

All Influencing Factors Should Be Taken into Account When Calculating Outcome Predictors for Paediatric Status Epilepticus [Letter]

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Dear editor

We read with interest the article by Chen et al on a retrospective study of prognostic factors for status epilepticus (SE) in pediatric patients >14 years of age admitted to the pediatric intensive care unit (PICU).¹ Based on the Glasgow Outcome Score (GOS) three months after discharge, patients were classified as having either a good or poor prognosis.¹ The presence of comorbidities, abnormal EEG findings, and the use of multiple antiepileptic drugs (ASMs) were significantly associated with a poor prognosis.¹ The study is noteworthy, but some points need to be discussed.

The first point concerns the retrospective design of the study.¹ Retrospective designs have several disadvantages, such as poor data quality, missing data, the inability to prove causality (only association), susceptibility to memory bias and selection bias, difficulties in controlling for confounding variables, and a generally lower level of evidence compared to prospective studies.²

The second point is that the outcome of SE in pediatric patients depends not only on comorbidities, EEG findings, and ASMs, but also on several other variables. These include the cause of epilepsy, the type of epilepsy, the type of epilepsy syndrome, the duration of SE, the delay in therapy, the results of cerebral imaging, the medications taken in addition to ASMs, the type of SE (convulsive, non-convulsive, minimally convulsive), the intensity of SE treatment, previous adherence to ASM treatment, and the development of complications during SE such as respiratory failure, heart failure (Takotsubo syndrome), or organ dysfunction.³ Unless these factors are included in the regression analysis, the results presented may be misleading.

The third point is that the classification of epilepsy into primary and secondary epilepsy does not correspond to the latest ILAE classification.⁴ According to the ILAE proposal, epilepsy is classified as focal, generalized, combined, or unknown epilepsy and, based on etiology, as genetic, structural, infectious, metabolic, immunological, and unknown epilepsy.⁴ Therefore, we should know how the 203 patients included were categorized according to the ILAE proposal.

The fourth point is that it is not clear why only 178 of the 203 patients had EEG recordings.¹ What was the reason for not performing EEG recordings on 25 patients? How was non-convulsive status epilepticus (NCSE) ruled out in these 25 patients?

The fifth point is that it is not clear why patients >14 years of age were excluded from the study. The usual upper age limit for pediatric patients is 18 to 21 years.⁵

In summary, it can be said that in order to calculate the outcome predictors for pediatric SE, all factors that influence the outcome of SE should be included in the regression analysis.

Data Sharing Statement

All data are available from the corresponding author.

Author Contributions

The author made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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