

ТҮЙІН

Описторхоз кезінде Opisthochidae тұқымдасының трематод личинкаларымен зақымдалған балықтардың ошақтардағы жұқтыру көрсеткіштері инвазияның қарқындылығына байланысты анықтауда маңызды рөл атқарады. Павлодар облысындағы Ертіс өзеніндегі тұқы тұқымдас (табан, кәдімгі тұқы/сазан, мөңке балық) және алабұға тұқымдас (алабұға) балықтарда паразиттейтін Opisthochidae тұқымдасы трематодтарының түрлік құрамын анықтау бойынша жүргізілген зерттеулер гельминт айналымындағы тұқы балықтарының барлық түрлерінің ішінен негізгі екінші аралық иесі аққайран болып табылатынын көрсетті. Зерттелген 23 аққайранның 20-ы (ИЭ 86,60%, ИИ 1-9 дана) Opisthochidae тұқымдасының трематодтарымен зарарланған. ПТР бойынша 20 зарарланған аққайраннан 2 түрлі трематод табылды. 17-і аққайранда *O. felinus* және 3 аққайранда *Methorchis bilis*. Басқа зерттелген балық түрлерінде описторхид личинкалары табылмады.

Павлодар облысы бойынша адамдардың сырқаттанушылығына талдау 12 жыл ретроспективада ҚР санитариялық-эпидемиологиялық сараптама және мониторинг ҒТО деректері бойынша жүргізілді

Павлодар облысы халқының ауру жұқтыру көрсеткіштерінің өте жоғары болуы тамақтану рационында дұрыс залалсыздандырылмаған, сонымен қатар жоғары дәрежеде трематод метацеркарияларымен инвазияланған тұқы тұқымдас балықтарды (кептірілген, ысталған, суық ыстау және т.б.) қолданылуына байланысты.

УДК 619:616.995

МРНТИ 68.41.43

DOI 10.52578/2305-9397-2022-1-1-55-60

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COMPARATIVE EVALUATION OF THE EFFECTIVENESS OF ABICTIN AND ALBENDAZOLE IN SHEEP MONIESIOSIS СРАВНИТЕЛЬНАЯ ОЦЕНКА ЭФФЕКТИВНОСТИ ПРИМЕНЕНИЯ АБЕКТИНА И АЛЬБЕНДАЗОЛА ПРИ МОНИЕЗИОЗЕ ОВЕЦ

ANNOTATION

The total number of sheep in the Republic of Kazakhstan, according to the Statistics Committee, is 16.399 million heads, including 955974 heads in the West Kazakhstan region, 11.7% of the total livestock. Crossbred sheep breeding is developing in the West Kazakhstan region. The article discusses a comparative assessment of the effectiveness of the use of abectin and albendazole in sheep moniesiosis. The development of sheep breeding is hindered by many factors, such as the imperfection

of the feeding system, production, management methods, etc. One of the most common reasons that do not allow to fully realize all the possibilities of this industry is a parasitic infection. According to the norms of the World Health Organization, the consumption of lamb meat per year by one person should be 18.2 g. However, there are many reasons that interfere with sheep farming on farms, as well as reducing the quality of meat. These include diseases of sheep, in particular moniesiosis. The distribution and causes of the foci of moniesiosis in the West Kazakhstan region have been studied. Based on the methods of veterinary and sanitary examination, the safety of drugs for the consumer has been confirmed, but at the same time the nutritional value of the meat of an animal with moniesiosis is reduced. Based on the analysis and generalization of experimental data, their testing in production conditions, it was determined that the drug "Abictin injection" at a dose of 1 ml / 50 kg (0.2 ml / kg) of body weight, has a pronounced anthelmintic effect on the cestode of the genus *Moniezia*.

Key words: *Sheep, moniesiosis, drugs, invasion, anthelmintics*

Introduction. Infectious (infectious and invasive) diseases occupy a special place among animal diseases. They differ in the participation of a living pathogen, the ability to be transmitted from one animal to another, the possibility of mass destruction of animals, wide territorial distribution and cause great economic damage. Some of these diseases are transmitted to humans. Naturally, not all infectious diseases fit into the specified framework without reservations (tetanus, for example, rarely becomes a mass disease and does not cause much economic damage). At the same time, certain features of the above general characteristic are also inherent in non-infectious diseases (some metabolic diseases, for example, are widespread and widespread). Zooanthroponoses are contagious diseases common to humans and animals. The emergence, spread and extinction of most infectious diseases is directly related to natural, economic and economic conditions.

As a result of studying the features of the epizootic process in certain diseases, measures for their prevention, elimination, prevention and prevention of infection of people are proposed. The main focus has been and remains preventive sanitary measures that prevent their occurrence. A significant role belongs to the protection of human health from infectious diseases common to animals and humans. By developing and applying in practice effective methods of diagnosis, prevention and control of these animal diseases, veterinary and sanitary specialists thereby protect human health. As already mentioned, diseases common to humans and animals, in which the source of infection in most cases are animals and very rarely humans, are commonly called zooanthroponoses.

