trative, non-circumscribed glioblastoma which had invaded and destroyed the white matter of the anterior half of both superior frontal gyri, more extensively on the right than on the left, the anterior fifth of the cingulate gyri and the association fibers in the genu and anterior third of the body of the corpus callosum. It also encroached upon and destroyed to a small extent the inner portions of the fiber tracts of both midfrontal gyri.

Microscopic sections of the tumor showed that it belonged to a class of tumors of epiblastic origin in which the type cell was a neuroglia cell, namely, a glioblastoma. The greater part of the tumor presented extensive retrograde changes, especially necrosis and hemorrhage.

Dr. B. Sachs said that he wondered why so much emphasis was put upon the involvement of the corpus callosum, as in his opinion this was much more a tumor of the frontal lobe. Did the frontal symptoms play a less important rôle than was generally the case? Did anyone ever make a diagnosis of corpus callosum tumor that did not impinge upon the frontal lobe? If so, he would like to hear of it.

Dr. J. Ramsay Hunt said that some years ago Dr. Putnam of Boston had reported a series of cases of tumors of the corpus callosum in which lack of initiative, both psychic and motor, was a conspicuous feature, and he asked if this peculiarity had been observed in the case just reported.

Dr. C. P. Oberndorf, replying to Dr. Sachs's inquiry, said that while he was at the Manhattan State Hospital they had a case which was diagnosed as paresis, but which at autopsy was shown to be one of tumor of the corpus callosum. Judging from the history of the case of Drs. Beling and Martland, and from the mental picture, one might readily have been misled here also to make a diagnosis of paresis. In the Manhattan State Hospital case the tumor originated in the corpus callosum and extended downward into the right capsule, causing a mild hemiplegia on the left. A curious thing was the absence of the knee jerks, notwithstanding the hemiplegia. The patient had suffered from convulsions, recovered and was apparently normal until a few days before his commitment to the state hospital.

A CASE OF DYSPITUITARISM WITH HEART BLOCK

By M. Packard, M.D.

Dr. M. Rothchild described a few lantern slides, thrown on the screen, of electrocardiograms and radiograms of this case which Dr. M. Packard presented with a description of the history and physical findings.

The patient was a native of Smyrna, 23 years of age. His early history was rather suggestive; although the third child in the family, at an early age he was taller than his two older brothers; also, although the climate was tropical, he always felt chilly. Eyesight had always been good. There was no venereal history nor had he ever had any desire for sexual coitus. His symptoms were as follows: persistent headache for several years; for two years considerable precordial pain; for about a year periodical nasal hemorrhages, probably vicarious menstruation; dizziness and attacks of restlessness; occasional unaccountable sensations of thirst which were associated with polydipsia and polyuria; marked constipation, evacuation taking place only once weekly; an apparent polyuria, getting up in the night to void frequently. He never perspired, even on exertion in hot weather and did not ever have to cut his fingernails. He was mentally alert, but complained of being so physically weak that he was unable to work. His temperature was as a rule subnormal, averaging 96.8°, pulse 46 and respiration 16. He had a pleasing low tenor voice.

Physical examination showed the skin to be remarkably delicate and white. There was no beard on the face, no hair on the chest or axillæ and the small amount of pubic hair was arranged in an effeminate configuration. Fingers long and tapering. Height 5 feet 11 inches and patient was still growing. The papillæ at the base of the tongue were hypertrophied, a condition seen in internal secretory disorders. Fat was distributed in special places. The penis was infantile; the testes descended but small; the scrotum was divided in two halves like a vulva. Superficial and deep reflexes were normal. Both visual fields and fundi were normal. There was a systolic murmur at the apex; the heart was hypertrophied. Systolic blood pressure was 100, but .001 gm. of adrenalin raised the pressure to 115. Wassermann reaction was negative. Blood sugar was 0.07; 300 gm. of lactose was given with no resulting glycosuria. 150 gm. of dextrose with a hypodermic injection of .001 of adrenalin produced no glycosuria, and 0.1 gr. pilocarpine caused a slight diaphoresis. His urine was clear and he passed 800 c.c. within twenty-four hours, the specific gravity being 1010. The alveolar tension was tested because of the low blood sugar and was found to be 45 plus by the Merriott apparatus. Blood urea and uric acid were low. Phthalein test showed 70 per cent. excretion within two hours.

