

Treatment and Prevention Measures for Anoplocephaliatosis of Sheep and Goats

A. S. Daminov ¹, A. X. Kurbonov ², Sh. A. Achilov ³, M. Sh. Toyloкова ⁴

Abstract:

this article explores and analyzes the effectiveness of antgel'mintic drugs that have been used and are being used in the treatment and Prevention of anoplocephaliatosis of sheep and goats. According to the analyzed literature, more than 200 different preparations have been tested in the treatment of monesiosis. Current high efficacy is achieved by using antgel'mintic drugs such as albendazole, fenasal, fenbendazole, Praziquantel, niclozamide, ricobendazole, clozalben, alvet suspension, moniezine, gelmicide, mesalbin, luxbendazole.

Keywords: anoplocephaliatosis, moniesiosis, tizanesiosis, avitelliniosis, antgelmintic, helminth, helminthosis.

Introduction. Meeting the demand of the world's population for quality pet products, producing environmentally friendly products, primarily maintaining the health of existing animals, protecting them from various infectious, non-infectious and parasitic diseases is one of the important urgent tasks. For this purpose, it is important to study the theoretical and practical aspect of animal anoplocephaliatosis, one of the invasive diseases that has a wide distribution among large and small horned animals.

The purpose of the study: consists in the analysis of various antgelmintic drugs used in the treatment and Prevention of anoplocephaliatosis of sheep and goats on the basis of literature data.

The degree of study of the problem. The chemical method has been widely used so far in the fight against helminths and their prevention. The author prescribed the suspension of kuproferra and albendazole in the treatment of monesiosis for sheep 5 mg/kg of albendazole, 20 ml of the drug kuproferra when using against M.expansa and M.benedeni claimed to have a 100% effect on their imaginal-stage [4; 15-18-b]. According to the analyzed literature, more than 200 different drugs have been tested in the treatment of monesiosis [3; 19-36 – p]. In the opinion of another author,

phenasal, albendazole, fenbendazole and Praziquantel have subsequently been noted as a drug that has an effective effect on anaplocephalioses [2; 9-22-p].

According to the data of the researchers who tested the drug Fenasal, the drug reached an efficiency of 83.0-84.8% avitelliosis, and tizanieziosis 90% – at a dose of 3 g per animal-when given. The separation of Cestodes from the animal organism stopped after 2 to 3 days after the drug was given [9; 63-65 - p].

According to the results of studies by another author, phenasal has been shown to have a 100% efficacy against mixed monesiosis when administered individually with 100-150 mg/kg, in a group manner with 150 – 200 mg/kg of feed [10; 120-124 – p].

RF VIGIS scientists have synthesized phenalidone, phenapeg, phenadec drugs with high efficacy against monesiosis. These drugs are characterized by a high antelmintic property compared to other drugs [8; 59-p]. According to the results of helminthological rupture, the drug niclozamide is known to have 100% efficacy when administered against *M.expansa* at a dose of 100 mg/kg. It was reported that the drug completely lost clinical signs of monesiosis 7 days after administration [21; 137-139-p].

Another group of authors has achieved 75% extensor efficacy using the Super antelmintic drug Alben against sheep monesiosis at a dose of 30 mg/kg [11; 229-230-p].

Another author has achieved a 100% efficacy against sheep monesiosis using a 3 – 4 mg/kg ricobendazole drug (sulfoxide albendazole) [13; 270-271-p]. One decision the authors witnessed the complete separation of existing monesias in the body when the combination of the drug Praziquantel with levamisol in the New Zealand conditions was used in the form of a suspension at a dose of 3.75 mg/kg against *M.expansa*. Alternatively, albendazole + levamisol and oxuclozanide + levamisol have been found to have low efficacy against *M.expansa* when used in combination case [23; 112-115-p]. When the anti-monesiosis drug Praziquantel was administered in an amount of 3.75 mg/kg after 6 days of slaughter of 10 sheep heads they were all found to be free of monesiosis. In untreated sheep, *M.benedeni*, *M.expansa* was found [19; 59-63-p].

