

## THE EFFECT OF BLOOD HERB (CHISTOTEL) (CHELIDOII HERBA) AND ALOE EXTRACT ON THE INFLAMMATION PROCESS

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**Abstract:** In this article, it was determined that the drugs have anti-inflammatory effects by using a 1:3 water solution of bloodroot (chistotel) and aloe extract in the treatment of artificially induced inflammatory processes in white mice, and the experimental results of their use in the treatment of pathological processes are described.

**Key words:** inflammation, bloodwort (chistotel) (chelidoii herba), aloe extract, depilation, xylol, dermatitis white mouse, hyperemia, burn, pain, local temperature.

**Relevance of the topic.** In the decision of the President of the Republic of Uzbekistan No. PQ-120 dated February 8, 2022 "On approval of the program for the development of the livestock sector and its branches in the Republic of Uzbekistan for 2022-2026" it is necessary to rapidly develop livestock, increase the quality of products from them and thereby food urgent tasks aimed at ensuring food safety are defined [1].

Despite the fact that measures aimed at preventing surgical diseases spread among high-yielding cows brought from abroad to the cattle farms of our republic are being carried out regularly, the seasonal incidence rate of interdigital dermatitis remains high in them. As a result of hoof pathologies in productive cows, cattle farms specializing in animal husbandry suffer great economic losses due to a sharp decrease in productivity and fertility, as well as an increase in veterinary costs. Therefore, scientific research aimed at developing methods of early diagnosis, effective treatment and prevention of interdigital dermatitis processes in productive cattle based on regional climatic conditions of our republic is considered urgent.

Despite the fact that systematic scientific researches on the origin, spread and economic damage of interdigital dermatitis processes in productive cows have been carried out in veterinary science and practice in the countries of the world, the methods of timely diagnosis, effective treatment and prevention of these diseases have not been sufficiently scientifically based. It is necessary to pay special attention to early diagnosis, conservative and operative treatment, and improvement of preventive methods of interdigital dermatitis, which is common among productive cows.

Treatment and prevention of infectious finger dermatitis in cattle is an urgent problem of modern animal husbandry. The main share of infectious diseases of the finger is considered to be necrobacteriosis and foot rot of sheep, which are widespread in the Russian Federation.

According to Döpfer D. [6], infectious finger dermatitis is one of the most common diseases in the world. This disease is widespread in the Russian Federation, because in the past years imported livestock and their number have increased significantly.

Since the emergence of the infectious disease finger dermatitis syndrome in 1974, scientists around the world have been trying to create effective means for the prevention and treatment of this disease [7]. During this time, many methods have been proposed, group and individual therapy, none of which has been found to be the generally accepted most effective means for the prevention and treatment of infectious finger dermatitis syndrome. Cook N. e. a. according to the information of the most common means for group treatment of infectious finger dermatitis are copper sulfate and formalin solutions[5]. But, at the same time, Koziy V.I. (2005) states that the effectiveness of this drug in the treatment of finger dermatitis is low, and the use of formaldehyde solution is prohibited in many countries due to its carcinogenic properties [4].

According to Julenko E. A. (2000) reported that the use of 10% zinc oxide as ointments promotes rapid wound healing[2].

Chistotel (*Chelidoni herba*) is a perennial plant belonging to the poppy family, from which the above-ground part of the plant is used as a medicinal raw material. The milky sap contains approximately 1-4% isoquinoline alkaloids (alkaloid content is much lower in the blood chupi grass and dry roots) - chelidonine, chelerythrine,  $\alpha$ -,  $\beta$ - and  $\gamma$ -homochelidonine, sanguinarine, chelidoxanthine, oxychelidonine, chelirubin, protopine, coptisine, kryptonin, spartein, stylonin, dephyllin, xelilutin, etc., as well as higher aliphatic alcohol chelidoniol, flavonoids, choline, tyramine, saponins, organic acids (citric, chelidonic, malic, amber), essential and fatty oils, phenolic acids, vitamin C, carotene, tannins and resins are also present.

Blood chupi has antimicrobial, antispasmodic, antitumor, diuretic and diuretic, degreasing and anti-inflammatory effects. (<https://compendium.com.ua/akt/67/73/chelidonium-majus/>) [8].

As a result of the complex treatment of the purulent-necrotic wound of the hoof of cows, it was observed that the amount of leukocytes in the blood decreased, the number of erythrocytes and hemoglobin, as well as the concentration of total protein and gamma-globulins in the blood serum increased compared to local treatment [3]. When experimental skin-muscular injuries were induced by the author in laboratory animals, and 50 and 100% chistotel juice was applied to them, *Staph. Aureus*, *Proteus vulgaris*, *Escherichia coli*, *Str.* It was noted that it has an effect against *Epidermidis* microorganisms, and 10% ointment of chistotel provided healing of skin-muscular wounds 3 days earlier than in the control group.

**The purpose of the study.** The purpose of this study is to study the effect of blood thorn (chistotel) and aloe extract on the course of artificially induced skin inflammatory processes in white mice.

