

## THE EFFECT OF BLOOD DRUG (CHISTOTEL) (CHELIDOII HERBA) AND ALOE EXTRACT ON THE REGENERATIVE PROCESS OF SKIN-MUSCLE INJURIES

Ernazarov D.A.

SamDVMChBU Nukus branch is the main doctoral student.

Niyazov H. B.

SamDVMChBU professor, vet.f.d.

**Abstract:** In this article, an increase in the concentration of collagen, an increase in re-epithelialization, and a faster closure of the wound defect were determined when a 1:3 water solution of blood thorn (chistotel) and aloe extract were used in the treatment of artificially induced wounds in white mice, and the experimental results of their use in the treatment of pathological processes were described.

**Keywords:** wound, blood clot (chistotel) (chelidoii herba), aloe extract, white mouse, collagen concentration, reepithelialization, hyperemia, pain, local temperature, dystrophic phase (hydration), regenerative phase (dehydration).

**Relevance of the topic.** 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. Cattle farms specializing in animal husbandry are experiencing great economic losses due to a sharp decrease in productivity and fertility in productive cows due to hoof pathologies, as well as an increase in veterinary costs.

Chistotel (*Chelidoii 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 about 1-4% isoquinoline alkaloids (the amount of alkaloids in the bloodwort and dry roots is much lower) - 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.

Bloodwort has antimicrobial, antispasmodic, antitumor, diuretic and choleric, analgesic and anti-inflammatory effects. (<https://compendium.com.ua/akt/67/73/chelidonium-majus/>) [9].

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 total protein and gamma globulins in the blood serum increased compared to the local treatment [2]. When experimental skin-muscular injuries were induced by

the author in laboratory animals, and 50 and 100% chistotel juice was applied to them, Staph. Aures, 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 authors studied the surgical pathologies occurring in the legs of cows, and out of 57 cows with surgical diseases, purulent-necrotic processes of the toes were observed in 46 heads, and purulent pododermatitis prevailed among them, i.e. purulent pododermatitis in 21 cases, interdigital cracks and skin injuries and ulcers were detected in 13 head animals. [4]. When the iodine-dimexide mixture is used in the treatment of diseases, the duration of treatment is reduced on average: in pododermatitis - by 9 days, in phlegmonous processes - by 5 days, and in injuries and wounds of interdigital tissue - by 5 days.

Some authors say that in the treatment of purulent-necrotic injuries of the fingers, it is important to find a means to quickly clean the surface of the wound from purulent exudate, to eliminate the inflammatory process early, to create a healthy granulation in the wound, as well as to ensure the transition from the inflammatory-dystrophic phase (hydration) to the regenerative phase (dehydration). becomes important [3;1].

In recent years, a number of drugs for the treatment of finger dermatitis have appeared on the market. Thus Kofler J. e. a. found that when using Protexin Hoof-Care (metal salts, organic acids) paste to treat toe dermatitis, it had the same high therapeutic effect as oxytetracycline [7]. Shahabaddin M. e. a. comparing the therapeutic effects of lincomycin spray with Solka Hoofgel gel (with and without a protective bandage, with removal of the affected tissue), concluded that the maximum effect was achieved by applying Solka Hoofgel gel and a protective bandage after removal of the damaged tissue [8].

Holzhauser M. e. a., found the high efficiency of Intra Hoof-fit gel containing copper and zinc in the treatment of M2 stage of finger dermatitis, which was applied according to the following scheme: on the 1st day - a protective bandage and gel, and on days 3 and 5 - the gel was applied without a protective bandage [ 6]. The author [5] recommends the use of Novaderma paste containing salicylic acid for the treatment of chronic stage (M4).

**The purpose of the study.** It consists in studying the effect of blood thorn (chistotel) and aloe extract on the regenerative course of artificially created skin-muscle wounds in white blood cells.

**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 the experiments, in order to study the effect of the extract of blood thorn (chistotel) and aloe on the regenerative course of skin-muscle wounds, the infected wound processes were

experimentally produced in 15 white mice with a body weight of 20-25 g. There were 2 experiments with 5 white mice in each group and 1 control. groups were studied comparatively. Musculoskeletal injuries were caused to them without following aseptic rules. A 2x2 cm area was carefully removed from the back of all animals. Then, using a stencil, the wound diameter of 10 mm was marked and the skin and muscle layer was cut with scissors. On the same day, one hour later, and on subsequent days, 3-4 drops of a 1:3 water solution of Chistotel (*Chelidoii herba*) were applied to a wound with a diameter of 10 mm in the first experimental group, and 3-4 drops of aloe extract were applied to the wound of the second group of mice. was applied and the wounds of control mice were treated with 70% alcohol. After that, the wounds were covered with a gauze napkin, a piece of gauze was placed on top of it, and its edges were glued to the fur of the animal with thick collodion. The healing process of the experimental wounds was evaluated by the following indicators: the time of the appearance of granulation in the wound, the coverage of the bottom of the wound with granulation, the quality of the granulation, the epithelization process, and the condition of the tissues around the wound. Mice in all experimental groups were kept in the same conditions and fed the same.

