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BJAN-D-20-00123_ Letter to the editor

Occupational team safety in ECT practice during the COVID-19 pandemic

Segurança ocupacional da equipe na prática de ECT durante a pandemia de COVID-19

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Dear Editor,

Electroconvulsive Therapy (ECT) is a procedure indicated for the treatment of several neuropsychiatric conditions, including severe and life-threatening disorders and situations such as depression with risks of suicide or malnutrition, catatonia, refractory schizophrenia, mania with severe psychomotor agitation and status epilepticus.[1] Although this is a life-saving treatment, maintaining the ECT services during the COVID-19 pandemic has become a challenge due to the intrinsic risks of anesthetics and airway management during the procedure.[2] Anesthesia for ECT consists in the use of a short-acting hypnotic agent (propofol, etomidate or thiopental) followed by a neuromuscular blocker, the most used is succinylcholine due to its rapid onset and offset of action. Oxygen supply is provided through a non-invasive bag and mask ventilation.[3] This is a critical point in the procedure because non-invasive ventilation poses a higher risk of contamination due to aerosol release from contaminated patients. To address this challenge, some services are using a Laryngeal Mask (LMA) for

ventilation, others are trying not to ventilate patients during the procedure, using preoxygenation via a non-rebreather mask. The latter can be dangerous because the patient's oxygen saturation may drop to a level that requires some kind of ventilatory support. Although the procedure is fast enough to allow the use of LMA, the risk of contamination due to the aerosol spray does not decrease significantly; in addition, LMA can induce the patient to cough.[4]

In our ECT service, we modified the non-invasive ventilation technique (Fig. 1) by installing a HEPA (High-Efficiency Particulate Arrestance) filter between the bag and the mask to retain the viral particles. Additionally, a sterile plastic bag surrounding the mask and the patient's face is attached to the ventilatory system. This device protects against the aerosol that may escape from between the mouth and the mask and spread viral particles around the ECT room. The edge of the plastic bag can be fixed with clamps. All ventilatory material is replaced among patients. The use of low O₂ flow during ventilation is also a recommended measure. The psychiatrist, anesthesiologist, and nurses should all use personal protective equipment such as a N95 mask, face shield, gloves, and an impermeable gown.

We believe this is a safe and effective way to reduce the risk of contamination from COVID-19 during the ECT procedure.

Conflicts of interest

The authors declare no conflicts of interest.

References

1. Espinoza RT, Kellner CH, McCall WV. Electroconvulsive Therapy During COVID-19: An Essential Medical Procedure-Maintaining Service Viability and Accessibility. *J ECT*. 2020;36:78-9.
2. Tor PC, Phu AHH, Koh DSH, Mok YM. ECT in a time of COVID-19 [published online ahead of print, 2020 Mar 31]. *J ECT*. 2020;10.1
3. American Psychiatric Association. Committee on Electroconvulsive Therapy, Weiner RD. The practice of electroconvulsive therapy: recommendations for treatment, training, and privileges: a task force report of the American Psychiatric Association. 2nd ed. Washington, D.C.: American Psychiatric Association; 2001
4. Bryson EO, Aloysi AS. A strategy for management of ECT patients during the COVID-19 pandemic [published online ahead of print, 2020 May 12]. *J ECT*. 2020.

Figure 1 Technique to reduce the risk of contamination from COVID-19 during the ECT procedure.

