

## Multiple-Monitored Electroconvulsive Therapy Held Safe

*International Medical News Service*

MIAMI BEACH — Multiple monitored electroconvulsive treatment appears to be a safe, effective procedure for use in patients with depressive psychosis and acute schizophrenia who do not respond to psychotropic drugs, Dr. Charles Goldfarb said at the annual meeting of the American Psychiatric Association.

The procedure, which consists of the administration of multiple grand mal seizures at one or more treatment sessions, monitored on EEG and ECG, should be used in more psychiatric facilities, said Dr. Goldfarb, department of psychiatry, New Jersey Medical School, Newark.

It can provide improvement in a patient after 1 day, shortens the hospital stay, reduces treatment cost, and "allows for maximal efficient use of a small psychiatric inpatient facility." Multiple monitored electroconvulsive treatment (MMECT) reduces the severity and duration of memory loss and other iatrogenic organ effects of electroconvulsive treatment, Dr. Goldfarb said.

As many as 18 MMECT treatments can be given at the same session

*(Continued on page 38)*

## More Use Advised of Multiple-Monitored Electroconvulsive Therapy for Psychosis

*(Continued from page 2)*

"without deleterious effect," he continued.

Satisfactory remissions were achieved with use of MMECT in four psychotic patients at the Adult Community Mental Health Center of the Jersey City (N.J.) Medical Center, reported Dr. Goldfarb, associate director of psychiatry at the center.

The decision to use the procedure was made after unsuccessful trials with psychotropic drugs on two patients with agitated, depressive psychosis and two with acute, catatonic schizophrenia.

The patients were prepared for the treatment with thiopental and succinylcholine anesthesia with intubation and oxygenation given by anesthesiologists in the center's recovery room.

Seven grand mal seizures were given over a 25-minute period to the two agitated, depressed patients, and the agitation and depression cleared up the same day. Within 6-7 days after treatment the patients' confusion, memory loss, euphoria, lability of mood, and decreased judgment had also cleared up, he said.

The two were inpatients for 1 week, had partial hospitalization for 1 month, and outpatient care for another 2 months. They were then dis-

charged and had maintained a good clinical remission.

A greater exposure to MMECT was required for the two acute, catatonic schizophrenic patients. A total of 40 grand mal seizures were given on 4 consecutive days in 35-minute periods to one of the patients, who was hyperkinetic and assaultive. A total of 35 seizures were given in 60-minute periods on 2 consecutive days—17 the first day and 18 the second—to the other patient, who was in a hypokinetic, stuporous state.

Both catatonic patients showed remission after the course of MMECT was completed. They were discharged 2-3 weeks later without signs of organic effects from the treatment, were being followed in the center's outpatient department, and had no evidence of secondary symptoms, Dr. Goldfarb said.

The total number of patients hospitalized at the center in the first year was 490.

Only four received electroconvulsive treatment and this was by the MMECT method.

Other investigators have also reported that the use of MMECT is safer and more expedient than conventional electroconvulsive treatment, and have cited similar advantages for it, Dr. Goldfarb said.

No. 298

Friday, May 14, 11:00 a.m.

USE OF MULTIPLE MONITORED ELECTROCONVULSIVE  
TREATMENT

Charles Goldfarb, M.D. (F), *Associate Director, Department of Psychiatry,  
Jersey City Medical Center, New Jersey*

**SUMMARY:**

Since the late 1950's some patients have been given several Electro-Convulsive Therapy (ECT) several times in the course of a day. This was primarily called regressive ECT. Investigators in Oregon in the 1960's began to work with the use of multiple ECT with equipment that will monitor the EEG and EKG. Their feeling was that with good anesthesia, muscle relaxation, and oxygenation, an entire course of ECT can be given in one sitting "or lying" with complete safety. Such a regime shortens patient hospital stay, provides improvement after one day, and is much cheaper in cost to the patient. Blacy and Gowing wrote of this approach in 1966. They also elicited a "fit switch" which was defined as a mechanism; that is, a neurophysiological abrupt termination of the seizure. They felt this was an endpoint to ECT use.

