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ANTIDEPRESSANT-LIKE EFFECTS OF *Solidago chilensis* AND QUERCITRIN IN RATS SUBMITTED TO MATERNAL DEPRIVATION

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INTRODUCTION

Evidence suggests that stress situation in childhood is responsible for impaired brain development and observation of depressive symptoms. In rodents, maternal deprivation (MD) is a model that mimics early life stressors agents. In these studies, in animals was observed still, an increase in the inflammatory cytokines in the central nervous system. In this context, this study aims to evaluate the involvement of inflammatory and of stress oxidative markers, in the effects antidepressant-like of hydroalcoholic extract from *Solidago chilensis* (HESc).

MATERIAL AND METHODS

This research was approved in CEUA-Unochapecó (002/CEUA/2021). The animals were submitted to MD for 10 days after the birth. At sixty days of age, the animals were divided into groups (n=10) and submitted to chronic treatment for 14 days (p.o): MD + vehicle (veh, água); MD + escitalopram (ESC, 10 mg/kg); MD + HESc (50 mg/kg); MD + quercitrin (QRT, 10 mg/kg). Also, have a group without stress + vehicle (Naive). At the end of the treatment, the animals were submitted to protocols of behavioral tests and after euthanasia, were performed biochemical analyses for o hippocampus. Data were treated by ANOVA (two-way) followed by Tukey's post-hoc and were considered significant when $p < 0.05$.

RESULTS

The animals submitted to maternal deprivation (veh group) showed an increase in the number of crossings in the open field when compared to the naive ($p<0.05$). The HESc and ESC groups reduced the number of crossings when compared with Veh ($p< 0.05$). In the forced swimming tests, HESc and QRT revealed differences in comparison to the Veh ($p<0.05$), presenting a reduction in antidepressant-like behavior. PM increased the levels of inflammatory cytokines in the hippocampus and MPO in the serum, and all the treatments reverted this alteration.

CONCLUSIONS

The results suggest that HESc and quercitrin, its active compound, have a potential antidepressant-like effect and the pharmacological mechanism involved seems to be, the reduction of neuroinflammatory cytokines in the hippocampus.

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