Cure for treatment of purulent-necrotic diseases of the animals limbs

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Keywords: emulsion, liniment, paste, salve, potassium humate, purulent-necrotic disease, limbs

DOI:10.36291/HIT.2021.033

All age and sex groups of animals are susceptible to infectious diseases of the extremities. According to some data, in economically developed countries of Western Europe, the prevalence of purulent-necrotic diseases of animal extremities, such as necrobacteriosis, hoof rot, Mortellaro's disease, purulent pyodermatitis, purulent and purulent-necrotic pododermatitis, alarinitis, Rustergolz ulcers, etc., ranges from 27 to 74 %; in farms of the Russian Federation, it ranges from 12 to 88%, in Kazakhstan - from 15 to 50%. Various veterinary drugs have been developed to combat diseases of the extremities of animals, and methods for treating purulent-necrotic diseases have been proposed [1].

The research aims to develop an effective agent for treating purulent-necrotic diseases of the extremities of animals of various etiologies with low cost, high efficiency, and a broad spectrum of antimicrobial action.

As a result of the research, the "Humik-Salve" product was developed, which uses potassium humate from brown coals of Kazakhstan (with a mass fraction of humic substances up to 56% in terms of dry matter). The preparation contains potassium humate, talc, vitamins, lanolin, glycerin, and the base: linseed or vegetable oil, petroleum jelly, depending on the dosage form (liniment, emulsion, paste, ointment) with a specific content of components.

The determination of the drug activity was carried out in relation to *Fusobacterium necrophorum* and *Escherichia coli* isolated from the contents of purulent-necrotic lesions, as well as pure cultures of *Streptococcus spp.*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Pseudomonas aeruginosa*. Ichthyol ointment was used as a control. It was found that the zone of no growth of *F. necrophorum* was 2.8-3.5 cm, the area of no growth of other bacteria - 3.0-3.7 cm, around the control - 1.2-2.4 cm, which indicates the high antimicrobial effect of the developed product.

Production tests of the effectiveness of the means and method of treating animals with purulent-necrotic diseases of the extremities were carried out in various farms of the Akmola, Karaganda, South Kazakhstan, Almaty regions of the Republic of Kazakhstan. Cows (361 animals) were selected according to the method of pairs-analogs with necrobacillosis, Mortellaro's disease, purulent pyodermatitis, purulent and purulent-necrotic pododermatitis, alarinitis; sheep affected by hoof rot (68 heads), horses with purulent-necrotic lesions of the limbs, scuffs, burns, lacerations, biting midges (57 heads). The treatment results showed that the "Humik-Salve" agent is highly effective for the above lesions, helps to reduce the treatment time by 2-3 times, and has a high penetrating ability. This allows us to recommend it for implementation in veterinary practice.

References

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