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Animal Models of Epilepsy: The Impact of some Chemoconvalsants on Animal Models

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Abstract

We summarize some of the most frequenthly used rodent animal models of temporal lobe epileps and the impact of chemoconvulsants on them. Temporal lobe epilepsy is the most common epilepsy in humans in which seizures spread to the neighboring cortiase and hippocampal neuron loss and other neuropathological take place. Temporal lobe epilepsy and the other form of epilepsy cannot acquired in chinical studies whit human, as result the use of oppropriate animal models is essential. Rodent must display a similar "chinical history" as the human conterpart including an intial latent period between the injury and the occurrence of spontaneous seizures chronic manifastation of spontaneous seizures and histopatological change deemed characteristic of temporal lobe epilepsy. Chemoconvulsants: 1) Kinic acid: Kinic acid was one of the first compounds used to model temporal lobe epilepsy in rodonts, injecded rodents show recurrent seizures. Kinic acid has the advantage of causing habitually hippocampus -restictes injury. 2) Pilocarpien: In the human halt spontaneous seizures in the pilocarpien model, systemic or intracerebral injection of pilocarpien causes seizures that build up into a limbic. In addition, there are several network and neurochemical similarities between human temporal lobe epilepsy and the pilocarpine model. Pilocarpine wich can also produce lesions in neocaritical area cognitive and memory deficits' commonly are found in temporal lobe epilepsy patient's, are also present in pilocarpine rats. Chemocanvulsants allow rapid investigation of epileprogenic mechanisms and screening at the expense of high mortality of subject and spontaneous seizures.

Keywords: Epileps, Chemocanvulsants, Epileprogenic Mechanisms

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