PSYCHIATRY

More or Less Shock?

Psychiatrists report success with new shock techniques for treatment of mentally ill. "Photo-shock" and strong and light electrical doses are among methods tested.

➤ NEW AND, it is hoped, better ways of shocking mentally sick minds back to health were reported at the meeting of the American Psychiatric Association in Atlantic City.

Some, such as Dr. Bernard C. Glueck Jr. and associates of Ossining, N. Y., think more intensive treatment with conventional electroshock gives better results.

They have been giving three "grand mal," or very strong convulsions, daily. This is continued until the patient has gone back to infantile behavior with abnormal neurological signs. Recovery from this state takes about three weeks. During this period many of the serious emotional conflicts involved in the illness may be uncovered.

A "significant finding" is the continued improvement in adjustment these patients make as the years go by. After five years Dr. Glueck found 18 of 34 recovered or much improved, 10 somewhat improved and six unimproved. This, he said, is a much better response than from other forms of organic, or shock, treatment. Associated in this work with Dr. Glueck were Drs. Harry Reiss and Louis E. Bernard.

Going in another direction with shock treatment, Dr. Joseph Epstein of New York is reporting good results, without the danger of broken bones or the after effect of disturbed memory and confusion, from his Monopolar method of treatment Fractions of the amount of electric current used in bipolar electroshock accomplish the result because, Dr. Epstein explains, the current is made to penetrate deeply and selectively into the brain area the psychiatrist thinks needs the shock stimulation.

Instead of electric current, a flashing light is used for "photo-shock" treatment by Drs. George A. Ulett and Kathleen Smith at Washington University School of Medicine, St. Louis. Dr. Goldine Gleser of Cincinnati worked with them.

The flashing light shock is given after patients have had injected into their veins the drug, Azozol.

This treatment was given to 21 patients acutely ill with depression or schizophrenia. Results were compared with those in 21 similar patients given routine hospital care, another similar group given electroshock, and still another group given less intensive "photostimulation," in which smaller quantities of the drug were used and the light flashes were interrupted oftener.

Photo-shock and electroshock gave better results than either photostimulation or routine hospital care. More than half the patients given photo-shock were home and engaged in their normal occupations three and six months after the treatment.

Electroshock can help some severely sick patients who "get stuck" in non-constructive or disruptive persistent activity during intensive psychiatric treatment, Drs. John D. Patton and Lewis B. Hill of Sheppard and Enoch Pratt Hospital, Towson, Md., report.

The periods of getting stuck in treatment come when the patients have reached the point where they cannot stand any further breaking down of the faulty, or crazy as some might say, defenses they have built against a world or life situation they fear. They react with violence or confusion or repeated denials and defiance or insist on dwelling on delusions.

At this point the appropriate amount of electroshock interrupts these refractory patterns and lets the patient again gain help from psychiatric treatment.

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PHYSICS

Split-Second Life of Heavy Meson Varies

➤ UNSTABLE PARTICLES known as heavy mesons, whose existence is measured in billionths of a second, can be divided into two groups on the basis of their lifetimes, Dr. George T. Reynolds of Princeton University's Palmer Physical Laboratory reported to the American Physical Society meeting in Washington.

Resulting from very high energy nuclear smash-ups, the unstable particles are observed in cloud chambers at Echo Lake, Colo., at an altitude of 10,600 feet. Dr. Reynolds presented the first positive evidence that these particles could be divided into sub-classes according to their lifetimes.

One group of particles, called K mu's, lives only eight-billionths of a second, Princeton scientists have found. Another class, the theta charged particle, decays with a lifetime of about five ten-billionths of a second.

The particles are studied in photographs made of tracks they leave in the supersaturated water vapor of cloud chambers. Paths are marked by condensed droplets.

Members of the Princeton group making the measurements, besides Dr. Reynolds, included Drs. J. Bullam, H. Arnold, S. B. Treiman, R. R. Rau and A. L. Hodson.

New things scientists are learning about the group of particles called K-mesons used to change from month to month, but now they are different from week to week, Dr. Maurice M. Shapiro of the Naval Research Laboratory, Washington, reported.

One of the K particles, a positive tau meson, left a history of four disintegrations in photographic emulsions flown high above the equator.

Not only is the birth and death of this tau meson recorded, Dr. Shapiro said, "but also the birth and death of its pion (a light-weight unstable particle) children, its muon (a different light-weight unstable particle) grandchildren, and the birth of its great grandchildren—the electron offspring of the muons."

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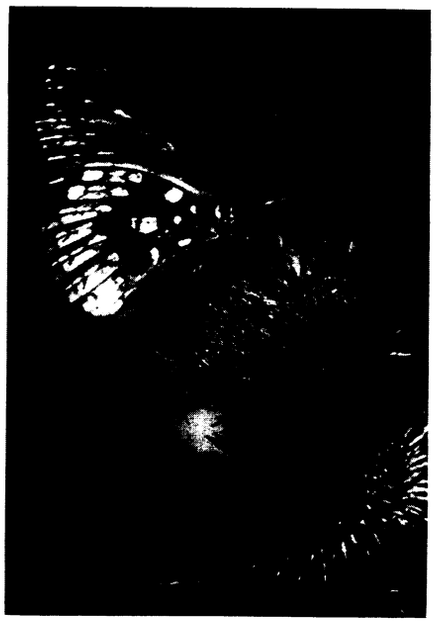

BUTTERFLY REPAST — In an unusual closeup of a common sight, a Great Spangled Fritillary is shown perched on a thistle, one of many kinds of flowers it visits, avid for nectar and moisture.

GENERAL SCIENCE

Mechanical Brain Wins Top Science Fair Award

➤ THE MECHANICAL brain that 16-year-old Rosemary Patricia Och of Bayley Ellard High School, Madison, N. J., created won for Miss Och one of the top awards at the National Science Fair in Cleveland.

The awards were annuonced by Watson Davis, director of SCIENCE SERVICE, which administers Science Clubs of America and the National Science Fair.

Exhibits in the Sixth National Science Fair, held from May 12 to 14, were of such excellence that 30 additional awards of $25 each were made.

The top awards consist of $125 in scientific books and equipment of the winners' choosing. Besides Miss Ochs the following won these top awards:

Johanna Hackman, 17, Radford (Va.) High School; Robert Scott Dunning, 17, Norview High School, Norfolk, Va.; and Vladimir Vadim Baicher, 17, Pasadena (Calif.) High School.

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