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Letter to the Editor

Electrode placement in electroconvulsive therapy – bilateral is still the ‘gold standard’ for some patients

We read with interest the systematic review and meta-analysis of bitemporal *v.* high-dose right unilateral electroconvulsive therapy (ECT) by Kolshus *et al.* (2016). While we agree with most of their findings, we would like to add an important interpretation of their results, as it relates to clinical practice: while the group data suggest an equivalent overall antidepressant efficacy rate for the two techniques, at the individual patient level, the approximately half of all patients who do not remit with right unilateral electrode placement should be crossed over to bilateral (Sackeim *et al.* 1993, 2000). While the randomized trial data for this assertion are few, crossover to bilateral electrode placement is a nearly ubiquitous clinical practice that has been employed successfully for many thousands of patients worldwide (Lapidus & Kellner, 2011).

We believe it is misleading, and a misunderstanding of research data, to assert that both types of treatment are equally efficacious. For some patients, the effect of right unilateral electrode placement in ECT is very weak, even when administered at adequately high stimulus doses (McCall *et al.* 2000). Unfortunately, at the current level of clinical and scientific understanding, it is impossible to predict which patient will respond to which technique.

What about the corollary? Might there be patients who do not respond to bilateral electrode placement who should be crossed over to right unilateral after four or five treatments? We believe this question has never been asked previously, and agree that it is highly counterintuitive. It is analogous to asking whether a lower dose of a medication might be stronger than a higher dose. But it does need to be asked, because of the possibility that the techniques may differ in more fundamental ways than ‘strength’. It is within the realm of possibility that lateralized brain abnormalities (e.g. abnormal connectivity) in depression might be corrected by right unilateral electrode placement, while bilateral electrode placement might either not reverse them, or even make them worse (Abbott *et al.* 2014; Leaver *et al.* 2016). Unless there are clinical trial

data to address this possibility (and it is unlikely that there will ever be), it will remain a matter of conjecture.

We certainly agree that there is no ‘‘gold standard’’ form of ECT that suits every patient’s need’, and strongly advise that practitioners continue to offer patients bilateral electrode placement when right unilateral is inadequately effective. Meta-analytic data are helpful and important for revealing population trends; clinical judgment must still be exercised for optimum individual patient care.

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