P140

ANTIINFLAMMATORY EFFECT OF RIPARIN II (*N*-2-HYDROXYBENZOYL TYRAMINE) IN PERITONITIS MODELS

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Riparin II (ripII) is an alkamide compound isolated from *Aniba riparia*, collected from the Amazonas's forest. This substance presents anxiolytic (Sousa et al., 2005) and antidepressant-like effects in different animal models. The antidepressant-like effect of ripII is dependent on its interaction with the serotonergic, noradrenergic, and dopaminergic systems (Teixeira et al., 2011).

The aim of the study was evaluate the antiinflammatory effect of riparin II in animal models. This work was approved by the local ethics committee (protocol number 40/10). Were used male rats (180-240g) and all experiments was conducted with n=6-9.

In this study, riparin II was tested in carrageenan- and fMLP-induced peritonitis models (Souza and Ferreira, 1985) and was made quantification of MPO activity (Bradley et al., 1982), Il-1β, TNF-α, and Protein measurement (Lowry et al., 1951). The animals were divided into groups: controls (vehicle-3% tween 80 in destillated water), ripII 25mg/kg, 50mg/kg or dexamethasone 5mg/kg (standard drug). All drugs were injected orally. Data were analyzed using One-Way ANOVA and Newman-Keuls with post hoc test.

The administration of carrageenan promoted an increasing in total number of leukocytes in the peritoneal fluid and pretreatment with riparin II at doses of 25 and 50mg/kg significantly reduce the amount of leukocytes, corresponding to an inhibition of 23.58% and 39.92%, respectively. Dexamethasone diminished the cell infiltrate in 81.80% in comparison to vehicle group. Intraperitoneal administration of fMLP resulted in strong migration of leukocytes to the peritoneal cavity and the pretreatment with riparin II (25 and 50mg/kg) significantly reduced the cell migration, corresponding to an inhibition of 26.21% and 22.52%, respectively. As expected, dexamethasone was able to reverse this parameter in 49.18%. Riparin II, at both doses, promoted significant reduction in the amount of proteins in the peritoneal fluid corresponding to inhibition of 41.6% and 40.36%, respectively. The intraperitoneal injection of carrageenan's solution increased the myeloperoxidase (MPO) activity and the pre-treatment with ripII (25 and 50mg/kg) or dexamethasone reduced the activity of MPO when compared to the vehicle (49.95%, 26.44% and 53.05%, respectively). RipII at both doses tested, as well as dexamethasone, were able to decrease the TNF-α amount compared to the vehicle (38.54%, 66.7% and 48.46%, respectively)**.** In relation to IL-1β, ripII 25mg/kg and dexamethasone reduced the amount of this cytokine (41.8 and 62.3%, respectively).

In conclusion, ripII reduced the influx of leukocyte, mieloperoxidase activity, TNF-α, IL-1β, as well as, the protein extravasations in response to carragenaan.

FINANCIAL SUPPORT: CNPq/ CAPES