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Opinion

Using L-type Voltage-Gated Calcium Channels (LVGCC) Antagonists to Treat Withdrawal Symptoms of Chronic Alcohol and Drug Abuse

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L-type Voltage-Gated Calcium Channels (LVGCC) are among ion-channels which their functions would be altered during some abused drugs withdrawal and alcohol withdrawal [1-3]. During alcohol consumption, the levels of L-type Voltage-Gated Calcium Channels would be increased in some parts of the brain including hippocampus and striatum. Using L-type Voltage-Gated Calcium Channels antagonists would decrease craving and tolerance and ameliorate alcohol withdrawal symptoms. Since LVGCC in the striatum is necessary in behavioral sensitization to amphetamine expression, higher levels of LVGCC could induce Long Term Depression (LTD) and develop behavioral sensitization expression after exposing to the drug [4-6]. The clinical importance of such findings indicates that using LVGCC inhibitors would be helpful to counteract early withdrawal symptoms of alcohol and some other drugs in patients consuming alcohol in chronic manner and abuse drugs for long times [7-8].

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Conflict of Interest

Author Declare no conflict of interest.

References

1. Buck KJ, Harris RA (1991) Neuroadaptive responses to chronic ethanol. Alcohol Clin Exp Res 15(3): 460–470.
2. Brooks SP, Croft AP, Norman G, Shaw SG, Little HJ (2008) Nimodipine prior to alcohol withdrawal prevents memory deficits during the abstinence phase. Neuroscience 157(2): 376–384.
3. Lucchi L, Govoni S, Battaini F, Pasinetti G, Trabucchi M (1985) Ethanol administration in vivo alters calcium ions control in rat striatum. Brain Res 332(2): 376–379.
4. Woodward JJ, Gonzales RA (1990) Ethanol inhibition of N-methyl-D-aspartate-stimulated endogenous dopamine release from rat striatal slices: reversal by glycine. J Neurochem 54(2): 712–715.
5. Kril JJ, Harper CG (1989) Neuronal counts from four cortical regions of alcoholic brains. Acta Neuropathol 79(2): 200–204.
6. Whittington MA, Little HJ (1991) Nitrendipine, given during drinking, decreases the electrophysiological changes in the isolated hippocampal slice, seen during ethanol withdrawal. Br J Pharmacol 103(3): 1677–1684.
7. Brebner K, Wong TP, Liu L, Liu Y, Campsall P, et al. (2005) Nucleus accumbens long-term depression and the expression of behavioral sensitization. Science 310(5752): 1340–1343.
8. Altamura AC, Mauri MC, Girardi T, Panetta B (1990) Alcoholism and depression: a placebo-controlled study with viloxazine. Int J Clin Pharmacol Res 10(5): 293–298.

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