5th BCNP Brazilian Conference on Natural Products
XXXI RESEM
Atibaia – SP – Brazil
ISBN: 978-85-66836-10-3
Oct. 26–29th 2015

PTERODON PUBESCENS BENTH: GASTROPROTECTIVE EFFECTS OF DICHLOROMETHANE FRUIT´S EXTRACT AGAINST ETHANOL-INDUCED GASTRIC LESIONS IN RATS: ROLE OF MICROCIRCULATION OR OXIDATIVE STRESS

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Side effects caused by the chronic use of nonsteroidal anti-inflammatory agents (NSAIDs) have stimulated researche for development of new drugs that produce anti-inflammatory and analgesic effects without undesirable effects on the gastrointestinal tract, as well as renal and cardiovascular systems[1]. Medicinal plants have various compounds that can act simultaneously on several targets causing different pharmacological effects providing synergestic activities [2]. For example, the specie *Pterodon pubescens* Benth popularly known as Sucupira, has been traditionally used as pain healing agent for various inflammatory diseases among them rheumatoid arthritis treatment and recentemently a study showed that diclhromethane extract of *P. pubescens* fruit´s (Pp) inhibited approximately 95% of ulcerative lesion in ethanol induces ulcer model in rats [2,3].herein we report the mechanisms of gastroprotection involved on ethanol-induced gastric lesions. Focus is given on the role of microcirculation mediated by endogenous prostaglandins and nitric oxide or the role of oxidative stress (decline in antioxidant defences). The pharmacological activity of *Pp* was evaluated in ethanol induces ulcer model using Wistar rats (200-250g) pre-treated with AINES (indomethacin), N-x-L-arginine methyl ester (L-NAME) and N-ethylmaleimide (NEM) to evaluate the role of prostaglandins, nitric oxide (NO) and sulfhydryl compounds, respectively. A 10 mg/kg Pp oral dose was administered 60 min before ethanol treatment (4mL/kg orally). The most relevant findings of the present work were that Pp activity on ethanol-induced gastric has a straight relationship with prostaglandins generation (The percentage of gastric ulcers inhibition in animals pretreated with AINES was 9% without pre-treatment was 63%)and sulfhydryl compounds (The percentage of gastric ulcers inhibition in animals pretreated with NEM was 18% without pre-treatment was 71%) but independent of NO (The percentage of gastric ulcers inhibition in animals pretreated with LNAME was 61% without pre-treatment was 63%). In conclusion these results showed that Pp may be acting by gastric microcirculation and the natural antioxidant role, nevertheless further studies need tobe evaluated to better understand the mechanisms involved.

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