Monieziosis is a helminthiasis of domestic and many wild ruminants caused by cestodes of the genus *Moniezia* of the family Anoplocephalidae, parasitizing in the small intestine. Moniesiosis is one of the most common diseases caused by tapeworms in ruminants. The most common species is *Moniezia expansa*, which more often parasitizes in the body of small cattle compared to other ruminants [1-10]. Moniesiosis negatively affects the productivity of animals, therefore it is a serious problem for sheep farms.

The body (strobila) of a cestode consists of a scolex (head), neck and segments (proglottids) in an amount from several pieces to a thousand in one parasite. These worms belong to the family Anoplocephalidae and the order Cyclophyllidea. The distinctive features of worms of the genus *Moniezia* are the presence of clearly defined anterior, posterior mature segments. Another characteristic feature is that each proglottid has repeating sexual parts [11].

Moniezioses are biohelminthiasis, i.e. helminthiasis, the pathogens of which develop only in the body of ruminants (the final host), as well as in the body of oribatid mites (the intermediate host).

Helminth eggs are excreted from the intestines of animals with feces, they must be eaten within one day by ticks, which are widespread in the soil. Then the eggs enter the intestines of ticks, where they develop and turn into oncospheres (larvae with 6 hooks). As an intermediate host, eggs remain in the intestines of ticks for 1-3 months. After that, the oncospheres pass through the hemocoel and pass into the cysticeroid stage. Ruminants grazing in a tick-infested area may swallow cysticeroids. Once in the digestive system of animals, they turn into a full-fledged parasite within 5-6 weeks in the large intestine [12].

Infection of sheep with monies causes many negative consequences, including a delay in the growth and development of young animals, a decrease in the productivity of adults, and with a high intensity of invasion, animal death is often observed [13]. In the regions of the North Caucasus and the

Lower Volga region, there is a high degree of infection of sheep with moniesiosis (56-74%). These helminths are almost ubiquitous, especially in sheep breeding areas [14].

There are different opinions regarding the pathogenicity of cestodes for sheep. The two main types of monieziosis pathogens in small ruminants are considered the most common – *Moniezia expansa* and *Moniezia benedeni*. Lambs are more susceptible to *Moniezia expansa* invasion than adult sheep. The invasion causes severe diarrhea and weight loss in lambs (Jalajakshi K. et al., 2016). In severe cases of the disease, the intestines of animals can become clogged with a parasite, which causes diarrhea and depression. Also, invasion can lead to loss of productivity and death of the animal [15].

Moniesiosis is one of the widespread parasitic diseases in all regions of ruminant breeding, both in Russia and around the world [16-18].

Moniesiosis of small ruminants causes huge damage to farms. At the same time, there is a decrease in live weight gain, a decrease in productivity, both for meat and wool. Animal deaths are often noted. Cestodes, parasitizing in the small intestine, have a negative mechanical effect on the intestinal mucosa of animals, resulting in inflammation, impaired absorption of nutrients, delamination of secondary pathogenic microflora. Moniesiosis also has a general toxic effect on the body of animals [19-20].

The success of the fight depends entirely on the mutual efforts of the veterinary and medical services in carrying out general and specific prevention of diseases of humans and animals. Important factors determining the success of this work are the promotion of knowledge about the nature and danger of diseases (which is especially important for people with a real threat of infection), as well as the provision of protective equipment. Therefore, veterinary and medical specialists are obliged to organize and carry out explanatory work among the population about diseases common to humans and animals, measures of protection against them, using all mass media and propaganda for this purpose. It is necessary to ensure the creation of appropriate sanitary working conditions at work and the observance of personal hygiene of people engaged in work associated with the risk of infection. The implementation of these measures requires strict control.

There is also a need for mutual information of veterinary and medical services at all levels, which allows timely prevention measures. Moniesiosis of sheep is an invasive disease caused by parasitization of cestodes (tapeworms) in the intestines of small cattle. In particular, in sheep, the disease is caused by worms belonging to the genus anoplocephalid. Of great scientific and practical importance is the development of modern methods of combating pathogens of infestations of farm animals on the basis of strict regulation of therapeutic and preventive means that ensure the possibility of reducing the number of parasites to an economically imperceptible level, protecting the environment from pesticide pollution and obtaining livestock products of high sanitary quality.

Materials and research methods. The study of the effectiveness of sheep moniesiosis drugs was studied in the farm "Nurdan".

Research results. According to a complete helminthological dissection of the small intestine, *Moniezia expansa* and *Moniezia benedeni* were found in 320 sheep. On average, E.I. (%) was 20.4%, with the intensity of invasion of *Moniezia expansa* 1.98 ± 0.18 ind/head, *Moniezia benedeni* - 1.27 ± 0.13 ind/head. In the study of the work, 3 groups of lambs were taken, 10 heads each, aged 2-7 months [table 1].

