

MEDICINE

Frontal Lobotomy Changes

Real physical changes occur after controversial frontal lobotomy operation on mentally ill persons, California doctors find.

► IMPROVEMENTS DERIVED from the controversial frontal lobotomy operation for persons with serious mental illness can be attributed to real physical changes rather than to psychological factors.

This was indicated in a report of University of California psychiatrists and surgeons to the California Medical Association.

One school of medical opinion has maintained that emotional shock, fear and intimidation are potent psychological factors entering into improvements achieved by the operation.

The procedure is used in patients who are greatly disturbed, very often in patients who are dangerous to themselves or others. It involves severing the fibers connecting the frontal brain lobes to the thalamus, another section of the brain, which controls the emotions. When the thalamus stops receiving messages, the emotional responses are greatly decreased.

To settle the controversy over the source of improvements, the California physicians divided a random group of 33 patients selected for the operation into two groups. One group received a bilateral lobotomy—the fibers of both frontal lobes were severed. The other group received a unilateral operation, with the fibers of just one lobe being cut.

At the end of six months all patients were examined by the psychiatrists, who at the time were not informed by the surgeons which patients had received which operation. It turned out that 11 out of 16

(68.8%) who received the bilateral operation were judged to be benefited; and 3 of 17 (17.6%) with the unilateral lobotomy were helped.

The 14 patients who had received the partial operation and were judged to be unimproved then had surgery to sever the fibers on the other side of the brain, thus giving a complete lobotomy. Beneficial results occurred in 11 (78.6%).

The scientists said this showed the benefits of the operation are more than merely psychic, that the complete operation is better than the partial one, and that it is an effective procedure in selected patients with chronic mental illness.

The scientists are Drs. Alexander Simon, Lester H. Margolis, Karl M. Bowman, and John E. Adams.

Science News Letter, June 2, 1951

INVENTION

Better Impregnation Process Forces Fluids into Cells

► FLUID COMPOSITIONS are forced into the innermost cells in porous material by a combination of a vacuum impregnation process and heat in an invention which brought patent 2,554,254 to Herbert M. Kroft, Baltimore, Md. Patent rights are assigned to Westinghouse Electric Corporation, East Pittsburgh, Pa. The process is particularly suitable in thoroughly saturating the fibrous insulation in electric coils with an insulating varnish.

In this process, as in other vacuum processes, the coils are placed in a chamber and the air, moisture and other volatiles removed, even from the tiny spaces within them. Then they are flooded with the insulating varnish and high pressure applied to drive the material into interior cells. In this new process, infra-red radiation supplies a temperature during the process of about 80 degrees Centigrade. The result is a complete impregnation.

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Question Box

AERONAUTICS

How does the new type radar track planes? p. 342.

ASTRONOMY

How small are the meteors to be photographed with the new meteor camera? p. 339.

INVENTION

How has the housewife's burden of a heavy iron been eased? p. 343.

MEDICINE

What is the leading cause of death for those in the age group 15 to 35? p. 341.

What is the new, life-saving use of cortisone? p. 351.

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METEOROLOGY

What recent discovery has dampened hopes for artificial rainmaking? p. 341.

PHYSICS

How are rocket aimers reminded that the earth turns? p. 338.

How is the Yo-Yo helping to teach physics? p. 351.

RADIO

How can those on the fringe areas for television reception receive better pictures? p. 345.

ZOOLOGY

How can black frogs be made to turn white? p. 338.