Results Of The Combined Use Of A Phascocidium Drug And An Immunoparasitic Immunostimulator In Dewormintization Of Cattle.

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ABSTRACT

For the treatment and prevention of fascioliosis in the liver, immunocorrective roncholeukin is used in combination with antitheloid fasciocid. Over the course of our experiment, drug efficacy (fascocid + immunoparasitic) is 5.3% more effective and reduces the level of invasion extensibility (IE) by 98.3%, the intensity of invasion (II) by 92.5%, the known method reduces the level of invasion extensibility (IE) by 93%, and the intensity of invasion (II) by 85.2%.

Keywords: fascioliasis, fasciocid, immunoparasite, immunomodulator, pathogenesis, dynamic decrease.

Introduction: fasciolosis, like helminthosis, can be considered as part of a global environmental and food problem not only in Uzbekistan, but also in other regions of the world. Due to the use of the liver, reduced milk yield and body weight, a decrease in specific and nonspecific resistance of the body, increased susceptibility to pathogenic agents, reduced quality of vaccinations cause great economic damage to livestock products and, accordingly, there is a need to stimulate livestock breeding [1.6.7.10].

The main part. Stimulating the specific and non-specific resistance of the animal's body is necessary to increase the therapeutic effectiveness of anthelminth, reduce its toxic effects and, accordingly, improve the quality of deworming and the safety of livestock.

The closest technical solution is a method of treating cattle with antihelmintics through the combined use of a fascicocidal drug and an immunoparasitic immunostimulant. The method includes, in addition to the application of fascicocid in accordance with the instructions, an additional three injections of the immunoparasitant subcutaneously at a dose of 0.8, 1.2, and 1.6 ml per head with an interval of 7 days [1.7.8].

Fasciocid is an antihelmintic drug for deworming cattle with fascioliasis, dicrotaceliosis and paramphistomatosus. The drug is highly effective for adult fascioliasis and has a pronounced trematocidal effect on young forms of fasciolosis.

Fascicocide is low toxic, does not have a harmful effect on the pregnancy process, and is quickly excreted from the body [2.3].

After 14 days after deworming, the slaughter of livestock for meat is allowed. Immunoparasitic activates immune reactions aimed at the destruction of parasites at different stages of development of the body.

At therapeutic doses, the immunoparasitic is less toxic, does not have local irritating or desensitizing effects, is compatible with antiparasitic, antimicrobial and other chemical therapeutic drugs.

An important disadvantage of this method is that the immunoparasitic drug is administered for several days in a row, which leads to additional costs and increases the cost of treatment [1.4]. With this deworming regimen, it is very unpleasant to inject Immunoparasitant 3-6 times subcutaneously, which is very painful for the animal and unpleasant for the veterinarian, since the cost of working time can add up.

The combination of active agents that stimulate the body's protective reactions with antihelmintics increases the success of treatment for helminthiasis.

To increase the effectiveness of helminthosis therapy, it is necessary to stimulate the body's non-specific resistance.

The need to stimulate the immune system is caused by the development of secondary immunodeficiency, which can occur for various reasons, including helminths.

Experiments Conducted. Prevention and treatment of cattle fasciolosis is to improve the effectiveness of treatment and reduce labor costs.

This goal is achieved through the use of the method of treatment and prevention of fascioliasis in cows, in combination with antithessalonic fasciocid immunocorrect ronkoleukin is used according to the following scheme: fascicoside at a dose of 1 g per 10 kg of animal. Once with concentrated feed by mouth, roncoleukin is injected subcutaneously into the middle third of the neck twice at a 72-hour interval at a dose of 5,000 YED per kilogram of body weight.

Fascicocid is an antihelmintic drug for ruminants, and is recommended for acute and chronic fascioliosis, dicrotaceliosis and paramphystomosis. Strongly contain oxyclosanide as active ingredient. The drug effectively acts on all stages of fasciola development.

Fasciocide is produced in the form of granules (packed in 0.5 and 1 kg) and in tablet form (packed in 25-100 tablets). When treating animals with fasciocide, special feeding is not required. Milk of dairy animals can be used for food purposes within 24 hours after deworming.

Slaughter of cows for meat is allowed after 14 days after deworming. In the event of forced slaughter before the due date, the meat can be used to feed predatory animals or to produce meat and bone for its production [5.6.9].

Roncholeukin is a novel drug from the group of cytokines, which has a wide biological activity and has a targeted effect on weakened joints of the immune circuit in trematodes. Roncoleukin has the ability to replicate the action of IL-2 as a key link of the cytokine chain.

