DISAPPEARANCE OF CORD TUMOR SYMPTOMS AFTER LUMBAR PUNCTURE

The complete relief by lumbar puncture of symptoms apparently due to a localized lesion in the cord is in their experience an unusual phenomenon. In September, 1915, Mrs. V., aged 23, showed on examination a saddle anesthesia, bladder and rectal disturbances, and weakness of one leg, and pain in her left leg. Lumbar puncture showed a normal cerebrospinal fluid. Immediately all sensory disturbances cleared up, and bladder and rectal control were regained. The explanation at the time was either that they had evacuated the fluid of a circumscribed serous-meningitis or that the cerebrospinal fluid had been obstructed by a tumor and had been the prime factor in causing the compression symptoms. Up to the present time the patient has had no return of her symptoms, and the most probable diagnosis is believed to be a circumscribed serous-meningitis. An identical case was reported recently before the Philadelphia Neurological Society by Dr. Weisenberg.

It has seemed to the speakers that problems of this sort could with profit be presented here in place of isolated case reports or statistical studies of cases.

PREVENTIVE NEUROLOGY

By Charles L. Dana, M.D.

The importance of neurology in its relation to social problems and preventive medicine: (1) Neurology and mental retardation (epilepsy, habit-neuroses, psycho-neuroses, insanity, neurology and mental hygiene); (2) neurology and its relation to specialization of industrial work (occupational neuroses); (3) neurology and the acute and chronic infections and poisons (chorea, myelitis, neuritis, so-called neuralgias, multiple sclerosis, etc.); (4) neurology and defective methods of study and education (neuroses of childhood and adolescence, psycho-neuroses); (5) neurology and defective metabolism (autotoxemic disorders, glandular and degenerative disorders, thyroid disorders, paralysis agitans, etc., neuralgia); (6) neurology and hereditary disorders; (7) luetic nervous diseases; (8) neurology and arterial disease (hemiplegia, etc.).

Dr. James J. Putnam said that instead of Dr. Dana adding the words of apology for what he says, Dr. Putnam felt that we owe him an apology if we do not give all the attention to these very important suggestions that they are really worth. This collective work which brings the labors of the neurologists in contact with those of other physicians and public health officers, those working with public heredity and the like, is the most important work the neurologist can do. Dr. Putnam voted with regret for the disbandment of this Committee, and although he can see that this step was necessary it would be an excellent thing if a certain time should be allotted each year at the annual meetings to the consideration of our obligations to the community. Dr. Dana has opened a number of doors which should not be closed.

Dr. Charles L. Dana thought that something definite and practical might be done by getting a research laboratory to take up some one of these problems in collaboration with medical men.

NOTES ON THE TREATMENT OF MENTAL TORTICOLLIS

By L. Pierce Clark, M.D.

The nature of the disorder as shown by a complete analysis of four cases. Successes and failures in the psychological treatment and the hypothetical reasons for the latter.

Dr. James J. Putnam said that papers of this kind ought to be welcomed

by the general neurologist because they open the door which everyone wishes to see opened towards the acceptance in the most rational form of what is known technically as the psychoanalytic movement. That is simply a recognition of the fact that our conduct depends in part upon causes lying hidden within ourselves, the existence and bearing of which it is difficult to recognize. They cannot be known until we choose to study them with care. Many of our acts are instinctive attempts to cover and disguise our real motives. They are "reactions of defense" and should be studied from this standpoint. Whether it will prove that we have to depend entirely upon the psychological character analysis for the final treatment and understanding of the case, or whether we have to go more into physiological questions on similar lines is of course a matter that will have to be determined later.

Dr. Harvey Cushing presented "The Report of the Cancer Commission."

Dr. Charles L. Dana said there is a line of inquiry in connection with cancer which would be extremely interesting; that is, the relation of cancer of the breast to metastatic tumors of the brain and cord. Such metastasis had occurred in the speaker's experience so often that he viewed with trepidation operation on the breast.

Dr. Smith Ely Jelliffe said there is one phase of the cancer problem that should interest the neurologist, even though the connection has not been sufficiently studied. This interest lies in the study of the vegetative neurological mechanisms that underlie tissue hyperplasias. Timme, of New York, has experimentally attacked this problem and his papers in *JOURNAL OF NERVOUS AND MENTAL DISEASE* have shown that experimental tissue hyperplasias of the gastric mucosa, closely resembling carcinoma, may be produced by interfering with the balance of the sympathetic and parasympathetic impulses. The close relationship of perverted vegetative neurological mechanisms not only to recurring physical stimuli, as in the case of the pipe smoker's lip cancers, the chimney sweep's scrotal cancers, but also to psychical stimuli suggests another field, which, because it cannot as yet be reduced to "mathematics," is regarded as pseudoscience by many. To such Dr. Jelliffe would modestly suggest a reading of Gilbert Murray's charming little introduction to Thomson's Greek Tradition.

