

IN VIVO STUDY OF ANTI-INFLAMMATORY ACTIVITY OF SOME SALVIA OFFICINALIS EXTRACTS DERIVATIVES

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Introduction: Different forms of *Salvia Officinalis* are known to be used in stomatology and non-traditional medicine as an antimicrobial and anti-inflammatory agent. Nowadays inflammation of various etiology is being treated mostly using non-steroidal anti-inflammatory drugs (NSAIDs) which have many side effects such as nausea, ulcerations, hepatic toxicity, etc. Search of safe and effective component among different *Salvia Officinalis* extracts with anti-inflammatory activity has been given priority in our study.

Aim: The aim of the present work was to investigate anti-inflammatory activity of decoction of *Salvia*, lysine complex, phenolic complex, flavonoid complex of *Salvia*.

Materials and methods: Anti-inflammatory activity was evaluated on Carrageenin induced rat paw edema test. Animals were divided into 4 groups of 12 in each, group of control (water) and comparison group (diclofenac). Dosages in study groups were 10, 20, 50, 70 mg/kg. One hour after extract/water/diclofenac were induced intragastric, animals were injected 0.1 ml of 1% Carrageenin water solution under the plantar aponeurosis of right hindpaw, intradermally. The thickness of paw was measured using oncometer just before the experiment and every hour later after Carrageenin injections during 4 hours.

Results and discussion: Decoction of *Salvia* in dosage 10mg/kg showed 98% anti-inflammatory activity, in dosage 20mg/kg - 83%, 50mg/kg - 85%, 70mg/kg - 100% respectively. Lysine complex of *Salvia* in dosage 10mg/kg showed 92% anti-inflammatory activity, in dosage 20mg/kg - 81%, 50mg/kg - 98%, 70mg/kg - 98% respectively. Phenolic complex in dosage 10mg/kg showed 13% anti-inflammatory activity, in dosage 20mg/kg - 19%, 50mg/kg - 13%, 70mg/kg - -6% respectively. Flavonoid complex of *Salvia* in dosage 10mg/kg showed 6% anti-inflammatory activity, in dosage 20mg/kg - -2%, in dosage 50mg/kg - 6%, 70mg/kg - -8% respectively. Diclofenac showed 93% anti-inflammatory activity in dosage 8 mg/kg whereas control group had 0% anti-inflammatory activity. The present study showed that the decoction of *Salvia* and lysine complex possessed significant anti-inflammatory effect, flavonoid and phenolic complex did not show anti-inflammatory activity in comparison to diclofenac.

Conclusions: In search of effective anti-inflammatory agent four kinds of *Salvia* extracts' anti-inflammatory activity has been studied. The results of studies have shown decoction of *Salvia officinalis* and lysine complex obtained high level anti-inflammatory profile and appeared to be promising substance for making anti-inflammatory drugs in comparison to the phenolic complex and flavonoid complex which did not to show anti-inflammatory effect.