

Natureza do trabalho: Resumo

TÍTULO

PIPER AMALAGO L. CRUDE EXTRACT AND ISOLATED COMPOUND REDUCES MECHANICAL ALLODYNIA IN CARRAGEENAN INDUCED INFLAMMATORY PAIN IN MICE

RENAN DONOMAE IWAMOTO, ELOISE BALEN, CÂNDIDA APARECIDA LEITE KASSUYA

UNIVERSIDADE FEDERAL DA GRANDE DOURADOS, UFGD, DOURADOS, MS, BRASIL

RESUMO

Introduction: Allodynia is explained as the pain due to a stimulus which does not cause pain in a normal physiological condition. This clinical feature is found in many painful conditions like neuropathies, fibromyalgia, postherpetic neuralgia and complex regional pain syndrome (CRPS). Allodynia is classified in two types: mechanical and thermal allodynia. To reduce the pain from allodynia, many drugs like opioids and non-steroidal anti-inflammatory drugs (NSAIDs) are used. However, the activation of opioid receptors in the central nervous system by opioids is correlated to the side effects, such as altered consciousness, respiratory depression and addiction. Moreover, NSAIDs chronic use can lead to gastro intestinal, cardiovascular and thromboembolic problems. Studies have shown natural compounds with anti-allodynic effect that could be useful in the treatment of painful conditions, with less side effects advantage. **Aim:** Test the mechanical anti-allodynic effect of Piper amalago and its isolated compound in experimental models of pain, in mice. **Materials and Methods:** Each group of male mice (n=6) received saline solution or ethanolic extract of P. amalago (EEPA) 100 mg/kg or isolated compound 1 (CI-1) 3 mg/kg orally. One hour after the treatment, animals received 300 µg of carrageenan injection (s.c.), in the right hind paw. Each animal was housed in a containment box under a steel mesh. Mechanical allodynia was measured at the times 3 and 4 h after carrageenan injection using a digital analgesymeter. **Results and Discussion:** Both EEPA and CI-1 significantly reduced mechanical allodynia in mice. Maximum inhibitions were: 3h) 49 ± 10 % (EEPA 100 mg/kg) and 19 ± 3 % (CI-1 3 mg/kg). 4h) 64 ± 5 % (EEPA 100 mg/kg) and 32 ± 10 % (CI-1 3 mg/kg). **Conclusion:** EEPA and CI-1 have anti-allodynic effect and this effect may be due to, at least in part, the presence of isolated compound tested.