

Short Communication

Bio-Organic Approach of Epilepsy Treatment: New Horizon for Future Neurological Treatment

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Abstract

Epilepsy is a chronic non-communicable disease affecting people at any age. There are several therapeutic approaches for epilepsy, but not all effective at any particular case. The need for designing new therapeutic strategies remains challengeable. We introduced a new therapeutic approach to treat epilepsy through application principles of bioorganic chemistry in which we give supplementation of zinc, calcium, and magnesium, in addition to vitamin D3. A 31 years old female who had epilepsy for more than 15 years, with three seizures per day exhibited excellent response for the prescribed approach over three months prior to writing this article. Taken together, epilepsy can be treated effectively, easily and cheaply by applying our methodology.

Keywords: Epilepsy, Bioorganic chemistry, Seizure, New treatment, Vitamin D

Introduction

Epilepsy is a brain disease with chronic nature that influences more than 50 million people at global level. Epilepsy is known by recurrent seizures, that include a group of movements (involuntary in nature), involving the body (partly or completely). Seizures may be associated with lack of consciousness in addition to loss of control over bowel or bladder function [1].

It has been estimated that one fifth of epilepsy cases are due to acute injuries such as Traumatic Brain Injury (TBI), stroke and infections of Central Nervous System (CNS) [2]. Epidemiologic studies from the U.S showed that about 6% of epilepsies are due to TBI, 11% are due to Cerebro Vascular Accident (CVA), 4% for infections, and less than 1% for new onset cryptogenic Status Epilepticus (SE) [3,4]. The treatment of epilepsy is highly costing and it has reached about 15 billion USD per year in the US. One of the challenges encountered in neurology is to avoid the occurrence of epilepsy following TBI or to minimize its intensity [5]. The problem is complicated by the long period involved from acute injury to the development of clear presentation of epilepsy [6].

Seizure scenes are an aftereffect of inordinate electrical releases in a gathering of brain cell. Various pieces of the cerebrum can be the site of such releases [7]. Seizures can fluctuate from the briefest breaches of consideration or muscle bastards to extreme and delayed spasms [8]. Seizures can likewise shift in recurrence, from under 1

every year to a few every day [9]. One seizure doesn't imply epilepsy, it is estimated that about 10% of individuals at global level have got one seizure in their life [10]. Epilepsy is characterized as having at least two unwarranted seizures [8,9]. Epilepsy is one of the world's most established perceived conditions, with composed records going back to 4000 BC. Dread, misconception, separation and social shame have encompassed epilepsy for a considerable length of time. This shame proceeds in numerous nations today and can affect on the personal satisfaction for individuals with the disease and their families [7].

Bio-organic approach of epilepsy treatment

In this section, we are introducing new therapeutic concept that we applied in a case study with epilepsy. A female with epilepsy, 31 years old, since she was 15 years old. During 16 years of suffering, she was admitted to several hospitals including private and public hospitals in Jordan. She was examined by several clinical neurologists and prescribed a lot of relevant medications. No improvements were observed. Medical investigations have continuously confirmed epilepsy.

Due to lack of improvements, the parents of the patient tried other therapeutic options including spiritual options hoping to ameliorate the clinical occurrence of seizures since she had three seizures per day. All options failed to end the patient's tragedy.

After thorough revision of the case and its medical history, the decision was to think of a new approach of treatment. We think that if electrical discharges are characterizing epilepsy, then we can focus on interacting with these discharges in a safe and simple way. The origin of this idea is based on our understanding of both organic chemistry and biochemistry. In other words, we employ principles of organic chemistry to achieve biological improvement of such a condition. From organic chemistry point of view, a chemical bond is an electron density round the nucleus. To break down such a bond, we need a catalytic action by enzyme from a biochemistry point of view [11,12]. Now, we can withdraw this bond and weaken it to break it down later through adding positive charges including zinc, magnesium, and calcium. Vitamin D was also given. We followed the patient for three months without any reported seizure.

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Conclusion

In this study, we introduced a new therapeutic approach for treatment of epilepsy. The new therapeutic approach is easy, effective and cheap. It depends on providing supplementations of calcium, magnesium and zinc, accompanied with vitamin D 3. A female with epilepsy for 16 years and with three seizures per day exhibited good therapeutic response without any reported seizures over three months of preparing this study.

References

1. Sirven JI. Epilepsy: A Spectrum Disorder. *Cold Spring Harb Perspect Med.* 2015;5(9):a022848.
2. Klein P, Tyrlikova I. No prevention or cure of epilepsy as yet. *Neuropharmacology.* 2019.
3. Hauser WA, Annegers JF, Kurland LT. Incidence of epilepsy and unprovoked seizures in Rochester, Minnesota: 1935-1984. *Epilepsia.* 1993;34(3):453-68.
4. Banerjee PN, Filippi D, Allen Hauser W. The descriptive epidemiology of epilepsy-a review. *Epilepsy Res.* 2009;85(1):31-45.
5. Löscher W, Klitgaard H, Twyman RE, Schmidt D. New avenues for anti-epileptic drug discovery and development. *Nat Rev Drug Discov.* 2013;12(10):757-76.
6. Pitkänen A, Lukasiuk K, Dudek FE, Staley KJ. Epileptogenesis. *Cold Spring Harb Perspect Med.* 2015;5(10).
7. <https://www.mayoclinic.org/diseases-conditions/seizure/symptoms-causes/syc-20365711>.
8. Stafstrom CE, Carmant L. Seizures and epilepsy: an overview for neuroscientists. *Cold Spring Harb Perspect Med.* 2015;5(6).
9. Hauser W, Hersdorffer D. Epilepsy: Frequency, causes and consequences. 1990.
10. Kanner AM. The treatment of depressive disorders in epilepsy: what all neurologists should know. *Epilepsia.* 2013;54 Suppl 1:3-12.
11. Domingo LR. Molecular Electron Density Theory: A Modern View of Reactivity in Organic Chemistry. *Molecules.* 2016;21(10).
12. Domingo LR., Arnó M, Andrés J. Influence of reactant polarity on the course of the inverse-electron-demand Diels-Alder reaction. A DFT study of regio- and stereoselectivity, presence of Lewis acid catalyst, and inclusion of solvent effects in the reaction between nitroethene and substituted ethenes. *J Org Chem.* 1999;64:5867-75.