Praziquantel has been found to be the most effective drug in the treatment of human and animal cestodosis according to data from the World Health (who) organization as a whole [5; 9-22-p].

The researcher used the antelmintic drugs Pisulfan and Susalin in the treatment of sheep monesiosis. When using Pisulfan orally at a dose of 100 mg/kg, the extensor efficacy was 75-100, and the intens efficacy was 84.2 – 100%. At the same dose, the drug Susalin was 75 – 90; 86.4 – 95.6%, respectively [6; 157-160-p].

The effectiveness of Alpemed when given orally to sheep helminthoses at doses of 50 and 75 mg/kg was 100% [1; 26-29-p].

The effectiveness of albendazole for sheep monesiosis was 83.2 – 100%. No adverse effects were observed, even when rabbits were given a 3-5 increase in albendazole levels. This condition allows a large group of animals-the possibility of using albendazole drugs at the same time-[14; 209-221-p].

It has been noted that the antiseptosis effect of the gelmicide drug was 91.0 – 95.4% when given at a dose of 5 mg/kg to sheep monesiosis, with a 96.5 – 100% effect at a dose of 7.5 mg/kg [12; 296-274-p].

The World Veterinary parasitological Organization classifies antelmintics used in the field of Veterinary Medicine as follows in terms of effectiveness.

High efficiency is greater than 98%, effective is 90 – 98%, relatively effective is 80 – 89%, low efficiency is lower than 80%.-this indicator should be taken into account the dosage of animals in

relation to 1 kg of body mass. The authors note that when assessing the effectiveness of drugs-it is necessary to pay attention to animal shaping and storage, treatment, dosage of the drug and other indicators. After a helminthocoprological examination of the animal's thesis, their separation into experimental and control groups should not be less than 7 -10 heads per group. Strictly according to the principle of analogs of experimental animals, the animal sex, breed, age, body mass, degree of damage should be taken into account. Experimental animals should be kept under the same conditions, for 14 days in homogeneous feeding, from the beginning to the end of the experiment [7; 31-35-p]. The Foreign author noted that more than 130 sheep farms conducted a questionnaire survey, which found that 92.3% of farms used antelmintic drugs against helminths. In intermediate farms, antelmintic drugs were known to be administered to one head animal, in the amount of a dose per year.

According to the conclusion of studies conducted, the body mass of 60% of sheep was measured by eye. In the treatment of sheep monesiosis, abermectin, Pirantel, morantel, levamisol and tetramizol containing benzimidazole were used [15; 153-173-p]. Another author claims that when albendazole was administered at a dose of 4.75 mg/kg to 120 head sheep, hemonx, ostertagia, cooperium, bunostome and habertia affected 99%, trichocephalus 93%, moniesia 88%. Alternatively, when administered at a dose of 9.5 mg/kg, it was found in their experiments that it gave 100% efficacy to dicrocelium, Cestodes, and nematodes. [25;49-53 p].

The author found that the effectiveness was 96.2 – 100% when using albendazole at a dose of 5 mg/kg for sheep and 7.5 mg/kg for cattle [20; 229-233-p]. In the following years, studies on boryl against Cestodes, including preparations on the quality of benzimidazole against monesias, it was mebendazole that proved well in their studies by a group of scientists [18; 313-316 p., 24; 702-703 p., 16; 1164-1166 p.,17; 753-754-p].

A foreign researcher had found that the drug niclozomide against M.benedeni and M.expansa had a 100-percent effect when administered at a dose of 100 mg/kg, followed by a helminthological rupture. Noted that the clinical signs of monesiosis disappeared 7 days after the administration of the drug in animals [26; 25-34-p].

Another group of authors observed adverse conditions such as the failure of owls to feed when using phenasal against owls from a ratio of 7-8 g head count, large abdominal tympania, swelling of the head [23; 71-74-p].

