

Studies of the alteration in perception with changes in brain function were the focus of activities of the Department of Neurology during the past year. A laboratory for electroencephalography was established, and newer methods for studying organic mental syndromes were introduced.

A group of related study projects were undertaken. The previous investigations of the response of subjects to simultaneous stimulation tests, begun by Dr. Bender, were continued with emphasis on the changes in perception in depressive illnesses, hysteria, and following electroconvulsive therapy. The effects of barbiturates, pervitin and lysergic acid (LSD-25) on such perceptual tests were intensively studied. In the latter part of the year, a correlated study of the changes in brain function during electroconvulsive therapy was undertaken. Two psychologists, Dr. Robert Kahn and Mr. H. Korin were appointed research assistants to the department, and Dr. Max Fink a fellow of the National Foundation for Infantile Paralysis was appointed to supervise the laboratory work.

On October 1, 1953 an electroencephalographic laboratory was established with a Medcraft 8 channel instrument. In the initial three months 65 records were taken. Of these 19 were consultation requests and 46 in the course of the integrated study on altered brain function.

During the year, 55 consultation requests were answered. More than half were for evaluations of organic mental states associated with depressive illness, or related to electroshock therapy. Seizure disorders, neuritic types of pain, and abnormal involuntary movements made up the bulk of remaining requests. Six patients with seizure disorders were followed and controlled with analeptic drugs. Three patients were transferred to the Neurological Service of Mt. Sinai Hospital for further investigations for neurological conditions observed at the hospital.

Two procedural changes were introduced by the department. As an aid to evaluating the organic mental states, the "amytal test"\* was introduced and utilized. For the past half year, this test has found increasing use in following the course of electroshock treatments, and also as part of the integrated study on electroshock. In addition, the use of succinyl-choline chloride (anectine) as an adjuvant in electroshock replacing curare-like agents was demonstrated. This agent is more efficacious in inducing relaxation and has now supplanted other relaxing agents in indicated cases of electroshock at the hospital.

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\* Weinstein, E. A. et al: The diagnostic use of amobarbital sodium in Brain Disease, Amer. Jour. Psych. 109:889-894 (June) 1953.

Bibliog. (1953)

Fink, M., Bergman, P.S., Nathanson, M. and Bender, M.B.: Effect of Barbiturates on Perception, Trans. Amer. Neur. Assoc., June 1953.

Fink, M., Green, M. and Bender, M.B.: Perception of Simultaneous Tactile Stimuli by Mentally Retarded Adults, Jour. Nerv. & Ment. Dis. 117:43-49 (Jan.) 1953.

Tarachow, S. and Fink, M.: A Statistical Study of a Psychoanalytic Hypothesis, Jour. Hillside Hosp. 2:67-71 (March) 1953.

October 4 , 1954

Interim Report

Dear Dr. Miller,

As you requested I wish to report that the following projects have been in progress this summer in this department.

1. Effect of electroshock on memory function tests. Twenty-four patients are now fully studied; the data is being collected; and a report is planned for the 1955 A P A meetings.

2. Effect of Lysergic Acid on perceptual functions, including Rorschach; and on blood chemistry. These experiments are now in progress and will be completed by the end of the year.

3. Under the terms of the U.S.P.H.S. grant a continuing study of perceptual changes in insulin, and EST patients is now in planning.

4. A psychiatric rating scale, modified after Malamud, is in use. As soon as it is standardized in this population, it will be presented to the Research Committee.

5. The Funkenstein test (Mecholyl) in EST and insulin therapy is being checked in our population.

Sincerely,

MF:SRB

October 26, 1954

Projects in Progress

- (a) Relation of mental changes to behavior
  - (1) Effect of organic mental syndrome on results of ECT.
  - (2) Changes in perception with ICT.
  - (3) Can ACTH, cortisone alter brain function and thereby results of ECT or ICT?
  
- (b) Psychophysical measurements of Psychiatric terms - an operational approach to terms of diagnosis.
  - (1) Denial: Relation to improvement in electroshock  

Relation of premorbid character to change in behavior in electroshock.
  - (2) Ambivalence: Is it possible to measure ambivalence by psychophysical means and relate to the past history of the patient in choice of neurosis?
  
- (c) Relation of chemical agents to psychoses, psychological, biochemical and behavioral aspects.
  
- (d) Rating Scale:

October 17, 1954

Dear Dr. Rachlin,

As you requested I wish to report the following projects have been in progress this summer.

(1) Effect of electroshock on memory function, EEG, Amytal tests and perceptual tests. Twenty four patients have been fully shielded. The first report on the relation between the response to treatment and the occipital test is being submitted to the A P A. The observation support the thesis that there is a relation between the development of an organ. Mental syndrome and improvement.

(2) Effect of lysergic acid on perceptual functions. Rorschach and blood chemistry. The psychiatric and psychologic tests are being prepared for presentation at the American Psychopathological Association.

(3) Under the terms of the U.S.P.H.S. grant a continuing study of perceptual changes in insulin and EST patients is now in planning.

(4) A psychiatric rating scale, modified after Malamud, is in use. As soon as it is standardized in this population, it will be presented to the Research Committee.

(5) The Funkenstein test (Mecholy1) in EST and

Insulin therapy is being checked in our  
population.

Since reply,