Dr. Tilney, in closing, said that the tremor was definitely of the agitans type, although there were other adventitious movements in the active voluntary motions very similar to chorea. Dr. Tilney said he could readily see how Gowers called his cases tetanoid chorea. The movements, however, are of the agitans type, except that they were increased on voluntary motion.

HISTOPATHOLOGICAL FINDINGS IN A CASE OF LANDRY'S PARALYSIS; DEMONSTRATED BY LANTERN SLIDES AND MICROPHOTOGRAPHS

By E. D. Fisher, M.D.

Points for discussion: (a) Differentiation from poliomyelitis; (b) Does the clinical history confirm the diagnosis? (c) Unclassified microorganisms as etiological factors in meningeal and parenchymatous diseases of the nervous system.

Dr. Carl D. Camp, Ann Arbor, Mich., stated that some time ago he reported a case of acute unilateral ascending paralysis which came to necropsy and there were found in the peripheral nerves very much the same degenerative changes that were described here. At that time he also noted the abnormality of the anterior horn cells and regarded it as a secondary phenomenon to the changes in the nerve.

Dr. E. E. Southard, Boston, thought the changes in the cases were peripheral and not central. His late colleague, Dr. Emma Mooers, had found neuritis in a monkey *B* infected from a characteristically poliomyelitic monkey *A*. Material from monkey *B* had produced a characteristic poliomyelitis in monkey *C*. Monkey *B*, however, had, after elaborate study, demonstrated only neuritis and no central changes whatever. Dr. Mooers's work had accordingly brought proof that there might be a true neuritic form of the disease called poliomyelitis.

Dr. Sidney I. Schwab, St. Louis, asked whether the possibility of the neuritis being of bulbar type was considered. Lately in the St. Louis Children's Hospital they have had such an instance in which the bulbar type was so acute that the process was very similar to the type of paralysis Dr. Fisher described.

Dr. Israel Strauss, New York, considered that Dr. Fisher had thought this a case of Landry's paralysis. Of course we are all aware that cases of Landry's paralysis occur in which no pathological lesion had been discovered. But in the case presented by Dr. Fisher Dr. Strauss thought we must bear in mind the fact that in the epidemics of poliomyelitis we have had cases which presented the symptoms of polyneuritis. In fact that type is being recognized to-day as a distinct class, in which the virus affects the peripheral nerves more than it does the central nervous system. We have even found in typical poliomyelitis a certain amount of degeneration in the peripheral nerves. From the lantern slides Dr. Strauss admitted that the histological appearance of the sections of the cord were not altogether typical of poliomyelitis.

There is, however, only one proof available for deciding whether this case is poliomyelitis or not. The microscopical is not the test. The only positive method is the intracerebral inoculation of a cord emulsion into the monkey. Dr. Strauss does not believe there is any other method by which this question could be solved.

Dr. Singer said he would like to call attention to the close similarity in the picture of the findings in the central nervous system with those of central neuritis. They correspond closely with the changes found in pellagra, in

some cases of alcoholism and in other intoxications. The chronic interstitial changes with well-formed fibrous tissue shown in the sciatic nerve, as it would seem to him, could hardly have been due to an inflammation present only six weeks.

Dr. Fisher, in closing, said in regard to the question of diphtheria that was thoroughly investigated and nothing of that kind found. Every possible examination was made. Wassermann reactions were carefully carried out by the health department and in their own laboratory. Cultures were tried and found negative. As far as the history of the case was concerned the boy was perfectly well up to about six weeks before his death. He complained of a little weakness. He was a very active boy, a messenger boy, and rode a bicycle in his business. It does not look as if he had much neuritis at any time previous to their observation. They can exclude anything like chronic neuritis as far as clinical symptoms are concerned. It appeared like an ordinary case of polyneuritis. It pursued the usual course described in Landry's paralysis. Later the upper extremities were affected. There was marked atrophy of the hands. Then difficulty in swallowing and ocular palsy occurred. The patient almost died at one time from difficulty of respiration, and twenty-four hours later died from respiratory failure. In regard to the microscopical findings Dr. Fisher said he would leave it for Dr. Neustaedter to make reply to the questions put. These specimens have been examined by Dr. Dunlap, Dr. Flexner and others, who excluded poliomyelitis. It might have been a primary neuritis with ascending changes passing into the central nervous system.

Dr. Neustaedter said he would take exception to the diagnosis of poliomyelitis. When the type is slow and begins in the nervous structures, there is set up an entirely different picture in the anterior horn. There is much perivascular infiltration and pericellular infiltration. If this were a case of poliomyelitis Dr. Neustaedter would expect these characteristics, and the lesions should have led to the patient's death much earlier.

OBSERVATIONS ON HEREDITARY SYPHILIS AFFECTING THE NERVOUS SYSTEM

By Carl D. Camp, M.D.

Varying clinical types of hereditary syphilis affecting the nervous system. Methods of diagnosis. Relations of hereditary syphilis to the psychoneuroses.

Dr. William W. Graves, St. Louis, said that an individual who did not present the generally recognized signs of congenital syphilis, such as Hutchinson's teeth, interstitial keratitis, etc., the possibility of syphilis in him was too often excluded. In his experience, congenital syphilis alone was not a frequent factor in the causation of the epilepsies; neither was it a frequent factor in those cases we call feeble-minded. The chief mental characteristic which he had found in congenital syphilitics was precocity. The main physical characteristic of the congenital syphilitic is deviation from parental types. The parents and other ascendants should be used as standards in our studies and if we will do this we cannot fail to be impressed with the deviating characteristics of the progeny of syphilitic parents. One needs only to study the progeny of a few paretics, tabetics and others known to be syphilitics in a comparative anthropological and clinical way and he will soon learn the great value of such studies in the recognition of syphilitic progeny and syphilitic ascendants. Healthy parents, as a rule, beget a healthy progeny. Remembering this fact when we find gross deviations in all of the progeny when these are compared with the parents, we should seriously consider the possibility that syphilis in the parents has been responsible for the deviations.