

Dr. Louis Casamajor said the devising of these instruments of precision by Dr. Tilney was a step in the direction of placing neurology on a more exact scientific plane. The dynamometer he had found of extreme value in testing the strength of certain groups of muscles, particularly in cases of anterior poliomyelitis and in watching the return of the muscle function in traumatic brachial palsy. With this instrument we could detect the earliest return of function and could base our prognosis upon exact scientific measurement rather than upon pure guesswork. He had also found it of value in drop foot and other conditions and it had made a strong impression upon him as being something more accurate than anything of the kind we have had before.

Dr. Timme said the stereopticon pictures of the tendon reflexes shown by Dr. Tilney were an excellent illustration of the accuracy of this instrument, as compared with the older methods. Instead of adding to the history of our case that the "reflex was still deficient" or an equally unsatisfactory expression, we had here an instrument which gave us in exact terms the amount of improvement or otherwise that had taken place.

### WILSON'S LENTICULAR DEGENERATION

By Charles E. Nammack, M.D.

A boy, 20 years old, was admitted to Bellevue Hospital on June 20, 1914. He had never had any regular occupation. His father died at the age of 42 of glandular tuberculosis; his mother at about the same age of pulmonary tuberculosis. His parents were not consanguineously related. The mother had seven children, the patient being the last child. Of the seven children, four were living and in good health. One brother died of pulmonary tuberculosis. The patient stated that so far as he knew, no one in either branch of the family had a condition similar to his. The family history was negative as to gout, rheumatism, syphilis, alcoholism or nervous affections. One of his brothers was married and had one child, in good health. There was also a married sister with two children in fair health.

This patient attended school until he was unable to stay in the class. He smoked cigarettes and occasionally drank a glass of beer. He had the usual diseases of childhood and at the age of five years he lost his speech and the power of walking, being obliged to creep around, but he was able to go to school at the age of ten, and left six years later, in 4-a grade. He states that he was always near the head of his class and liked to study. He had a bad temper and would get into quarrels with the other boys. He left school at the age of 16 because his left arm began to shake so that he could not hold objects in it. After he left school he remained at home, occasionally going out with draymen, etc., but he had never had any regular work.

The first symptom of the disease occurred when he was six years old, when it was noticed that his left hand trembled considerably and that his right leg slowly turned in, as the patient expressed it. The foot finally got into such a condition that he walked on the side of the foot and had to catch hold of bed-posts, etc., to support himself. He was taken to the family physician, who said that he had St. Vitus' dance. There was no history of epileptic fits or periods of unconsciousness. Gradually, the

tremor of the hand became more aggravated, the condition of the foot became worse, and his speech became so nasal in quality that it was difficult to understand him. When he started to do anything he had to wait a few minutes and then quickly arose; as soon as he got up he would



FIG. 1. Case of Lenticular Degeneration.

start swaying around and would have to take hold of some support to pull himself along. If he was in the open, without support, he would throw himself forward and drag or slide his feet. After he started walking he got along very well unless he stopped; states he could walk across the Brooklyn bridge providing he did not stop, but kept right on. The muscles of the arm and trunk were remarkably well developed.

The patient's facial expression was fixed; the mouth was large and drawn, and when walking or doing any form of exercise he protruded his tongue. He understood everything that was said to him and was usually in a jolly mood, although he had a bad temper. His intelligence was about on a par with that of a boy of twelve or thirteen. He was able to

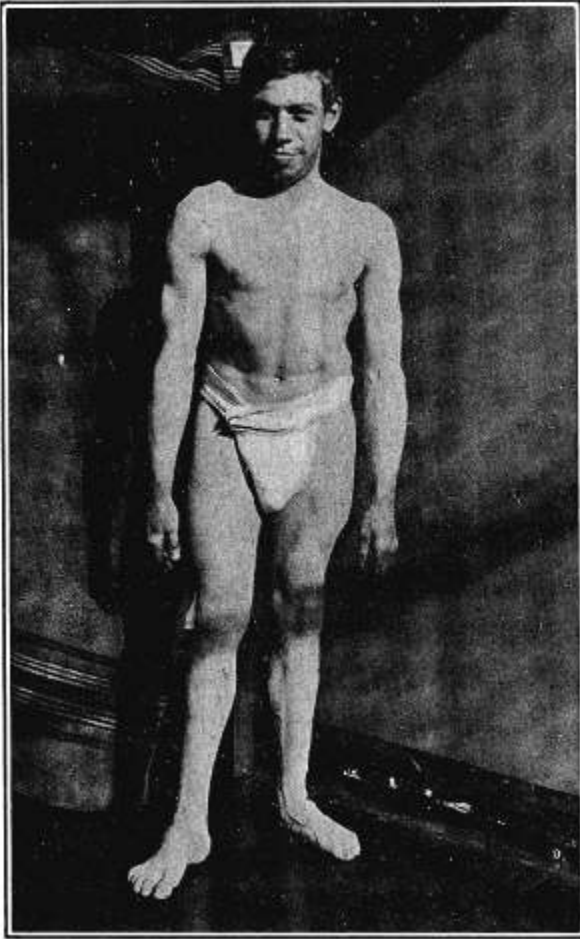


FIG. 2. Case of Lenticular Degeneration.

dress and feed himself; only it took him longer. His condition had apparently remained unchanged for several months; at least, it did not appear to differ physically or intellectually since the date of his admission on June 20, 1914.

