The cross talk between underlying mechanisms of multiple sclerosis and epilepsy may provide new insights for more efficient therapies

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Abstract

Despite the significant differences in pathological background of neurodegenerative diseases, epileptic seizures are a comorbidity in many disorders such as Huntington disease (HD), Alzheimer's disease (AD), and multiple sclerosis (MS). Regarding the last one, specifically, it has been shown that the risk of developing epilepsy is three to six times higher in patients with MS compared to the general population. In this context, understanding the pathological processes underlying this connection will allow for the targeting of the common and shared pathological pathways involved in both conditions, which may provide a new avenue in the management of neurological disorders. This review provides an outlook of what is known so far about the bidirectional association between epilepsy and MS. © 2021 by the authors. Licensee MDPI, Basel, Switzerland.

Author keywords

Demyelination; Epilepsy; Multiple sclerosis; Neurodegeneration; Seizure