

Natureza do trabalho: Resumo

TÍTULO

ANTINOCICEPTIVE ACTIVITY OF THE ESSENTIAL OIL FROM Campomanesia adamantium FRUIT IN RATS

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RESUMO

Introduction: *Campomanesia adamantium* (Myrtaceae) is popularly known as guavira and has been used in folk medicine as antirheumatic, antidiarrheal, hypocholesterolemic and anti-inflammatory agent (1). At harvest, fruits are consumed *in natura* or processed in various preparations like jellies, liqueurs, among others (2). **Objective:** The present study has evaluated the antinociceptive activity of essential oils from peel (EOP) and seed (EOS) of *C. adamantium* fruits in formalin model. **Material and Methods:** Essential oils were obtained from 200 g of dried peel (EOP) and seeds (EOS) from *C. adamantium* by hydrodistillation using a Clevenger-type apparatus for 3 hours. Samples obtained by hydrodistillation were analyzed by gas chromatography. Nociception was evaluated after injection of formalin (3). Sixty minutes before, male *Wistar* rats (n=5) were divided in groups: dexamethasone (1mg/kg, s.c.), EOP (100 and 300 mg/kg), EOS (100 and 300mg/kg) and vehicle saline solution (0.9%), treated by oral route. One hour after treatments, the animals received an injection of 20 µl of saline containing 2.5% of formalin in the right hind paw. Pain reaction time (paw licking) in seconds was evaluated from 0 to 5 min (phase 1 – neurogenic pain) and from 15 to 30 min (phase 2 - inflammatory response) after injection of formalin in the paw which represents a tonic response to pain, accompanied by an inflammatory response. **Results:** EOP and EOS produced significant antinociceptive effects in the first phase when compared to control group. EOP and EOS, respectively at the doses of 100 and 300 mg/kg significantly reduced licking time in the second phase of formalin test in rats. Dexamethasone (1 mg/kg) produced significant antinociceptive activity in both phases of the formalin method. It was also found that orally administration of EOP and EOS inhibited formalin induced paw edema. **Discussion and Conclusion:** The anti-inflammatory action of *C. adamantium* on formalin-induced is in accordance with the results of the antinociceptive test. Analyzes using chromatography (GC-MS) indicated the presence of limonene, Thujopsene and β-pinene that can be characterized as being a contributor to the anti-inflammatory effects, suggesting their use as nutraceutical or pharmacological agent.

Acknowledgments

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