

Naltrexone effects in a preclinical model of addiction : therapeutic and adverse effects

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Naltrexone is a non selective μ - and δ -opioid antagonist which is prescribed to help patients during opiate and alcohol withdrawals to avoid relapse in drug intake. The present study has been conducted in order to evaluate the effect of naltrexone in a preclinical model of addiction, the behavioral sensitization induced by alcohol in mice. Acute alcohol administration induces a locomotor hyperactivity, the repeated treatment leads to an enhancement in the behavioural response. This behavioural sensitization induced by alcohol is reduced by naltrexone administration. This result is in accordance with the use of naltrexone in the treatment of dependence in alcoholics patients. In a second part of the study, the depressive state of the treated mice has been evaluated in the forced swimming test. Alcohol chronic treatment induces no major effect. However, mice treated with both alcohol and naltrexone show a significant increase in immobility time in the test. This observation suggests that naltrexone could induce a despair-like state. Such a depressant effect could participate to the reducing in craving observed in treated withdrawn alcoholics. Nevertheless, a depressant effect may represent a major adverse effect regarding the observance of a long-term treatment.