms. An x-ray, taken after the first operation, showed nothing more than the area of decompression in the occipital region. As subsequent events showed, the tumor was not very deeply seated below the surface of the cerebellum; it was not covered by more than one centimeter of tissue.

Dr. Verdi said they had had a number of cases of cerebellar operation in New Haven. A few years ago they had a case that had been previously operated on in Baltimore, where a decompression operation had been done, the symptoms subsequently recurring, as in this case. Upon operation, he found a tumor about the size of an English walnut, soft in consistence, and not as well outlined as the one in the case just reported. That patient was a boy of eighteen: he made an excellent recovery, and his gait, which had been very bad, improved to such an extent that he was able to dance and skate and ride a bicycle. Unfortunately, about two and a half years later, there was another recurrence, and at the third operation it was found that the growth had attained such a size that it was impossible to remove it.

Dr. B. Sachs, who had seen this patient several times in consultation, said it was a source of great satisfaction to learn that the young woman was on the road to complete recovery. He complimented Dr. Mailhouse and Dr. Verdi upon the excellent manner in which the case had been observed and handled, and said that the use of the Bier cup in holding the tumor during its enucleation was an exceedingly ingenious idea. The case was not only the most successful one of the kind they had ever had in New Haven, but one of the most successful cases of cerebellar operation on record. More than five years ago, Dr. Sachs said, he collected twenty-two cases of cerebellar operation, and among these there was not a single one in which the outcome was entirely satisfactory. Very few patients go on to complete recovery after such an operation.

In reviewing the history of this case, several lessons were to be learned: First, it emphasized the importance of taking care of the optic nerves. Loss of sight was most to be feared in cerebellar growths, and in this case the observations made by Dr. Alling on the condition of the optic nerves before and after the decompression operation showed conclusively that early and perhaps permanent blindness was averted by removal of the occipital bone, which was done long before the tumor was localizable. This procedure also relieved the headache and other symptoms.

The difficulty in localizing this tumor, Dr. Sachs said, was at least partly due to the fact that it had invaded, at a relatively early stage, both halves of the cerebellum, and only gave rise to general cerebellar symptoms; nothing that was of definite localizing value. The symptoms were gone over very carefully, and they were not able to decide as to which side was involved. Still, the outcome of the case was very gratifying, and would stimulate neurologists to renewed efforts in other cases. It was fortunate that the growth was so situated that it could be enucleated, and even if only a portion had been removed, the patient's condition would doubtless have been more satisfactory than it was before the operation.

Dr. I. Abrahamson said that usually, in cerebellar neoplasms, we found an external strabismus, not a bilateral internal strabismus, as was reported in this case. The speaker suggested that at the original operation, which was limited to a decompression, aspiration of the cerebellum might have afforded some clue as to the presence or absence of a tumor. He also emphasized the uselessness of external palpation in many cases, and referred to the late recurrence of the choked discs after the decompression operation, which was rather unusual and pointed to an interference with the intra-ventricular flow.

Referring to the use of the Bier cup in this case, Dr. Abrahamson thought such a procedure might prove injurious if too much suction were employed for the purpose of holding the tumor; the forceps or tenaculum would be less apt to do injury. He thought that the more marked choked disk on the right side rather pointed to a right-sided condition. The rather early occurrence of the cerebellar symptoms and choked disk pointed towards cerebellar involvement rather than to a frontal lesion.

Dr. S. P. Goodhart said the tendency to fall more towards one side than the other was sometimes of diagnostic value in the localization of cerebellar tumors. One could not, he thought, be influenced very largely by the side on which the choked disk was present. In a case of cerebellar tumor which was operated on by Dr. Charles A. Elsberg, there was a rapid recurrence of the choked disk, and in spite of a very early operation, almost total blindness persisted. A choked disk may appear early, before localizing symptoms indicate the site for surgical procedure.

Dr. William M. Leszynsky asked if any one present had seen any benefit derived from a subtemporal decompression in cerebellar growths.

Dr. Sachs said that he never depended upon subtemporal decompression in these cases, and that he always advised an occipital decompression.

Dr. Edward D. Fisher said he did not think the tendency to fall more towards one side than the other was of great diagnostic value in the localization of cerebellar growths. He had at present under his observation a boy of fourteen who had a tendency to stagger towards one side, but the speaker said he was not prepared to place much reliance on that symptom in determining the location of the cerebellar growth from which this patient was apparently suffering.