At the new Adult Community Mental Health Center (ACMHC) of Jersey City Medical Center (JCMC) which opened in March 1974, we were faced with vast psychiatric problems in a large population that hitherto was sent to a State hospital seventy-five miles away. Approximately 1000/1200 patients were sent yearly. The fifteen bed inpatient unit had to provide clinical services to reduce this number of state hospitalizations as quickly and efficaciously as possible. Many of our very psychotic patients who could not be contained in partial hospitalization programs suffered from agitated depressive states or acute catatonic states. Most clinicians agree that these patients show the most spectacular improvement with ECT. As a result, after unsuccessful trials with antidepressants and phenothiazines, it was decided to use multiple monitored ECT (MMECT). EEG and EKG monitoring was utilized with pentothal and succinyl choline anesthesia. Intubation and full oxygenation was delivered by our anesthesiologists. Four patients were selected for this MMECT approach; two with agitated depressive psychosis and the remainder with acute catatonic schizophrenia.

For the depressed patients, seven grand mal given in one day over a twenty-five minute period cleared up the depressive symptoms. Confusion, memory loss, euphoria, and other signs of acute organicity cleared within one week. As a result, hospitalization duration was one week. Satisfactory results persisted during partial hospitalization and outpatient follow-up for three months. After this, both patients were discharged and have maintained a good clinical remission.

For the acute catatonic schizophrenic patients, the MMECT required was a total of forty grand mal treatments given on four consecutive days in the first patient and a total of thirty-five grand mal seizures given on two consecutive days in the second patient. The time required was between thirty-five and sixty minutes per each MMECT. Both patients have had satisfactory remissions and were discharged two to three weeks after completion of MMECT and are currently followed in our outpatient department. Unlike Blacy and Gowing, not one of the four patients showed a fit-switch on the EEG tracing. This paper is presented to show the advantages of Multiple Monitored Electro-Convulsive Therapy in a community where severe psychopathology is abundant, allowing for the most efficient use of an Adult Community Mental Health Center with a limited bed capacity.

This technique permits for more community treatment and avoids transfer to a distant State hospital.

lessness, slurred speech, and tremors. Until the 1940s between 10 and 15 percent of people institutionalized in psychiatric facilities bore this diagnosis. Syn. dementia paralytica, general paralysis of the insane, general paresis, parietic psychosis.

**Parkinsonlike symptoms.** See *extrapyramidal syndrome*.

**parole.** Conditional release from a psychiatric institution; out-patient supervision and treatment are required. Individuals who do not cooperate as out-patients may be reinstitutionalized without a court order. Syn. convalescent leave. Comp. *discharge, leave*.

**perseveration.** Psychiatric symptom: repetition or continuance of a specific line of thought or activity in response to external stimuli, e.g., repeating the answer to a previous question in response to new questions. See *stereotypy*.

**personality disorder.** A functional mental illness involving a wide variety of symptoms. Personality disorder may be distinguished from neurosis and psychosis according to the following formulation: A neurotic person thinks that he has a problem and is sufficiently disturbed by it to seek psychiatric treatment. A psychotic person doesn't think he has a problem, but other people in the community believe he has one and are sufficiently disturbed by this perception to have him undergo psychiatric treatment even against his will. Someone with a personality disorder may recognize that he has a problem, but is not sufficiently disturbed by it to seek psychiatric treatment; nor is the problem sufficiently disturbing to others to cause them to seek treatment for him. Types include:

- antisocial personality. Disloyal, irresponsible, selfish, unprincipled. Syn. psychopathic personality, sociopathic personality (commonly used terms in prison psychiatry). See *psychopath*.
- asthenic personality. *Anhedonic*, fatigued, unemotional.
- cyclothymic personality. Given to having alternating periods of *depression* and *mania*.
- explosive personality. Given to outbursts or rage and *aggressiveness*.
- hysterical personality. Dependent, excitable, manipulative, overly dramatic, sentimental, vain, weepy.
- inadequate personality. Dull, socially inept and ineffective, unaggressive.
- obsessive compulsive personality. Conformist, frugal, inhibited, orderly, perfectionist.
- paranoid personality. Fault finding, jealous, self-important, suspicious.
- passive-aggressive personality. Hostile, mocking, sulky, reluctant to attack others openly, but doing so indirectly through noncooperation and *abstractionism*.
- schizoid personality. Given to daydreaming, isolated, seclusive, shy.