Conclusion. So in the following years, a huge number of antelmintic drugs have been tested for the purpose of treating and preventing animal anoplocephaliatosis. It is not widely used in practice due to the high toxic levels of some of these drugs, and the high cost of some. It is now known that more imported drugs are being used, such as albendazole, fenasal, moniezine, fenbendazole and others. One of the important tasks today is to establish the production of antelmintic drugs with high cestodocide properties in the treatment and Prevention of anoplocephaliatoses.

Фойдаланилган адабиётлар

1. Ажыбеков Х.А. Оценка терапевтической эффективности альпемеди при гельминтозах овец / Х.А. Ажыбеков, М.Т. Тоимбетов, М. Арзыбаев // Тр. Всерос. ин-та гельминтол. М., 2007. - Т. 45. - С. 26-29.
2. Архипов И.А. Экспериментальная терапия паразитарных болезней. Проблемы XXI века / И.А. Архипов // Тр. Всерос. ин-та гельминтол. - М., 2003.-Т. 39.-С. 9-22.
3. Архипов И.А. Особенности применения и дозирования антгельминтиков на разных видах животных / И.А. Архипов // Тр. Всерос. инта гельминтол. - М., 2002. - Т. 38. - С. 19-36.
4. Арисов М.В. Эффективность купроферра и суспензии альбендазола при мониезиозе овец / М.В. Арисов // Тр. Всерос. ин-та гельминтол. - М., 2002.-Т. 38.-С. 15-18.

5. Архипов И.А. Экспериментальная терапия паразитарных болезней. Проблемы XXI века / И.А. Архипов // Тр. Всерос. ин-та гельминтол. - М., 2003.-Т. 39.-С. 9-22.
6. Арзыбаев М. Эффективность сусалина, писульфана и медизина при мониезие овец / М. Арзыбаев // Матер, конф. молодых ученых и специалистов к 70-летию юбилею Ботбаева И.М. - Бишкек, 2001. - Вып. 10. -С. 157-160.
7. Архипов И.А. Стандартизация методов испытаний и оценка эффективности антгельминтиков/ И.А. Архипов, М.Б. Мусаев, В.Е. Абрамов//Ветеринария.- 2004.-№ 5.- С. 31-35.
8. Архипов И.А. Антгельминтики. / И.А. Архипов, А.Б. Шакиров, Б.К. Касымбеков [и др.] - Бишкек, 1998. - 59 с.
9. Вибе П.П. Испытание эффективности фенасала и гексахлорофена на авителлин и тизаниезий / П.П. Вибе, Т.Я. Султанкулов, Н.С. Мозарев // Сб. раб. по гельминтол. - М., 1971. - С. 63-65.
10. Вышемирский И.П. Аноплосцефалезы овец в Южной Киргизии / И.П. Вышемирский // Ветеринария. - 1974. - № 8. - С. 69-70.
11. В.А. Сидоркин, В.Н. Зубарев // Российский паразитологический журнал. - Москва, 2010.- № 1.-С. 120-124.
12. Махмудов А.И. Антигельминтная эффективность альбена супер при стронгилятозах, цестодозах и трематодозах овец и коз / А.И. Махмудов, В.М. Шамхалов, О.А. Магомедов [и др.] // Матер, докл. науч. конф. «Теория и практика борьбы с паразитарными болезнями». - 2005. - Вып. 6. - С. 229-230.
13. Муромцев А. Б. Гельминтозы жвачных животных в Калининградской области / А.Б. Муромцев // Матер, докл. науч. конф.
14. Всерос. о-ва гельминтол. «Теория и практика борьбы с паразитарными болезнями». - 2009. - Вып. 10. - С. 269-274.
15. Оробец В.А. Титрация терапевтических доз рикобендазола при мониезие овец / В.А. Оробец, В.А. Сидоркин, М.А. Саурина [и др.] // Матер, докл. науч. конф. Всерос. о-ва гельминтол. «Теория и практика борьбы с паразитарными болезнями». - 2005. - Вып. 6. - С. 270-271
16. Сафиуллин Р.Т. Оценка эффективности альбендазола при мониезие и стронгилятозах желудочно-кишечного тракта овец / Р.Т. Сафиуллин, С.К. Шибитов, А.В.Семенычев // Тр. Всерос. ин-та гельминтол. - 2007. - Т. 45. - С. 209-221.
17. Amdrozini, F. The relation ship between parasite control practices in sheep production systems in Italy and anthelmintic resistance development/F. Amdrozini// Agr. and Environ. Int. Dev.- 2000.-94,- № 2-3.- P. 153-173.
18. Averkin E.A. Methyl 5(6)-phenylsulfinyl-2-benzimidazole-carbamate. A new potent anthelmintic / E.A. Averkin, C.C. Beard, C.A. Dvorak [et al.] // J. Med. Chem.- 1975,-V. 18.-P. 1164-1166.
19. Baeder C. Fenbendazole. A new highly effective anthelmintic / C. Baeder, H. Bahr, O. Christ [et al.] // Experientia. - 1974. - V. 30. - № 5. - P. 753-754.
20. Brugmans J.P. / J.P. Brugmans, D.C Thienpont // J. Amer. Med. Assoc. 1971,-V. 217. -№2.-P. 313-316.
21. Cardini G. Moniezia infections in sheep.Praziquantel treatment / G. Cardini, R. Papini, A. Marconcini, F. Taccini // Obiettive e Documenti Vet. - 1998. - V. 19. - № 6. - P. 59-63.