The leading role in the pathogenesis of trematodes belongs to secondary factors, provoking various pathological processes in the body. Including immunopathological toxic-allergic reactions, which lead to a violation of the neurohumoral and enzymatic systems of the body. All this leads to a violation of metabolic processes and, as a result, a decrease in animal productivity. Given that roncoleukin gently corrects disturbances in the immune system of animals affected by fascioliasis, leading to an increase or decrease in physiological meor levels, we developed this method of deworming given that fasciocid is a highly effective but toxic trematodocide [7].

To date, chemotherapy is an effective way to fight trematodes. However, not including anthelmintic drugs that are used to treat. fasciocides are very toxic (their pharmacological effect is based on this feature), moreover, it is very difficult to dose the drug on a large population, because when deworming batches, mandatory safety conditions - mixing the drug with food and taking the prepared substrate in uniform are high probability of overdose;

In modern conditions of industrial animal husbandry it is very difficult to comply with these conditions. Dead and rotting helminths are a source of the most dangerous group of biological toxins.

Procedure of planned or involuntary deworming with fascicocid does not involve the

use of drugs from other pharmacological groups, including drugs. The use of immunomodulators or immunocorrectors, as well as the immunotropic drug Roncoleukin, does not require the mandatory use of anthelmintic fascisoticide. Roncholeukin is a drug used against diseases associated with the growth of tumor cells, as well as viral, bacterial and fungal infections. But in the "Guidelines for the use of the immunomodulator Ronkoleukin as an immunocorrective in veterinary medicine" 02.02.04 N 13-4-03 / 0909. the possibility of using this drug for parasitic diseases of cattle has not been demonstrated, the indicators of roncoleukin use for infectious diseases differ from trematodes; Infection has a specific etiopathogenesis, which is based on the introduction of nucleic acids (RNA, DNA) into the cells of macroorganisms as a data matrix with the subsequent creation of microorganisms. In response to the infection entering the body, the macroorganism forms a specific immune system.

The leading role in the pathogenesis of helminthiases belongs to secondary factors, provoking various pathological processes in the body. Including these are immunopathological toxic-allergic reactions that lead to disruption of the neurohumoral and enzymatic systems of the body. All this leads to a violation of metabolic processes and, as a result, a decrease in animal productivity.

Thus, deworming is a process defined as the combined effect of toxicants of chemical (drug Fascocid) and biological (exogenous agents of parasitic activity, biogenic structures of dead helminths) origin. Such toxic pressure is extremely dangerous for the body and, according to our research, is accompanied by a decrease in animal productivity, as well as the development of secondary immunodeficiency.

The essence of the method is highlighted by examples.

EXPERIMENT 1. Comparative efficiency of various methods of deworming cattle with fasciolosis.

Research work was carried out in cattle farms of Turkulsky district, Beruni district, Ellikkala district. Three groups of animals infected with fascioliosis (identified by helminthic method) were selected, with 10 heads of animals each. Animals in the control group were not given medication (non-treated animals). The animals of the first experimental group were given fascicocid to the mixture of concentrated feed once per 1 g/10 kg of body weight. Animals of the second experimental group were given fascicocid in combination with the drug fascicocid by mixing immunocorrective roncoleukin twice (with an interval of 72 hours) subcutaneous (with an interval of 72 hours) with a dose of 1 g / 10 kg. in relation to body weight. After deworming animals of the third group with fascicocid, the immunoparasitic agent was administered subcutaneously three times at an interval of 7 days at doses of 0.8, 1.2 and 1.6 ml per 1.

Thus, our recommended method for the treatment and prevention of fascioliosis in cattle by the combined use of fascioside and roncoleukin is 5.3% more effective than the known method (fasciscocid + immunoparasitic) and reduces the invasion rate (IE) by 98.3%, the invasion intensity (II) by 92.5%, the known method reduces the extent of invasion extensibility (IE) by 93%, and the intensity of invasion (II) by 85.2%.

In group 1 (infection control), the 100% intensity of invasion in the study of feces of cows infected with fascioliosis (II) averaged 115.2±11.7 samples for group (II). F.gigantica eggs in a 1 g dung specimen.

The indicators studied did not change much during the experiment, and by day 30 they were 115.0 ± 11.6 samples. Egg in a sample of 1 g of dung at IE 100% (Table 1).

In the animals of the first experimental group, before giving a fascicocid, II was 112.4 ± 10.4 samples. In the sample of 1 g of dung, IE - 100%. After 10 days after deworming cows with fascicocid, II decreased by 72.4% and amounted to 81.4 ± 9.7 units. Intensity efficiency (II) on day 10 was 27.6% (Table 1).

