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Use of Antihelmantic Medicines of A New Type in The Treatment of Moniezois Disease

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Abstract
Cestodes live as parasites in the gastrointestinal tract of ruminants. Moniesiosis is also a cestode disease that parasitizes the small intestines of sheep and goats. As a result of this disease, animals lose weight, decrease productivity and even die. Currently, many anthelmintics belonging to the albendazole group are being produced for the treatment and prevention of monieziosis.

Keywords: Cestode, moniesiosis, cysticercoid, intermediate host, albendazole, disease biology, anthelmintic, deworming.

Introduction

It is known that today the development of livestock farming requires increasing the profitability of this sector, the effective use of various reserves and opportunities. Today, under the influence of environmental and anthropogenic factors, some parasitic diseases, including trematodes and cestodes, are becoming widespread in large and small horned animals in the world. Determining the epizootological status of sheep cestodes in various biogeocenoses of our country, making a rapid and definitive diagnosis, developing modern treatment methods and developing measures to prevent these diseases is an urgent task.

Relevance of the Topic

In the current conditions, diseases such as internal cestodes: moniezia, tizaniasis, avitellinosis, are spreading among small horned animals, especially sheep, in our republic. Systematic grouping of the pathogens causing these diseases, their distribution, biology, diagnostics of diseases, and effective treatment and prevention measures, and research are practically not carried out. In Uzbekistan, 2 types of causative agents of moniezia in sheep are found on the territory of our republic: Moniezia expansa (Rudolphi, 1810), Moniezia benedeni (Moniezia 1879). These parasites parasitize in the small intestines of sheep. The pathogens of this disease have a specific biological system of development. Adult parasites parasitize in the small intestines. During the process of parasitism, strobila grows and fertilized eggs are present in the last mature segments. Each segment contains up to 20 thousand mature eggs. This parasite is a biohelminth. Mature

segments are excreted into the external environment through animal feces and pass to soil mites, which are their intermediate hosts. These intermediate host mites are called oribatids. In the body of the mites, the larva hatches from monies eggs and goes through 6 embryonic stages of development. In the final stage of development, it turns into a cysticercoid. This larva has the property of living in the body of the mites for a long time. Sheep become infected by consuming infected mites through grass, fodder or water. Cysticercoid larvae that enter the body of sheep develop into adults. Among sheep, infection with this parasite is most common in lambs and kids aged 1.5-8 months. The incidence of small horned animals at the age of 1 is 59%, at the age of 2 it is 31%, and at the age of 15 years. The urgency of the problem is that the disease leads to disruption of the digestive system in sheep and goats, reduced productivity, and death in young animals.

The purpose of the. Study is to determine the prevalence of moniesiosis among sheep of different ages in Termez, Jarkurgan and Kumkurgan districts, and to use new types of anthelmintic drugs for their effective treatment and prevention.

Research objectives. To study the prevalence of moniesiosis among sheep of different ages in different bioecological zones of Surkhandarya region. To determine the effectiveness of various anthelmintic drugs in sheep infected with moniesiosis.

Methods of investigation. The studies were conducted using epizootological, clinical, macrohelminthoscopic, and helminthoooscopic methods.

Research results. Many anthelmintic agents have been used to treat moniesiosis. The most effective method of combating this disease is the systematic mass deworming of sheep. To date, 1-2% copper sulfate, phenasal, phenalidone, tin with iron, bitinol, panacur (fenbendazole), rintal, albendazole group yomezan and other drugs have been used to treat and combat moniesiosis in Uzbekistan. Later, a new generation of drugs was developed in foreign countries for the treatment of these helminths. New drugs from the albendazole group are being used against intestinal cestodes in Russia and the CIS countries.

The above-mentioned drugs are albendazole-containing drugs (alben, albendazole (2.5-10%), albazen (albazen (2.5-10%), albendex, albex, etc.), BENTEL-900 (albendazole + praziquantel), brovalzen emulsion (albendazole), MSAlbazen (albendazole), brontel plus (albendazole + praziquantel), combitrem (triclabendazole + albendazole), iprazen (ivermectin + praziquatel), Alsav (albendazole), Alvet (albendazole), Metsalben (albendazole), Monezol and other drugs. Currently, they are used in livestock farms and veterinary practice.

