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EFFECTIVENESS OF ANTIHELMINTIC MEDICINES IN THE TREATMENT OF FASCIOLYSIS IN GOATS IN THE CONDITIONS OF SURKHANDARDO REGION

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Abstract
The prevalence, extensiveness, and intensity of fascioliasis among goats in the Surkhandarya region have been determined.

Keywords: Fasciola hepatica, Fasciola gigantica bioekologiya, trematod, gelmint, geksaxloretan, geksaxlorparaksilol, geksixol, bitionol, sulfen, diamfenetid, zanil, fazineks, doveniks, rafoksanid, dertil, albendazol, alben, rolenol.

Introduction

In the fight against and prevention of fascioliasis of goats, it is necessary to pay attention to its regional epizootological characteristics, bioecology, and the intensity of invasion of pathogens. It is also advisable to improve the methods of prevention and treatment of the disease based on the mechanism of action of the tested drugs, their application processes, and cost.

The majority of livestock, especially goats, currently being raised in our republic is kept in the care of the population, therefore, all personal assistants, farmers and farms require timely, high-quality and planned treatment and preventive measures against helminthiasis and other dangerous parasitic diseases. Today, many private veterinary pharmacies have been established in our republic, and many new anthelmintic and other medicinal products have been imported from abroad.

Currently, these pharmacies have various forms and compositions of anthelmintic drugs used against helminthiasis, especially helminths of small horned animals. Among them, albendazole, which has a low cost and its various dosage forms, is currently one of the widely used medicinal anthelmintic agents in veterinary practice for the treatment of fascioliasis in goats. Also, currently in production practice, veterinary specialists or animal owners are using these drugs unplanned, in excess of the norm, many times, and in some cases, the same anthelmintic is

repeatedly used every month. Such unplanned deworming activities lead to a number of unpleasant situations, such as increased costs, poisoning of the animal body, as well as the quality of products obtained from animals and harm to human health due to their consumption. In the treatment of fascioliasis in goats, it is advisable, first of all, to take into account the season and type of trematode, the intensity of the invasion, the course of the disease, and, accordingly, to select anthelmintic drugs and determine the duration of their use, based on the regional epizootological characteristics of this disease.

For many years, preparations such as carbon tetrachloride, hexachloroethane, hexachloroparaxylene, hexychol, bithionol, sulfen, diamphenetide, zanil, fazinex, dovenix, rafoxanide, dertil have been used to treat fascioliasis in goats. However, in recent years, the influx of new medicinal substances from foreign countries has increased, and the improvement in the quality of private veterinary pharmacies has created the opportunity to recommend several types of drugs for a particular disease. As a result, the type of drugs used against fascioliasis has changed, and the old anthelmintics have been replaced by combined ones with new properties. Examples of such new chemical preparations include all albendazole preparations (alben, albasafe, albendazole, albenol, helmintol, albazen, albendex, bendaz, etc.), rolenol, brontel-10, closan-50, closantel, faskotsid, helmicid, and many other chemical preparations.

Methods of examination. Examinations were carried out using epizootological, clinical, helminth-coprological examination methods, using the sequential washing method.

Object and scope of the study. Scientific research was carried out at the “Togaymurodov Burkhon” goat farm in the Boysun district of the Surkhandarya region.

Experiments were conducted to improve the treatment and prevention of trematode diseases in goats. Field experiments 30 naturally infected goats were isolated from the “Togaymurodov Burkhon” goat farm in the Boysun district of Surkhandarya region and divided into 3 groups. Infected goats in group 1 were given 1 ml of albendazole suspension (10% albendazole) produced in China per 10 kg of live weight. Goats in group 2 were given 1 tablet of Alben produced in Russia per 40 kg of live weight of each goat orally. Goats in group 3 were given 1 ml of the Spanish anthelmintic Rolenol per 10 kg of live weight intramuscularly.

Albendazole 10% - 1 ml of albendazole contains 100 mg of albendazole and excipients: glycerin, polysorbate 80, hydroxyethylcellulose, sodium metabisulfite, sodium methylhydroxybenzoate, sodium propylhydroxybenzoate, citric acid, purified water.