Dr. Fisher said that in a case like the one reported by Dr. Mailhouse and Dr. Verdi, where the exact localization of the growth was apparently impossible, he would advise exposing both sides of the cerebellum. In an obscure case of this kind that came under his observation, both sides of the bone were removed and fluid was found on one side. After the withdrawal of a certain amount of this fluid, the patient, a man of 30, made a very satisfactory recovery and was able to return to work. He was still in good health at present, eighteen months after the operation.

Dr. Mailhouse, in closing, said the first time the eyes were examined in this case, the right disk was a little more edematous than the left, but after the decompression operation, when the symptoms recurred, the left disk was a little more involved than the right, so that the conditions of the disks and eyegrounds were unreliable guides, at least in this instance. Another peculiarity of the case was that the choked disk came on rather late, and one misleading factor early in the history of the case was the periodicity of the headaches, similar to attacks of migraine. That, together with the history of headaches in the mother, helped to obscure the diagnosis.

Dr. Verdi, in closing, in reply to Dr. Abrahamson, said the Bier cup was simply placed upon the tumor mass to help steady it; it was absolutely impossible to do this with a pair of forceps or a tenaculum. The cup was not placed on the cerebellar tissue, and could not possibly do any harm. Dr. Verdi said he did not aspirate the cerebellum in this case at the time of the decompression operation. He had resorted to needling in a number of cases, and in dealing with a solid tumor the procedure was of practically no value, as the needle met with no resistance in passing through the tumor tissue. In dealing with cystic growths, of course, it was different. As to palpation of the skull, the speaker said they had found this very useful in several cases.

A CASE OF HYSTERICAL HEMIPLEGIA, WITH SPASM OF THE HAND

By Benjamin Rosenbluth, M.D.

The case was that of a girl, seventeen years old, who attended a school for cripples, as she was unable to work on account of weakness of her right side, especially the hand. The rather meager history obtained from the girl's father was that she was of normal birth; that before the age of five she had measles and diphtheria and possibly meningitis, but of the latter he was not sure. When she was four or five years old she had about ten convulsions, the nature of which he could not describe. There were four other children, all of them healthy.

The girl presented herself at the Beth Israel Hospital Dispensary on account of weakness of the right upper extremity, which she said was in constant motion, and for weakness and limping of the corresponding lower extremity. She stated that she was always weak on this side, but the first definite date she fixed as the beginning of her trouble was associated with two events occurring about six years ago. The first was when a man looked into the toilet where she happened to be sitting, and from which she ran in great fright. The second was when she fell from a swing, which she said aggravated her previous symptoms, and she dragged her right foot and had continual movements of the right hand.

At the present time the girl walked with a limp, coming down on the right side. The hand did not move as she walked. There was no Romberg. When the lower extremities were exposed, it could be seen that the body came down on the right side as the thigh was bent on the knee. As she progressed, the right leg was drawn up and swung in a fanciful way to the left thigh as a sort of a flail. The body was rotated at the hip. On lying down, the patient was able to make every movement perfectly, and had excellent and equal power on both sides of her body. The only symptom that it was difficult to eliminate was the movement and spasm of the fingers when the hand was pronated. In that position, the anterior muscles of the forearm were seen to be contracted and hard as if in a cramp. The examination of the rest of the body was negative.

Dr. Rosenbluth said the question arose here whether we had an organic condition purely by itself, or such a state with a hysteria engrafted upon it, or were the manifestations purely hysterical. Personally, he would rule out an organic lesion were it not for the spasmodic movement of the fingers of the right hand. The persistence of this, together with the cramp-like condition of the muscles, made one pause before relegating the case into the class of neuroses.

Dr. Abrahamson said the case was very similar to the one he had shown at the previous meeting of the Society as one of dystonia. This patient had the same peculiar gait, the same tortipelvis and a similar difficulty with the hand. In the present case, the patient's past history was uncertain, and it was possible that she originally had a hemiplegia. He was more inclined to accept the diagnosis of dystonia than that of hysteria.

Dr. J. Ramsay Hunt said that some months ago, when Dr. Fraenkel read his paper upon the subject of the dystonia of Oppenheim, the speaker had shown a case very similar to the one presented by Dr. Rosenbluth tonight and by Dr. Abrahamson at the last meeting. It was very significant, he thought, that within a year three cases had thus been presented to the Society which could not be definitely classified, and which were essentially very close to what Oppenheim had described as dystonia. In his own case, Dr. Hunt said, the extremities were more involved than the trunk. Oppenheim laid more emphasis on the involvement of the trunk.

Dr. Leszynsky said that in the presence of apparent tortipelvis, together with the spasm on muscular movement, and the absence of all spasm while the patient was asleep or at rest, the case shown was certainly very suggestive of Oppenheim's type of dystonia.