Table 1 – The scheme of application of drugs

№	Name of the drug	Dose according to the active substance and method of application
1	Abictin (powder)	0.2 ml/kg
2	Albendazole (suspension)	1 ml/50 kg(0.2 ml/kg)
3	Abectin (injection)	1ml/50kg

For the treatment of moniesiosis in the first group, abictin powder was used for group feeding in a mixture with feed containing 0.2 ml / kg of the active substance.

In the second group, albendazole suspension of 2.5% was used for single oral individual administration, and in the third group, an abectin injection drug was administered at a dose of 1 ml /50 kg (0.2 ml / kg DV) of body weight. Of interest are the data on the treatment of nematodes with avermectin group drugs. Since abictin tablets are easy to dose, they were applied to lambs and young sheep with mixed nematodes individually once in a very low dose - 0.2 mg / kg. The effectiveness of treatment was 100%. The highest therapeutic effect we obtained in the treatment of sheep parasites abictin injection drug was administered at a dose of 1ml / 50kg (0.2 ml / kg) of body weight once and reached 100%.

Conclusion. Based on the analysis and generalization of experimental data, their testing in production conditions, it was determined that the drug "Abictin injection" at a dose of 1 ml / 50 kg (0.2 ml / kg) of body weight, has a pronounced anthelmintic effect on the cestode of the genus *Moniezia*.

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ТҮЙІН

Статистика комитетінің деректері бойынша Қазақстан Республикасында қойлардың жалпы саны 16,399 млн басты құрайды, оның ішінде Батыс Қазақстан облысында-955974 бас жалпы мал басының 11,7%. Батыс Қазақстан облысында кроссбредті қой шаруашылығы дамып келеді. Мақалада қойдың мониезиозында абектин мен альбендазолды қолдану тиімділігін салыстырмалы бағалау қарастырылған. Қой шаруашылығының дамуына азықтандыру жүйесінің, өндірістің, басқару әдістерінің және т. б. жетілмегендігі сияқты көптеген факторлар кедергі келтіреді. Бұл саланың барлық мүмкіндіктерін толық жүзеге асыруға мүмкіндік бермейтін ең көп таралған себептердің бірі – паразиттік инфекция. Дүниежүзілік денсаулық сақтау ұйымының нормаларына сәйкес, бір адамның жылына қой етін тұтынуы 18,2 г болуы керек, алайда фермаларда қой өсіруге кедергі келтіретін, сонымен қатар ет сапасын төмендететін көптеген себептер бар. Оларға Қой аурулары, атап айтқанда мониезиоз жатады. Батыс Қазақстан облысында мониезиоз ошақтарының таралуы мен пайда болу себептері зерттелді. Жүргізілген ветеринариялық-санитариялық сараптама әдістерінің негізінде тұтынушы үшін препараттардың қауіпсіздігі расталды, бірақ бұл ретте мониезиозбен ауыратын жануар етінің тағамдық құндылығы төмендейді. Тәжірибелік деректерді талдау және жалпылау, оларды өндірістік жағдайда сынау негізінде дене салмағының 1мл/50кг(0,2 мл/кг) дозасындағы "абиктин инъекциялық" препараты moniezia тектес цестодқа айқын антигельминтикалық әсер ететіндігі анықталды.

РЕЗЮМЕ

Общая численность овец в Республике Казахстан, по данным Комитета статистики, составляет 16,399 млн. голов, в том числе в Западно-Казахстанской области – 955974 головы 11,7% от общего поголовья. В Западно-Казахстанской области развивается кроссбредное овцеводство. В статье рассматривается сравнительная оценка эффективности применения абектина и альбендазола при мониезиозе овец. Развитию овцеводства препятствуют многие факторы, такие как несовершенство системы кормления, производства, методов управления и т.д. Одна из наиболее распространенных причин, не позволяющих в полной мере реализовать все возможности этой отрасли, – паразитарная инфекция. По нормам Всемирной организации здравоохранения, потребление мяса баранины в год одним человеком должно составлять 18,2 г. Однако существуют много причин мешающих овцеводству в хозяйствах, а также снижающих качество мяса. К таким относятся болезни овец, в частности мониезиоз. Изучены распространение и причины возникновения очагов мониезиоза в Западно-Казахстанской области. На основании проведенных методов ветеринарно-санитарной экспертизы подтверждена безопасность препаратов для потребителя, но при этом пищевая ценность мяса животного, больного мониезиозом снижается. На основании анализа и обобщения экспериментальных данных, апробации их в производственных условиях определено, что препарат «Абиктин инъекционный» в дозе 1мл/50кг(0,2 мл/кг) массы тела, оказывает выраженное антигельминтное действие на цестод рода Moniezia.