**Analysis of the obtained results.** Observations showed that in the mice of the first experimental group, the healing of the wound, i.e. the granulation of the wound, the disappearance of hyperemia, swelling and pain around it, and the formation of epithelization with the formation of a scar were manifested on the 12th day of the experiment (Fig. 1-2-3). In the mice of the second experimental group, the healing of the wound, i.e. the granulation of the wound, the loss of hyperemia, swelling and pain around it, and the formation of epithelization with the formation of a scar were shown on the 11th day of the experiment (Fig. 4-5-6). In the animals of the control group, hyperemia, swelling and loss of pain around the wound, epithelization with the formation of a scar were shown on the 15th day of the experiment (Fig. 7-8-9).



Picture 1-2-3. The first day of the experiment.



Fig. 4-5-6. The seventh day of the experiment.



Fig. 7-8-9. The twelfth day of the experiment.

The obtained data allow us to conclude that a 1:3 water solution of blood thorn (chistotel) and aloe extract has a positive effect on regenerative processes and stimulates them.

The obtained data allow us to conclude that a 1:3 water solution of blood wort (chistotel) and aloe extract has a positive effect on regenerative processes and stimulates them.

## CONCLUSIONS

1. When a 1:3 water solution of blood hyacinth (chistotel) and aloe extract were used in the treatment of artificially induced wounds in mice, an increase in collagen concentration, an increase in re-epithelialization, and a faster closure of the wound defect were observed.
2. In the treatment of artificially inflicted wounds on mice, the use of a 1:3 water solution of bloodroot (chistotel) and aloe extract has been confirmed to have a positive effect on the regenerative processes and to stimulate them, making it possible to use them for the treatment of pathological processes.

## LIST OF REFERENCES

1. Ляшенко П.М., Марьин Е.М., Ермолаев В.А. Морфологические изменения в сосудах при гнойных язвах мякишей у крупного рогатого скота. Материалы Международной научно-практической Конференции “Аграрная наука и образование на современном этапе развития: опыт, проблемы и пути их решения”. Ульяновск, УГСХА, 2009. –С. 161-164.

2. Стельмухов М.В. Этиопатогенетическая терапия гнойно-некротических язв копытец у коров. // Дисс... канд.вет.наук. Владикавказ, 2008. 171 с.
- 3.Симонова Л.Н., Концевая С.Ю., Симонов Ю.И. Гистологические показатели гнойно-некротических поражений копытец у крупного рогатого скота. Вестник Брянская ГСХА, 2013. 3 6. –С. 23-25.
- 4.Черняк Н.Г., Черняк С.В., Козий В.И., Гончарук О.П. Наследственность – одна из причин развития деформации Конечностей у коров. Научное обеспечение животноводства Сибири. Материалы II Международной научно-практической Конференции (г.Красноярск, 17-18 мая 2018 г.). Красноярск, 2018. –С. 283-289.
- 5.Fiedler A. Ein Pflaster gegen Mortellaro / A. Fiedler // Elite Magazin furMilcherzeuger SONDERDRUCK aus der Ausgabe 06/2012.
- 6.Holzhauer M. Curative effect of topical treatment of digital dermatitis with a gel containing activated copper and zinc chelate / M. Holzhauer, C.J. Bartels, M. van Barneveld, C Vulders, T. Lam//VetRec.-2011.-V. 169(21).-P. 1-4.
- 7.Kofler J. Efficacy of the Non-antibiotic Paste Protexin Hoof-Care for Topical Treatment of Digital Dermatitis in Dairy Cows / J. Kofler, M. Pospichal, M. Hofmann-Parisot // J. Vet. Med.. - 2004. V. - 51. - P. 447-452.
- 8.Shahabaddin M. Clinical Assessment of Four Individual Treatment for Digital Dermatitis in Dairy Cows / M. Shahabaddin, I. Nowrouzian, M. Nouri, S.M.K.S. Javad // Iranian journal of veterinary surgery. - 2007. - V. 2. - P . 56-60.
- 9.<https://compendium.com.ua/akt/67/73/chelidonium-majus/> .