TÍTULO

INHIBITORY EFFECTS OF THE EXTRACT AND FRUTICULIN A OBTAINED FROM SALVIA LACHNOSTACHYS BENTH LEAVES ON GP120-INDUCED MECHANICAL HYPERALGESIA IN MICE

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ABSTRACT

Introduction: Hyperalgesia induced by intrathecal administration of gp120 are responsible for the release of inflammatory cytokines, such as IL-1β, TNF and IL-6, and the development of mechanical sensitivity (1, 2). Salvia lachnostachys Benth is native from Brazil which presented oleanolic and ursolic acids and Fruticulin A in a preliminary phytochemical study. Previous report from our group has observed both Salvia lachnostachys and its compound Fruticulin A have anti-inflammatory and antihyperalgesic activities in animal models (3). Objectives: The present work has investigated the antihyperalgesic effect of S. lachnostachys (SLEE) and Fruticulin A induced by intrathecal injection of gp120 in mice. Material and Methods: Male Swiss mice (n=6) received gp120 (300 pg) or sterile saline (naïve), intrathecally. One hour before injections animals were treated orally with SLEE (100 mg/kg) or Fruticulin A (3 mg/kg) or saline solution, as a control. Mechanical sensitivity was determined by the paw withdrawal threshold using an electronic analgesimeter. The device was positioned on the right hind paw of the animal and pressure was determined, in grams, after the paw withdrawal. The measurements were performed at 2 and 3 hours after intrathecal injection of gp120 (4). Results: After intrathecal administration, gp120 was capable to significantly decrease mechanical hypersensitivity in mice when compared to naive group. SLEE and Fruticulin A, significantly increased mechanical sensitivity after 2 and 3 hours of gp120 injection, when compared with control group. Maximal inhibition were 33 and 48% for SLEE, respectively and 39 and 55%, respectively, for Fruticulin A. Discussion and Conclusion: All results of the present work demonstrate that when administered intrathecally, gp120 caused hyperalgesia and oral treatment with SLEE and its compound Fruticulin A have showed mechanical antihyperalgesic effects. Thus, Fruticulin A may be responsible for the mechanical antihyperalgesic effects of the SLEE.

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References