**personal unconscious, the.** See *psyche*.

**phobia.** 1. Psychiatric symptom: exaggerated, unrealistic fear, often of a specific object or situation.

2. A type of *neurosis*.

3. When used as a suffix, phobia means "fear of," as in acrophobia (heights) and claustrophobia (being closed in). Comp. *mania* (third definition).

**photoshock.** A somatic treatment in psychiatry involving the production of a convulsion in a sedated subject by means of exposure to intermittent photic stimulation (15 flashes of intense light per second) from a stroboscope. Introduced in the 1940s, photoshock was never used widely and is not now used at all.

**physical treatment.** Syn. *somatic treatment*.

**placebo.** A preparation with no medicinal properties, such as a sugar pill, administered to satisfy a person's request for treatment. The placebo effect (or faith-healing aspect) of a particular medical or psychiatric procedure refers to its power to make someone actually feel better solely on the basis of that person's belief that it will do so.

**polypharmacy.** A type of drug treatment in psychiatry involving the use of a number of psychoactive drugs simultaneously.

**postpartum psychosis.** A type of *psychotic \*organic brain syndrome* affecting women following childbirth. Syn. puerperal psychosis. See *postpartum \*depression*.

**posturing.** Psychiatric symptom: holding one's body in a self-determined fixed position, e.g., fetuslike or with arms outstretched, for a long period of time; a form of *cataplexy*.

**praecox feeling.** The psychiatrist's intuitive feeling that it is not possible to establish emotional contact or *rapport* with the subject. The concept was introduced in 1956 by H. C. Rumke, who claimed that it was the only valid diagnostic criterion in schizophrenia. Later, in a study of 1000 psychiatrists, 54 percent agreed that the praecox feeling was a reliable test in diagnosing schizophrenia.<sup>16</sup>

**premedication.** In psychiatry drugs used prior to the administration of shock treatment to reduce certain risks inherent in the procedure. However, the drugs themselves carry certain other risks, not excluding death:<sup>39</sup> e.g., "The objection to the use of *muscle relaxants* is that, although decreasing the rate of fracture complication, they unquestionably increase the chance of fatal accident."<sup>40</sup> Although anesthetics reduce pain during the procedure, they increase the subject's convulsive threshold, thereby requiring (in the case of ECT) a larger amount of current to produce the convulsion,<sup>41</sup> which in turn increases the risk of brain damage. See *muscle relaxant drug*.

**pressured speech.** Psychiatric symptom: speech so rapid that the words become jumbled and unintelligible. Comp. *flight of ideas*.

**prognosis.** Prediction of the course, duration, and outcome of a disease.

**projection.** *Defense mechanism*: the ascription to others of one's own unacknowledged desires or faults.

**proxy consent.** Consent by a third party, such as a conservator, guardian, or responsible relative, to administer a medical or psychiatric procedure. Syn. *substitute consent*. Proxy consent is contrasted with direct consent, which refers to consent by the person for whom the procedure has been proposed. Comp. *informed consent*.

react at all when spoken to or pricked with a needle, but resists violently if you try to take her hand or to pour water on her. She obeys no kind of orders. . . . Generally she calls out disconnected words, having absolutely no relation to her position, loudly and quite senselessly: 'Pupp—bups—moll—you know—temperature—fire insurance—water—Weinheim—water—creolin—God damn you!—twenty marks—say, what—water—creolin—don't look in—twenty marks—say, what is—away with it—thank you very much—twenty marks—say what you want—God damn you!—water—not I—twenty marks—so—God damn you!—dear child—so. . . .'"<sup>54</sup>



