

PSYCHIATRY

Advances in Psychiatry

The American Psychiatric Association, at its annual meeting held in Chicago this year, heard discussed some of the research in the treatment and prevention of mental illness.

➤ A SUBSTANCE has been found in the blood of schizophrenic patients which produces psychotic symptoms in normal individuals.

This evidence of a cause in the blood's chemistry for the most common mental illness was reported by a group from the Tulane University School of Medicine, New Orleans.

Prisoners at the Louisiana State Penitentiary at Angola volunteered to act as subjects in the experiment. Only prisoners with no history of nervous or mental disease in themselves or their families were allowed to be subjects. All volunteers were screened by two psychiatrists and on some occasions by four.

The volunteers received doses of one of a variety of chemical compounds, including a fraction extracted from the serum of normal persons.

The experiment was conducted as a "double blind" study. That is, neither the prisoner nor the scientists knew at the time which individuals received the substance from the schizophrenic blood and which received one of the "control" compounds.

The substance used from the blood of schizophrenics is called taraxein.

The individuals who received taraxein later developed "consistent basic alterations in behavior which fit the description of primary schizophrenic symptoms."

None of those receiving the control substances developed such changes in behavior.

The scientists also tested the effect of the taraxein on schizophrenic patients who were improved enough for their symptoms to abate. It had a much more pronounced effect on them than on the normal persons who received taraxein. One schizophrenic patient in remission who received a strong dose developed a much more prolonged behavioral defect than did normal persons.

A small dose of taraxein which had very little effect on the non-schizophrenic subjects produced a very clear-cut psychotic reaction in the remitted patients.

The group who conducted the experiment were Drs. Byron E. Leach, biochemist, Sten Martens, foreign fellow of The Commonwealth Fund, and Charles Feigley, all of the Tulane University School of Medicine.

Atropine Treatment

➤ ATROPINE, the substance the oculist puts in your eyes to dilate the pupils for examination, is successfully used as treatment for the mentally ill, psychiatrists from the Northville State Hospital, Northville, Mich., reported.

The atropine, also known as a nerve-gas antidote, was injected in massive doses into selected patients. An altered state of consciousness was induced, during which the patient re-lived psychologically important events and conflicts in his life.

When he regained consciousness, these important experiences and their re-living were again forgotten, but much of the emotional pressure which had produced anxiety was relieved.

Of the selected patients reported, 50% improved so markedly they were able to resume their places in society. Another 25% were enough better so that they could lead a more satisfying life in the hospital and some of these could be expected to go home after a longer period of treatment. Only one percent became worse. None died.

Manic attacks are quickly and effectively ended with more regularity and success than with any other known treatment, the psychiatrists found.

Anxiety is important in indicating which patients will benefit from the atropine therapy. In general, it was stated, the greater the degree of anxiety the greater the extent of improvement that can be expected.

The atropine therapy was reported by Drs. Jacob J. Miller, Heinz H. Schwarz and Gordon R. Forrer.

Brain Abnormalities

➤ THE JUVENILE or youth under 25 who gets into trouble with the police or terrifies others may have a brain that is functioning abnormally.

His aggressive behavior may be the response of a disordered brain to the demands of interpersonal dynamics, Dr. Robert Cohn and Capt. John E. Nardini of the U. S. Naval Hospital in Bethesda, Md., told the Association.

The brain abnormality is one that may also cause epilepsy.

Following the discovery that individuals with certain behavioral disorders have a characteristic brain wave pattern with isolated short sequences of very slow waves from the occipital part of the brain, the Navy doctors studied 2,000 unselected hospital patients as they were admitted to the psychiatric service. The peculiar slow waves were found in 10%, or 200 cases.

Of the 200, 15%, or 30, had clearly defined convulsive disorders such as epilepsy and five percent had an abnormality that caused pressure on the brain. The rest had behavioral abnormalities.

Those who were between seven and 17 years old were unruly in school and play and failed to respect the rights of other people.