The president, Dr. Clark, said that in the absence of the early history of this case, one must be very careful before accepting the diagnosis of Oppenheim's disease. It was not uncommon to see little or no reflex alteration after early infantile cerebral palsies, and in such cases to find a condition of the hand suggestive of post-hemiplegic athetosis and spasticity. Even under those conditions, it was possible that we had to deal here with an engrafted or superadded disease like the dystonia of Oppenheim. It was possible that some of these old cases of infantile palsy had a very close analogy to what is now supposed to be pure and simple dystonia. The distinction would have added importance from a therapeutic standpoint.

Dr. Rosenbluth, in closing, said the only question with which we had to deal in this case was whether we had an organic condition, or a

neurosis, or a combination of the two. He was not willing to regard it as a dystonia, though he did not look upon the latter condition as a clinical entity, and certainly not with an organic basis. The fact that the lower extremity lost its symptoms when the patient was at rest would stamp this as a hysteria, but the persistence of the cramp in the forearm should not rule out the possibility of a cerebral lesion.

UNILATERAL INTERMITTENT CLAUDICATION OF THE LUMBAR REGION

By J. Ramsay Hunt, M.D.

Dr. Hunt said that in February, 1912, he directed attention to the occurrence of intermittent claudication in the lumbar region.¹ The case described in that article presented the typical symptoms of this affection limited to the lower lumbar region on both sides, consisting of pains and cramp-like sensations which came on regularly while walking, and passed away after a brief period of rest. While sitting or in the recumbent posture, the patient was quite free from pain. The condition had persisted over a period of two years and was steadily growing worse. The pain and muscular cramps were situated below the level of the ribs posteriorly, and above the level of the crest of the ilium. These symptoms, the speaker said, he attributed to an imperfect flow of blood through the lumbar arteries, caused by an arteriosclerotic process in that portion of the abdominal aorta from which they took their origin, or of the lumbar arteries themselves.

Dr. Hunt said the case he now wished to record was similar, excepting that the lumbar pains were strictly limited to one side and there was an associated intermittent claudication of the lower extremities of twelve years' duration.

History.—The patient was a woman, 66 years of age, who had been under his care for intermittent claudication of both lower extremities for the past ten years. The symptoms were typical of this affection, and her case was fully described in a previous paper.² The left leg was more involved than the right, and there were the characteristic pains, cramps, paresthesia and rigidity on exertion, which disappeared after a brief period of rest. The femoral and popliteal arteries pulsated equally on the two sides, but the pulsation in the right dorsalis pedis was thread-like and was often not palpable, and there was only a feeble pulsation in the left posterior tibial. The left dorsalis pedis and the right posterior tibial showed good, strong pulsations.

Dr. Hunt said that since his original report of this case there had been practically no change in the local conditions, but the patient had developed a constant but moderate degree of glycosuria, which under a careful diet averaged 0.3 per cent.

Onset.—In April, 1912, the patient first noticed pain in the lumbar region of the left side when very tired or after exertion. This had gradually increased in frequency and severity. The pain was limited to that portion of the lumbar region, on the left side of the vertebral column, below the ribs and above the level of the crest of the ilium. When very severe, there was a tendency for the pain to extend somewhat laterally, but never beyond the mid-axillary line. It was described as sharp and

¹ *American Journal of the Medical Sciences.*

² "Intermittent Claudication," *The Medical Record*, May 27, 1905, Case I.

knife-like; sometimes as if an iron claw were gripping her in the back; more often, however, it was a severe aching and throbbing pain, with weakness. The muscles did not feel as though they were cramped or in spasm, but there was often a swollen sensation as if there were an abscess there which would burst. The speaker said he had never been able to make out any swelling, although the patient insisted that the parts felt swollen. Sometimes, after the pains had persisted for a time after overexertion, the muscle mass was tender to deep pressure. The pain came on while walking, standing, or when sitting in an uncomfortable chair which did not support the back well, as when sitting at a desk writing. It always disappeared promptly after rest in the recumbent posture, and even the most violent paroxysms relaxed after a short rest in the recumbent posture, although a dull, aching pain might last for several hours if she had forced herself to stand or walk beyond her endurance during the day. In the morning, on arising, she was quite free from pain, and it was only after the exertion of the toilet that the pain reappeared. It never extended to the right side of the vertebral column. Her spine was perfectly normal in contour and mobility, and there was no pain in the sacro-iliac articulations. Passive and active movements of the hip joints in the recumbent posture caused no pain.