#### References

1. Blueler, E. (1930). Quoted in L. E. Hinsie and R. J. Campbell, *Psychiatric Dictionary*, 4th ed. New York: Oxford Univ. Press, 1970, p. 517.
2. Meduna, L. J. *Carbon Dioxide Therapy: A Neurophysiologic Treatment of Nervous Disorders*. Toronto: Ryerson Press, 1950.
3. Brussel, J. A., and Cantzlaar, G. L. *The Layman's Dictionary of Psychiatry*. New York: Barnes & Noble, 1967, p. 43.
4. Karen, R. Dr. LaVerne's magic gas. *New York*, July 4, 1977, pp. 43-50.
5. The Committee on Nomenclature and Statistics of the American Psychiatric Association. *Diagnostic and Statistical Manual Mental Disorders (DSM-II)*, 2d ed, Washington, D. C.: American Psychiatric Association, 1968, p. 50.
6. *DSM II*, p. 50.
7. *DSM II*, pp. 50-51.
8. Forns, B. J., and Litwack, T. R. Psychiatry and the presumption of expertise: flipping coins in the courtroom. *Calif. L. Rev.*, 62:693-752 (May), 1974.
9. Farrar, C. B. (1951). Quoted in Hinsie and Campbell, *Psychiatric Dictionary* (see note 1), p. 192.
10. Szasz, T. S. *Heresies*. Garden City, N. Y.: Doubleday Anchor, 1976, p. 145.
11. Kraepelin, E. *One Hundred Years of Psychiatry* (1917). New York: Citadel, 1962, p. 62.
12. Kraepelin, *One Hundred Years*, pp. 87-88.
13. Rush, B. *Medical Inquiries and Observations upon the Diseases of the Mind* (1812). Quoted in W. Overholser, Cox and Trotter—two psychiatric precursors of Benjamin Rush. *Amer. J. Psychiat.*, 110:825 (May), 1954.
14. Szasz, T. S. *The Second Sin*. Garden City, N. Y.: Doubleday Anchor, 1973, p. 71.
15. Thomas, C. L., ed. *Tauber's Cyclopedic Medical Dictionary*, 12th ed. Philadelphia: Davis, 1973, p. N-23.
16. Kraepelin, E. *Dementia Praecox and Paraphrenia* (1919). Huntington, N. Y.: Robert E. Krieger, 1971, p. 33.
17. Haslam, J. (1798). Quoted in E. J. Stainbrook and E. H. Santos, *A history of psychiatric nursing in the nineteenth century: part II. nursing procedures*. *J. Hist. Med.*, 4:68 (Winter), 1949.
18. Tuke, H. Observations on the treatment of insanity, when refusal of food is a prominent symptom. *J. Ment. Sci.*, 4:213 (Oct.), 1857.
19. Laing, R. D. *The Divided Self*. Baltimore: Penguin, 1965, p. 164.
20. Esquirol, J. *Mental Maladies: A Treatise on Insanity* (1845). In T. Shipley, ed., *Classics in Psychology*. New York: Philosophical Library, 1961, p. 359.
21. Farmer, F. *Will There Really Be a Morning?* New York: Putnam, 1973, p. 199.
22. Talbot, J. H., and Tillotson, K. J. The effects of cold on mental disorders: a study of ten patients suffering from schizophrenia and treated with hypothermia. *Dis. Nerv. Syst.*, 2:116-126 (Apr.), 1941. Also see M. B. Ray, *Doctors of the Mind*. Boston: Little, Brown, 1942, pp. 245-249.
23. Winslow, F. (1857). Quoted in Stainbrook and Santos, *A history of psychiatric nursing* (see note 17), p. 65.
24. Moreau, J. (1854). Quoted in Stainbrook and Santos, *A history of psychiatric nursing*, p. 66.
25. Cammer, L. *Up from Depression*. New York: Pocket Books, 1971, p. 159.
26. See generally T. S. Szasz, *Psychiatry and the criminal law* (pt. 3), *Law, Liberty, and Psychiatry*. New York: Macmillan, 1963, pp. 89-146.
27. Szasz, T. S. *The Manufacture of Madness*. New York: Harper & Row, 1970, pp. xvii, xxv.