Therapeutic effect of deworming

Groups, medications	Days of inspection

	Tajribadan oldin				10 days				20 days				30 days			
	AI (copies)	IE %	EI %	EE %	AI (copies)	IE %	EI %	EE %	AI (copies)	IE %	EI %	EE %	AI (copies)	IE %	EI %	EE %
Control (untreated cattle)	115.2±11.7	0	100	0	116.0±11.9	0	100	0	114.3±11.0	0	100	0	115.0±11.6	0	100	0
1 tajriba gruppa(facades)	112.4±10.04	0	100	0	81.4±9.7*	27,6	82	18	48.3±5.7*	57	36	64	18.2±3.1*	83,8	9	91
2 Tariba group(Faxotsid+Ronkoleykin)	114.5±11.1	0	100	0	42,7±4,8*▲	62,7	44	56	21,2±3,7*▲	81,5	27	73	8,6±2,1*▲	92,5	1,7	98,3
3 tayriba gruppa(faskotsid+immunoparasitic)	113.2±11.4	0	100	0	76.5±7.9	32,4	80	20	36.1±4.4	68,1	30	70	16,8	85,2	7	93,0

*-P≤0.01-0.001 compared to the control group

▲-P≤0.01-0.001 compared to 1 group

The invasion rate (IE) decreased by 82% and the efficiency rate (IE) was 18%. On the 20th day after deworming, II had 48.3±5.7 copies. Compared to the FON study, II increased by 57% and 2 times compared to the previous study. On day 20, IE was 36%. This is 64% higher than the initial study and 46% lower than the previous study.

On day 20, IE was 64%, an increase of 46% from the previous study. On day 30 of the experiment, we noted a significant decrease in all studied indicators in animals of experimental group 1. II stopped at 18.2±3.1. In a 1g feces sample, this was 26.8% lower than the previous study. II was 83.8%. IE did not exceed 9%, which is 27% lower than previous studies. On the 30th day of the experiment in the animals of experimental group 1, the IE was 91%. It is worth noting that in animals from experimental group 1 compared to the invasive control group and FON data, a significant change in the studied indicators was detected on the 20th day of experiment.

FON indicators in the study before the use of the drug in animals of experimental group 2: II - 114.5±11.1 samples. In the sample of 1 g of dung, IE - 100%. After complex therapy on day 10 of the experiment, we found a significant dynamic decrease in the studied parameters (Table 1). II had 42.7±4.8 copies, which was 2.7 times less than in the control group and 1.9 times less than in the experimental group. II was 62.7% at the same time, and IE did not exceed 44%, which was 2.3 times less than in the control group and 1.9 times less than in the experimental group. On day 10 of the study, IE was 56% in the second experimental group, which is 3.1 times higher than this rate in the first experimental group and 56% higher than in the control group.

On the 20th day of the experiment, the indicators studied in animals of experimental group 2 decreased by the following values: II - 21.2 ± 3.7 samples, which is 2 times lower than the data of the previous study, similar to the data. 2.3 times in experimental group 1 and 5.4 times in control group (Table 1).II was 81.5%, which is 1.8 times higher than the previous data, 1.4 times higher than the data from experimental group 1, and 81.5% higher than the control group data. The IE was 27%, which is 2 times lower than the previous study data, 1.3 times lower than the experimental group 1

data, and 3.7 times lower than the control group data. On day 20 of the experiment, the IE in the animals of Experiment Group 2 reached 73%, which was 17% higher than the previous study data, 9% higher than the data from Experiment Group 1, and 73% higher than the control group data.

On the 30th day of the experiment, the II and IE values in the experimental animals of Experimental Group 2 reached a maximum of 8.6 ± 2.1 samples. and 1.7%, respectively (Table 1). By the end of the experiment after complex therapy, the risk decreased by 12.9 times compared to the II group of animals, by 13.3 times with background data, and by 2.1 times with 1 experimental group. II was 92.5%, which is 19.5% higher than previous study data from animals in the same group, and 8.7% for experiment group 1. Compared to the infected control group and background data, II was 92.5% higher. IE in Experimental Group 2 did not exceed 1.7% at the end of the experiment, which is 15.8 times or 25.3% lower than the results of the previous study, 7.3% and lower than the data from Experimental Group 1. In the animals of Experiment Group 2, the IE at day 30 of the experiment was 98.3% and was 25.3% higher than the previous study data of this group and 7.3% higher than the data from Experiment Group 1, compared to the control group (infected animals) and the background data by 98.3%.

Conclusion. Thus, studies conducted to determine the therapeutic effectiveness of various methods of deworming cattle with fascioliasis have demonstrated that complex therapy with the use of the antihelmintic fascicocid and the immunocorrective ronkoleukin in animals of experimental group No. 2 reduces II and IE more than 2 times from 10 days. After using one fasciscocide from the 20th day of the experiment, this is how these indicators decreased significantly. By day 30 of the experiment, during complex therapy, II increased by 8.7% from the same indicator in the first experimental group and was 92.5%, IE by 7.3-fold, and by 98.3% ($p \leq 0.01$).

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