VAL66MET BDNF GENE POLYMORPHISM HAS NO MAJOR IMPACT IN TEMPORAL LOBE EPILEPSY

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Introduction: There is a growing interest in molecular mechanisms of epilepsy. Brain-Derived Neurotrofic Factor (BDNF) is a protein involved in neuronal development, protection and synaptic functioning. Changes in production and function of this protein could be one of these mechanisms. Impact of the Val66Met polymorphism of BDNF gene on epileptic disorders has been published with conflicting results. Objectives: To compare frequencies of Val66Met polymorphism in two different groups of subjects and access its impact on major clinical variables of temporal lobe epilepsy. Methods: In a case-control study, we compare the frequencies of Val66Met polymorphism in 85 patients with TLE and 87 normal controls. Also, we evaluated the impact of Val66Met polymorphism in clinical and electrographic characteristics of TLE. Results: The Val66Met polymorphism frequency in patients was not different from the normal controls (p=0.25). Met66 allele was found in 23 patients (27,1%) and in 30 controls (34,5%). The Val66Met polymorphism did not influence clinical variables regarding onset of epilepsy, duration of epilepsy, familial history of epilepsy, presence of aura or extension of irritative zone. Conclusions: In spite of evidences that Val66Met polymorphism has impact on several different neurological or psychiatric disorders, we conclude that a direct impact of this polymorphism as a disease modifier in TLE is unlikely. However, because of the impact of Val66Met in other pathologies and several evidences from preclinical research, further studies with larger samples or the evaluation of marginal influences of BDNF polymorphisms in some specific variables of TLE are needed before final conclusions.