



Robert R. McElroy—Newsweek

Bolt to the brain: Patient receiving electroshock therapy in New York

Depression and Electroshock

Few of the techniques used to treat mental illness are quite so widely misunderstood as the electroshock therapy that Democratic Vice Presidential candidate Thomas Eagleton says he received in 1960 and 1966. The layman's misapprehension is understandable enough, for what electroshock does is send a 150-volt bolt of electricity into the center of the human brain; but to many psychiatrists, electroshock is one of the most effective techniques available to relieve that most common of mental ills, depression.

The procedure grew out of the insulin shock therapy devised in the late 1920s by Dr. Manfred Sakel of Vienna. Sakel found that patients given a sufficient amount of insulin to send them into convulsions—a common occurrence among diabetics who miscalculate their dosage—showed improvement in their mental states. Psychiatrists reasoned that it was the convulsion rather than the insulin itself that produced the improvement, and in 1937 two Italian investigators, Ugo Cerletti and Lucio Bini, began inducing convulsions with electric shock. The technique, usually referred to by professionals as electroconvulsive therapy (ECT), was introduced in the U.S. in 1942 by Dr. Lothar Kalinowsky of New York.

As practiced in those early days, electroshock had a decidedly medieval aura about it. Usually the patient was fully conscious when the shock was delivered, and four attendants had to hold him down to prevent his arms, legs or spine from being broken while he thrashed in the throes of muscular convulsions. Before treatment, he required curare to loosen up his muscles and, after treatment, strychnine to start him breathing. "It was," notes Dr. Robert W. Gibson,

medical director of the Sheppard and Enoch Pratt Hospital in Towson, Md., "an awesome kind of thing."

The fractures and occasional deaths that occurred during this kind of ECT were largely responsible for giving the technique a bad name. But by the late 1950s the treatment had become much less dangerous. Nowadays, the patient receives a mild anesthetic and muscle-relaxing drugs that make the convulsions barely perceptible. Sponge-rubber electrodes are placed like headphones above and slightly in front of each ear. The physician throws a switch on a control box that sends the shock into the patient's brain for no more than one second. Two or three minutes later, the patient wakes up relaxed and slightly euphoric and is able to get up and walk away. For mild to moderate depression, six to eight treatments, spaced a day apart, are usually required.

Although fractures rarely occur any more, patients usually experience a loss of memory for one or two hours after each treatment. And some psychiatrists think that impairment of varying degrees may occur in patients who require 100 or more shocks. To minimize this risk, notes Dr. Richard Abrams of New York Medical College, some therapists apply the electrodes only to one side of the head. This prevents the shock from passing through verbal and speech memory areas. But while this kind of shock seems to produce less memory loss, it does not seem to be as effective as conventional electroshock.

No one knows just how electroshock really works. "A nervous discharge explodes all over the brain, not unlike the explosion of an epileptic attack," says Dr. Henry Brill, director of Pilgrim State

Hospital in Brentwood, N.Y. "We presume that rather massive chemical changes occur in the brain cells themselves." One of the more popular theories is that the electric shock increases the levels of serotonin and norepinephrine—both electrochemical transmitters of impulses between nerve cells—that seem to be related to mood.

A History of Melancholy

Last week, in the wake of the Eagleton disclosures, some historically minded psychiatrists noted that fits of depression have been common to many leaders and political figures. These include not only such tyrants as Ivan the Terrible but also Abraham Lincoln, with his recurrent bouts of melancholia, and Winston Churchill, who referred to his attacks as "the black dog" of depression and said that when this mood was upon him, he sometimes wondered whether it would not be better to hurl himself in front of a train and end it all.

In the U.S. alone some 4 to 8 million persons suffer from depression in any given year, according to National Institute of Mental Health estimates, and about 250,000 of them are hospitalized. But there are no precise statistics on just how many receive shock treatments, since the practice varies widely. Many of the more analytically oriented psychiatrists, of course, totally disapprove of any physical approach to mental illness, including both drugs and ECT; and, in general, the use of electroshock has diminished since the development of effective anti-depressant drugs in the late 1950s. Some psychiatrists use ECT only in severely depressed, suicidal patients who failed to respond to medication. But others use it routinely, even in mild anxiety states, if drugs don't help.

The major advantage of electroshock is that it takes speedy effect. While drugs may take weeks or even months to elevate a patient's mood, ECT works almost immediately. "Where there is pressure of time, where the patient must get back to work, or if the patient is suicidal," says Abrams, "ECT is most effective." Private hospitals tend to employ ECT more often than state institutions because they often treat depression on an ambulatory basis. "The patient," says Brill, "stays a couple of hours and goes home, or even back to work."

Because of the differences of opinion among psychiatrists as to when to use ECT, the fact that a person has undergone electroshock therapy says nothing about the full nature of his problem. But the psychiatrists note that bouts of depression usually become progressively severe and more frequent with age. And on one point the psychiatrists seem to agree: electroshock, like the anti-depressive drugs, affords only temporary relief for depression; it is definitely not a cure. "Nobody knows the full answer," says Dr. Irving Taylor, director of Taylor Manor Hospital in Ellicott City, Md. "We're all just treating symptoms."