Society Proceedings

NEW YORK NEUROLOGICAL SOCIETY

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The President, DR. FREDERICK TILNEY, in the Chair

DISCUSSION OF DR. SHARPE'S PAPER, THE TREATMENT OF PARESIS BY INTRA-VENTRICULAR INJECTIONS OF SALVARSAN, READ AT THE MEETING OF MARCH 6, 1917

Dr. G. M. Hammond said that he had had opportunity to examine the thirteen cases treated by Dr. Sharpe by his intraventricular method, as they had all come from either his service at the hospital or his private practice. They were all unmistakably typical of paresis; the histories were gone into in detail and complete examinations made, including all the laboratory tests of the spinal fluid, among them the colloidal gold test. In all but two of the cases this test was beautifully demonstrated. The two cases referred to were both far advanced in the disease; in fact, both had since died in the terminal stage, and yet in neither case was the typical gold reaction obtained.

In regard to the cell count, there was a wide variation between that of the ventricular fluid and the spinal fluid, the ventricular fluid generally containing many more cells.

Personally, the speaker had always been skeptical about all forms of new treatment; he had not known whether this one would be successful or not, but was willing to make the attempt. The improvement of all the cases was the result. In the first place, the operation was perfectly safe, no case having been in bed more than three days and all leaving the hospital on the fifth day. There had been no deaths. As regarded the clinical symptoms, there had been improvement in every one. In five out of thirteen cases a very notable improvement had taken place; to such an extent that they were now self-supporting. Of course many more cases were needed and a longer time must elapse before any positive statement could be made in regard to the final efficacy of the treatment; but, though the colloidal gold test was still positive, these five had gone back to work, could transact business, had better memories, no longer had any ideas of an expansive nature and showed progressive and steadfast improvement which had been maintained for some time. They were all better, and five vastly so. If this method of treatment could improve five out of thirteen cases so that they could return to work, it was better than any other had accomplished. With only one out of one hundred, it would be better than anything done before, especially as the operation was perfectly safe.

In the speaker's experience of many years he had never seen as good results. Whether they were going to be maintained, or sustained, there was no means as yet of knowing, but a few years would show, and meantime

Dr. Sharpe could feel that he had accomplished what had not been done before, and that was something to be congratulated upon.

Dr. J. Wheeler Smith, Jr., spoke of the laboratory work done in the conduct of the series of Dr. Sharpe's cases. This might be considered under two heads: (1) the preparation of the medicated sera and (2) the examination of the patients' blood sera, cerebral and spinal fluids.

A small portion of the serum from the blood, drawn for the preparation of the medicated serum, was put aside each time and was submitted to the complement fixation test for syphilis. Cases 3, 5, 7 and 8 gave negative reactions before intraventricular treatment was begun. The reaction had remained negative in cases 3, 5 and 8. Case 7 showed a positive reaction; this was simply an instance illustrative of the greater delicacy of ice-box fixation. Six cases gave positive blood reactions before treatment and in five of these the test was still just as strongly positive; in the remaining case there appeared to be a diminution in the degree of positivity. Except in the last case, there was no evidence of any effect by this treatment upon the complement fixation reactions of the blood sera in this series of cases.

A specimen of the cerebral fluid was obtained just prior to each intraventricular injection. For various reasons some or all of the examinations were not made of some of the specimens. Some of them were too bloody; some were delayed in transit from the operating room to the laboratory and occasionally a specimen was mislaid or lost.

The globulin tests used were the phenol test of Pandy, the ammonium sulphate tests of Nonne and of Ross-Jones and the butyric acid-sodium hydrate test of Noguchi. The globulin content, both in the cerebral and in the spinal fluids, was definitely diminished by this treatment. The effect of treatment upon the Wassermann reaction was appreciable in two cases. The colloidal gold reaction was a valuable aid in the diagnosis of syphilis of the central nervous system, in particular of paresis. Although a satisfactory theoretical basis for the reaction had not been advanced, the test seemed to be of great practical value. Seven cases all gave typical paretic curves, both with cerebral fluids and with spinal fluids. In two of these a transient effect was produced upon the curves; in five no appreciable change had been wrought in the colloidal gold reactions.

