Efficacious retrial of electroconvulsive therapy (ECT) after a prolonged seizure in an older adult with a history of post ECT confusion

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Background

Electroconvulsive therapy(ECT) is an FDA approved class II device for severe major depressive episodes in patients 13 and older who are treatment resistant or require a rapid response[1]. However, the literature regarding retrial of ECT in older adults who have had prolonged seizures with postictal confusion is incomplete.

Introduction

This is a case of a 77-year-old woman with treatment resistant geriatric major depression who was admitted psychiatrically for the 5th time in 1.5 years. She had a history of intensive psychotherapy and psychotropic medication trials with poor efficacy. She had a history of adverse response to electroconvulsive therapy (ECT) including a prolonged seizure and postictal confusion during her 3rd hospitalization. At her 5th hospitalization, due to poor response to routine psychiatric treatment, ECT was recommended. We discuss challenges in pursuing ECT and the outcome of a retrial of an acute ECT series, and it's contraindications in geriatric depression.

ECT Contraindications & Adverse Reactions

There is no absolute contraindication to ECT

However, there are relative contraindications that pertain to a patient's ability to undergo treatment and anesthesia. The most notable comorbidities pertain to cognition, cardiovascular, cerebral, pulmonary, dental[8], and musculoskeletal etiologies.

Adverse events

Headache, myalgia and cognitive changes are most common.

Cognitive effects are typically experienced as confusion which typically resolve in less than one hour and retrograde anemia concerning more recent impersonal facts. It is Important to consider the patient's age, gray or white matter disease, and/or dementia which are comorbid factors that can increase possible post-ECT confusion.

Third Lifetime Admission

Chief Complaint: "I wanted to shoot myself"

Admitted involuntarily to the Older Adult inpatient Unit

History of Present Illness: Worsening depression and anxiety with suicidal ideation since the death of her husband 3 years prior.

Patient trialed on medication, however was found to be treatment refractory.

ECT started due to treatment resistance. No medication changes during ECT treatments.

Fifth Lifetime Admission

Chief Complaint: "I don't want to wake up"

Admitted involuntarily to the Older Adult inpatient Unit

History of Present Illness: Severe anxious depression not responding to outpatient treatment, decline of activities of daily living, and suicidal ideation.

Patient was found to have a poor response to medication and cognitive decline per family.

Neuropsychological testing revealed mild cognitive impairment, likely secondary to severe depression.

ECT recommended to patient and family with discussion of risks vs benefits.

