The 6th International Epilepsy Symposium
Shefa Neuroscience Research Center, Tehran, Iran, 24-26 August, 2018
The Neuroscience Journal of Shefaye Khatam
Volume 6, No. 3, Suppl 2

Poster Presentation

The Role of Aquaporin-4 Receotors in Mesial Temporal Epilepsy

Zeinab Najmi[1], Sayed Mostafa Modarres Mousavi[1, 2*]

[1]Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran, Iran
[2]Department of Nanobiotechnology, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran

Published: *24 August, 2018*

Abstract

Introduction: Aquaporin-4 (AQP4) express in glial cells and plays a crucial role in brain water and ion homeostasis during rapid neural activity. Only AQP-4 has been found in astrocyte, which is widely expressed throughout the brain, especially in the cerebrospinal fluid and cerebrospinal fluid (CSF) interface, which may have contributed to edema and CSF absorption. Mesial temporal lobe epilepsy (MTLE) is a chronic seizure disorder that is often refractory to epilepsy treatment. The main cause of MTLE is not fully understood, but the ability to hyperexcitability in neuronal networks is an essential feature. Loss of AQP4 from perivascular endfeet of sclerotic hippocampus contributes to increased seizure propensity in human MTLE. **Conclusion:** In conclusion, mislocalization of AQP4 in different regions of hippocampus may contribute to the epileptogenicity of the MTLE patients.

Keywords: Mesial Temporal Epilepsy, Glial Cells, AQP4, Epileptogenicity.

Corresponding Author: Sayed Mostafa Modarres Mousavi
E-mail: *modarres.mousavi@gmail.com*

[Downloaded from shefayekhatam.ir on 2026-11-12]