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Letter to the Editor

Acute followed by continuation right unilateral ultrabrief ECT for 12 months in first episode schizophrenia-a single case report

Dear Editor,

The role of electroconvulsive therapy (ECT) in the management of early schizophrenia in combination with non-clozapine antipsychotics is controversial. ECT is seldom used in young people and is even more rarely used in the treatment of schizophrenia among this population (Duffett et al., 1995), although it has been shown that a shorter duration of an episode from the onset of schizophrenia is a good prognostic indicator for response to ECT (Dodwell and Goldberg, 1989). However clinical situations may arise where this occurs.

Ultrabrief ECT with 0.3 ms pulse widths coupled with right unilateral ECT at 6 times threshold stimulus dose, an optimal stimulus paradigm, has reached mainstream in the management of severe depression (Mayur et al., 2013; Kellner et al, 2016). Current evidence on its effectiveness in schizophrenia are case reports limited to acute phase of treatment (Cupina et al., 2013; Cotovio et al., 2017; Mayur and Chakos, 2018). The following case describes the effectiveness of ultrabrief pulse width ECT in schizophrenia both in the acute and continuation phases of ECT along with concomitant antipsychotic medications.

AB a 17-year-old male was admitted with a 2-month history of catatonic symptoms. Organic factors were not detected upon neurological examination. CT brain, MRI brain, EEG and thyroid functions were normal. He was commenced on lorazepam oral/IM with only partial resolution of symptoms and a decision was made to commence ECT due to the ongoing catatonic features with prominent mutism, rigidity, waxy flexibility, staring and significant withdrawal. Later, after partial resolution of catatonic symptoms following the commencement of ultrabrief right unilateral ECT, he reported continuous loud auditory hallucinations ('he is fat', 'your family and mother will be killed'), delusions of persecution that he would be harmed and his mother would also be killed by nurses in the inpatient unit and thought broadcasting ('my thoughts are known to those around me and can think the same thing I think') despite being on olanzapine 20 mg per day along with ziprasidone 80 mg BD.

ECT was commenced with d'Elia right unilateral electrode placement using the MECTA 5000Q device (Lake Osvego, Ore) with pulse amplitude setting of 800 mA. At session 1, threshold was empirically determined. A total of 37 ECT sessions spread across 55 weeks was administered. The first 17 sessions were the acute phase treatment at three ECT sessions per week followed by a further 20 continuation sessions. The continuation ECT was gradually spread out from once a week (sessions 18–22), once in 2 weeks (sessions 22–24), once in 3 weeks (sessions 25–29), once in 4 weeks (sessions 30–35) and once in 6 weeks (sessions 36–37). From session 21 onwards, pulse width was augmented from 0.3 ms to 0.5 ms.

AB had a complete and stable resolution of catatonic symptoms after the acute phase of ECT. During most of the continuation phase, he reported attenuated psychotic symptoms and had better quality of life. Immediately following each ECT session in the continuation phase he would report that the 'constant roar' of the auditory hallucinations have become a 'gentler wave that is less loud and less frequent'. The persecutory delusions ebbed gradually but remained in the form of transient fears of being watched by people. Thought broadcast completely stopped during the months leading up to the cessation of ECT. He passed first year at University. He was able to attend and enjoy a major Australian sporting event in a different city. At home, he enjoyed solving word and pattern puzzles and watching TV-serials along with is parents. AB was not keen on clozapine due to concerns about weight gain. The dose of olanzapine was reduced to 10 mg nocte along with ziprasidone 80 mg BD during the past 3 months prior to cessation of ECT. The patient and his family decided not to proceed with further ECT treatments. They were satisfied with the treatment response that was present thus far. He did not complain of any cognitive or other adverse effects that influenced the decision to discontinue ECT. Subsequently he was followed up at 6 weekly intervals for 3 months. He continued to maintain a stable response.

This study reiterates findings that presence of catatonic symptoms prompts an earlier referral to ECT among adolescents (Bloch et al., 2008). The finding also supports a recent report which observed that if chosen wisely in certain clinical contexts of schizophrenia, which in this case was 'catatonia', the benefits are more likely to be observed (Mitra and Thirthalli, 2018). The decision to continue ECT along with antipsychotics beyond the usual acute phase and its 'take up' by the patient and his family was prompted by not only a robust clinical response but also by the absence of obvious cognitive side effects. This is not surprising since families report a greater degree of trust and satisfaction with ECT as their children improved with it (Grover et al., 2017). It was encouraging to note a steady stretching of ECT to greater inter-ECT intervals, even though the pulse width changed from 0.3 ms to 0.5 ms and therefore the absolute dose of stimulation increased by 60% (from 115.2 mC to 190 mC) during most of the continuation phase. This 'augmentation' perhaps helped maintain a better clinical response over longer intervals and requires further examination in larger samples of patients. A longer length of ECT not only prevented relapse for more than a year but also allowed a significant reduction in the dose of olanzapine and may augur well for the overall course and outcome for this young man.

In conclusion, this case illustrates the successful and safe use of shorter pulse width (0.3 ms, 0.5 ms) right unilateral ECT for just more than12 months in an adolescent with early onset schizophrenia initially with catatonic symptoms.

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