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Electroconvulsive therapy for refractory neuropsychiatric symptoms in frontotemporal dementia: a case report and literature review

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Introduction: Neuropsychiatric symptoms are common in dementia and contribute significantly to functional decline, institutionalisation, and caregiver burden. Symptoms such as depression, apathy, and oppositional behaviour can greatly affect quality of life and clinical outcomes. Electroconvulsive therapy (ECT), traditionally used for severe mood disorders, has emerged as a potential option for managing refractory behavioural and affective symptoms in dementia, especially when medications fail or are poorly tolerated.

Objectives: To describe a clinical case of an elderly patient with frontotemporal dementia and severe food refusal who was successfully treated with ECT, and to discuss the therapeutic implications supported by a literature review.

Methods: Case report and brief literature review on the use of ECT for neuropsychiatric symptoms in dementia.

Results: An 87-year-old woman with a history of frontotemporal dementia was admitted to an internal medicine ward following a fall that resulted in cranioencephalic trauma. A psychiatric consultation was requested due to persistent refusal to engage in rehabilitation and maintain adequate oral intake. On initial assessment, the patient presented with a depressed mood and oppositional behavior. Antidepressant therapy was initiated but subsequently refused by the patient. Given the progressive deterioration of her nutritional status and continued resistance to treatment, electroconvulsive therapy (ECT) was proposed as a therapeutic intervention. The patient underwent nine sessions of bifrontotemporal ECT, which were well tolerated. Gradual clinical improvement was observed, including restoration of oral intake, improvement in mood, and increased cooperation with care. No significant cognitive or somatic adverse effects were noted. The patient was discharged with sustained clinical improvement.

Conclusions: ECT appears to be a safe and effective therapeutic alternative for the management of refractory neuropsychiatric symptoms in patients with dementia, particularly in cases where pharmacological treatment is contraindicated, poorly tolerated, or ineffective, and where functional or nutritional decline poses additional clinical risks. Although clinical outcomes in this and other reports are encouraging, the current evidence base remains limited. Further well-designed studies are essential to establish robust and high-quality evidence supporting the use of ECT in this population. ECT should be integrated within an interdisciplinary therapeutic framework, ensuring close cognitive and somatic monitoring to optimise safety and efficacy.

Disclosure of Interest: None Declared

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Targeting Anhedonia in Depression: findings from a Randomized Single-Blind Comparison of arTMS and Standard rTMS

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Introduction: Anhedonia, defined as the diminished ability to experience pleasure, is a core symptom of Depression and is associated with significant functional impairment, increased suicidality, and poor treatment outcomes (Rizvi et al., *Neurosci Biobehav Rev* 2016;65:21-35). This symptom often persists even after mood symptoms remit, suggesting that anhedonia may represent a distinct therapeutic target with unique clinical and neurobiological characteristics (Cooper et al., *Front Psychiatry* 2018;9:513). For this reason, it has more recently become a focus of novel therapeutic strategies, including repetitive Transcranial Magnetic Stimulation (rTMS), which has shown preliminary efficacy in modulating reward-related symptoms (Fukuda et al., *Brain Behav* 2021;11(9):e2329).

Objectives: This study compared the effects of accelerated repetitive Transcranial Magnetic Stimulation (arTMS) versus standard rTMS on anhedonia in inpatients with Major Depressive Episodes (MDEs), including both unipolar and bipolar depression. Accelerated rTMS, which delivers multiple sessions per day over a shorter period, reduces treatment duration and is emerging as an effective alternative to standard rTMS.

Methods: In a single-blind randomized design, 33 inpatients diagnosed with MDE were assigned to receive either arTMS (4 sessions/day for 5 days; n=18) or standard rTMS (1 session/day for 4 weeks; n=15). Due to 2 dropouts in the standard rTMS group, the final analysis included 18 patients in the arTMS group and 13 in the rTMS group. Anhedonia was assessed using Item 8 of the Montgomery-Åsberg Depression Rating Scale (MADRS) and Items 4 and 12 of the Beck Depression Inventory-II (BDI-II) at baseline, day 28, and day 56.

Results: At day 28, MADRS Item 8 scores decreased by 2.1 points in the arTMS group compared to 0.8 in the rTMS group (p=0.003); at day 56, reductions were 2.4 and 1.0, respectively (p=0.002). For BDI-II Item 4, reductions at day 56 were 1.3 in the arTMS group versus 0.7 in the rTMS group (p=0.008); for Item 12, 1.0 versus 0.4 (p=0.01). No significant differences in adverse events were observed between groups.

Conclusions: These preliminary findings suggest that arTMS may lead to faster and greater improvements in anhedonia symptoms compared to standard rTMS in inpatients with MDE, without compromising safety or tolerability. This supports the potential of arTMS as a promising intervention for persistent symptoms like anhedonia, which often remain refractory to conventional treatments. Further large-scale, controlled studies are needed to confirm these results and clarify the underlying neurobiological mechanisms, including modulation of reward and motivational neural networks.

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