The X-ray examination showed that while a peculiar bony configuration of the sella turcica was seen, there was no indication of absorption, erosion or pressure defect. The size of the sella turcica was small.

Electrocardiographic studies showed complete dissociation between the auricles and ventricles. There was also present a sinus arrhythmia. One record, taken before the administration of atropin, 1/50 gr., showed a condition of complete heart block; the ventricular and auricular rates increased after the administration of atropin; there was evidence that the block was not wholly functional; there were evidences of the influence of the vagus.

Dr. I. Strauss said that he had had a little experience with the electrocardiographic work at Mt. Sinai Hospital and it did not surprise him to hear that Dr. Rothchild was puzzled by the combination of conditions in his case. There was a case in the service of Dr. Sachs which might be mentioned in connection with the one presented here. This patient had a tumor of the pituitary and he was tested out with various glandular extracts, such as adrenalin, pituitrin and other like substances in an effort to learn what effect their administration would have upon a glycosuria from which he suffered. He had a glycosuria of 23 grams a day. One day he was given three doses of thyroid extract, about five grains at a time. This was immediately followed by a changed picture; instead of passing 23 grams of sugar, he immediately passed over 200 and continued to pass that large amount, so that a condition of glycosuria was converted into a true diabetes. The further interest of the case was this: the patient went to Boston to be operated on by Dr. Cushing for the tumor. He had acromegaly and also suffered from severe headaches. For some reason he refused operation and returned to New York. On arriving in the city he experienced a sensation as if an explosion had occurred (probably the breaking of a cyst) and the headaches disappeared and had not returned. In addition there had since been a disappearance of sugar from his urine. The speaker mentioned this case in connection with the testing out of Dr. Packard's case, to show how easily such cases were thrown out of balance by the administration of glandular extracts.

Dr. Walter Timme said that he was not prepared to say the case was clear, but there were some features that stood out in the dramatic presentation of Dr. Packard that led one to believe the condition was not altogether a result of dyspituitarism. The cause was much deeper to seek than that shown by the small sella turcica. The changes in the sexual sphere, the pre-

cordial pain and the distribution of hair were significant. Whenever one found inversion of sex, it was a good plan to search for the cause in the adrenal gland and in that portion of it known as the cortex. Tumors of the cortex of the suprarenal gland usually gave a type of inversion of sexual characteristics. Aplasia of the suprarenal cortex gave a more or less degree of amentia, so that idiots were found to be without it, and the lower the type of animal the smaller the proportion of suprarenal cortex to medulla. It was man that was characterized by great preponderance of suprarenal cortex. If by tumors of this cortex one got such results, it was only a step to the condition which was assumed here of irritable suprarenal cortex. This tissue produced an over amount of secretion and then there was a disproportionately small amount of medullary adrenalin. This medullary adrenalin produced a sympathetic stimulation; it increased the blood pressure and the rapidity of the heart action if it was not prevented from performing this activity by an overacting cortex which was antagonistic to it.

This case showed a diminution of adrenalin content. In so far as the vagus symptoms showed, this overactivity of the cortex would account for the slowness of pulse, the feeling of chilliness, the precordial distress, the low respiration ratio, the low blood pressure and the low temperature for the secretion of the suprarenal cortex was vagotonic. The relative diminution of the adrenalin medulla would account also for lack of stimulation of the cardiac accelerator nerve proceeding from the cervical sympathetic. Diminish the result of adrenal activity and one would have all the symptoms this boy showed, perhaps even the heart block. The speaker regarded the case, not as dyspituitary alone, but as polyglandular, the pituitary being secondary to disturbance in the suprarenal cortex, and he believed that therapy directed to this suprarenal unbalance would assist in overcoming the bradycardia and perhaps the heart block.

Dr. I. Abrahamson said that he would like to call attention to several points in connection with this case.

First, it was a common mistake in *dystrophia genitalis* to imagine a change to the opposite sex type; such was not the case. It was rather a return to an infantile, or to a neutral type. The epistaxis could scarcely be regarded as vicarious menstruation.