Maintenance ECT & Follow Up

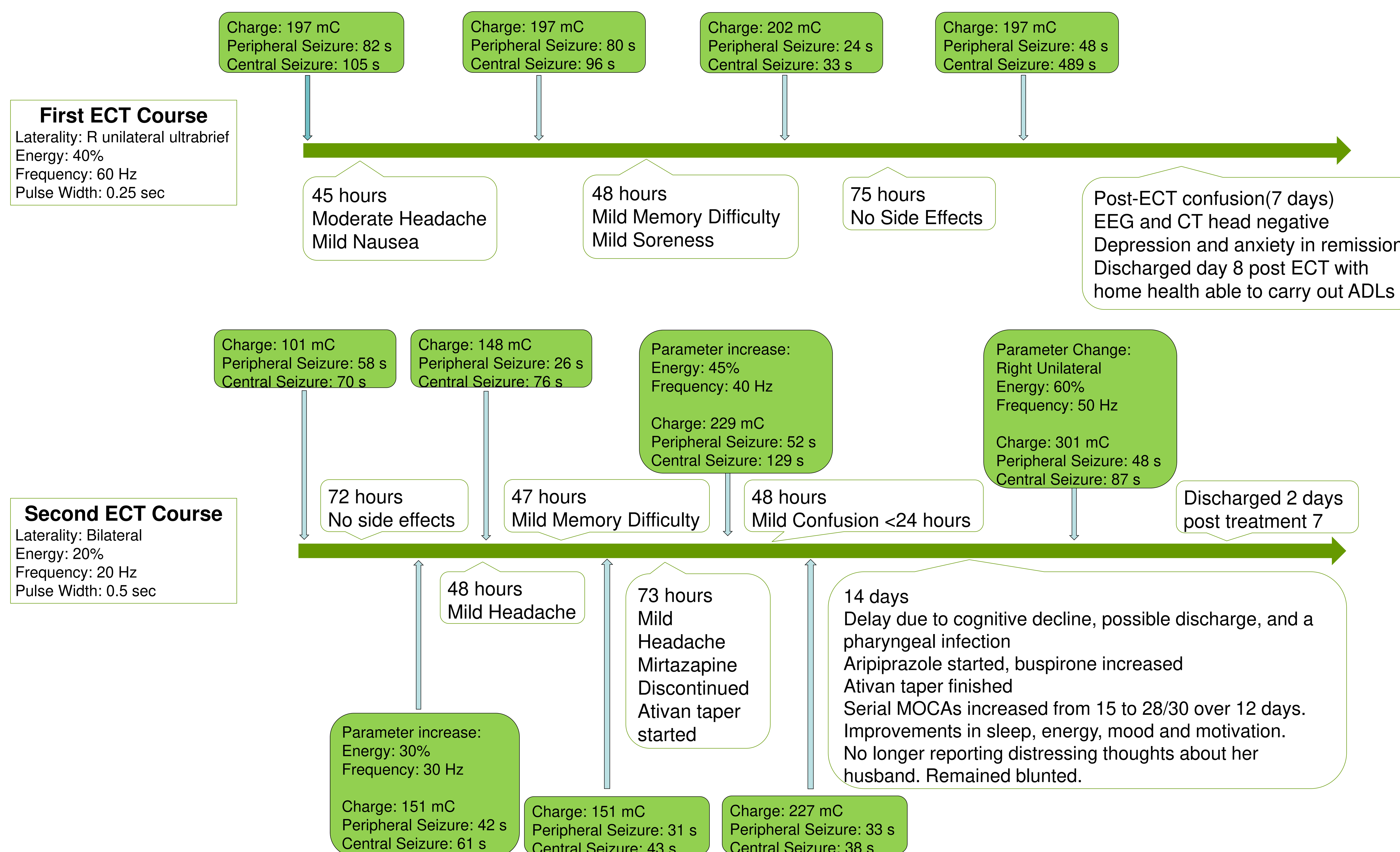
After discharge, patient received 4 right unilateral ECT weekly sessions and is now on monthly ECTs, last given February 2021

PHQ-9 and GAD-7 scores did not change during her inpatient treatments remaining at 27 and 21, respectively. However, at her first follow up treatment both scores were 14. These continued to decline the 9 and 7, respectively, at her next maintenance therapy.

Patient has remained euthymic and linear.

Outpatient therapy and reports low depression and anxiety, good sleep, good appetite, and denies suicidal thoughts.

Patient overall thinks that ECT has been helpful for her.



Discussion

This case demonstrates appropriateness of ECT retrial in older patients who experience a prolonged seizure and temporary postictal confusion. This patient benefited from ECT more than any previous pharmacological treatment and did not experience prolonged seizures on retrial. It is important to have detailed discussion about benefits and risks of ECT with patient's and families. However, it is important to personalize the treatment for the family, as this case occurred during the COVID-19 pandemic where institutional policy did not allow family visitation. Frequent contact with family over the phone, asking feedback about family conversation with patient, assessing cognitive functioning daily with bedside testing can be supportive of the ECT treatment plan.

Clinical Pearls

(1) While the APA quotes no absolute contraindications to ECT and further research has demonstrated that prolonged seizures or acute cognitive impairment are not relative contraindications either, the patient's history and past experiences with treatment are an important part of developing a treatment plan.

(2) We present this case to demonstrate efficacy of retrial of ECT in older adults who experience both a prolonged seizure and negative cognitive effects can be an appropriate treatment plan.

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