

tived Wilson's disease. As for multiple sclerosis, the pathological findings in the young man showed no traces of it. It resembled mostly a paralysis agitans and very likely the finer microscopical examinations would bear this out. Italian investigators sought to include the juvenile cases of Parkinson's disease with the cerebral diplegias. The crossed-legged progression, bilateral pyramidal tract involvement, etc., in both of these cases did certainly resemble the clinical group of Little. At present one ought to be content with a regional localization (leaving the nature of the process to be determined in the future), *i. e.*, a diffuse degenerative disease of the basal ganglia and midbrain.

Dr. Dana said that the autopsy showed in the case of W. H. that there was no degeneration of the pyramidal tracts. He thought that neurologists would have to follow the alienists for a time and use the term "allied to" in their diagnosis of these cases. The case shown here, as well as that of W. H., and some so-called cases of Wilson's disease, were in the group "allied to" paralysis agitans. Clinically they most resembled this disease, and anatomically the lesions were in the same regions. He was not so sure that the lenticular nucleus degeneration in Wilson's disease was important as the cause of the specific symptoms. The lenticular nuclei could probably be badly softened, as in gas poisoning, and the patient get well.

Dr. Strauss asked Dr. Dana about lenticular softening in gas poisoning. What symptoms would he ascribe to lenticular softening? Cases he had seen of gas poisoning with lenticular involvement had come to autopsy. They had never come out of coma.

Dr. Dana said that his views as to the symptoms of acute lenticular poisoning were based on certain clinical cases, and the fact that in prolonged gas poisoning there was almost always a softening of the lenticular nuclei. The cases he had seen had shown on return to consciousness mental confusion and excitement, and later motor disturbances, very much like those seen in paralysis agitans and the Wilson disease. In regard to this latter disease, he thought that perhaps too much emphasis had been placed upon the importance of the lenticular lesions than ever. In the acute gas cases there was complete recovery with probably distinct scars in each lenticular nucleus.

Dr. Goodhart said he thought there need not be symptoms with softening of the lenticular nuclei. One case that came to autopsy had no symptoms. He thought only extensive degeneration, involving the tracts passing through would show symptoms.

#### ANATOMICAL STUDIES EXPLAINING LESIONS FOLLOWING THROMBOSIS OF THE POSTERIOR INFERIOR ARTERY, WITH LANTERN SLIDES

By M. T. Burrows, M.D.

Definite clinical symptoms frequently accompanied occlusion of the vertebral artery where it coursed over the surface of the medulla oblongata and the posterior inferior cerebellar artery, near its origin. The symptoms were indicative of lesions involving the olive, the formatio reticularis in the region of the olive, the nuclei of the ninth, tenth and eleventh nerves and the longitudinal tracts passing down through the region, the restiform body and frequently the root of the fifth nerve. Several cases had been reported where areas of softening had not included the entire region indicated by the symptom complex. Dr. H. M. Thomas had reported cases with typical symptoms

which had later cleared up and at autopsy the thrombosed vessels were found but there were no areas of softening. Injections of the separate arteries of the medulla had shown that the region in question was supplied by a number of small branches from the vertebral, the posterior inferior cerebellar artery, or both. In a large number of brains the branches were terminal branches. The posterior inferior cerebellar artery was variable both in size and position. It was, however, always present although in some brains it might supply only a very small part of the cortex of the cerebellum. It might arise at any level from the vertebral artery. In a large percentage of the brains studied it arose at the level of the olive to supply a part of the branches to the area in question, but only in a few cases did all these branches arise from this trunk. The nuclei of the sixth, seventh and eighth nerves were supplied by similar lateral and terminal branches. These branches arose, however in most brains from the middle cerebellar artery or the basilar. In a few brains these vessels might also come from the posterior cerebellar artery. The remaining portion of the medulla was supplied by vessels which anastomosed frequently with each other, with vessels of the spinal cord, and those of the opposite side. The portion of the descending root of the fifth nerve, substantia gelatinosa Rolando, lying at the level of the olive, might be supplied by the same vessels which supplied the penetrating arteries to the formatio reticularis, but it was frequently supplied by separate branches which coursed from below upwards or from above downwards. This was also true for the restiform body. This accounted for the frequent absence of symptoms from these parts. In a limited number of brains large anastomoses had been found between the vessels supplying the region in question, connecting the end branches of these vessels with vessels of the pons above and the spinal cord below. In a few cases these anastomoses were of sufficient size to prevent symptoms following occlusion of these arteries at their origin from vertebral or posterior inferior cerebellar artery. In others they were smaller, so that symptoms might develop for a time from a temporary anemia of the part, later to disappear without softening as the anastomoses enlarged. The latter were frequently small and variable, as were the vessels. The branches of one vessel might intermingle with others so that penetrating arteries in the same horizontal plane had a different origin. A few of these vessels might be terminal, while others had small anastomotic connections with vessels of other parts. At the instance of occlusion of these vessels symptoms indicating involvement of all of this region might be observed, while later some of the symptoms might disappear and others persisting might be variable. Where death occurred one would expect to find areas of softening not indicative of all the symptoms noted.

#### STUDIES OF ATYPICAL CHILDREN FROM THE DEPARTMENT OF UNGRADED CLASSES

By William B. Noyes, M.D.

Dr. Noyes said he found the commonly accepted medical terms of diagnosis often inadequate in cases of abnormal children in the public schools. The teachers had the first sifting of children for ungraded classes. The final study was accomplished by medical advisers. The Department of Health in many cities covered the entire field, but in New York the mental study was becoming the work of carefully trained specialists. There were certain well-