The second point was in regard to the experiments of Levy of London in studying death under chloroform. An animal given adrenalin before chloroform anesthesia developed ventricular fibrillation. This showed conclusively the close relationship between the heart action and the ductless glands.

How often had heart block been observed in adrenal insufficiency? The speaker had never seen a case, and if Dr. Timme's ready explanation were the true one, the condition ought to be commonplace instead of being so rare. Study of the hearts of animals during hibernation might give a clue to this condition, showing the relationship of the pituitary gland to heart action.

Dr. J. Ramsay Hunt asked if the question of congenital heart affection had been considered, and its possible effect on growth. Infantilism, associated with congenital heart disease, had been described, and he thought that such a possibility should be considered in the present case.

In closing the discussion, Dr. M. Packard said, in reply to Dr. Abrahamson, that in hibernating animals the pulse was slow, but there had been no heart block described in any of the experiments so far undertaken.

The cause of the condition in this case could not be definitely decided, so it was called dyspituitarism, although it was known that various glands were involved. The case had been shown in the hope that the problem might be definitely solved.

As to this being a case of congenital heart, no cases of heart block had ever been proven to be congenital.

In reply to Dr. Strauss, the speaker wished to say that the boy had never had glycosuria. He had been given 300 grams of lactose and 150 grams of dextrose and did not subsequently show sugar. Laboratory tests showed his blood sugar to be low; in fact there was rather a condition of hypoglycemia. The fact that this case had no glycosuria was one of the reasons for putting it in the category of dyspituitarism.

Dr. Marcus A. Rothschild, who demonstrated the electrocardiograms from the case presented, said that it was exceedingly fascinating to attempt to group the entire symptom complex—that is, the polyglandular disturbance and the complete heart block—under the same etiological basis. However, he believed it impossible to exclude a coincidental heart block. The fact that the ventricular complexes were normal in type and that the heart responded in a normal way to the effect of atropin, he believed to be evidences of no serious structural defect. The heart block might well be neurogenic in origin, brought about by some disproportion between the inhibitory and accelerator nerves. Buchanan had described bradycardia and even complete dissociation of auricle and ventricle in hibernating animals. This case presented many of the symptoms seen in hibernation. One could definitely exclude a congenital defect of the conduction system as the cause of the heart block.

ADDRESS OF THE RETIRING PRESIDENT

By William M. Leszynsky, M.D.

Dr. William M. Leszynsky said that one of the valedictory functions of the retiring president was to present a report of the general condition of the society and a résumé of the work accomplished during his term of office. It was gratifying and encouraging to note that the New York Neurological Society, now in its forty-fifth year, was still vigorous in the field of its chosen work, despite the development within recent times of other local neurological societies. It had a membership of 115 and there had been an average attendance of fifty-two at each of the sixteen meetings in two years. Thirty-seven patients had been shown and thirty scientific papers read. Among the clinical demonstrations there were fifteen patients with organic brain disease, nine with spinal cord affections, three with disease of the peripheral nerves and ten cases illustrating myasthenia gravis, Basedow's disease, chorea, tic, myotonia congenita, dystonia musculorum and myotonia congenita.

In thus recounting the creditable character of the transactions of the New York Neurological Society, it was quite evident that the topics discussed had been of unusual interest, and had covered a large field of neurological endeavor and progress.

The "Poliomyelitis Meeting" of November, 1916, was a memorable one, inasmuch as it attracted a very large attendance, interested the general profession and the public and called attention to the remarkable and inexplicable absence of official recognition of the value of neurological coöperation. Papers were read on the diagnosis, prognosis and treatment of poliomyelitis. Resolutions were unanimously adopted and a copy forwarded to the Public Health Committee of the Academy of Medicine, which had already taken the matter of poliomyelitis under consideration; their further deliberations on this subject had resulted in the appointment of a subcommittee to investigate what was being done at the various clinics, and also for the purpose of standardizing equipment. Certification would be required of the Associated Out-Patient Clinics, whose officers, after inspection, would report on the degree of conformity with established standards before any money would be furnished for equipment by the New York Committee on After-Care of Infantile Paralysis Cases.