The patient was well developed and nourished. His movements were

jerky; that is, his head and arms would jerk while his spine became rigid with a functional anterior curvature, with talipes equinovarus of the left side. As he bent forward, the right foot was thrown out in an inverted position, and the left foot was drawn by sliding, in the meantime the head, arms and pelvis going through jerky motions. The speech was long and drawling, making it difficult to understand him. Swallowing was normal. The tremor of the hand was coarse. The grip was good; the knee and ankle jerks were exaggerated; sensations appeared to be normal. The Wassermann test was negative. There was atrophy of the muscles of the right leg, hip and calf, with compensatory hypertrophy of the other muscles of the body.

Dr. Nammack said that when this boy was about ten years old he was treated at the Cornell Dispensary, without diagnosis. About two years later he was under treatment at the Vanderbilt Clinic; diagnosis withheld. When he was admitted to Bellevue Hospital in June, 1914, the case was regarded as a puzzle until Dr. Foster Kennedy called attention to Wilson's article on lenticular degeneration, when it was placed in that category. So far as he was aware, Dr. Nammack said, this was the first case of Wilson's lenticular degeneration to be shown in this city. One case had been reported in Philadelphia.

Dr. Foster Kennedy said that while he was inclined to regard this case as an example of Wilson's lenticular degeneration, he recognized the fact that there was considerable scope for argument in the diagnosis. In several important respects, this case did not absolutely conform with the clinical description given by Wilson in his paper. One was the comparatively slow progress of the disease in this case—its long duration. Then again, there was the lack of emaciation and pyrexia and the absence of any evidence of liver disease. Of course, it was fair to presume that the lenticular nucleus could be diseased without visceral involvement and give rise to a syndrome somewhat dissimilar from that described by Wilson, but as the case stood now, it did not conform in the above particulars with the original description of Wilson's disease, which was regarded by him as a clinical entity, dependent on toxic causes, and the main feature of which was involvement of the liver associated with degeneration of the lenticular nucleus. It was unfortunate that the name adopted by Wilson, *i. e.*, progressive lenticular degeneration, did not suggest the presence of concomitant liver disease. Whether or not the liver was cirrhotic in the case shown by Dr. Nammack could not be definitely stated at this stage. In only one of Wilson's cases was there jaundice.

Dr. J. Ramsay Hunt said that he had become very chary in making the diagnosis of Wilson's disease, since an experience with a case which had been under observation for a number of years at the Montefiore Home in which the clinical picture was in many respects typical of this condition. The progressive rigidity and the terminal symptoms corresponded in almost every particular with Wilson's description of lenticular degeneration. At the autopsy, however, the liver was found to be perfectly normal and careful serial sections of the lenticular nucleus showed no macroscopic lesions. Some histological studies were now being made in this case which were not yet complete.

The clinical picture of Wilson's disease, therefore, may be very closely stimulated by a clinical type which is probably a juvenile paralysis agitans.

In the case presented by Dr. Nammack, the symptoms which are now of 14 years' duration, seemed to have been consecutive to an acute

central affection of early childhood. It is not unlikely that the entire clinical picture is simply the result of a polioencephalitic process in early life, and not a progressive degenerative condition.

Dr. Smith Ely Jelliffe said that the bilateral character of lenticular degeneration as originally described by Dr. Wilson assumed importance. This patient did not show a bilateral tremor. The patient had athetoid movements of the left upper extremity, and palsy and spasm of the right leg, and the speaker said he was inclined to agree with Dr. Hunt that we had here the results of a polioencephalitis occurring in youth, with athetosis on one side and spasm on the opposite side. In the cases described by Wilson the tremor was invariably bilateral. In some of the patients which were presented at meetings of this Society by Dr. Jelliffe as probable cases of multiple sclerosis with paralysis agitans like syndromes, the possibility of Wilson's degeneration was considered and the relationships to this disease taken up. He thought that the diagnosis of lenticular degeneration could not be successfully maintained in this case on account of the absence of any hepatic involvement, the long duration of the disease, the non-bilaterality of the symptoms, and the doubtful clinical findings.

Dr. Nammack, in closing, said the possibility of an old cerebral hemorrhage, with post-hemiplegic athetosis, was considered in connection with this case, but subsequently rejected. The patient's symptoms had not been noticeably progressive since his admission to the hospital four months ago.

As regarded the long duration of the disease in this case, and its bearing upon the possible diagnosis of Wilson's disease, Dr. Nammack said there was considerable difference of opinion among those who had reported cases of lenticular degeneration since Wilson's original description. Wilson divided his cases into two groups, *i. e.*, acute and chronic, the duration of the latter averaging four years. Sawyer's case lasted seventeen years, but when Wilson saw this case he threw it out. None of the cases reported in this country entirely agreed with Wilson's description. While this case was somewhat analogous to the juvenile type of paralysis agitans, there was enough difference to separate them clinically.

#### THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM WITH SALVARSAN IN THE FRANKFURT AND HAMBURG CLINICS

By F. J. Conzelmann, M.D.

Dr. Conzelmann described in detail the methods employed in the treatment of syphilis of the nervous system with salvarsan in the two representative clinics in Germany—the Dreyfus clinic at Frankfurt and the Nonne's clinic at Hamburg.

At the Dreyfus clinic the first idea of salvarsan was conceived, and here the great master Ehrlich visited the clinic, rendered individual supervision and offered suggestions. One was impressed with the well-planned and orderly arrangement of the clinic, and the feature that stood out most prominently was that Dreyfus did not treat the patients as merely cases, but as individuals. He first selected the type of the disease; secondly, he gave the intensive treatment of salvarsan and mercury;