

# Far From an Elective Procedure

## *Electroconvulsive Therapy and Autism in the Era of COVID-19*

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The novel coronavirus was reported at the end of 2019 in Wuhan, China, and rapidly spread worldwide with nearly 9 million reported cases and nearly half a million deaths at the time of writing, immeasurable toll on health care systems and vast economic consequence.<sup>1</sup> COVID-19 was recognized early to be particularly deadly to those older than 65 years, with other risk factors, including diabetes, hypertension, cardiovascular or pulmonary disease, and obesity.<sup>2</sup> In the United States, racial disparities were readily apparent, with higher mortality in African-Americans and Hispanics highlighting longstanding health care inequities.<sup>3</sup> COVID-19 also wrought havoc on nursing homes across the world, as well as residential facilities housing individuals with a range of disabilities.<sup>4,5</sup> Health care systems were abruptly forced into emergency mode, with nonemergent medical interventions suspended. Electroconvulsive therapy (ECT) did not escape this fate, with multiple international reports documenting marked reduction in ongoing acute and maintenance ECT services.<sup>6–8</sup>

ECT practitioners have rightly decried the callous and clinically inaccurate classification of ECT as an elective procedure and rallied support for patients with intractable depressive, psychotic, and catatonic pathology.<sup>6,9</sup> The plight of ECT patients with autism has been similarly accentuated by COVID-19, with potentially disastrous, yet avoidable consequence.

### CASE EXAMPLES

1. The patient is a 27-year-old White man with autism and intellectual disability who had remained in excellent physical health until age 17 years when he developed multiple catatonic symptoms, including intricate posturing involving his arms, legs and torso, statuesque rigidity, grimacing, agitated repetitive movements and stereotypies, unusual mannerisms, staring, negativism, decreased functional communication, and intermittent diaphoresis and flushing. He further demonstrated global slowing, hesitation in all movements, including feeding, as well as such severe prompt dependence that he required multiple reinforcers to be incorporated into his daily behavioral programming to allow him to complete any activity, including intake of adequate liquids and solid food. The patient was treated for 5 years with lorazepam in dosages up to 18.5 mg daily with moderate improvement in catatonic
2. The patient is a 20-year-old White man with autism and intellectual disability who began ECT at age 11 years for bipolar affective disorder and catatonic agitation, including aggressive and self-injurious behaviors devoid of operant function which had led to countless failed psychotropic and behavioral interventions, tissue injury, and many months of hospitalization. The patient's acute ECT course has been previously published, and 6 years of his maintenance ECT course included in a case series.<sup>10,11</sup> The patient had continued with maintenance ECT every 9 to 10 days for the past 6 years with excellent overall sustained affective stability, nearly absent challenging behaviors, and very active participation in community programming, including completing his bar mitzvah. M-ECT frequency was not extended beyond every 9 to 10 days given consistent insidious evidence of symptom return by day 7 or day 8. In early March 2020, the patient had received 377 total ECTs. The patient's mother was notified the day before his scheduled m-ECT that the ECT facility would be closed due to COVID-19 as the virus progressed across Pennsylvania. An open in-state ECT provider needed to be found immediately, given the stay-at-home and quarantine orders for those traveling

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outside of their home state. The patient's mother was fortunately able to locate an alternative provider, thus avoiding any psychiatric decompensation. The patient received 3 ECTs at the alternative facility until his usual ECT provider was able to reopen services

The usage of ECT in patients with autism, intellectual and neurodevelopmental for affective, psychotic, and catatonic pathology, inclusive of intractable self-injurious and aggressive behaviors, has increased significantly in the past 2 decades, with multiple reports documenting rapid and robust clinical benefit sustained over extended periods with ongoing maintenance ECT.<sup>10–13</sup> A recent meta-analysis reviewed 12 retrospective and 11 prospective reports on continuation and maintenance ECT in typically developing adult patients and demonstrated clear benefit not only in terms of reduced symptom recurrence but also decreased hospital admissions and inpatient days, as well as improved patient functioning.<sup>14</sup> Individualized and flexible symptom monitoring and tailoring of m-ECT frequency, as promoted, for example, in the symptom-titrated, algorithm-based longitudinal ECT (STABLE) paradigm, help optimize m-ECT schedules and prevent relapse. In both of these cases, the patients' parents had years of experience in monitoring their children's psychiatric symptoms and response to ECT, were well aware of the need for m-ECT, and lived in areas where ECT was still relatively available during the pandemic, despite moderate scheduling concerns. Both individuals had known severe clinical morbidity before ECT and were at risk for return of dangerous symptomology.

Indeed, ongoing psychiatric stability in individuals with autism and developmental disabilities has never been of greater importance during these unprecedented times, where schedules, school and community programming, and care taker availability outside of the immediate family have all been severely disrupted for vulnerable individuals with often limited capacity to understand the pandemic, protect themselves, or self-advocate.<sup>15</sup> Deterioration in psychiatric and behavioral pathology, and associated increased psychotropic utilization have also already been noted.<sup>16</sup> Our patients simply cannot afford further clinical deterioration; in France, it has already been noted that reduced access to ECT in agitated catatonics has led to situations of sustained usage of restrictive equipment and seclusion that was previously unnecessary<sup>7</sup>; such a finding has direct relevance for the many autistic patients who receive ongoing relief from intractable self-injurious behavior in the context of agitated catatonia.<sup>11</sup> It is relevant as well that those developmentally disabled patients who have found relief via ECT from malignant catatonia would be at particular risk for dangerous relapse without ongoing m-ECT, and the intensive care unit is currently to be avoided at all costs.<sup>11,17–20</sup>

In the short 3 months since COVID-19 has overrun the United States, it has also been demonstrated that not only are developmentally disabled individuals living in group homes at higher risk for infection and death but also people with autism and intellectual disability *regardless of place of residence* have a higher risk of actual death from COVID-19. A study performed by the New York and Pennsylvania Department of Health and Office of People with Developmental Disabilities demonstrated 2.5 times higher death rates in NY, and twice as high in PA, with disabled patients 4 times more likely to contract COVID-19.<sup>1</sup> Another study found that risk of death from COVID-19 in patients aged 0 to 17 years was 1.6% for those with ID, and less than 0.01% for those without. In those aged 18 to 74 years, risk of death was 4.5% in ID, and 2.7% for those without ID.<sup>21</sup> This is not surprising, given that individuals with intellectual disability often have comorbid physical conditions.<sup>15</sup> It is further salient that

respiratory infection is the leading cause of death among those with intellectual disability, even before COVID-19.<sup>22</sup>

As we navigate the challenges of COVID-19 and plan for potential future waves of infection, it is imperative to advocate for ongoing acute and maintenance ECT availability for all psychiatric patients in need. Patients with autism and intellectual disability should be no exception, despite their relatively “new” status in the ECT world for recalcitrant catatonic, affective, and psychotic pathology, their response to ECT is rapid and robust, and the stakes are alarmingly high for a population with higher baseline morbidity and mortality from COVID-19.

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