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Discontinuation of maintenance electroconvulsive therapy: Lessons learned from the COVID-19 pandemic

Discontinuación de la terapia electroconvulsiva de mantenimiento: lecciones aprendidas de la pandemia COVID-19

Dear Editor,

The COVID-19 pandemic has raised serious concerns in all healthcare systems. Due to this exceptional situation, many aspects of regular medical practice have had to be reconsidered. Unfortunately, ECT and other medical services, labeled as ''non-urgent'' or ''non-essential'' and have been delayed.[1,2] Maintenance ECT (M-ECT) has been particularly affected: the time between treatments has been prolonged[1] or fully discontinued in many hospitals.[3–7] Literature on the outcome of patients discontinuing M-ECT is limited, but the data suggest high rates of relapse (44–50%), especially in the first year after discontinuation.[8,9]

In our hospital, ECT was halted completely on March 18, 2020, mainly due to the reassignment of anesthesiologists to the intensive care units. Normal activity was not resumed until May 8, 2020. At the time of cessation of ECT, 37 patients were on the ECT program, 33 of them receiving M-ECT. Our real-world prospective study aims to characterize the clinical outcome of these patients, from the time of the interruption of M-ECT until January 15, 2021, and to analyze the related cost–benefit ratio. Demographic, clinical and M-ECT data were recorded. A relapse was defined as the need for hospital admission, or the need for a new acute ECT course; M-ECT was also reestablished in the case of early signs of relapse. The study was approved by the Hospital Ethics Committee.

Descriptive and survival analysis were performed (a Kaplan–Meier to estimate the time until full clinical relapse or the occurrence of early signs of decompensation, and a univariate Cox analysis to identify potentially contributing factors). Variables that displayed significant associations were entered into a multivariate Cox regression model. A cost estimate was made, determining the economic ''savings'' in M-ECT sessions during the period in which ECT was not applied, the ''saved sessions'' in patients who to date have not restarted M-ECT as well as the cost in days of admission and the number of additional ECT sessions.

Nineteen of the 33 patients (57.6%) were female (with a mean age of 67.12 years (±12.1; 40–85)). Sixteen patients (48.5%) met criteria for major depressive disorder. The mean number of previous episodes in the last five years was 3.52 (±3.2). The mean duration of M-ECT was 41.78 months (±52.4; 1.45–273.1). Twenty-six patients (78.8%) were receiving M-ECT at a monthly frequency or higher at the time of treatment discontinuation. One of the patients on the M-ECT program died of COVID-19 in March 2020.

When the ECT program was resumed a risk-benefit analysis was made, prioritizing acute ECT. Regarding the clinical course of the 32 patients, 19 (59.4%) met criteria for relapse (eight patients (25%) need for hospital admission or a new acute ECT course) or experienced early signs of relapse and M-ECT was reestablished (11 patients, 34.4%). The mean time to relapse or the emergence of early signs of relapse was 88.84 days (±78.8; 61 median, 15–290). Furthermore, two patients preferred to restart M-ECT despite having no relapse symptoms. Finally, to date, 11 patients (34.4%) have opted not to restart M-ECT while awaiting the evolution of the pandemic, and are clinically stable. As of January 15, 2021, 62.5% of patients (20/32) had resumed M-ECT.

Seventeen of the 19 patients (89.47%) who relapsed or showed early signs of relapse did so in the first six months. In the univariate Cox analysis, patients with an interval between sessions at the time of discontinuation of less than one month showed a higher risk of clinical decompensation (HR, 7.43; 95% CI, 2.60–21.19; $p = 0.000$). The number of previous episodes in the last five years also influenced clinical decompensation (HR, 3.81; 95% CI, 1.41–10.27; $p = 0.008$). Other variables (age, sex, diagnosis, duration of M-ECT) did not appear to influence clinical decompensation. In the multivariate Cox regression model, only the interval between sessions at time of discontinuation emerged as a predictor of clinical decompensation.

The cost of M-ECT session is estimated at 197.15 euros. During the period when M-ECT was not available, it was estimated that 80 M-ECT sessions were not held, with a ''saving'' of 15772 euros. In patients in whom M-ECT was not resumed, when ECT was available once again, 16 sessions were not performed, with a ''saving'' of 3154.4 euros. Furthermore, 11 patients have not restarted M-ECT to date, with an additional ''saving'' of 73 sessions (14391.95 euros). The cost of admissions and acute ECT courses was 63594.61 euros. Thus, the discontinuation of the M-ECT program resulted in an additional cost of 30276.26 euros.

The COVID-19 pandemic health crisis led to the complete cancelation of the M-ECT program. More than half of the patients on this program have since relapsed or developed early signs of relapse, and required admission to an acute hospitalization unit, the initiation of an acute ECT course, or re-inclusion on the M-ECT program. Negative clinical outcomes significantly affected patients who received M-ECT more frequently, i.e., with an interval between sessions of less than one month. In fact, all stabilized patients were receiving M-ECT at a frequency higher than a month. The results of this and previous studies indicate the high risk of relapse in patients discontinuing M-ECT.[8,9] Likewise, the discontinuation of the M-ECT program increased economic costs, deriving from the need for hospitalization and for new acute courses of ECT. The results highlight the importance of this treatment and therefore M-ECT must be taken into account in future contingency plans. If M-ECT delivery is impossible, a close monitoring protocol should be established with the capability for conducting rescue sessions.[3] It is also very important to intensify communication between patients, families and therapists in order to maximize early detection of relapse.[7] Finally, whether or not we are able to develop prioritization criteria, each case must be approached on an individual basis.

The inability to maintain ECT programs may significantly increase the risk of relapse, the rates of hospitalization, and also incurs high healthcare costs. Healthcare managers and providers should be reminded that ECT is an essential treatment. If access to ECT cannot be guaranteed in all settings, centralized care should be considered.

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Conflict of interest

The authors state they have no conflicts of interest to declare.

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