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Address

THE GROWTH OF NEUROLOGY.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON NERVOUS
AND MENTAL DISEASES, AT THE FIFTY-SEVENTH
ANNUAL SESSION OF THE AMERICAN MEDICAL
ASSOCIATION, BOSTON, JUNE 5-8, 1906.

WHARTON SINKLER, M.D.
PHILADELPHIA.

I am very glad to have this opportunity of thanking you for the honor conferred on me in making me chairman of this Section. It is a distinction of which one may justly be proud, for the Section has grown from a small beginning in 1891 to one of the most important and widely known in the American Medical Association.

It is interesting to consider the development of the Section. Prior to the year 1891 there was no section devoted to this branch of medical science. In 1887 a new section was formed and this was called the Section on Medical Jurisprudence, Chemistry and Psychiatry, and this by expansion began to include the consideration of nervous diseases. In 1891, the subject of neurology having become so prominent in the discussions of the Section, the title was changed to the Section on Medical Jurisprudence and Neurology. In 1900, the scope of the Section had become such that it seemed advisable to again change the name, and it then became the Section on Nervous and Mental Diseases. Thus we have kept abreast of the progress in neurology throughout the world.

The list of men who were influential in the organization and development of this Section is well worth considering, for it contains among the names those of the brightest lights in neurology in this country. As chairman of the Section on Medical Jurisprudence, begun in 1887, are to be found the names of E. M. Reed, J. G. Kiernan, T. B. Evans and T. D. Crothers. In 1891, in the Section on Medical Jurisprudence and Neurology, H. N. Moyer was elected chairman. He was followed by Charles K. Mills, in 1892, and in regular order came J. G. Kiernan, D. R. Brower, T. D. Crothers, W. J. Herdman, C. H. Hughes, Frederick Peterson, H. T. Patrick, H. A. Tomlinson, R. A. Dewey, F. W. Langdon, F. Savary Pearce and J. H. McBride.

To those who can look back thirty years, it is amazing to consider the progress in the knowledge of the diseases of the nervous system. Until the latter half of the nineteenth century, no special attention was given to this branch of medical science in the schools, and few physicians ventured to claim neurology as a specialty. How different it is now! There is not a college of any size in the country which has not a chair of nervous and mental diseases, and almost every city has its neurologic society. The interest taken in neurology has increased in the profession at large, and this is shown by the large attendance at the meetings of this Section by members

of the Association whose practice is not especially devoted to nervous diseases. It has been for years the custom of the general practitioner to regard the study of nervous diseases as not only difficult and obscure, but unprofitable, and for this reason he has put it aside and felt that there was no use in trying to do anything in the way of diagnosis or treatment of a case of nervous disease. It is different now, and the effect of teaching in the colleges is obvious to every one who meets the general practitioner in consultation. The meetings of the Section have each year been of greater interest and value to the members, not only in the character of the papers presented, but in the discussion of them. This year I can point with pride to our splendid program, which will be seen to include not only many papers on mental diseases, their etiology, pathologic anatomy and medico-legal relations, but the consideration of many organic and functional nervous diseases. It is noteworthy also to observe that the papers presented are not merely reports of individual cases, but a critical and scientific study of the nature of the various diseases considered. No attempt has been made to present a symposium on any special subject, for the reason that this would have taken so much time that many valuable papers would have been of necessity excluded. As it is, the papers offered have been in excess of the number allowed by the by-laws of the Association. This number, as you know, is forty. Had we been able to accept all which have been presented, there would have been at least fifty, and it is much to be regretted that many important contributions had to be declined on account of the program being full when they were presented. I believe that in the future it will be a wise plan to limit the time for the reading of each paper to twelve minutes and the discussions to five minutes, so that all papers which are offered may be presented before the Section. I am not in favor of requiring that the papers shall be read in abstract, as this mars their interest and value, but by excluding lengthy histories of cases and condensing pathologic reports it would be easy to present almost any paper in the space of ten or twelve minutes.

An innovation this year, and I believe that it is one which will accrue to the advantage and importance of the Section, is that of printing and distributing the transactions of the session. This will include all of the papers and discussions, together with anything else of importance connected with the session. Some of the other sections have published transactions, but this is the first time that the Section on Nervous and Mental Diseases has undertaken the task. I trust that this will meet with the hearty approval and co-operation of the members of the Section. In order to secure the publication of the transactions by the Association, it will be necessary to secure 75 subscriptions at \$1.00 each. This does not cover the total expense, the balance being borne by the Association. The transactions are bound in cloth

and make a handsome volume. We must, therefore, look to the members to subscribe to one or more copies each.

