

Risk Estimation of SUDEP during COVID-19 Pandemic Era: Are We Ready For The Second Wave?

Authors

Rehab Magdy ^a, Nirmeen A. Kishk ^a, Amr M Fouad ^a, and Enas Alsayyad ^a

Affiliations

^a *Department of Neurology, Kasr Al-Ainy Faculty of Medicine, Cairo University, Cairo, Egypt*

Correspondence to:

Dr. Rehab Magdy

rehab.m.hassan@kasralainy.edu.eg

<https://orcid.org/0000-0002-4916-276X>

Abstract

Objective: No data exist regarding the impact of the lockdown due to the COVID-19 pandemic on the risk factors of sudden unexpected death in epilepsy (SUDEP). This study aimed to stratify risk factors of SUDEP in relation to COVID-19 lockdown, among patients with epilepsy (PWE) in Cairo University epilepsy unit (CUEU). Therefore, we can detect risk factors and mitigate such factors in the second wave of the virus.

Methods: an observational, cross-sectional study carried on 340 Egyptian patients with active epilepsy. Individual risk identification and stratification was done by using The SUDEP and seizure Safety Checklist, after which sharing risk knowledge to PWE and their caregivers was undertaken.

Results: The mean age of patients was 29.72 ± 12.12 . The median of the static factors was 4 (IQR 3-5) whereas, the median of the modifiable factors was 2 (IQR 1-3). Epilepsy emergencies (serial seizures or status epilepticus) were reported in 24.1% of patients, for which non-compliance was the commonest cause, followed by deferral of epilepsy surgery for patients with drug resistant epilepsy (DRE). Stepwise logistic regression analysis showed that depression, non-compliance, keeping patients with DRE on dual anti-seizure medications (ASMs), or adding third medication increased the odds of increased seizure frequency by 2.3, 3.2, 15.1 and 6.6 times, respectively.

Conclusion: Some COVID-19 related issues had influenced the risk of seizure worsening and thus an increased risk of SUDEP. Special attention should be paid to these issues to mitigate the risk of SUDEP during the second expected wave.

Keywords: The SUDEP and seizure Safety Checklist, COVID-19 pandemic, active epilepsy, drug resistant epilepsy