PI4: EFFECT OF BARAKOL ON THE FORCED SWIMMING BEHAVIOR IN SOCIAL ISOLATION REARED RATS

Noppamars Wongwitdecha, Somruethai Srisomboonlert, Panee Ritilert

Department of Pharmacology, Faculty of Science, Mahidol University, Bangkok 10400, THAILAND

ABSTRACT

Objective: The aim of the present study was to investigate the behavioural effects of barakol on the forced swimming test in socially and isolation reared rats.

Methods: Male Wistar rats were obtained from weaning, and housed either alone (isolation rearing) or in groups of six rats/cage (social rearing). Six weeks later, these rats were tested for their sensitivity to barakol using the forced swimming test (Porsolt et al., 1978, Eur J Pharmacol 47, 379-391).

Results: The results demonstrated that the forced swimming behavior of the saline-treated isolation reared rats was not significantly difference from the socially reared controls. Sub-chronic administration of barakol (5, 10 and 25 mg/kg i.p.) 24, 5 and 1 h to both isolation and socially reared rats produced the biphasic effects on the forced swimming behavior in the isolation reared rats. Low doses of barakol (5 and 10 mg/kg i.p.) significantly induced antidepressant-like effect (as indicated by decrease the immobility time and increase struggling) (P<0.05) compare with the saline treated controls. However, the effect of higher dose, barakol (25 mg/kg i.p.) on the immobility and struggling time was not significantly difference from the saline treated isolation reared rats (P>0.05). Moreover, the antidepressant-like effect of barakol (5 and 10 mg/kg i.p.) was not observed in the socially reared rats.

Conclusion: These results indicate that barakol has antidepressant-like effect in social isolation rats. Future experiments will need to investigate the mechanism of antidepressant action of barakol in the social isolation reared rats.

Key words: Barakol, forced swimming test, social isolation, rats