

51-SPF-DPW
RETYPE FROM ORIGINAL

Minutes of

SUPERINTENDENTS' MEETING *** Medical Session

February 16, 1951
Hotel Leamington, Minneapolis

The professional meeting was called to order by Dr. Rossen. A paper by Dr. Buchstein on selection of patients for pre-frontal lobotomy was presented to each superintendent and is to be entered into the minutes of the meeting. Dr. Lawrence Kolb of the Mayo Clinic, who was to present material on the physiology of the frontal lobes, was unable to attend because of inclement weather. This material will be discussed at a subsequent meeting.

Dr. Gowan opened the discussion by asking for a definition of what is a "recent" case, and suggested that patients ill for two and one half years should be considered for operation. Dr. Petersen stressed that a sufficient period of observation depended upon the clinical judgment of the psychiatrist, Dr. Buchstein agreed that nothing was gained in many cases by waiting until a specific time had elapsed.

Dr. Gowan again recommended insulin shock combined with electric shock treatment, and Dr. Petersen noted that state hospital conditions, especially the shortage of trained personnel, made use of this treatment difficult.

The effect of pre-frontal lobotomy on blood pressure which has been shown by many investigators to be a transient one was discussed and Dr. Fahr reminded the group that any surgical procedure was followed by a similar effect. He stressed the need for careful controls in evaluating any form of therapy. Dr. Brown mentioned that in the Fergus Falls series patients who had low pre-operative pressures often showed a sustained septolic drop of twenty points. Dr. Fahr asked whether these patients exhibited evidence of post-operative depression. Dr. Brown noted that there was marked change in the general activity of these patients. Methods of study, criteria for operation, necessity of control cases, and well-grounded statistical approach to this problem were urged by Dr. Rossen. The surgical precision resulting from the direction of the operator by one standing at some distance from the patient, as noted before by Dr. Petersen, was stressed as a means of securing more uniform procedure.

Changes in the electrocardiogram after electric shock, apparently resulting from stimulation of the parasympathetic fibers of the vagus, were noted by Dr. Fahr, who expressed interest in securing tracings on post-lobotomy patients, and also suggested studies of hypothalamic function, and glucose tolerance. Dr. Petersen noted that many

such studies had been performed and that usually both systolic and diastolic pressures remained below preoperative levels.

Dr. Buchstein reported that the entire frontal lobe contains fields of representation of various parts of the autonomic nervous system, but that on stimulation of these areas, the effects proved variable, not consistently localized, and that the same areas in the same patient might give different autonomic effects when stimulated at different times. Dr. Rossen suggested the advisability of doing careful studies on the pulse rate, and repeated cosinophile counts which would give an estimate of adrenal response to stress. Dr. Buchstein noted that clinically no great upset in bodily economy after operation had been observed. Dr. Rossen noted changes in pulse rate in different personalities, and Dr. Buchstein stated that he had found a consistently high pre-operative pulse rate a good prognostic sign. Dr. Petersen noted a drop in B.M.R. on six of his patients; basal rates, however, rose slowly some months after operation. Both skin and body temperatures were low in these patients under basal conditions. One patient showed EKG changes which were presumed the result of thrombosis resulting from the post-operative hypotension.

In summarizing this data, Dr. Fahr noted that it was all suggestive of hypothalamic effects of the operation. Dr. Petersen agreed, adding that, just as severe lobotomies resulted in weight gain, hypothalamic lesions in rats produced a similar effect. Dr. Fahr noted marked changes in sugar tolerance in individuals suffering brain damage as a result of the indiscriminate use protamine zinc insulin. Those less severely damaged recovered ability to regulate blood sugar after six month. Dr. Petersen cited the tremendous variations in blood sugar levels in both alcoholics and normals, stating that many alcoholics not receiving insulin have blood sugar levels as low as twenty mg. %. On the basis of these facts he questioned the thesis that brain damage results from hypoglycemia.

Dr. Rossen requested that each superintendent write his ideas about the relationship of lobotomy to other therapies, and also record his suggestions for pre-operative workup. Dr. Buchstein stated that in over 500 operations he has not encountered any unexpected brain pathology, despite the fact that many of the patients had previously received both electric and insulin shock treatment.

Dr. Fahr mentioned the cancer detection work he has been doing at Anoka. Many of our mental patients are not aware of, or do not complain of, early cancer symptoms. Thus it is not uncommon to encounter on any ward a patient with clinical evidence of anemia, who on more careful examination will prove to be a cancer victim. Closer observation, with emphasis on early detection of anemias, followed by careful physical and x-ray study, may uncover many cases while operation still promises good results.

Dr. Gowan noted the beneficial effect of intravenous potassium on cases of prolonged insulin coma. Dr. Fahr described the opposite effects of insulin and digitalis, advised the use of KNO 3 because of the molecular effects of KOL, and stated that in a

one hundred and fifty pound person, one gram could be given intravenously over a fifteen minute period without ill effect.