Therefore, studying the effect and effectiveness of anthelmintic drugs in the treatment and prevention of cestodes in sheep remains one of the urgent tasks today. In our research, we aimed to test various anthelmintic drugs in the fight against moniesiosis in sheep and goats and to determine their effectiveness. We set out to study the effect of helminths. During the research, we will identify the most effective drug for the treatment of these cestode diseases, develop treatment methods and create prevention plans**.**

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In our research, we used the following suspensions against moniesiosis: Monezol (albendazole + praziquantel), Metsalben (albendazole), Alsav (albendazole + praziquantel), Alvet (albendazole) and MS-Albazen 10%, and studied their effectiveness. These drugs were tested in special experiments for several months in the treatment and prevention of moniesiosis in sheep and goats.

№	Name of groups and number of animals	Name and amount of anthelmintic drug used	Results of helminthoscopy and helminthoscopic examinations (in the main number)			Deworming effectiveness in percent
			12 after an hour	24 after an hour	48 after an hour	
1.	Group 1 (4 heads) experiment	Monezol suspension 1ml 10kg.t.in ha	4			100
2.	Group 2 (4 heads) experiment	Metsalben 1ml/20 kg.t.v ha	4			100
3.	Group 3 (4 heads) experiment	Alsav suspension 1ml/10kg.t.v ha	4	2		75
4.	Group 4 (4heads) experiment	Alvet suspension 1ml/10kg.t.v ha	4	2		50
5.	Group 5 (4 heads) experiment	MS-Albazen 10% 1ml/10kg.t.v ha	4	2		50
6.	Group 6 (4 heads) experiment	No medicine was given.	4	4	4	

In our studies, a total of 24 lambs 2-5 months old, spontaneously (naturally) infected with moniesiosis, were selected and divided into 6 groups and the above-mentioned anthelmintics (Monezol, Metsalben, Alsav, Alvet and MS-Albazen 10% suspensions) were tested in the following order (table). In this case, lambs in group 1 were given Monezol suspension orally at a rate of 1 ml per 10 kg of live weight. Lambs in group 2 were given Metsalben suspension 1ml per 20 kg of live weight orally, lambs in group 3 were given Alsav suspension 1ml per 10 kg of live weight orally, lambs in group 4 were given Alvet suspension 1ml per 10 kg of live weight orally, lambs in group 5 were given MS-Albazen 10% suspension 1ml per 20 kg of live weight orally. Lambs in group 6 were not given anthelmintics and were used as a control group.

After deworming, feces samples were taken from all lambs in the experiment and they were subjected to helminthoscopy after 12, 24, and 48 hours. It was observed whether the segments of the cestodes were detached or not. After 12 hours, the separation of helminth segments was observed in the feces samples of all lambs in groups 1 and 2. No separation of cestode segments was observed in the feces samples of lambs in groups 3, 4, and 5.

When the feces samples of the lambs were examined after 24-48 hours, no eggs were released into the external environment in the feces samples of lambs in groups 1-2. It was noted that the effectiveness of the drugs used in both groups (Monezol, Metsalben) was 100%. In the feces of

lambs in group 3, when examined after 24 hours, cestode eggs were found in 3-4 copies in the feces of 2 heads and in 2-3 copies in the feces of 1 head when examined after 48 hours, and the effectiveness of the anthelmintic (Alsav) given to this group was 50%. The same conditions as in group 3 were repeated in lambs in groups 4 and 5. The effectiveness of the drugs used in groups 4 and 5 (Alvet and MS-Albazen 10%) was also 50%. In the feces of lambs in group 6, which were not given the drug (control), continuous shedding of cestode systems was observed during the observations and the intensity of the invasion increased.Bizning tadqiqotimizdagi tajribalar davomida qo‘llanilgan preparatlar dan Monezol va Metsalben suspenziyalarining sestodlarga ta’siri yuqori ekanligini ko‘rsatdi. Alsav, Alvet va MS-Albazen 10% suspenziyalari ancha past samara beruvchi antigelmentik ekanligini aniqlandi.

In order to prevent moniliosis, it is advisable to systematically deworm animals, combat intermediate hosts, for this purpose, spraying the areas where animals are kept with copper sulfate 2-3 times a year, disinfecting manure using a biothermal method, and feeding animals with nutritious foods based on a diet..

Conclusions

1. It was found that moniesiosis is widespread among sheep in farms and households of the Surkhandarya region.
2. According to the results of our research, a high incidence of moniesiosis was observed among sheep in the farms we examined.
3. It was found that oral administration of 1 ml of Monezol suspension per 10 kg of body weight and 1 ml of Metsalben suspension per 20 kg of body weight is 100% effective in combating moniesiosis.

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