Summarizing, it could be stated that the blood sera, the cerebral fluids and the spinal fluids of eleven cases of paresis undergoing intraventricular treatment with neosalvarsanized or salvarsanized serum were examined at irregular intervals, usually before treatment, after the first treatment, after the second treatment and after the third treatment. Some cases had been examined since, after a lapse of four to eight months. The fluid changes were either nil, or so slight as to be negligible in most instances. The only conclusion possible was that three intraventricular injections of salvarsanized serum were not sufficient to produce fluid changes, though the clinical improvement was marked.

Dr. Sharpe, in closing, said that he wished to say only a few words emphasizing Dr. Hammond's statement in regard to the safety of the treatment; out of thirty-seven injections, no accidents and no deaths had resulted and the only reactions consisted of a rise in temperature and pulse rate for twenty-four hours following the injections in some of the cases. It was, as Dr. Hammond said, too early to claim that any of the cases were cured, but when it was recalled that the five cases, now greatly improved and back at work, had had symptoms of paresis varying from a few months up to two years before treatment, during which time they had been incapacitated for work, and when consideration was given to the condition these paretics would now otherwise have been in if untreated, it was apparent that some-

thing indeed had been accomplished. The speaker felt very much encouraged by the results of the last two years' work in these cases.

CONGENITAL CEREBRO CEREBELLAR DIPLEGICS, WITH NOTES UPON THEIR TRAINING-TREATMENT

By L. Pierce Clark, M.D.

Dr. Clark reported three cases of cerebrocerebellar diplegia and spoke of the experience which had been obtained in caring for and training such children. The term cerebrocerebellar diplegia was used for a combination of symptoms dependent upon cerebellar agenesis, or some form of injury to the cerebellum, at the time of or before birth, the exact nature of which had not yet been determined. The varying types of the disorder were those of flaccid and flaccid-spastic palsy, and shaded into the general, mildly spastic state. In the cerebellar ataxic type there was hypotonia, dysmetria, gross incoördination, astasia, abasia, dysarthria, occasionally dysphagia and often complete inability to sit up. In extreme involvement of the forebrain all these cerebellar symptoms were present together with mutism and idiocy. In the mixed types there might be either a slight degree of spasticity in certain parts, combined with hypotonia, or flaccidity in other parts of the body.

It was interesting to speculate what ultimately became of these children affected with congenital cerebrocerebellar palsy. No doubt the children possessing the mildest grades of defect quickly outgrew the disorder. The severest types drifted to special institutions for mental defectives. Prognosis of all the varying types of course depended upon the combination of symptoms presented. When the forebrain was damaged to such an extent that the mental state was no longer to be classed as retardation, but showed mental arrest or marked imbecility, these children usually never recovered either from their ataxia or from their defect in mental development. In the less severe types, one should be quite sure that the mental state was one of simple retardation or mental arrest, as much of the definiteness of prognosis could not be determined until one had made a very decided effort to train out the cerebellar symptoms, or force the forebrain to take up vicariously the functions of the cerebellum.

While the principles of treatment embraced mental as well as motor training, the primary point of approach was to be directed toward overcoming the motor defects. First of all, segmental incoördination was to be removed. The child was to be taught to appreciate, by actual manipulation, the flexion, extension, abduction and adduction of the different segments of the extremities. Frenkel's principles for training trunk incoördinations, laid down for cases of tabetic ataxia, were of the utmost importance. When one had obtained results in removing the segmental defects, there still remained the general motor training for the use of simple, isolated contractions of segments in purposive acts in which all the segments of an extremity were coördinated harmoniously. One might then undertake more definite principles of motor training as laid down in the Montessori, Seguin and other special school systems, where under the guise of play the child was further taught to develop coördination.

In many cases there was ataxia of speech for which training was needed on the same principles as those used for the deaf and dumb. The process of teaching the child the complicated mechanism of speech was often long and tedious. The temperamental defects which invariably went with these cases of congenital cerebrocerebellar diplegia were an important feature to be handled. The disciplinary system of nursery ethics had much to do toward helping the child to develop out of his motor and mental disorder.