The older persons, between 17 and 25, were the ones who gave the trouble with aggression, truancy, drag racing, sex promiscuity and rebellion against authority.

Not all the delinquents among the patients studied showed the abnormal brain waves, the doctors pointed out, but in many cases the aggressive behavior was associated with the occipital slow waves indicating abnormal brain function.

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Advances in Psychiatry

(Continued from page 340)

➤ **YOUNG MEN** were literally driven out of their minds by isolation, similar to that used in brainwashing, in an experiment reported to the meeting.

In the experiment, conducted at Harvard Medical School, young men volunteers were kept confined to an iron lung for a maximum of 36 hours. No drugs were administered, but the volunteers lost track of time and saw brightly colored visions which sometimes terrified them.

The volunteer lay on his back in semi-darkness. Movement of his arms and legs was restricted. He could not see any part of his body—he could see nothing, in fact, but a small patch of ceiling directly overhead. He could hear nothing but the dull, monotonous sound of the respirator motor.

An observer stayed with him all the time but never spoke. He did, however, feed the volunteer and take care of all his bodily needs.

Most of the volunteers were unable to endure the experiment for the 36-hour maximum. It was impossible for them to concentrate and think clearly. A few became panic-stricken.

In general, the personality structure of the individual appeared to determine just what reaction he would have to the experience.

The experiment was conducted by Drs. Donald Wexler, assistant in psychiatry, Jack H. Mendelson and P. Herbert Leiderman, teaching fellows in psychiatry, and Philip Solomon, assistant clinical professor of psychiatry, all of Harvard Medical School.

Mentally Ill

➤ A **VERY SMALL** percentage of the mentally ill are getting treatment.

At least this seems to be indicated by a study of a small town.

Dr. William D. Longaker and Frank W. Young, research associates at Cornell University, described a study in which a probability sample of the whole population of a small town was surveyed for psychiatric symptoms. Health data were collected by questionnaires, interviews with local physicians and from hospital records.

Only two percent of those in the community who were found to have psychiatric symptoms had gone as patients to the one and only psychiatric clinic in the town.

Naturally, those who had sought treatment were more seriously ill than those who had not, but all those considered to be showing psychiatric symptoms had at least 10% impairment.

Science News Letter, June 1, 1957

MEDICINE

Gin and Tonic "Allergy"

➤ **THE RECENTLY POPULAR** drink, gin and tonic, can pack an awful wallop if you happen to be sensitive to quinine, Drs. Frederick G. Novy Jr. and Gordon R. Lamb, Oakland, Calif., report in the *Journal of the American Medical Association* (May 4).

Many people do not tolerate quinine and even small solutions of it can bring on headaches, deafness, dizziness, vomiting and most commonly skin eruptions.

One unwary drinker found himself at a cocktail party at which gin and tonic was the only drink served. Although he happened to know he was sensitive to quinine, he had five or six drinks over a three-hour period and ended up flat on his back in a hospital 48 hours later.

The gin and tonic drinker noticed a burning sensation in his hands, feet and groin two hours after the party. From then on the skin eruption progressed to nearly all of his body and when he was hospitalized his facial features had swollen beyond recognition.

Another man who had been drinking six to eight gin and tonics a day over a long period began to lose his hearing and notice strange sounds in his head. At first,

a brain tumor was suspected and it was thought surgery might be necessary. A general examination before the operation, though, revealed the patient's drinking habits and he was immediately taken off the drink. After that, all his symptoms disappeared.

The doctors suggest a change in the old saying of skin specialists "New drugs, new eruptions," by adding "New drinks, new eruptions."

Science News Letter, June 1, 1957

Do You Know?

In the atmosphere of *Saturn* clouds as large as the entire earth can be detected about once a decade.

More than 300 strains of *corn* from the far corners of the world have been gathered as possible sources of rust disease resistance for breeding into modern corn hybrids.

"Stormer Orbits" are the paths followed by streams of *charged particles* from the sun, which affect electrical communications.