Dr. Archibald Church said it had been his misfortune to see a number of women who have had cord metastasis from the breast during the last three years. What is the route for this metastatic implantation? After reading the lymphangogenesis of ascending neuritis as published recently by English observers, it occurred to him that possibly the route for the metastatic migration might be by way of the intercostal nerves. He felt it might be a reasonable hypothesis that through the lymphogenous tracts of the intercostal nerves the cancer cells might travel from the breast to the dorsal spine and he had some material in hand under search for the purpose of determining whether this may be the route.

Dr. L. F. Barker wished to speak of a practical point, namely, the relief of root-pains in carcinoma of the spine. We all know how often morphine wears out and how the dose has gradually to be increased. Schlesinger suggested a formula that Dr. Barker has used extensively with patients in the Johns Hopkins Hospital with great satisfaction to prevent pain of this sort. Two doses a day will usually keep the patient easy. The formula is as follows:

Scopolamin Hydrobrom.	0.0025
Morph. Mur.	0.2
Dionin	0.4
Aq. dist.	10.0

M. vii hypo. every 12 hours or oftener.

It is made up sterile.

The doses of scopolamin and of morphine are small, but it is remarkable how the mixture assuages pain. Half an ordinary hypodermic syringe of morning and evening will generally suffice. The patients awake refreshed, clear-headed, and without nausea.

Dr. Harvey Cushing thought it is quite evident from this discussion that the matter is of considerable concern and interest to this Society. He gathered that the primary object of the Commission is to bring before the lay public the importance of cancer in order to spare the many victims of malignant growths from the neglect of early treatment. He did not quite see why the designation cancer should be used, unless the term covers all malignant growths and is used to arouse the laity. For if the investigation excludes the malignant growths of the central nervous tissue, it would perhaps be of less concern to neurologists.

Dr. James J. Putnam read a paper entitled Acroparesthesia. (See this JOURNAL, Vol. 44, p. 193.)

Dr. Sidney I. Schwab asked Dr. Putnam to explain the very common etiology met with in acroparesthesia in a group of women who use their hands many hours a day washing clothes, exposed to differences of temperature. Some of these cases can be benefited and a few can be cured by the simple means of telling them not to use water on their hands for a period, which is rather an easy therapeutic treatment. He did not see how this is an adaptive mechanism.

Dr. Smith Ely Jelliffe said three cases of acroparesthesia came to his mind as illustrating three possible groups. The first was a result of vegetative nerve disorder, particularly an endocrinopathy with predominant thyroid involvement, a hypothyroidism. It was much relieved after a few months' treatment by thyroid. The second belonged to the sensori-motor group. The acroparesthesia was purely a mechanical affair, due to a diffuse carcinoma of the vertebral column with pressure upon thoracic nerve roots. Death occurred after two years. The third case belonged distinctly in the psychogenic group and improvement has occurred under psychoanalysis. Acroparesthesias may belong to any of the three groups, vegetative, sensori-motor or psychic. Dr. Putnam has placed emphasis upon the psychogenic group. Dr. Jelliffe's observations point to the inference that most acroparesthesias have large psychogenic components. Many an individual with marked arteriosclerosis will react to emotional material by means of acroparesthesias. The symbolic significance of the localization of the sensations is worthy of study. This phase of the subject is considered trifling by the ultra-organicist, but it is a living problem.

Dr. Hugh T. Patrick ventured to make a very unscientific, but he believed practical suggestion. He believed with Dr. Jelliffe and with the president who has gone into the question in the past, that these groups creep over into each other. He was sure we all have the experience of being unable to place a given case in a given group and we are driven to trying various remedial procedures and agents in the hope that we may cure the case or relieve the patient. Some of these patients are very promptly and permanently relieved by a very simple procedure, the suggestion of which he got from Dr. Moyer, which is elastic constriction. He did not know what group of cases, nosologically, it relieves. One might conclude from the success of the treatment what the nature of the case is. He was not sure just how they are relieved. The application of the rubber tubing or elastic rubber bandage about the extremity two or three times a day for two or three minutes will absolutely and completely relieve some of these cases in a very short time. The last case he had was in a young woman, wife of a physician, who was driven nearly frantic by this paresthesia in the hands. She was taking morphine. Her husband writes that she was promptly and completely relieved by the elastic constriction.

