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IL-1β associations with posttraumatic epilepsy development: A genetics and biomarker cohort study

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To the Editors

We have read with great interest the recent article in *Epilepsia* from Diamond et al.[1] Although the role of interleukin (IL)-1β in epileptogenesis is a topic of importance, the article fails to address several key issues. First, although the authors mention the importance of the blood–brain barrier (BBB) and the potential role of type II IL-1 transporters in moving IL-1β across the endothelial barrier, they fail to investigate any markers of BBB integrity in their study. A simple analysis of the cerebrospinal fluid (CSF)/serum albumin ratio may have clarified the role of BBB dysfunction versus intrinsic central nervous system (CNS) IL-1β production in determining the CSF/serum IL-1β ratio. Furthermore, the authors primary variable of interest was time to first seizure, whereas seizure recurrence was not investigated. Although late posttraumatic seizures are an important risk factor for developing epilepsy, it is incorrect to assume these patients truly developed epilepsy without any data concerning further seizure activity over time. Although this study provides some evidence of a genetic component to risk of posttraumatic epilepsy (PTE), controversy remains over the functional difference of the rs1143634 single nucleotide polymorphism (SNP) and the unclear role of peripheral production of IL-1β and their role in epileptogenesis following traumatic brain injury (TBI). It is important to realize that a much more nuanced understanding of the role of IL-1β and its genetic variants in PTE is necessary before any firm conclusions regarding genetic susceptibility to PTE can be made.

References

1. Diamond ML, Ritter AC, Failla MD, et al. IL-1β associations with posttraumatic epilepsy development: A genetics and biomarker cohort study. Epilepsia. 2014; 55:1109–1119. [PubMed: 24754437]

DISCLOSURES

None of the authors has any conflict of interest to disclose. We confirm that we have read the Journals position on issues involved in ethical publication and affirm that this report is consistent with those guidelines.