Epilepsy & Behavior 98 (2019) 285–286

Contents lists available at ScienceDirect

Epilepsy & Behavior

journal homepage: www.elsevier.com/locate/yebeh

Letter to the Editor

Letter regarding the article 'Evaluation of sleep quality in spouses of people with epilepsy'

Keywords:
Sleep quality
Epilepsy
Sleep seizures
Spouses of patients

To the Editor

I read the article by Hamamci et al. with great interest in which they illustrate the results of their study investigating the spouses of people with epilepsy with and without a history of seizures during sleep in terms of depression, anxiety, and sleep quality [1]. I appreciate the authors for addressing such an original issue and constituting a rational discussion (including an extensive section of limitations) of the study results. However, I would like to make some additional comments for a better understanding of the study results and in order to provide new perspectives for future studies.

In the discussion section, the authors referred to the previous studies reporting that seizures during sleep in people with epilepsy are associated with worse sleep quality in individuals with epilepsy [1,2]. Based on their results of worse Pittsburgh Sleep Quality Index (PSQI) scores in patients with epilepsy with seizures during sleep, they concluded that seizures during sleep in people with epilepsy disturbed the PSQI scores of their spouses similar to the patients. Combining the main results with strong correlations between Beck Anxiety Inventory (BAI) and PSQI scores, they also concluded that similar pathophysiological mechanisms play a role in the disruption of sleep quality in people with epilepsy and their spouses. Such that, they suggested that the worry about a potential seizure during sleep could cause high anxiety scores and consequent sleep disturbance in the spouses of people with epilepsy. However, there may be some questions about this interpretation way of these results. For instance, it can be predicted that patients with more severe epilepsy would be also more prone to develop seizures during sleep. Besides, the severity of epilepsy has been found to be associated with worse sleep quality in the patients with epilepsy, previously [3,4]. In addition to its relationship with sleep quality, seizure severity is also known to be associated with higher. Beck Depression Inventory (BDI) and BAI scores [4]. Hence, I think that for performing a rational correlation between sleep quality and sleep seizures, the severity of epilepsy should be kept in mind as a major confounding factor to influence the results of the analyses. Remarkably, the authors interrogate the annual number of seizures in their study and report no association of these data with any subscales of PSQI. However, this criteria of annual frequency of seizures cannot reflect the severity of epilepsy, and I strongly suggest performing a validated scale of seizure severity to exclude the confounding effect of this variable with sleep disturbances. Nevertheless, I think that regression analyses excluding the effect of annual seizure frequency (although it is not an ideal measurement of seizure severity and it was not found to be associated with any of the subscales of PSQI in the study) might still be performed in all analyses investigating the association between seizures during sleep and other clinical parameters. Taken together, I think that the results of future studies including groups of patients with epilepsy comparable in terms of epilepsy severity are needed for a clear investigation of the association of sleep seizures with the mentioned parameters in spouses of patients with epilepsy.

However, after clarification of the limitations mentioned above, I believe that the significant results of this study may remark a strong association between sleep seizures and sleep quality of spouses and their status of depression and anxiety. Nevertheless, concluding statements as 'sleep seizures had a negative effect on the index scores reflecting the anxiety, depression, and sleep quality in the spouses of people with epilepsy' or 'seizures during sleep in people with epilepsy disturbed the PSQI scores of their spouses', which also indicate a causal relationship, is an ambitious manner as many other confounding factors be involved in this causal relationship. Remarkably, for most of these disturbances of impaired sleep quality, depression, and anxiety symptoms, the interspousal transmissions have been shown [5–7] which might constitute the primary causative mechanism resulting in the high incidences of these conditions in also spouses of patients with epilepsy (rather than the primary effect of sleep seizures). In my opinion, for suggesting a causal statement, many other parameters that may be potentially interact with behavioral status of the spouses as well as be also affected by the sleep seizures (depression–anxiety status of the patients, sleep quality of the patients, fatigue, socioeconomic status of the patients) should be evaluated and excluded in the regression analyses. Of note, in a study including a limited number of patients like this, concluding causal relationships would be further nonscientific in the setting of these various confounding factors. Finally, some other details to be clarified may be that when the patient had the sleep seizure (before marriage or after marriage), had the seizure been witnessed by the patient's spouses, and had the disturbances of sleep quality initiated after witnessing sleep seizure (subjective opinions of the spouses may be evaluated in this regard), etc. Future related reports may provide crucial perspectives regarding the behavioral problems in spouses of patients with epilepsy, the interspousal transmission of these conditions as well as their pathophysiologies.

Financial support

None.

Declaration of Competing Interest

None.

https://doi.org/10.1016/j.yebeh.2019.04.040
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Acknowledgments

None.

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22 April 2019
Available online 7 June 2019