PSYCHIATRY

Brain-Cutting Operation

Restoration to useful lives of more than 50% of patients with mental disease is accomplished by surgical procedure in which tissues are cut but not removed.

➤ MORE THAN HALF the patients with the mental disease, schizophrenia, who were treated by a brain-cutting operation are now leading useful lives and only 15% are still so sick they have to remain in a mental hospital, Dr. Walter Freeman and Dr. James W. Watts, of Washington, D. C., reported at the Philadelphia meeting of the American Psychiatric Association.

The patients in whom the operation has been successful have been "usefully occupied" for from six months to as long as seven years after the operation.

Prefrontal lobotomy is the technical name for this surgical procedure, in which the brain is cut but no part of it is removed.

"The prime factor in securing a good result," the Washington doctors report from their study of the patients, "is the degree of emotional tension still present at the time of operation. The battle is lost only when the patient stops fighting."

The operation may lead to the discovery of the mental and emotional processes that cause mental disease, in the opinion of Dr. J. A. Kindwall, of Wauwatosa, Wis., who, with Dr. David Cleveland, of Milwaukee, reported using the procedure in 15 cases.

The operation brings about a more profound change in a person than any other treatment hitherto used, "though not more profound than that wrought by the mental illness itself," Dr. Kindwall stated from his study of facts accumulated over the past few years.

"The patient after the operation is not the same person as before the mental illness," he said; "but he is usually happier, more out-going, and easier; often productive, sometimes even more productive than before."

The behavior pattern established in the brain by severe mental illness is changed by the operation, and anxiety, the most common factor in mental illness, is allayed. The results of the operation are said to be "encouraging to science in its thousand-year search for an understanding and a cure of insanity."

Science News Letter, May 20, 1944

Insulin Shock Treatment

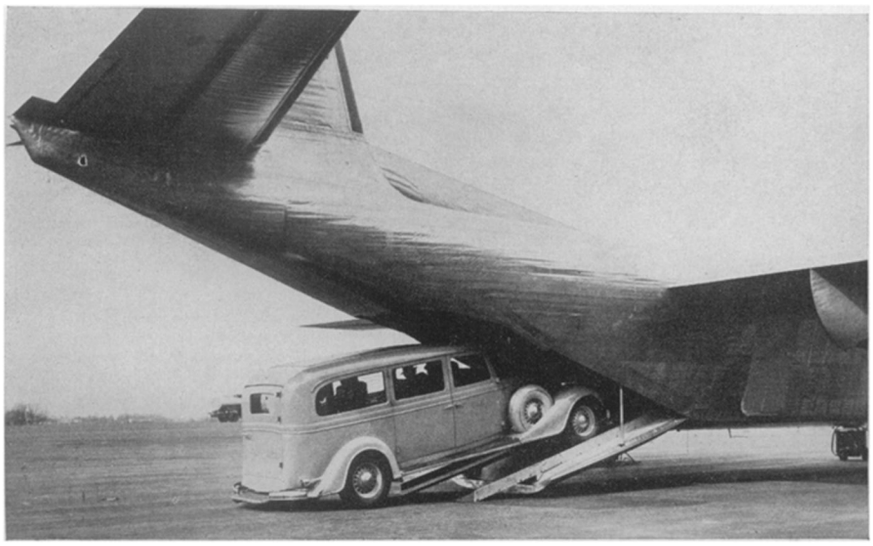
➤ SIGNIFICANT findings in a survey of seven years' experience with insulin shock treatment of some 700 patients with schizophrenia were reported by Dr. Alexander Gralnick, of Central Islip, N. Y., State Hospital, as follows:

Worthwhile results are obtained in cases of a duration up to two years. The treatment causes quicker remissions, or disappearance of symptoms. The age of the patient and the type of schizophrenia are not significant factors. The number of treatments given and the coma produced bear no constant relation to the results obtained. Women respond better than men. Although by no means as effective as the early enthusiastic reports led one to believe, the method has definite value, Dr. Gralnick declared.

It is not merely insulin treatment but the specific insulin treatment situation that counts, in his opinion. This explains why patients who have not been sick long do so well under the treatment. They are still close enough to reality to respond to the treatment situation, whereas patients who have been sick longer are so withdrawn from reality that the very same drug in the very same treatment situation can have little or no effect.

Further study will eventually show the meaning this particular treatment situation has for patients and may, he said, point the way to some other treatment situation that will help those ill too long to be helped by insulin shock.

Science News Letter, May 20, 1944



FLYING AMBULANCE—This is the first big aircraft made of stainless steel ever to be put into production. This official U. S. Navy photograph shows a car ambulance rolling up the ramp into the cargo compartment.

AERONAUTICS

Sky Giant of Steel Accepted by U. S. Navy

➤ THE FIRST large-sized airplane of stainless steel construction ever put into production has been accepted by the Navy after extensive trial board tests. It will be used to carry vital cargo to the fleet.

