

Review of: "Impending role of hippocampal neurogenesis in the development of chronic epilepsy following seizures after Kainic acid and Pentylenetetrazol treatment"

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Potential competing interests: No potential competing interests to declare.

General Comments

The authors focused on neuropathological changes in the brain at different time scales following PTZ- and kainic acid-induced seizures. Although it is remarkable in terms of its subject, there are some deficiencies.

The last part of the Abstract should be rewritten, and the introduction should be more comprehensive. A schematic experimental protocol could be added to the methodology section. Data on the number and duration of seizures are missing. The discussion section looks good. My specific comments are as follows.

Abstract

-“These results contribute to our understanding of the factors involved in the onset of seizures and the development of chronic epilepsy. Additionally, they may aid in the development of strategies for preventing and treating epilepsy.”

Please write concluding remarks specifically inspired by the findings of your study, rather than using general statements.

-Introduction

-“Although the etiology of TLE is not completely understood, it is often observed after acute seizures like status epilepticus (SE), brain injury, tumours, meningitis, and encephalitis.”

This sentence does not make sense logically or grammatically. Please correct the statement.

-Materials and Methods

A diagram summarizing the experimental protocol (exploring the time-line for KA or PTZ treatment, or investigating the temporal dynamics of histopathological biomarkers following seizures) will be more understandable.

-Discussion

-“The present study showed that systemic administration of KA and PTZ elicited seizures in rats, but marked differences

were observed in intensity, duration, and frequency. Administration of KA led to generalized tonic seizures, referred to as SE, followed by SRS after a latent period of a few weeks. In contrast, administration of PTZ initially resulted in a freezing response, but with repetitive injections, the seizure response altered dramatically and finally increased in duration and intensity.”

In the results section, there are no parameters related to seizure frequency or duration.

-“However, PTZ lasts for only two hours in the body.”

Please add a reference.