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Importance of access to epilepsy monitoring units during the COVID-19 pandemic: consensus statement of the International League Against Epilepsy and the International Federation of Clinical Neurophysiology*

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ABSTRACT – Restructuring of healthcare services during the COVID-19 pandemic has led to lockdown of epilepsy monitoring units (EMUs) in many hospitals. The ad-hoc taskforce of the International League Against Epilepsy (ILAE) and the International Federation of Clinical Neurophysiology (IFCN) highlights the detrimental effect of postponing video-EEG monitoring of patients with epilepsy and other paroxysmal events. The taskforce calls for action for continued functioning of EMUs during emergency situations, such as the COVID-19 pandemic. Long-term video-EEG monitoring is an essential diagnostic service. Access to video-EEG monitoring of the patients in the EMUs must be given high priority. Patients should be screened for COVID-19, before admission, according to the local regulations. Local policies for COVID-19 infection control should be adhered to during the video-EEG monitoring. In cases of differential diagnosis in which reduction of antiseizure medication is not required, home video-EEG monitoring should be considered as an alternative in selected patients.

Key words: COVID-19 pandemic; epilepsy monitoring units (EMUs); ILAE; IFCN; video-EEG

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Background and justification

The International League Against Epilepsy (ILAE) and the International Federation of Clinical Neurophysiology (IFCN) appointed an ad-hoc taskforce to provide a rapid response to the challenges concerning video-EEG monitoring, encountered during the current pandemic, caused by the coronavirus SARS-CoV-2 disease (COVID-19). Through consensus discussions, review of the published evidence and experience of the experts representing the two societies, the ad-hoc taskforce elaborated this statement.

During the restructuring of healthcare services due to the current pandemic, many hospitals closed video-EEG monitoring facilities, referred to in this document as epilepsy monitoring units (EMUs) [1]. A European survey showed that in most centres, inpatient video-EEGs monitoring had been stopped (61.7% for adults, 36.2% for children) or was restricted (38.3% for adults, 53.2% for children) [1], with detrimental effects on patients with complex and severe epilepsy and other paroxysmal events [1], such as a lack of optimizing medical treatment and lack of evaluation for epilepsy surgery. The likelihood of triggering seizure emergencies in patients with epilepsy and neurological complications is limited. The measures used to close EMUs were adopted by healthcare providers to focus on re-allocation of resources to services, considered more important and more immediately required, and to prevent spreading the disease. Long-term video-EEG monitoring in EMUs was regarded by the healthcare providers as an elective procedure that could be postponed without significant consequences, a categorization that we challenge as incorrect for the following reasons.

Long-term video-EEG monitoring is an essential diagnostic tool for patients with complex and severe epilepsy [2, 3]. The main indications are diagnostic and presurgical evaluation [2, 3]. While video-EEG monitoring is diagnostic, it has direct implications on treatment of epileptic seizures, co-morbidities and important differential diagnoses (arrhythmia and cardiac death, psychogenic non-epileptic seizures and the risk of suicide).

Reasoning for continuing diagnostic monitoring

Approximately one third of patients referred to specialized centres based on a suspicion of drug-resistant epilepsy do not have epilepsy [4-7]. Persistent misdiagnosis of paroxysmal events, often cardiac or psychogenic in origin, has severe consequences for them [8-10]. In patients with drug-resistant epilepsy, misclassification of the seizure types can lead to inadequate choice of antiseizure medication [2]. Video-EEG recording of the patients' habitual clinical episodes is the diagnostic gold standard for patients with unclear paroxysmal events [2, 3].

Reasoning for continuing presurgical evaluation

Epilepsy surgery is the evidence-based treatment for patients with drug-resistant focal epilepsy [11-13]. This requires video-EEG recording of the seizure, and in around one third of patients, invasive monitoring [2, 3]. Failure to proceed towards surgery unnecessarily exposes the patients to further seizures, injuries associated with seizures and the risk of sudden unexpected death in epilepsy (SUDEP) [14]. The appropriate and unrestricted utilization of EMUs in comprehensive epilepsy centres has been shown to reduce mortality of patients with epilepsy [15].

High-quality epilepsy care, including video-EEG monitoring, has decreased morbidity and mortality [15-17]. Hence, increasing waiting times can cause considerable problems, increasing morbidity and mortality. These patients often have worsening epilepsy and co-morbidities, and prioritizing care with restricted resources becomes more and more challenging. Some EMUs have managed to continue video-EEG monitoring during the pandemic [1]. Using measures of prevention and protection generally adopted in the hospitals, these EMUs were able to continue this important diagnostic function, without causing local outbreaks [1, 15, 18, 19]. Recommendations for neurophysiology staff with risk factors for COVID-19, and for the mental health of the staff have been proposed by the Latin American chapter of the IFCN Task Force – COVID-19 [20].

Summary statements

The ILAE-IFCN ad-hoc taskforce issues the following statement, related to functioning of EMUs during the COVID-19 pandemic:

- 1. Long-term video-EEG monitoring is an essential diagnostic service.
- 2. Access to video-EEG monitoring of the patients in the EMUs must be given high priority.
- 3. Patients should be screened for COVID-19, before admission, according to local regulations.
- 4. Local policies for COVID-19 infection control should be adhered to during the video-EEG monitoring.
- 5. In cases of differential diagnosis, in which reduction of antiseizure medication is not required, home video-EEG monitoring should be considered as an alternative in selected patients.

Conclusion

The ILAE-IFCN ad-hoc taskforce calls for action to ensure that healthcare providers understand the importance of providing diagnostic services for patients with epilepsy and paroxysmal events, and that EMUs continue functioning during emergency situations like the COVID-19 pandemic, while adhering to local healthcare policies. ■

Disclaimer.
This report was written by experts selected by the International League Against Epilepsy (ILAE) and the International Federation of Clinical Neurophysiology (IFCN) and was approved for publication by the ILAE and IFCN. Opinions expressed by the authors, however, do not necessarily represent the policy or position of the ILAE and IFCN.

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