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EVIDENCES OF THE ANTINOCICEPTIVE PROPERTIES OF TERPENES OBTAINED FROM *PTERODON* GENUS: A BRAZILIAN SOURCE OF NEW COMPOUNDS FOR CHRONIC PAIN.

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Purpose: *Pterodon* genus fruits are commercially available at the Brazilian medicinal market and the crude alcoholic and aqueous extracts are used in folk medicine as anti-inflammatory, analgesic, and anti-rheumatic preparations. Studies have demonstrated that furanditerpenes possessing vouacapan skeleton contribute for the antinociceptive activities of this genus, becoming a promising template for the development of new analgesics. We proposed the evaluation of the potential antinociceptive properties against chronic pain of semisynthetic compounds 6alpha-hidroxivouacapan-7beta-17beta-lactone (HVL), 6alfa-oxovouacapan-7beta-17beta-lactone (POL), analogues of the compound 6alpha,7beta-dihydroxyvouacapan-17beta-oate-methyl-ester previously reported [1-3]. **Methods and Results:** *Swiss* mice (25-35 g) were used in the experimental models (Ethics protocol 2191-1). Formalin test: The dose-response curves for compounds HVL and POL demonstrated that on phase II (inflammatory pain) HVL produced a greater reduction in the reaction time of animals with 10, 30, and 100 mg/kg (ED_{50} 85.3 mg/kg; $p<0.001$) compared to POL, which demonstrated significant reduction only with 100 mg/kg, on phase II (ED_{50} = 108.3 mg/kg; $p<0.001$). Carrageenan test: Both compounds HVL and POL given intraperitoneally in a dose-response manner were significantly effective on reducing paw edema. During the peak of the inflammatory response (6h), treatments with HVL reduced edema ($p<0.001$) compared to the control group (ED_{50} = 101 mg/kg). POL was also effective in this time point ($p<0.001$) (ED_{50} = 32 mg/kg). CFA-model: Both compounds were able to reduce the mechanical allodynia measurements from acute to chronic phases. POL demonstrated a better activity in the acute phase in a dose-dependent manner ($p<0.001$). HVL was significantly ($p<0.001$) more effective in the chronic phase, corroborating the hypothesis of activity against chronic pain for these compounds. **Conclusion:** Results showed herein provided consistent data to support the potential activity of this class of compounds to be used against inflammatory chronic pain disorders.
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