The constriction is to make congestion. The constriction is at the upper part of the extremity. In the case mentioned it was in the midhumeral region. One thing that has occurred to him, he can go back to the early days of the use of the Esmarch in surgery. The surgeons who were using the tourniquet objected to the Esmarch because after its use there was an unusual amount of capillary oozing. It is a question whether the congestion has anything to do with it and whether it is not an influence on the nervous supply of the vessels, or the effect may be due to the constriction of the nerve trunks.

Dr. Charles L. Dana spoke of a case of acroparesthesia in a woman of fifty in which he had the arm X-rayed. This showed very much thickened and calcified arteries and the paresthesia was undoubtedly due to this condition. The speaker said that there was a group of cases which ought to be watched very carefully on its first appearance. This was the acroparesthesia which occurs at the beginning of combined sclerosis, associated with anemia. These cases can be controlled by early and watchful attention, therefore the somatic origin should always be carefully investigated. The paresthesia occurring in cases of anemia with spinal sclerosis is rather sharply limited at certain segments of the hand or foot, and thence slowly progresses up the extremity. It is not a vague and diffuse disturbance.

Dr. L. F. Barker has seen a case of acroparesthesia due to latent tetany. Usually the Trousseau sign and the Chvostek sign can be brought out in latent tetany.

Dr. Harvey Cushing did not know whether he fully understood what acroparesthesia is. The cases which we are accustomed to place in this group possess a definite organic basis, though many doubtless have a definite functional superstructure and are apt to occur in individuals with more or less unstable nervous systems. The vascular lesions Dr. Dana has spoken of are very common. Many of the cases which formerly were regarded as psychogenic or neurasthenic have been detached from the acroparesthesia group. This is particularly true of those due to a gradual obliterative thrombosis of the veins and arteries, a disorder largely limited to the lower extremities. The acroparesthesias of the greatest intensity and distress are those which have been so common abroad among soldiers, the so-called "trench bite" or "trench feet." This is probably in large part primarily a circulatory disturbance due to the soaking of the feet inside of wet shoes and the associated use of puttees, which impede the circulation. The paresthesias which accompany these conditions have been very serious, and if the sensation of numbness, discomfort and tingling in the extremities is really what acroparesthesia is, these cases are examples of it.

Dr. Putnam said if he had read his paper as it was written it would have been seen that he covered some of the points that have been brought up. He did not fail to recognize what Dr. Dana and Dr. Cushing call attention to, and he has references to two cases where the paresthetic neurosis was induced by a crushing of the fingers. Of course, he does not maintain that psychoanalysis is a cure for organic conditions such as those sometimes here present, but simply that even where there has been an actual trauma there is usually a background of neurotic tendency.

Dr. Schwab calls attention to the exposure of the hands to water as a frequent cause. That this is so is well known; and still more striking is the fact that a case was reported by Oppenheim where a single exposure of the overheated hands to ice seems to have brought on the trouble. What happens under these conditions is, apparently, that a vascular spasm is induced which recurs as a sort of habit; and this is more likely to happen if there is a neurotic temperament in the background.

Dr. Jelliffe speaks of disorders of the internal secretions as a possible cause, and of the benefit to be expected from thyroid preparations. Dr.

Putnam tried thyroid in one case where he thought it was particularly indicated, but without effect. The same patient received benefit later from a thorough irrigation of the bowel, continued for some time.

He was pleased to learn of Dr. Patrick's experiment with the Bier treatment, through the use of the elastic ligature, and should certainly favor its use. He has, indeed, used this treatment in former days a good deal, for a somewhat kindred angioneurosis of the feet, and found it of distinct value. He also agreed with what Dr. Moyer had said.

He hoped it will be understood that he is not laying stress on the neurotic temperament as the sole cause, or, indeed, asserting any condition to be the sole cause. Arteriosclerosis is not infrequently present in a marked form, and arthritic disorders of the fingers are very common. In his paper he had called attention to an excellent study by Curschmann, who points out the analogy between this disorder and so-called false angina pectoris, and the occasional association of both of them with migraine. He also points out that this group of disorders is often related, in a functional sense, to sexual excitability, and thinks that special attention should be given to this element in the treatment. Illogically enough he couples this opinion with the statement that this benefit is not to be expected through psychoanalysis, and thus throws aside what is obviously the only means of meeting such constitutional, neurotic tendencies in a thorough manner.

The general aim of Dr. Putnam's paper was to emphasize the fact that, let the etiology be, in other respects, what it may, the symptoms occur in obedience to certain principles the action of which one can study to best advantage through observations made on the psychoneuroses.

