

behavioral sciences

Gathered last week in San Francisco at the meetings of the American Psychiatric and Psychoanalytic Associations and the Society of Biological Psychiatry.

NEUROPSYCHIATRY

CPK and muscle tissue

Significant abnormalities in the muscle tissue of acute psychotics have been discovered by an Illinois research team.

The discovery is a result of an earlier study of unusually large increases of creatine phosphokinase (CPK) activity in the blood of 24 out of 32 patients during psychotic reactions. CPK is an enzyme associated with brain, heart and skeletal muscle cell function, and is thought to have a role in muscle contraction.

Skeletal muscle was identified as the source of the increased CPK, so the researchers, Drs. Herbert Meltzer and Ronald Fischman of the University of Chicago, W. King Engel of the National Institute of Neurological Disease and Ronald Moline of the Illinois State Psychiatric Institute, examined muscle tissue from patients. Sixteen out of 29 samples showed abnormal muscle fibers. Comparable abnormalities were found in some of the relatives of acutely psychotic patients, but were not found in 57 normal subjects.

Although unusual muscle tissue could not be the cause of such illnesses, it may locate biochemical pathology and central nervous system disorder, the team told the APA.

GERIATRICS

Oxygen for senility symptoms

The psychological symptoms of senility can be favorably modified by intermittent exposure to pure oxygen, Drs. Eleanor A. Jacobs, S. Mouchly Small and Peter M. Winters of Buffalo, N.Y., told the APA.

The senile patients were placed in a hyperbaric chamber containing 100 percent oxygen twice a day for 90 minutes, throughout a 15-day period. Control patients breathed normal air under the same conditions. The post-hyperoxygenation test scores showed the test patients improved markedly. Control patients demonstrated no such change.

CHILD PSYCHOLOGY

Influence of microbehavior

The initial relationship between a mother and her newborn infant is thought to have a critical influence on the child's later development. Dr. Daniel N. Stern of Columbia University has conducted a motion-picture study of such a relationship which reveals a complex interaction of what he calls social microbehaviors occurring at speeds of up to three and four per second.

Dr. Stern and his colleagues filmed characteristic interactions between a mother and her three-and-one-half month-old fraternal twins. A frame-by-frame examination of the film revealed a series of subtle eye and head movements which were then classified either as approaches, withdrawals or random. Viewed at normal speed, the high number of approaches and withdrawals between the mother and each twin appeared unrelated

to the ongoing interaction. But patterns of making and breaking face contact, as well as coordinated head movements during social contact, revealed on examination, differences in the mother's total relationship with each twin, Dr. Stern told the APA.

The twins were examined a year later in a follow-up study which confirmed the direct development of the earlier microbehaviors into more complex patterns of approach to and withdrawal from the mother.

PSYCHOLOGY

Long sleepers and short

Two distinct types of sleeping personalities have been found in an examination of the sleep habits of over 400 men aged 20 to 40. The study was conducted by a group of psychiatrists headed by Dr. Ernest Hartmann, director of the sleep and dream laboratory at Boston State Hospital.

The subjects all responded to newspaper advertisements for men who slept less than six hours or more than nine hours every night. They were evaluated by means of medical histories, tests and interviews. Eight all-night polygraph sleep recordings were made on each subject.

The results indicate considerable psychological difference between long sleepers and short sleepers, the investigators told the APA. The long sleepers tended to be introverted and passive, often suffering from mild chronic depression. The short sleepers appeared to be very efficient, hard-working and achievement oriented. They were also mildly agitated and hyperactive, tending to keep busy as a defense mechanism.

Both the long sleepers and the short sleepers spent an equal amount of time (75 minutes) in slow-wave sleep. But the groups differed sharply in the amount of REM (rapid eye movement) sleep, usually associated with dream activity. The long sleepers had almost twice as much REM sleep time as the short sleepers, the experiment showed.

The investigators suggest that there are two distinct sleep needs: a universal need for slow-wave sleep equal among all, affected by physical factors such as exercise, and a separate need for REM sleep, which shows great variation according to individual psychological characteristics.

TRANSSEXUALISM

Sex change psychologically satisfying

The Gender Identity Clinic of the Johns Hopkins Hospital has performed sexual adjustment operations on 14 male transsexuals as part of a pilot study to determine the effects of such surgical changes. The results so far do not show any major psychological changes following the operations, Drs. Dietrich Blumer and Norman Knorr of Johns Hopkins, and Jon K. Meyer of the National Institute of Mental Health, told the APA meeting.

