“Say, are you psychiatrists still using ECT?”

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Résumé

Des médecins de disciplines autres que la psychiatrie sont étonnés d’apprendre que les électrochocs sont encore répandus comme traitement sûr et utile contre les dépressions unipolaires et bipolaires graves. L’électrochoc consiste à faire passer un courant électrique au moyen d’électrodes fixées unilatéralement ou bilatéralement. Un traitement type comporte au total huit séances ou plus, administrées trois fois par semaine. Les effets secondaires sont minimes. Il ne faut pas considérer les électrochocs comme un traitement de dernier recours : c’est plutôt le traitement de choix chez les patients aux prises avec une dépression grave qui ne peuvent tolérer la pharmacothérapie ou qu’il est vital de faire réagir rapidement.

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PsYchiatrists are accustomed to the surprise that their colleagues in other disciplines sometimes express when they realize that electroconvulsive therapy (ECT) is still in common use. A few years ago an editorial in the New England Journal of Medicine was entitled “Electroconvulsive therapy — a modern medical procedure,” the word “modern” implying the need to justify a treatment that is 90% effective and almost 100% safe.1

The primary indication for ECT is major unipolar or bipolar depression. Its efficacy is directly proportional to the severity of illness, especially as indicated by changes in psychomotor rate, sleep, appetite, weight, libido and the capacity to experience pleasure.2 ECT is considered the treatment of choice for depression in the context of many neurologic and medical conditions, including Parkinson’s disease, stroke and pregnancy. ECT is also efficacious in the treatment of acute mania and, in some cases, schizophrenia; it is relatively inefficacious, however, in the treatment of depressive episodes in patients with primary personality disorders.3 It should be the first choice for patients who cannot tolerate pharmacotherapy and for those, such as actively suicidal patients, in whom a rapid response is needed.

In practice, ECT is most often used in patients who have not responded to treatment with 1 or more antidepressants. Contrary to this practice, the results of a multicentre study indicate that the outcome of ECT in medication-resistant patients may be inferior to that observed in patients without medication resistance.4 However, a very recent study by Lam and his colleagues at the University of British Columbia, which involved a greater number of patients at a single centre, found a very high ECT response rate regardless of whether there was any history of medication resistance.5 Although the issue is not resolved as to whether antidepressant resistance predicts inferior ECT response, there is no logical reason to consider ECT only after antidepressants have failed. In fact, informed consent requires that depressed patients be informed of ECT as one of the available therapeutic options.

Nondominant unilateral ECT (uECT), in which 1 electrode is placed on the nondominant temple and a second electrode is placed on the vertex, produces less memory impairment in the first 2 months after treatment than bilateral ECT (bECT), in which 1 electrode is placed on each temple. Unfortunately, 20% of patients do not respond to uECT. Most of these patients will still respond to bECT.6 Many clinicians start patients with uECT and switch to bECT if no response is evident by the fourth treatment. This often means “starting from scratch” in terms of the number of additional treatments needed to obtain a full response. More recent research confirms that bECT is more efficacious than...
ECT, in which treatment is given every 2 to 4 weeks, has been suggested as giving better protection against relapse than uECT, even when there is an improvement in many other aspects of cognitive function.10

Considerable improvements have been made in the delivery of ECT, but the mechanism of its action remains unclear.9 It is known that successful ECT correlates with many of the neurotransmitter and receptor changes in the catecholamine and serotonin systems in the hypothalamus and left frontal cortex (thought to be key sites in the pathophysiology of depression) that occur with antidepressants. Whether such changes are integral to the therapeutic process remains to be determined. What is clear is that variables in stimulus intensity, seizure threshold and seizure duration have an important impact on the efficacy and side effects of ECT. The production of bilateral generalized seizures appears necessary but not sufficient to achieve an antidepressant effect. Stimulation at or barely above the seizure threshold is less therapeutic than stimulation at higher levels, even though the seizure duration itself may be the same in both instances.9 This is especially true for uECT. Because patients vary markedly in seizure threshold, and because this threshold is generally lower in uECT than in bECT, individualizing the “dose” of electrical stimulation is important. The threshold can be determined empirically for each patient at the time of the first uECT. In bECT, a formula based on the patient’s age is usually evident by the fourth treatment. Because the benefits of ECT in acute depression persist for only 2 to 3 months after completion of the course,7 the risk of relapse is high unless adequate maintenance therapy is provided. Full-dose antidepressant therapy after successful ECT is a common strategy but may not provide adequate protection against relapse in patients who did not respond well to antidepressant therapy before ECT:8 Maintenance ECT, in which treatment is given every 2 to 4 weeks, has been suggested as giving better protection against relapse in such patients.5 Randomized controlled trials to compare ECT with antidepressant therapy as maintenance strategies are needed.

Although many patients experience headache and jaw stiffness immediately after ECT sessions, amnesia and confusion are more significant potential side effects.6 Most patients who receive bECT experience permanent memory gaps for some events occurring during and up to a few weeks after a course of ECT, as well as shorter periods of retrograde amnesia. Confusion and disorientation are less common, as is delirious euphoria (as distinguished from mania). All of these side effects are far less common with uECT. Most patients, including those treated with bECT, recover normal memory and other cognitive functions within weeks of receiving ECT.10 However, a few patients (especially those with pronounced global cognitive impairment before ECT) demonstrate persistent retrograde amnesia after ECT, even when there is an improvement in many other aspects of cognitive function.10
References

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