

Electroconvulsive therapy

Should this treatment be used for depression?

pro It's safe and effective

BY PRAFUL CHANDARANA, MD

Depression is the most commonly encountered psychiatric disorder in clinical practice. The Epidemiologic Catchment Area study — an extensive community survey — estimated a one-month prevalence of 1.6% and a lifetime rate of 4.4%. According to a World Health Organization forecast, the incidence of this condition is increasing so fast that by the year 2020 it will likely rank as the second most serious illness in terms of the global burden of disease. About 15% of patients with primary affective disorders commit suicide and, for those who survive, their life span is shorter and morbidity rates are high. Depression as a comorbidity intensifies the suffering of physically ill patients. These individuals generally have poor outcomes — postmyocardial patients who are depressed have a much higher mortality rate compared to their nondepressed counterparts. Further, depressed medically ill patients are high utilizers of the healthcare system and present a special challenge during their rehabilitative treatment.

Many patients respond poorly to antidepressants, even when they're combined with proven forms of effective psychotherapy. For others who are acutely suicidal or suffer from rapid and unrelenting decline, electroconvulsive therapy (ECT) is their only life-saving option.

Studies show success

Numerous trials have proven ECT to be effective in various types of depression with particular success in treating delusional forms and those with catatonic features. As maintenance therapy, it can also prevent relapse

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and recurrence. Although its use in other psychiatric conditions isn't widespread, it's known to be beneficial in severe forms of mania and schizophrenia that are unresponsive to conventional pharmacotherapy. Studies provide evidence that the modern form of ECT is safe and effective in depressed patients with medical illnesses, and the same results have been observed in the elderly. In effect, ECT has broad applications and benefits that have been proven through numerous randomized controlled trials and many years of clinical experience. Unfortunately, dramatization of ECT by the popular press and movie industry portrays it as a risky and, at times, punitive mode of treatment. This myth is further perpetuated by radical patient rights groups who protest regularly at psychiatric conferences.

Significant progress has been made since the introduction of ECT in 1938 by Cereletti and Binni. Patients are carefully selected and prepared. Modern ECT machines efficiently deliver accurate doses of electrical current while patients are closely monitored in a safe environment. Contemporary methods of anesthesia attenuate the motor aspects of the seizure. These measures have dramatically reduced the rates of complications and mortality. Developments and observations of the effects of ECT on brain activity have set the stage for a novel and less interventionist method of treatment referred to as transcranial magnetic stimulation. This innovative approach, a natural outgrowth of ECT, will revolutionize the management of depressive disorders in the future.

Despite public skepticism and opposition from various quarters, ECT has prevailed for over half a century as an acceptable form of treatment for certain psychiatric disorders. This is testimony to its safety and efficacy, as well as to the accomplishments of its proponents.



con *There's a lack of evidence for benefit*

BY BRAD HAGEN, RN, PhD

ECT advocates assert that it's safe and effective, despite considerable evidence that casts doubts on these claims. While ECT has come a long way since its first use, there are still many reasons for skepticism.

ECT is so commonplace that many forget what it actually is — the use of electricity to induce a grand mal epileptic seizure. The unorthodoxy of this treatment should give us pause. Most of us avoid direct contact with electricity and, with the exception of cardioversion — which requires less voltage and has clear justification for its application — shocking patients is generally considered illogical. Further, in neurology the accepted approach is to reduce, not induce multiple seizures.

Although numerous theories have emerged, there's still no sound physiologic explanation for why ECT might help in depression. Clear justifications are also lacking for why it's used in so many dissimilar conditions, such as depression, mania and schizophrenia. While studies find that 50 to 85% of patients claim ECT is helpful, this 'efficacy' is likely due to a powerful placebo effect. While antidepressants also demon-

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strate a high success rate, meta-analysis of drug studies show only an 18% improvement over placebo, and even less if active placebos (with side effects) are used. If a simple pill produces such a strong impact, consider the potential placebo effect of ECT with its electrodes, machines and intravenous devices. Some studies try to control for this by using sham ECT — administration of anesthetic, but no electric shock — but patients usually know which treatment they've received due to the presence of post-ECT headaches and amnesia.

Drawbacks are unsolved

Proponents cite studies that demonstrate ECT's ability to resolve symptoms of depression by 75-95%, but are less vocal about the remarkably high relapse rate. Further, 60 years of research has failed to show any benefit after four weeks post-treatment. ECT is also promoted as lifesaving for acutely suicidal patients. The majority of studies, however, report that it doesn't prevent suicide in depressed patients and in some cases may actually increase the risk — Ernest Hemingway claimed that ECT-related memory loss drove him to take his life.

Is ECT safe? If the same 100 to 450 volts (0.75-0.9 amps) were applied to the chest, the results would likely be fatal. When administered to the head, however, the mortality rate is very low. The two most common side effects associated with ECT — headaches and memory impairment — are usually transient. There are no reliable studies, however, on the long-term effects of repeated (maintenance) ECT, particularly among the elderly who are at greater risk for cardiac mortality and morbidity. Although contentious, it's also speculated that continuous use of ECT may cause brain damage.

Finally, if ECT were truly safe and effective, why isn't it used extensively? Less than 8% of all U.S. psychiatrists perform ECT, and a disproportionate number of them are men. ECT also isn't applied uniformly across all patient populations — elderly women tend to be a common target group. With the current lack of knowledge about its mode of action and clear evidence for its long-term benefit, we should be more skeptical and cautious about ECT use for the time being. pe

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