28. Kanno, C. K., and Glasscote, R. M. *Private Psychiatric Hospitals*. Washington, D. C.: The Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, 1966, p. 42.
29. United States Public Health Service Shock Therapy Survey (Oct. 1941). Quoted in F. G. Ebaugh, *A review of the drastic shock therapies in the treatment of the psychoses*. *Annals Internat. Med.*, 18:295 (Mar.), 1943.
30. Szasz, *The Manufacture of Madness*, p. xvi.
31. Rifkin, A., Quitkin, F., Carrillo, C., and Klein, D. F. Very high dosage fluphenazine for nonchronic treatment-refractory patients. *Arch. Gen. Psychiat.*, 25:398-403 (Nov.), 1971.
32. See generally T. S. Szasz, *The Myth of Mental Illness*, 2d ed., rev. New York: Harper & Row, 1974.
33. Kraepelin, *Dementia Praecox*, p. 108.
34. *DSM-II*, p. 39.
35. Dr. Gregory (c.1765). Quoted in Overholser, *Two psychiatric precursors* (see note 13), p. 825.
36. Virtually all the information in this section is drawn from *DSM-II*, pp. 20-32.
37. Kraepelin, *Dementia Praecox*, p. 21.
38. Lehman, H. E. Clinical features of schizophrenia. In A. M. Freedman and H. I. Kaplan, eds., *Comprehensive Textbook of Psychiatry*. Baltimore: Williams & Wilkins, 1967, p. 642.
39. Kalinowsky, L. B. The danger of various types of medication during electric convulsive therapy (Letter to editor). *Amer. J. Psychiat.*, 112:745-746 (Mar.), 1956.
40. Ulett, G. A. *A Synopsis of Contemporary Psychiatry*. St. Louis: Mosby, 1972, p. 284.
41. Saltzman, C., Konikov, W., and Relyea, R. P. Modification of electroshock therapy by succinylcholine chloride. *Dis. Nerv. Syst.*, 16:154 (May), 1955.
42. See generally C. G. Jung, *Archetypes of the Collective Unconscious* (1934). In R. F. C. Hull, trans. *The Collected Works of C. G. Jung*, vol. 9, pt. I. New York: Bollingen Series XX, Pantheon, 1959.
43. Klein, F. C. Doctors boost efforts to treat mental illness through brain surgery. *Wall Street J.*, Apr. 29, 1971, p. 18.
44. McGrath, P. G. The mentally abnormal offender. *The Medico-Legal J.*, 41(pt.1):10, 1973.
45. Kraepelin, E. *Lectures on Clinical Psychiatry*. T. Johnstone, ed. New York: William Wood, 1913, p. 30.
46. Hinsie and Campbell, *Psychiatric Dictionary* (see note 1), p. 682.
47. For a modern report of castration practices in Norway, see J. Bremer, (Medical Director, Gaustad Mental Hospital, Oslo), *Asexualization: A Follow-up Study of 244 Cases*. New York: Macmillan, 1959.
48. Kanno and Glasscote, *Private Psychiatric Hospitals*, p. 42.
49. Polatin, P., and Philline, E. C. *How Psychiatry Helps*. New York: Harper & Brothers, 1949, pp. 150-151.
50. Myerson, A. Theory and principles of the "total push" method in the treatment of chronic schizophrenia. *Amer. J. Psychiat.*, 95:1197-1204 (Mar.), 1939.
51. See generally W. James, *The Varieties of Religious Experience* (1902). New York: Mentor, 1958.
52. Jung, C. G. *The Relations between the Ego and the Unconscious* (1916). In V. S. de Laszlo, ed., *The Basic Writings of C. G. Jung*. New York: Modern Library, 1959, p. 110.
53. Bleuler, E. *Dementia Praecox or the Group of Schizophrenia* (1911). In Shipley, *Classics in Psychology* (see note 20), p. 418.
54. Kraepelin, *Lectures on Clinical Psychiatry*, pp. 82-83.

