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Poster Presentation

Induced Pluripotent Stem (iPS) Cells-Derived Astrocytes: Decrease of Inflammation in Epilepsy

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Abstract

Introduction: Epilepsy is a threatening neurological disease that affects approximately 60 million people worldwide. Epilepsy is one of the neurological diseases related to inflammation. Induced pluripotent stem cells (iPS) have the ability to differentiate into different types of cells, including neurons and glial cells. Astrocytes, as the main glial cells of the central nervous system, play an important role in brain function with the ability to regulate extracellular ions and neurotransmitters, nourish and protect neurons, and modulate the activity of microglia. ***Materials and Methods:*** A systematic literature review was conducted using databases including PubMed, Scopus, and Web of Science, focusing on articles published from 2010 to 2023. Search terms included "Glia"," Seizure", "Neuroinflammation ", and "Microglia". ***Results:*** Astrocytes derived from induced pluripotent stem cells can reduce the occurrence of seizures by reducing neuroinflammation caused by microglia cells. ***Conclusion:*** Our findings show that induced stem cells can be used as cell therapy in epilepsy.

Keywords: 1. Neuroglia 2. Seizures 3. Microglia 4. Neuroinflammatory Diseases

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