22. Chroust, K. Problems of parasitoses in beef cattle imported into the Czech Republik and in common pastures of cattle and sheep/K. Chroust // Abst. European Multicolloquium of Parasitology.-Parma.- 1996.- P. 229-233
23. Gill J.S. Comparative efficacy of anthelmintics against monieziasis in sheep / J.S. Gill, H.S. Bali, A. Miglani // Ind. J. of Parasitai. - 1990. - V. 14. - № 2. - P. 137-139.
24. Radionov P.V., Kejelbekov N.K., Dadayev Ya.M. Mater, po izucheniyu effektivnosti fenasala pri kishhechnykh sestodozakh jvachnykh. - Krasnoyarsk, 1974. - Выр. 2. - S. 71-74.
25. Southworth J. Use of praziquantel for the control of Moniezia expansa in lambs / J. Southworth, C. Harvey, S. Larson // New Zealand Vet. J. - 1996. - V. 44. № 3. - P. 112-115.
26. Theodorides V.J. Anthelmintic activity of albendazole against liver flukes, tapeworms, lung and gastrointestinal roundworms / V.J. Theodorides, J. Gyurik, W.D. Kingsbury [et al.] // Experientia. - 1976. - V. 32. - № 3. - P. 702-703.
27. Traldi, G. Efficacy of albendazole against helminthoses of sheep and goats/ G. Traidi, F.S. Basano, G. Borelli, C. Genchi // Obiettivi e Documenti Vet. - 1994,- V. 15,- № 1, - P. 49-53.
28. Waruru R.M. Gastrointestinal parasite infections of sheep and goats in a semi-arid area of Machakos District, Kenya / R.M. Waruru, M.N. Mutune, R.O. Otieno // Bull. Anim. Health Product, in Africa. - 2005. - V. 53. - № 1. - P. 25 - 34.
29. Даминов, А. С., Хашимов, Б. С., Муртазаева, З. А., & Назаров, А. (2022). ИСПЫТАНИЕ НОВЫХ СОВРЕМЕННЫХ АНТГЕЛЬМИНТНЫХ ПРЕПАРАТОВ ПРИ ПАРАМФИСТОМАТОЗАХ ЖВАЧНЫХ. *Вестник Ветеринарии и Животноводства*, 2(1).
30. Даминов, А. С., Хашимов, Б. С., & Хушназаров, А. Х. (2018). ЭПИЗООТОЛОГИЯ И ЛЕЧЕНИЕ ПАРАМФИСТОМАТОЗА КРУПНОГО РОГАТОГО СКОТА. In *Современное состояние, традиции и инновационные технологии в развитии АПК* (pp. 76-83).