Through the courtesy of Dr. James J. Putnam, the Section has been invited to hold one of our meetings at the Massachusetts General Hospital, so as to enable the members to visit the neurologic wards in this famous old institution and to have demonstrations of different sorts made before and after the meetings, and to allow the presentation of cases. We have selected Thursday afternoon for the meeting there.

I am sure that all of the members of the Section share with me the regret that I feel in the absence of the former secretary, Dr. D. I. Wolfstein. Last autumn Dr. Wolfstein, who for many years had been in poor health and had had two or three attacks of renal colic, was obliged to undergo the operation of nephrectomy. He made a good recovery, but was so generally shattered in health that he has been obliged to give up practice and go abroad for a year. During his term of service he proved a most valuable and efficient officer of the Section and did much toward promoting its growth and prosperity. We have been fortunate in securing the services of Dr. Weisenburg, who has been appointed to his place.

It is a source of some regret that we have no distinguished foreign neurologists with us. Your chairman and secretary sent invitations to several of the most distinguished men in this line in England and on the continent, but each one, while expressing great appreciation of the honor conferred on him, was obliged to decline for some good and sufficient reason. The International Medical Congress at Lisbon and the meeting of the British Medical Association at Toronto interfered with the acceptances in most cases.

The members of the Section have received a cordial invitation from Dr. Flood, the superintendent of the Massachusetts Hospital for Epileptics at Palmer, Mass., to visit that institution. The hospital is situated in the village of Palmer, about 84 miles west of Boston. To those who are interested in the colony treatment of epileptics and the insane, this institution affords an admirable opportunity for study.

Original Articles

THE MOTOR DEGENERATIVE SEQUENCE IN DEMENTIA.*

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In the infant pantomime plays the principal part in expression, and as the child grows older this pantomime becomes more complicated and graphic; especially in so far as the movement of the eyes, the muscles of the face and of the arms is concerned; so that the impressions from the environment and the emotions involved are reflected in these movements. In those individuals who are born blind, this association of pantomime with the afterward acquired vocal or graphic means of expression persists, so that the muscles of expression reflect the emotions in any given form of mental activity. In the ordinary individual, however, these modes of expression are eliminated by education and the exigencies of social intercourse; which require the putting on a

mask that shall conceal the effect of the conditions in the environment on the individual so far as they are emotional. Therefore, as the result of training and the influence of convention, and just in proportion with their extent, there is the exercise of restraint on the motor manifestations of mental activity. However, when, as the result of defect in the constitution of the individual, and the influence of untoward conditions in his environment, there is loss of mental capacity; and, therefore, of the power of inhibition, or interference with the means of expression; there is the tendency toward the reversion to these primitive auxiliaries of expression, to supplement the acquired faculty that the loss of capacity for control has rendered more or less inefficient, just as occurs in the confusion of mental aberration and after aphasia. When this loss of mental capacity becomes extreme, or the mental alienation of the individual makes him entirely introspective, there again develops the tendency to the suppression of the motor manifestations of mental activity; not as the result of volition, but because of the loss of capacity to generate them; and, as these emotions are less frequently generated, there follows a sequential and essential degenerative motor change which has its origin in that form of atrophy in the motor generative portion of the brain that results from disuse.

The dependence of motor manifestations on mental activity is not well understood, and too little thought of with relation to the significance of variation or suppression of muscular activity as a sequence to loss of mental capacity. We lose sight of the fact that very few forms of motion are in direct response to external stimuli. Aside from those motor manifestations that are so intimately associated with emotional activity, and are included under the term expression, there are numerous other forms of muscular activity that are a more or less direct response to the stimuli resulting from mental processes, even although they are not a direct reflex of the conditions involved in these processes. These motor generative impulses are centrifugal, and have their basis in the liberation in consciousness, as the result of indifferent stimuli, of pre-existing impressions that give rise to them. To illustrate, a man may be sitting under a tree, on a hot day, completely engrossed in a train of thought that has no relation to his environment. The sun reaches a position so that it shines directly on him. After a time, and without any conscious interruption of his train of thought, he will change his position so as to again get into the shade. The muscular movements involved in this change of position, while reflex, are extremely complicated and involve the intervention of intelligence. A new-born child, or a demented person, would not and could not change his position under similar circumstances, although both might manifest evidence of discomfort by irregular and inco-ordinate movements. Even in acute mental aberration, the accompanying loss of capacity has the same effect; because, in delirium, stupor, or the morbid introspection associated with depreciatory or persecutory ideas, extreme discomfort, or even the presence of physical danger, if apprehended, may not give rise to any movements that have their origin in centripetal stimuli. There can be no doubt but that these impressions reach the brain; but there is no active consciousness, and the correlation and co-ordination of these impulses does not take place: although we have found, as the result of repeated investigation, that the individual is impressed by them, and can recall the nature of these external impressions in

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.