

ORAL PRESENTATIONS

PHARMACOLOGICAL STUDY OF THE VITASTEROIDS SUM FROM *Physalis angulata*

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The sum of vitasteroids from the aerial part of *Physalis angulata* L. (family Solanaceae) was obtained in the ICPS of the Academy of Sciences of the Republic of Uzbekistan and the pharmacological efficacy was studied.

Studies of the acute toxicity and anti-inflammatory effects of the sum of vitasteroids (VS) in comparison with the reference drug cortisone acetate have been conducted.

The acute toxicity of the sum of VS was studied in experiments on white mice weighing 18-20 g of both sexes. The drug was administered to animals of the experimental groups using a metal probe into the stomach once in doses of 500, 1000, 1500, 2000 and 2500 mg/kg. Each dose of the drug was tested on 6 animals. The control group of animals was injected with distilled water under similar conditions. All experimental animals were kept in solitary conditions and on a general diet with free access to water and feed. The observation was conducted for 14 days. General behavioral reactions, motor activity, and animal deaths were taken into account.

It was found that the administration of a sum of VS at a dose of 1500 mg/kg in 10-15 minutes caused short-term oppression, they became less mobile. No deaths were observed in this subgroup of experimental animals. An increase in the dose to 2000 mg/kg caused prolonged and pronounced depression in the animals after 10-15 minutes, and the animals became sedentary. This condition was observed for 3-4 hours. No animal deaths were observed in this group. Due to the absence of dead animals, the majority of acute toxicity indicators were $LD_{50} < 2500$ mg/kg. This allows it to be classified as a low-toxic substance.

In studying the anti-inflammatory effect, the studied sum of VS and the reference drug cortisone acetate were administered orally to male rats (180-200 g) at a dose of 10 mg/kg once a day for 7 days.

To assess the severity of the effect of the sum of VS on the proliferative phase of inflammation, sterile cotton balls weighing 10 mg were implanted under the skin of the back of rats under light ether anesthesia. After a week, the rats were decapitated, the balls with the granuloma around them were removed and dried to a constant weight at 75°C. The mass of granulation fibrous tissue was determined by the difference between the masses of the dried granuloma and the implanted ball. Experiments have shown that the sum of VS exhibits pronounced antiproliferative activity. The introduction of VS significantly inhibits the formation of granulation-fibrous tissue around implanted cotton balls, and leads to a significant decrease in the mass of granulation tissue to 28.6 ± 1.6 mg, which corresponds to an inhibitory effect of 58.1% compared with the control group ($p < 0.001$). At the same time, the anti-inflammatory activity of the sum of VS significantly exceeded the effect of the reference drug cortisone acetate. Cortisone acetate reduced the mass of granulation tissue by 33.4% ($p < 0.001$), but its effectiveness was lower than that of the sum of VS.

Thus, the obtained results confirm that the sum of vitasteroids from *Physalis angulata* is low-toxic and has a pronounced anti-inflammatory activity superior to that of cortisone acetate.