**Place, object and methods of research.** The experimental part of the research was conducted at the Nukus branch of the Samarkand Veterinary Medicine University of Animal Husbandry



and Biotechnology, 31 A.Utepov Street, Nukus, Republic of Karakalpakstan. In order to clarify the effects of blood sputum (chistotel) and aloe extract on the inflammatory process in experiments, 6 groups of 18 head laboratory animals with a body weight of 22-26 g were formed, each with 3 white mice: 4 of them were experimental and 2 were control groups. After depilation in the waist area, the white mice of the first and second groups were given three drops of xylene, rubbed on the skin with a glass stick for two minutes to induce dermatitis. On the same day, one hour later, and on subsequent days, the first group received 3-4 drops of a 1:3 water solution of chistotel (*Chelidoii herba*) and the second group received 3-4 drops of aloe extract on a 10 mm diameter skin area treated with xylene. applied.

White mice of the third and fourth experimental groups were given a 10 mm diameter burn on the skin under the influence of a metal heated to 50-60 °C after depilation. On the same day, one hour later, and on the following days, the third group received 3-4 drops of a 1:3 solution of blood sedum (chistotel) in water, and the fourth group received 3-4 drops of aloe extract.

Three drops of xylene were applied to the lumbar region of 5 groups of white mice, which were rubbed on the skin with a glass stick for two minutes to induce dermatitis. In the same way, 6 groups of control white mice were given a 10 mm diameter burn on the skin under the influence of a metal heated to 50-60°C after depilation. White mice in these 5th and 6th control groups were not treated.

Mice in all experimental groups were kept in the same conditions and fed the same.

**Analysis of the obtained results.** In white mice of the first and second experimental groups, mild hyperemia without swelling was noted during the first day; on the second and subsequent days of the experiment, there were no signs of inflammation in the skin exposed to chemicals. At the same time, in 5 groups of white mice, during the first 24 hours, hyperemia and edema were detected in the areas of chemical exposure to the skin, characteristic clinical signs were detected after 6-10 hours (Fig. 1-2-3-8). On the second day, specific clinical signs of inflammation (hyperemia, swelling, local temperature increase, pain) were observed in the injured area of the skin (Fig. 4-5-6).



Fig. 1-2-3. The first day of treatment.



Figure 4-5. The sixth and 6th pictures of the experiment. The twelfth day of the **experiment**.

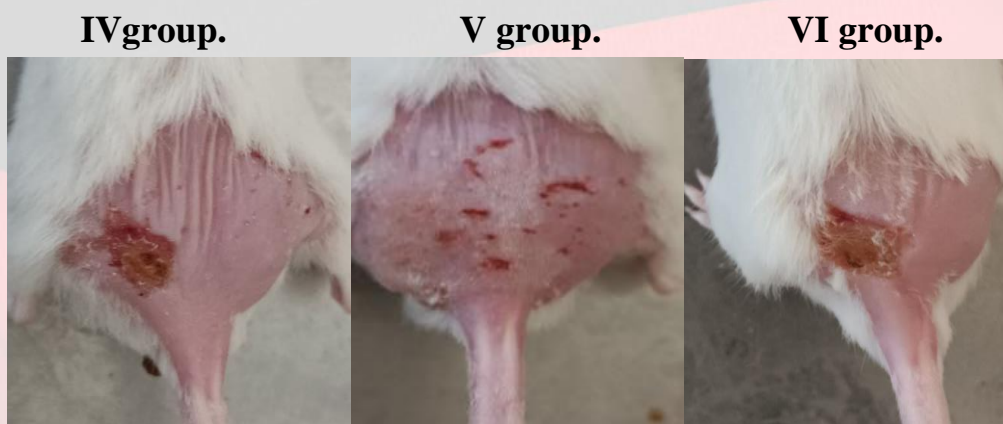


Fig. 7-8-9. The first day of treatment.



Fig. 10-11-12. The twelfth day of the experiment.

In the animals of the third and fourth experimental groups, skin hyperemia and slight swelling in the injured area after the first day of burn exposure were detected (Figures 3-6-7 -8-9). On the second day, the signs of inflammation disappeared, and by the 8-9th day, there were no signs of burning.

In 6 similar groups of animals, after 2-3 hours, hyperemia, pain, local temperature increase and swelling of the skin due to burns were detected. During the next 12 hours, inflammatory processes developed and serous blisters appeared in two animals. A day after the burn, severe



swelling appeared. Later, with the passage of time, the exudative processes decreased, by the 3-5th day, necrotic cells were observed in the burned areas, and on the 12th day, the necrotic cells began to grow stronger (Fig. 10-11-1).

From the obtained data, it can be concluded that the used drugs have an anti-inflammatory effect and allow their use in the treatment of pathological processes.

## **CONCLUSIONS**

1. A 1:3 aqueous solution of bloodwort (chistotel) and aloe extract was found to have an anti-inflammatory effect when administered to mice in the treatment of artificially induced inflammation.

2. In the treatment of artificially induced inflammatory processes in mice, it was determined that the drugs have anti-inflammatory effect by using a 1:3 water solution of blood sedum (chistotel) and aloe extract, which makes it possible to use them in the treatment of pathological processes.

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