Alben – 1 g of Alben granules contains 200 mg of albendazole as the active ingredient and excipients: polyvinylpyrrolidone, calcium stearate, potato starch, and lactose.

Rolenol is a solution for injection, 1 ml of which contains 50 mg of closantel and excipients: polyvinylpyrrolidone, anhydrous sodium sulfate, disodium EDTA, sodium

methylhydroxybenzoate, sodium propylhydroxybenzoate, sodium hydroxide, benzyl alcohol, propylene glycol, water.

This drug has been shown to be effective against gastrointestinal and liver parasites of large and small horned animals, including fasciola. It has been noted that it is highly effective against trematodes when administered intramuscularly or subcutaneously at a rate of 1 ml per 10 kg of live weight in sheep and goats.

Research results and their analysis.

The results of the study of the effectiveness of anthelmintics in intestinal cestodes in goats are presented in Table 1.

Table 1 Results of studies on the effectiveness of anthelmintics.

Groups	Animal head count	Name of the drug	Dosage
1 st group	10	Albendazole	1.5 ml per 10 kg body weight
2 st group	10	Alben	1 piece per 40 kg body weight
3 st group	10	Rolenol	1 ml per 10 kg of live weight

After 24-48 hours of administration of anthelmintic drugs, fecal samples were collected from the experimental animals and examined using the Fulliborn and Darling methods of helminth coprology.

The results of the study are presented in Table 2.

Table 2 Results of helminthic and coprological examination.

Groups	Inspection deadlines	The number of helminth eggs found during the examination	
		F. hepatica	F. gigantica
1 st group	Verification results at the beginning of the experiment	3	7
	24-hour follow-up	1	3
	48-hour follow-up	-	-
2 st group	Verification results at the beginning of the experiment	2	8
	24-hour follow-up	4	4
	48-hour follow-up	-	1
3 st group	Verification results at the beginning of the experiment	2	8
	24-hour follow-up	1	3
	48-hour follow-up	-	-

As can be seen from the table above, when feces samples were taken from the goats in the experimental group at the beginning of the experiment and the intensity of the invasion was

determined using helminthrocopological examination methods, in the first group, F. gigantica representatives were present in 3 goats and F. hepatica representatives in 7 goats, while 24 hours after administration of a 10% suspension of Albendazole, F. gigantica representatives were present in 1 goat and F. hepatica representatives in 3 goats. After 48 hours, the results of the examination showed that no F. hepatica or F. gigantica eggs were found.

In the second group, F. gigantica representatives were present in 2 goats and F. hepatica representatives in 8 goats. 24 hours after the Alben tablet was administered, F. gigantica representatives were present in 4 goats and F. hepatica representatives in 4 goats. After 48 hours, according to the results of the examination, eggs were found in 1 goat of F. gigantica representative.

In the third group, F. gigantica representatives were present in 2 goats and F. hepatica representatives in 8 goats. 24 hours after injection with Rolenol anthelmintic, F. gigantica representatives were recorded in 2 goats and F. hepatica representatives in 1 goat. After 48 hours, no F. hepatica or F. gigantica eggs were found in the examination results.

Conclusions

1. The results of the conducted scientific research show that in terms of the resistance of helminths to the used anthelmintics, Albendazole suspension 10% is 33% for F. hepatica, 57% for F. gigantica, Alben anthelmintic is 50% for F. hepatica, 50% for F. gigantica, Rolenol anthelmintic is 50% for F. hepatica, and 62.5% for F. gigantica. Based on the above data, it was determined that fasciola gigantica prevails among the causative agents of fasciolosis.
2. Taking into account the extensive and intensive effectiveness of all the used anthelmintic drugs against fascioliasis in goats, when conditionally evaluating their effectiveness, we note Rolenol injection solution in the first place, Albendazole 10% suspension in the second place, and Alben tablets in the third place. However, when analyzed in terms of economic cost and average cost, Metsalben suspension is a relatively cheap and convenient drug to use. Closantel-50 solution is also a relatively cheap and convenient anthelmintic.

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