



Letter to the Editor

Comment regarding: “Predictors of long-term mortality in status epilepticus”

Dear Editor

I have read with a lot of interest the analysis of long-term outcome mortality after status epilepticus by Tiamkao et al. [1]. It is widely accepted that status epilepticus (SE) has high in-hospital mortality, and in line with data in literature, the authors report a 1-year mortality of 16.5% [1,2]. Established knowledge on long-term outcome after SE is currently lacking. However, several lines of evidence in the literature suggest a high mortality of patients after discharge as shown in a critical appraisal of published studies by Sculier et al. [3]. Tiamkao et al. and the integrated Epilepsy Research Group addressed this question using data from the Universal Health Coverage Database, Thailand. They report of 83.3% survival after 2 year, 83.2% after 5 years, and 83.0% after 10 years. Thus, 0.2% of the patients that survived 1 year after SE died in the 2nd year after diagnosis. After 4 and 9 years, the mortality rate was 0.4% and 0.6%. The mortality was astonishingly low, as compared to reports, e.g., by Longroscino et al. [4]. One possible explanation may be the lower age of patients with a reported average age at onset of 35 years and differences between Western- and non-Western countries. However, the mortality of the Thai cohort surviving SE for more than 1 year was actually lower than the mortality of the general population in Denmark. The cohort of 35-year-old Danes has a 1-year mortality of 0.1%, a 4-year mortality of 0.3% and a 9-year mortality of 0.9% [5]. In other words, previous SE appears to be protective against all-cause mortality, which certainly does not reflect a biological phenomenon but a substantial bias (e.g., social bias) or a systematic bias in the data material. This notion is further substantiated by the reported etiology of SE that varies from what was found in other cohorts [2]. Differences

between Thailand and Western countries may explain parts of the differences, but certainly not all of it. In summary, it is questionable, if the identified predictors of long-term mortality described by Tiamkao et al. can be applied to other Western and non-Western cohorts, and further research is needed to understand of long-term outcome after SE.

Declaration of interest

CPB has no conflicts of interest relevant to this study.

References

- [1] Tiamkao S, Saybungkla P, Sirikam P, Sawanyawisuth K, Integrated Epilepsy Research Group. Predictors of long-term mortality in status epilepticus. *Epilepsy Behav* 2018; 84:114–7.
- [2] Rossetti AO, Hurwitz S, Logroscino G, Bromfield EB. Prognosis of status epilepticus: role of aetiology, age, and consciousness impairment at presentation. *J Neurol Neurosurg Psychiatry* 2006;77:611–5.
- [3] Sculier C, Gainza-Lein M, Sanchez Fernandez I, Loddenkemper T. Long-term outcomes of status epilepticus: a critical assessment. *Epilepsia* 2018;59 Suppl 2:155–69. <https://doi.org/10.1111/epi.14515>. Epub 2018 Aug 26.
- [4] Logroscino G, Hesdorffer DC, Cascino GD, Annegers JF, Bagiella E, Hauser WA. Long-term mortality after a first episode of status epilepticus. *Neurology* 2002;58:537–41.
- [5] Statistic Denmark. www.dst.dk, Accessed date: 3 September 2018.

Christoph P. Beier

Department of Neurology, Odense University Hospital, Denmark
Department of Clinical Research, University of Southern Denmark,
Odense, Denmark

Department of Neurology, Odense University Hospital,
Sdr. Boulevard 29, 5000 Odense C, Denmark.
E-mail address: cbeier@health.sdu.dk.

17 September 2018

Available online 26 January 2019