

## **Lateral Hypothalamus inactivation does not compensate PTZ kindling induced hippocampal tissue disorganization**

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Kindling is a model of epilepsy which results in changes of synaptic plasticity due to repetitive electrical or chemical stimulation of the brain. Plasticity changes can lead to structural alteration in epileptic susceptible areas like hippocampus. We investigated the effect of PTZ kindling and lateral hypothalamic area inactivation on hippocampal tissue and neuronal organization of kindled rats. Animals were injected 45 mg/kg PTZ every other day to 13 injections intraperitoneally. Tissue structure was studied using cresyl violet staining of dentate gyrus and CA3 areas of hippocampus. Lidocaine was used intracerebroventricularly 20 min before each PTZ injection. PTZ kindling altered the neuronal density of DG and CA3 of hippocampus. LH inactivation using Lidocaine could not reorganize the neuronal density of the so called areas of hippocampus. It is concluded that kindling alters tissue structure, and LH projections to hippocampus are not responsible for this destruction.

Keywords:

Pentylentetrazol; Kindling Development; Lateral Hypothalamus