## What It's Like

One patient said, "I dreamed I was on a roller coaster and the place where the roller coaster was, was in Hell."

HAMLIN A. STARKS, M.D. Subjective experiences in patients incident to insulin and metrazol therapy. *Psychiat. Quart.*, 12(4):699, 1938.

## Curare as a Muscle Relaxant

In 1938, as a result of a trying situation in clinical practice and a fortunate set of circumstances, I was able to discover the potential usefulness of curare. After coordinated research investigations between the pharmacologic department and clinical practice, we were able to introduce successfully into clinical medicine for the first time the drug, curare (Indian arrow poison). It was marketed as Intocostrin by E. R. Squibb Company, and first used to soften Metrazol convulsions and to prevent all the traumatic hazards of this therapy. As a safe, nontoxic, most powerful muscular relaxant it proved to be a necessary adjunct to safe convulsive shock therapy, both with Metrazol and electroshock.

ABRAM ELTING BENNETT, M.D. *Fifty Years in Neurology and Psychiatry*. New York: Intercontinental Medical Book Corp., 1972, p. 53.

## The Starving Patient

*The starving patient.* Before insulin shock treatment was developed, I and my co-workers were among the first psychiatrists to use small, subcoma doses of insulin to stimulate appetite and to promote weight gain. Such use of insulin has gone far to supplant the forced feeding of patients who eat little or nothing, patients with anorexia. This type of insulin therapy is still used and has proved valuable in hastening the recovery of undernourished psychoneurotic and psychotic patients.

BENNETT, *Fifty Years*, pp. 55-56.

## You Have Performed a Miracle

I had decided to use Metrazol convulsive shock on depressions because of the following observations. A 45-year-old female, in the hospital 143 days because of a severe agitated, suicidal depression, for two months had been mute and did not respond in any way. The family was finally forced to make arrangements for her commitment to a state hospital. I decided to try convulsive shock; after the first treatment the patient was responsive, and stated, "I feel I am coming to life." After the third treatment she stated, "I feel so good, I don't know what happened, but isn't it wonderful! I can talk and eat; you have performed a miracle." This was followed by the same type of improvement in 10 consecutive, chronically depressed pa-

tients who had been ill for many months and failed to respond to many other therapies. This was a most exciting therapeutic experience, as it was the first effective therapy for relieving all forms of depressive and manic illnesses.

BENNETT, *Fifty Years*, p. 91.

## Curing the Treatment

Just before [a] female patient received her last Metrazol convulsive shock treatment she pleaded with me beseechingly as I was about to give the intravenous injection, saying, "Doctor, is there no cure for this treatment?" Once a visiting doctor watching us give the Metrazol treatment asked if we ever had any incontinence with treatment. I replied, "Sometimes, in the doctor."

BENNETT, *Fifty Years*, p. 131.

## The Elixir of Life

To lament the times is a favorite habit with everybody these days; however justified this may be economically or internationally, it certainly does not apply medically, for medically speaking we are lucky to be alive. Never in the world's history have so many brilliant discoveries been made in such a short time. It is just on twenty years since I began my medical career; to mention just a few of the discoveries made since then, insulin has conquered diabetes, liver extract has conquered pernicious anemia, the sulphanilamides have conquered a variety of allied diseases. Worthy to rank with, if not above all these, is the use of "Cardiazol" [Metrazol] in psychiatry, for "Cardiazol" is the elixir of life to a hitherto doomed race.

BROUGHTON BARRY, M.D. The use of "Cardiazol" in psychiatry. *Med. J. Austral.*, Sept. 16, 1939, p. 430.

## Several Convulsions a Day

The optimum frequency of [electric shock] treatment is still a matter for debate. There is no doubt that twice a week is too seldom. Even with three times a week some patients give a definite impression of having "missed the boat," and there is no doubt that many patients benefit more if a convulsion is induced every day at least for the first week. The physical condition of each patient must, of course, be a guide to this, but it should be remembered that Fumarola [1939] has frequently induced several convulsions in a day, thus bringing the patient into a state of deep coma as in *status epilepticus* [rapid succession of epileptic attacks]. The whole course of treatment could thus be completed in a few days apparently without harm to the patient's body and perhaps with considerable saving to his pocket.

R. E. HEMPHILL, M.D., and W. GREY WALTER (England). The treatment of mental disorders by electrically induced convulsions. *J. Ment. Sci.*, 87:257 (Apr.), 1941.

one of earliest references in literature of shock I'm aware of