Three points were listed for a subsequent agenda:

1. Anatomy and physiology of the frontal lobes.
2. The use of combined insulin and E. S. T.
3. Lobotomy in mental deficiency.

The meeting was then adjourned.

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Suggestions for the:

SELECTIONS OF PATIENTS FOR FRONTAL LOBOTOMY

The selections of patients for frontal lobotomy cannot be reduced to rules in terms of diagnosis or time periods. However, some general principles can be delineated and that is the purpose of these remarks. The final decision in each instance depends upon the clinical judgment of the psychiatrists.

Frontal lobotomy is a radical and irrevocable procedure. Therefore, it will be considered only for those patients in whom other available methods of treatment have been or are presumed to be ineffectual. It is not necessary that other forms of treatment such as electroshock be administered to each patient before lobotomy is considered if the psychiatrist's experience would indicate the futility of such a procedure.

The question to be answered then is: Does the patient present symptomatology of a sort which one may expect to be improved by frontal lobotomy? Lobotomy is not worthwhile for a great many psychotic patients and should not be employed as a measure of last resort with the attitude that it might as well be tried since the situation hardly be any worse. Nor should lobotomy be thought of simply as a form of surgical restraint whose chief virtue lies in the fact that it tends to quiet noisy, aggressive and hyperactive patients. Lobotomy's greatest usefulness lies in the treatment of other patients. The types of patients most benefited by lobotomy will be mentioned later.

If it is felt that the patient presents symptoms which may be benefited by lobotomy one may then consider what it is hoped to accomplish through the lobotomy. In general, three degrees of improvement may be aimed at.

- A. Social adjustment with restoration to productive life in the home or on a job.
- B. Improvement in psychotic symptoms sufficient to permit adjustment outside the hospital with assistance. In many instances the family situation will be such that the patient will have to remain in the hospital but on a much better level of adjustment.
- C. Relief of symptoms sufficient to permit improved hospital adjustment and to reduce the patient's suffering. Release from restraints can usually be accomplished. Most of the patients in this group will be schizophrenics of long standing.

When should frontal lobotomy be considered for a state hospital patient?

Presuming that other methods of treatment have been found ineffectual, lobotomy should be considered when the duration of the patient's illness (not just the

period of his confinement in a state hospital) indicates that his disease is chronic and not apt to remit spontaneously. For most patients this will be a matter of two to three years from the onset of disabling symptoms. A patient who has had much psychiatric care and hospitalization on a private basis before admission to a state hospital may be "chronic" when first seen. As a matter of policy each patient should be under observation in a Minnesota State Hospital for at least six months before lobotomy is performed (recommended?).

Which symptoms are most likely to be benefited by a frontal lobotomy?

Frontal lobotomy benefits certain symptoms, not specific diagnostic entities or diseases.

1. There is usually a striking reduction in symptoms which are indicative of excessive psychic tension, namely apprehension, worry, fear, agitation. Depression is also alleviated in most instances.
2. Patients exhibiting impulsive, hostile, aggressive and over-active behavior are usually considerably benefited.
3. Paranoid idease are frequently abolished and in other instances even though they remain the patient may be less concerned about them.
4. Obsessive and compulsive thoughts and acts are usually much benefited.

Which specific diagnostic entities are benefited by frontal lobotomy?

Although frontal lobotomy is not to be thought of as a treatment for specific diagnostic entities, it is possible to list some which include many patients who are benefited by lobotomy.

1. Affective psychosis (manic depressive; involuntional melancholia; agitated depression) when they have reached a state of chronicity in which shock treatment is no longer effective or in which the period of benefit following shock treatment is so brief that almost continuous treatment is required.
2. Schizophrenia, particularly those patients whose illness is of brief (two to three years) duration and who exhibit a good deal of emotional turmoil. Schizo-affective group is a good example of this. In general also those whose psychosis came on rather acutely following a period of more or less satisfactory adjustment are relatively favorable candidates. The same is true of those whose schizoid reaction developed following childbirth.
3. Paranoid psychoses of any sort, provided the patient retains a fairly good contact with reality. Paranoid patients having many vision and auditory hallucinations are less favorable but may be benefited.
4. Psychoneuroses of sufficient chronicity and severity to disable the patient and render long term hospitalization necessary are among the more favorable candidates. These patients are usually obsessive compulsive, chronically anxious or hypochondriacal neurotics.

5. Mentally defective patients with psychoses characterized by much over-active and destructive and hostile behavior are frequently much benefited.

Special indications for frontal lobotomy.

1. Lobotomy may be indicated in certain hyper-active psychotic patients (schizophrenics) whose pyheractivity is having a deleterious effect upon organic disease of pulmonary or cardiac nature.
2. Psychotic patients who presumably would be benefited by shock therapy but in whom shock is contraindicated by the presence of serious organic lesions may in most instances be safely lobotomized.