Named the "Conestoga," after the covered wagons of pioneer days, the RB1 Flight Ship was designed and is being produced by the Edward G. Budd Company of Philadelphia. It is the first airplane obtained by the Navy which was designed especially for cargo carrying. Other Navy cargo planes are adaptations of combat aircraft and passenger transports.

The "Conestoga" is a high-wing monoplane, 68 feet long, with 100-foot wingspread, and is powered by two Pratt and Whitney engines having a take-off power of 1,200 horsepower each. It has a cruising speed of 165 miles per hour and a flight range, with maximum

load of 1,700 miles. This may be extended to 2,500 miles by use of auxiliary fuel tanks.

Except for plywood doors and floor, the airplane is constructed entirely of stainless steel. The steel skin varies from .008-inch upward and is joined together by spot welding.

The airplane is built around a cargo compartment 25 feet long, 8 feet wide and 8 feet high. A cargo hatch opens at the rear, below the upswept tail. The hatch drops down to form a ramp over which the cargo may be loaded.

The cargo capacity is 10,400 pounds. The "Conestoga" will carry one ambulance truck or two jeeps. As a personnel transport it may be fitted with 24 seats. For evacuating wounded from combat areas, the new plane will be used as a flying ambulance. For such use it will carry one ambulance and eight stretchers, or 24 stretchers alone.

Paratroops may be launched simultaneously through doors on both sides of the fuselage, while at the same time troop supplies may be dropped through the rear hatch.

Radically different in appearance, the bulbous nose of the "Conestoga" slopes down to a slimmer mid-section, which in turn sweeps up again aft to the towering rudder.

Science News Letter, May 20, 1944

MEDICINE

Sulfa Drug for TB

Fatty acid sulfabenamide gives encouraging results in treatment of tuberculosis. It appears safe to use, but no claims of cure are warranted yet.

➤ "ENCOURAGING" results in treatment of tuberculosis with sulfabenamide, a special kind of sulfa drug, were reported by Dr. Richard Gubner, of the Long Island College of Medicine and the Equitable Life Assurance Society of the U. S., at the Atlantic City, N. J., meeting of the American Society for Clinical Investigation.

No conclusions are as yet warranted as to the curative value of this sulfa drug, Dr. Gubner warned.

No harmful, or toxic, effects resulted even when almost an ounce was given within 16 hours, or when given over a protracted period. One patient received over 2,000 grams (about five pounds) during a 16-month period without harm.

In five cases with advanced bilateral pulmonary tuberculosis, daily doses were given for an average period of 10 months. No harmful effects of any sort were observed and the patients gained, on the average, 35 pounds. At the same time tuberculosis germs disappeared from the sputum of all five patients and X-ray pictures of their lungs showed resolution, or healing.

Encouraging results have also been obtained with other patients treated for a shorter time.

Sulfabenamide differs greatly from other sulfa drugs now in use, Dr. Gubner pointed out. It has a fatty acid linked to it and is soluble in fatty materials. The waxy outer coat of the tuberculosis germ may act as a barrier to the penetration of other sulfa drugs, Dr. Gubner explained, whereas a fatty-acid sulfa drug such as sulfabenamide might get through this barrier to attack the germ.

The small dosage that can be used because the drug remains in the body for a long time is another of sulfabenamide's properties which Dr. Gubner calls "ideal" for protracted treatment such as is necessary in tuberculosis.

Science News Letter, May 20, 1944

Diet for War Wounded

➤ A HIGH-CALORIE diet, with lots of meat and other protein food, is needed by the wounded fighting man during convalescence to help him gain weight and rebuild his tissues rapidly, it appears from studies reported by Dr. J. S. L. Browne, Dr. Victor Schenker and Dr. J. A. F. Stevenson, of McGill University and the Royal Victoria Hospital, Montreal, at the meeting.

After burns, fractures, wounds, operations and the like, the normal grown man goes into a state of negative nitrogen balance, that is, he loses more nitrogen from his body than he takes in in his food. This means he is using up his body tissues instead of rebuilding them.

This condition, which may last from five to 45 days, has been noted before. However, it is followed, the Montreal scientists discovered, by a period of positive nitrogen balance in which the nitrogen from food is more readily retained by patients recovering from injury than by normal persons.

This state of positive nitrogen balance, however, is easily upset. Wheeling around in a wheel chair for the first time or a fatiguing procedure such as having a cast changed during early convalescence lead to increased nitrogen output and a more negative nitrogen balance.

At the height of the early period of negative nitrogen balance, feeding protein up to about three and one-half ounces (2,000 calories) daily does not overcome the difficulty, practically the entire nitrogen content of the protein food being excreted on the same day. The nitrogen from plasma transfused

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