

STUDY TO EVALUATE mRNA EXPRESSION OF INTERNEURONS IN ANIMAL MODEL OF TEMPORAL LOBE EPILEPSY FOLLOWING SECRETOME TREATMENT

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Abstract

Epilepsy affects 65 million people worldwide. Epilepsy is characterized by unpredictable occurrence of seizures due to imbalance between excitatory and inhibitory activities in brain. One of the well characterized epilepsies is Temporal Lobe Epilepsy (TLE). Currently 30% of TLE patients do not respond to anti-epileptic drugs, temporal lobectomy is an option to reduce seizure intensity/ frequency in TLE patients with drug refractoriness. However, temporal lobectomy results in significant cognitive impairments and depression. Stem cell based therapeutic strategy is been explored instead of lobectomy. Hence, the aim of the present study is to investigate the effects of HEK-CM treatment on mRNA expression of endogenous anti-epileptic factors in animal model of temporal lobe epilepsy. Our results revealed a significant decrease in endogenous anti-epileptic factors, GDNF in TLE group. Furthermore, we observed significant decrease in mRNA expressions for GAD-67, neuropeptide-Y, somatostatin, parvalbumin, calretinin and calbindin in TLE group as compared with normal/sham control groups. Also, we have shown that CM treatment to TLE mice significantly thwarted the reduction in mRNA expression of endogenous anti-epileptic factors. In TLE+CM group, mRNA expressions were comparable to that of normal and sham control groups.

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Biography

The Prajnya Prabhu is a Research Scholar at Manipal Institute of Regenerative Medicine, India. She is in the third year of her Ph.D. and is a holder of DST-INSPIRE fellowship. She has qualified UGC NET exam twice. The Prajnya Prabhu is a Research Scholar at Manipal Institute of Regenerative Medicine, India. She is in the third year of her Ph.D. and is a holder of DST-INSPIRE fellowship. She has qualified UGC NET exam twice.

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