Dr. Peter Bassoe, Chicago, and Dr. C. L. Shields, Salt Lake City, presented a paper entitled Diffuse Endothelioma Enveloping the Spinal Cord in its Entire Length. (See this JOURNAL, Vol. 44, p. 385.)

Dr. Foster Kennedy asked Dr. Bassoe whether he had seen any such cases associated clinically with what appears to be an osteoma of the skull. He had had an opportunity of seeing three such cases and following one of them. These three cases presented clinically the same feature: a large bony tumor of the skull without signs of pressure. The cases were operated on, the bony mass was removed with difficulty, considerable shock ensued; there was then found a diffuse smearing of the dura with tumor material. In one of these cases the symptoms were of gradual deterioration and death.

Dr. Harvey Cushing said that in a series of about one hundred examples of endotheliomata he had seen a number of different varieties. Many of these tumors have heretofore been called sarcomas and whether this tumor of Dr. Bassoe's is really of this nature he did not know. The condition Dr. Kennedy spoke of he had seen. There have been ten or twelve cases in which there was a marked stimulation of bony growth overlying the tumor. In the majority of the cases of this type the tumor had a parasagittal point of origin and the associated osteoma has occupied a midcranial position. However, it is just as common for the overlying bone to show pressure absorption.

It is his feeling that these tumors have not a dural but an arachnoid origin and that they arise from the endothelial cells which cover the arachnoid tufts. These tufts have the same histological character as the tumors. In the primary tumor of Dr. Bassoe's case there were no typical cellular whorls, and indeed in many of the tumors fibrous elements far outnumber the thelial ones, although both types may be present.

Not uncommon, too, are the conditions in which, contrary to a single isolated tumor, flat meningeal growths are found—what Dr. Kennedy has spoken of as tumor smearing. In Dr. Cushing's experience, however, tumors of this type appear in the gross to be subdural rather than subarachnoid as

in Dr. Bassoe's case. If the original tumor in his case was an endothelioma, a sarcomatous degeneration presumably has taken place with invasion of the cerebrospinal space and extension of the tumor just as we see when a glioma reaches the surface and overflows, as it appears to do, into the subarachnoid space, under which circumstances it may extend the whole length of the spinal cord.

Dr. Peter Bassoe had not seen the literature in connection with the tufts that Dr. Kennedy mentions, but he had a case, on which he was working, of a perivascular endothelioma, involving the parietal and occipital lobe. It is intradural and right over it there is a marked thickening of the bone. As to the sarcoma and endothelioma question, that is a very long one. He would simply say that if he were shown a slide of the tumor above the cerebellum without being familiar with the history of the case, he would call it a fibrosarcoma, and any other part of the pial tumor would pass for a round cell sarcoma. There were whorls, but no connections as in psammoma. The relationship between these diffuse endothelial tumors and the multiple central neurofibromata is interesting, because there are cases on the borderland. Also the relationship of this condition to the so-called diffuse glioma of the pia as described by Spiller is interesting. These tumors may all really arise from primitive neural cells, as suggested by Verocay, in which case we would consider them of congenital origin, arising at different stages of development and they should be called neurinoma.

INSANITY—THE PHYSIOLOGICAL, MORPHOLOGICAL AND SEROLOGICAL CHARACTERISTICS

By S. D. W. Ludlum, M.D., and E. P. Corson White, M.D.

Abderhalden reactions have been done on cases of insanity and on animals after experimental removal of glands. In all instances there has been noticeable groupings which developed, by means of reactions, the morphology and the physiological and nervous symptoms.

PRELIMINARY REPORT ON THE USE OF THE ABDERHALDEN REACTION IN MENTAL DISEASES

By Henry A. Cotton, M.D., E. P. Corson White, M.D., and W. W. Stevenson, M.D.

Review of recent investigations. Technique of the method. Nature of the reaction. Experimental evidence of the relation of the reaction to disturbance of the ductless glands. Also demonstration of pathological brain lesions coincident to the changes in the endocrinal system. Type of mental cases investigated. Analysis of results in 200 cases. Relation of vagotonic and sympathetonic states to the type of mental diseases. Important physical symptoms described especially in dementia præcox.

THE AUTOLYSIS OF NITROGENOUS COMPOUNDS IN THE BLOOD SERUM OF GENERAL PARALYSIS AND DEMENTIA PRÆCOX WITH ITS BEARING UPON THE ABDERHALDEN TEST*

By H. Douglas Singer, M.D., M.R.C.P., and W. B. Quantz, Ph.D.

From the Laboratory of the Illinois State Psychoanalytic Institute.

Estimations of the increase of amino-acid nitrogen in blood serum during incubation for twenty-four hours with brain substrate which had been washed

* The full text published in the Arch. of Int. Med.