The case was of interest, Dr. Hunt said, in showing that intermittent claudication of the lumbar region might occur as a unilateral affection, and this was to be ascribed to an obstruction in the flow of blood through one or more of the lumbar arteries on the left side, either in their course or at their origin within the abdominal aorta.

In conclusion, the speaker emphasized the etiological significance of this group of cases, and the importance of the vascular element in the production of the lumbar weakness and backaches of advanced life.

Dr. B. Sachs said that in speaking of intermittent claudication we should not fall into the error of using a clinical designation for a pathological condition. What were we to regard as the symptoms of intermittent claudication, which occurred as a clinical entity? The condition, first described by French writers and more recently by Erb, was characterized by a temporary paralysis of a certain muscle or group of muscles, which then disappeared. The muscular disability amounted almost to a paralysis.

Dr. Sachs said he recently had a case of intermittent claudication and erythromelalgia associated in the same patient, and it was interesting to note that this latter affection was also dependent upon changes in the peripheral arteries. He did not understand why we should regard pain as a particular feature of intermittent claudication; the essential feature of the condition was the paralysis, not pain.

Dr. Hunt said one recognizes a leg type of intermittent claudication, as well as an arm type. One recognizes intermittent claudication of the cerebral and spinal arteries as well as of certain visceral arteries. The important point in diagnosis was not the pain, but the intermittent character of the symptoms, which appear on exertion and cease during rest. Pain was not always present, even in the extremities. It was interesting, the speaker thought, to recognize these various clinical types of intermittent claudication, and in establishing a lumbar type one may perhaps make a slight advance in diagnosis, by separating certain lumbar backaches of vascular origin in middle and advanced life from the chronic rheumatism, chronic lumbago.

Dr. Clark said the literature was filled with descriptions of these various types of so-called intermittent claudication, and doubtless there

was a tendency to enlarge and make the condition much more diffuse and irregular than was originally intended by Charcot. The type of cases described by Dr. Hunt was very interesting and suggestive, and might prove a step in the direction of clearing up those vague cases of backache not infrequently met with in elderly persons.

Dr. Sachs said that in speaking of intermittent claudication of cerebral arteries we were confusing pathological and clinical terms. He was opposed to the use of this designation for a pathological condition, and it should not be applied to a spasm of certain arteries of a temporary or intermittent character.

Dr. Foster Kennedy raised the query whether intermittent claudication was a transient thrombotic condition or a vascular spasm. The symptoms depended entirely upon the location of the vessels that were subjected to this condition; in some locations it would naturally give rise to pain; in others to cramp-like sensations, and if it occurred in the brain it might be associated with transitory paralysis or paresthesia. Instead of calling it an intermittent claudication, why not call it a spasm or thrombosis of the affected artery?

Dr. Smith Ely Jelliffe said that he would have to challenge one statement made by Dr. Hunt, and that was that pains as he described must be due to intermittent claudication. Pains similar to those described by Dr. Hunt might be found in connection with various fatigue phenomena in growing people and in those who had been confined to bed for a long time, where characteristic pains which were intermittent in type and relieved by rest were complained of. He also mentioned the fatigue pains in old poliomyelitis cases due to overuse of a limb. While there were doubtless cases in which lumbar pains were associated with arteriosclerotic changes in the peripheral blood vessels, he was not convinced that pains of the type described by Dr. Hunt were invariably an indication of intermittent claudication. He felt that Dr. Hunt had not meant precisely what he said. He believed that the general point of view was well taken—namely, that the recognition of a certain group of lumbar pains as due to local vascular disturbance, *i. e.*, an intermittent claudication, would push diagnosis forward and be a distinct aid to definite therapy.

Dr. Rosenbluth said, apropos of the remarks of Dr. Kennedy, that the condition of angiospasm was but regional as to symptoms. Thus, in collating his cases of intermittent claudication, he had ruled out cigarette-smoking as the potent factor, and since all of the cases were as a rule in rye-bread eaters, he felt that here we no doubt had slow and persistent ergotism. The affect on the blood-vessels must be universal, but in the lower extremity, where the circulation below the knee is derived from but one large vessel, it caused the greatest interference with the blood stream.

Dr. Hunt, in closing, said that we used this term intermittent claudication in honor of Charcot, who gave such a clear description of the condition many years ago. Charcot used the term in a very limited sense. In these cases, there was an arterial supply which conveyed sufficient blood to the parts when at rest, but after increased exertion the blood supply became insufficient and a local anemia resulted. Intermittent claudication could not possibly be mistaken for fatigue pains, or other conditions, such as Dr. Jelliffe referred to, and the speaker said he did not know of any organic condition with which it could be confounded, when the symptoms were well defined and proper care was used in the study of the case.