The patients were selected beforehand on the basis

of psychotherapeutic experience, absence of psychosis, experience living as the opposite sex, and agreement of next of kin. Postoperative psychiatric evaluations indicated that the patients had no feelings of regret and were convinced of the rightness of their action. They were almost always dissatisfied, however, with the physical results, since absolute anatomical fidelity could not be achieved.

HYPERACTIVITY

Links with alcoholism

Many hyperactive children are known to be susceptible to other psychological disorders, particularly alcoholism, later in adolescence. Dr. James Morrison of Washington University told the SBP that a follow-up study of 50 hyperactive children showed that a high proportion of the parents of these children were alcoholics themselves.

Twenty-four percent of the fathers and four percent of the mothers of hyperactive children were diagnosed as either definitely or probably alcoholic. Only 10 percent of the fathers and none of the mothers of the 50 control parents were so diagnosed. In addition, 18 percent of the grandfathers of hyperactive children were probable or definite alcoholics compared to nine percent of the control grandfathers.

NEUROPSYCHIATRY

Epinephrine and aggression

In recent years there has been increasing evidence to suggest that persons labeled as sociopaths have unusual sympathetic nervous system disorders, particularly a cardiac instability associated with the hormone epinephrine or adrenaline, an important regulator of blood pressure and heart activity. Dr. L. A. Lindner directed a multidisciplinary team from Ohio State University in an experiment involving 29 sociopaths and 14 nonsociopaths at the Ohio Penitentiary to test this hypothesis, he told the SBP.

The 29 sociopaths were divided into two groups, either simple or hostile, according to the degree of aggressiveness which they displayed. There was no other common denominator, such as family history or social background among the men. The study revealed that only the simple sociopaths exhibited an unusual cardiovascular reactivity to epinephrine.

MENTAL HEALTH

Election behavior typical

The election laws of many states restrict the voting rights of mental patients. But the results of two studies at New York's Bronx State Hospital show no difference between the voting pattern of the inmates in the hospital and the citizens in the community.

The hospital policy is to admit from its district every patient in need of psychiatric treatment. On election days of 1966 and 1968, the patients were polled on the gubernatorial and Presidential races. No attempt was made to prevent the more severely disturbed from voting. In both years, a comparison between the vote of the hospital sample and the vote of the population of the hospital's

admission district revealed practically identical results. Less than five percent of the hospital ballots were invalidated because of procedural errors.

Drs. Morris M. Klein and Saul A. Grossman told the APA that their study should dispel any factual basis for disenfranchising mental patients. While such people may manifest dysfunction in one area of activity, they may be competent in other areas. Such laws, they say, perpetuate the myth that the mentally ill are uniquely different from other people.

GROUP THERAPY

Beer and geriatrics

Beer therapy for geriatric mental patients, may be one solution to the increasing problems of institutional health care. It may even be superior to certain forms of drug treatment, reports Dr. Ching-Piao Chien, director of the Franklin Mental Health Center of the Boston State Hospital in Massachusetts.

Of 40 male geriatric patients selected for the study, with mean age of 73, 70 percent suffered from chronic brain syndrome disorders, common forms of mental illness in the aged, while 30 percent were functional psychotics. The subjects were divided into four groups and treated over a period of nine weeks.

The first group received beer and social therapy in the hospital's recreational room. The second group received fruit punch and social therapy. The third group received fruit punch laced with thioridazine, a psychotropic drug frequently used with geriatrics. The fourth received thioridazine alone, in a ward setting.

A comparison of the four groups showed significant differences, the researchers say.

The beer group made the greatest improvement, according to all psychiatric measurements, Dr. Ching-Piao told the APA. He suggests that social drinking increases the patient's self-esteem, stimulates his interaction, permits sounder sleep and stimulates appetite.

ANXIETY

Genital indices

A physiological study of the male genitals during structured psychiatric interview indicates that the testes and scrotal sac are sensitive indicators of psychological anxiety. Dr. Anita I. Bell of the New York Psychoanalytic Institute, leader of the study, reported preliminary findings to the APAA.

A standard battery of physiological equipment, including electrodes and a mercury strain gauge to record muscular changes of the testes and scrotal sac, was used to measure the subjects' responses to the interview.

Questions about toilet training evoked scrotal responses of the greatest magnitude in all subjects. This corresponds, says Dr. Bell, to clinical findings that boyhood fear of uncontrollable testicular movements is a source of great anxiety during the period when he is undergoing toilet training.

The second largest scrotal response was to questions about the wish to be female or bear children. According to Dr. Bell, this could be symptomatic of a repressed homosexual-heterosexual conflict within boys during puberty.