Society Proceedings

AMERICAN NEUROLOGICAL ASSOCIATION

FORTY-THIRD ANNUAL MEETING, MAY 21, 22 AND 23, 1917, HELD IN
BOSTON, MASS.

The President, DR. E. W. TAYLOR, in the Chair

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FURTHER EVIDENCE IN SUPPORT OF THE GLANDULAR NATURE OF THE PINEAL BODY

By Frederick Tilney, M.D.

An essential question to be decided is the pluri-potency of the central axis in its derivatives. Evidence of this may be found in the epithelial roof plate of the brain. The glandular characters of the paraphysis and the choroid plexus are generally recognized. These structures, derived from the roof plate of the interbrain, establish the possibility that the epiphysis may, likewise, be glandular. The comparative histology of the pineal body discloses definitely glandular characteristics in reptiles, birds, and some of the lower mammals. The ontogeny of the structure followed through the several stages of development in the higher mammals, including man, furnishes tenable evidence that the pineal body is a gland. Certain of the pineal neoplasms, particularly in their relation to the syndrome of Pellezzi (macro-genitosomia præcox), tend to substantiate this view.

Dr. Paton asked Dr. Tilney whether he used the methods suggested by Dr. Bensley, of Chicago, in studying these secretory cells. It was a very interesting question to try to determine whether these cells were capable of functional activity. The speaker had had a somewhat similar problem in the embryo, trying to find out when such a glandular structure as the thyroid and the adrenal became functionally active; and as the question was a complex one he had become very cautious in drawing any conclusions. Dr. Tilney's illustrations were convincing as to the existence of a glandular type of cell in the pineal body.

STUDIES IN THE PATHOLOGY OF HUMAN AND EXPERIMENTAL POLIOMYELITIS

By Louis Casamajor, M.D., and Hubert S. Howe, M.D.

The material upon which this study is based includes eighteen cases of human poliomyelitis from the epidemic of 1916 and eighty experimental animals. Among the latter were *Macacus rhesus*, *Felis domesticus*, *Mus decumanus* and *Lepus*. The human cases gave a definite and constant pathological picture which was duplicated by the infection experimentally produced in

monkeys. The chief characteristics of the pathological change were manifested in reactions of the fixed and wandering connective tissue elements, as well as in parenchymatous alterations involving the ganglion cells of the neuraxis, the dorsal root ganglia, the nerves and the neuroglia. The principal addition to the pathology, as hitherto described, is a pronounced, fat-pigmentary degeneration in the cells of the pons. Poliomyelitis virus was injected intracerebrally into cats, rabbits and rats, but in no instance were the definite pathological changes of acute anterior poliomyelitis produced as the result of these experiments. Cats suffering from a febrile epidemic during the summer of 1916 presented symptoms similar to human poliomyelitis. Upon examination the spinal and cerebral changes did not resemble the recognized pathology of the Heine-Medin disease.

POLIOMYELITIS: A NEUROLOGICAL STUDY OF THE 1916 EPIDEMIC IN PHILADELPHIA

By T. H. Weisenburg, M.D.

Seven hundred and fifty cases studied. Pre-paralytic symptoms, with characteristic temperature, pulse and early manifestations. Onset of the paralysis with the recession of symptoms. The paralyzes were more marked in the proximate portion of the limbs than the distal. Meningeal cases, in which frequently the symptoms were limited to the head, neck and shoulders, or to the lower limbs and lower back. Types of spinal cases, unusual bulbar and pontile forms. Unusual number of cerebral cases. Practically no cerebellar types. State of reflexes, dependent largely upon the quantity of increase of cerebrospinal fluid, altered by lumbar puncture. Spinal fluid findings; causes of death. Mortality. Treatment, use of serum, lumbar puncture, etc. Abortive types. Multiple cases. The question of contagion.

The papers by Drs. Casamajor and Howe, and Weisenburg were discussed together.

Dr. Jelliffe said that he believed Dr. Weisenburg was entirely too iconoclastic if he wished to reject two of the types as proposed, namely, the polyneuritic and the cerebellar forms. As to the former he had observed many and within his own family circle had had the uncomfortable experience of watching a severe polyneuritic type. That they might be considered as rare he was willing to admit, but the polyneuritic type should not be rejected. The cerebellar type was not infrequently met with. It showed in a number of minor ways other than ataxias, such as by nystagmus and other cerebellar signs. Dr. Jelliffe believed a new type might be erected. This could be termed the vegetative group. Its pathology depended upon the involvement of the vegetative nuclei in the lateral horns of the cord. Here vesical, rectal, vascular, kidney, liver, enteroptotic, bony and other phenomena might be grouped together advantageously. The syndrome of the vegetative disorders in poliomyelitis was almost unwritten and would make a large chapter in the future. Who knows but that certain dyscrasias, so-called, which later develop constitutional defect anomalies, might in the early years have had their fundamental pathology laid down in a poliomyelitis of the vegetative nuclei, the sensori-motor reflex arcs having remained intact.

Dr. Archambault considered that both papers on poliomyelitis had been extremely valuable. He wished to say a few words regarding some of the points brought out by Dr. Weisenburg, particularly. He felt the latter had made a very important statement when he brought out the fact that in poliomyelitis the method of extension of the paralysis was not necessarily to contiguous parts. In fact, the paralysis might begin in the leg, and then, without