

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Features Of The Epizootology Of Mono- And Mixed Invasions Of Young Sheep Anaplocephalatosis In The Republic Of Dagestan And The Results Of Group Testing Of The New Drug Kuprofen A.

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ABSTRACT

In the subjects of the Russian Federation moniesiosis. avitelliniosis and tizanesiosis, etc. are the most common cestodosis and occur in sheep with an EI of 30-70%. The goal is to study the nosological profile of anaplocephalatosis in sheep in the Republic Dagestan and to test the effectiveness of the new drug Kuprofen A in mixed invasion of intestinal cestodosis in young sheep. Research found that intestinal sheepanaplocephalatosis in the form of mono- and mixed invasions are widespread in the Republic Dagestan with a total EI of 76,00%. In young sheep, mono-invasions of intestinal cestodes dominate over mixed invasions. Associative invasion caused by the intestinal cestodes triad (*Moniezia expansa*, *Moniezia benedeni*, *Avitellina centripunctata* and *Thysaniezia giardi*) was observed mainly with EI = 6,00% with an intensity of 4.0; 2.6; 2.0 ekz./head. In the group of sheep infected with the mixed invasion of *Moniezia expansa*, *Moniezia benedeni*, *Avitellina centripunctata* and *Thysaniezia giardi*, the new drug Kuprofen A at a dose of 15 mg / kg body weight had EE and IE - 100%. At the same time, on the 5th day the deworming of eggs cestodes of the family Anaplocephalidae in feces did not detect. This dosage of Kuprofen A should be recognized as an effective therapeutic dose.

Keywords: Dagestan; young sheep; mixinvasia; cestodes; *Moniezia expansa*; *Moniezia benedeni*; *Avitellina centripunctata*; *Thysaniezia giardi*; drug; Kuprofen A; extense efficiency.

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INTRODUCTION

In the subjects of the Russian Federation moniesiosis, avitelliniosis and tizanesiosis, etc. are the most common cestodosis and occur in young sheep with an EI of 60-100%, which requires the development of new drugs for the treatment and prevention of invasions (1-15). In young sheep populations, common cestodosis (moniesiosis, avitelliniosis and tizanesiosis) have an epizootic manifestation with the formation of mixed invasions (1-15).

The goal is to study the features of the epizootology of mono- and mixed invasions of young sheep anaplocephalosis in the Republic Dagestan (moniesiosis, avitelliniosis and tizanesiosis).

MATERIALS AND METHODS

The features of the epizootology of mono- and mixed invasions of young sheep intestinal cestodosis (anaplocephalosis) in the Republic Dagestan was determined in 2017-2018. by the method of full helminthological autopsy according to K.I. Scriabin and the inspection of the corpses of 50 sheep aged 4-7 months. Experiment to test the anthelmintic activity of the drug Kuprofen A with mixed invasion of intestinal cestodes (*Moniezia expansa*, *Moniezia benedeni*, *Avitellina centripunctata* and *Thysaniezia giardi*) were conducted on 15 heads of sheep. Experimental (n = 10) and control sheep (n = 5) were divided into 3 groups. young sheep of the 1st group (n = 5) infected with mixed invasion of intestinal cestodes received a new drug Kuprofen A at a dose of 10 mg / kg body weight with minced meat, sheep of the 2nd group (n = 5) at a dose of 15 mg / kg body mass, once. The young sheep of the 3rd group (n = 5) served as an invasive control, they did not receive the new drug Kuprofen A. According to the plan of the experiment, after 3, 5, 7, 10 and 15 days after a single injection of the new drug Kuprofen A, the feces of all young sheep underwent coproscopy [6]. The results of experimental testing on young sheep of the new drug Kuprofen A with mixed invasion of *Moniezia expansa*, *M. benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi* were subjected to statistical processing using the "Biometrics" program.

RESULTS

Features of the epizootology of mono- and mixed invasions of young sheep anaplocephalosis in the Republic of Dagestan

Research found that intestinal cestodosis young sheep (moniesiosis, avitelliniosis and tizanesiosis) in the form of mono- and mixed invasions are widespread in the Republic Dagestan with a total EI of 76,00% (Table 1). In young sheep, mono-invasions of intestinal cestodes dominate over mixed invasions. Monoinvasion of moniesiosis in young sheep was registered with EI = 20.00% and II = 4,8±0,6 ekz., monoinvasion of avitelliniosis, respectively, with EI - 14.00% and II - 3,6±0,4 ekz. per 1 head and monoinvasion of tizanesiosis with EI - 8.00% and II - 2,9±0,3 ekz. per 1 head. At autopsy in young sheep of the small intestine, the highest quantitative values of EI were for mixed invasions of the family *Anaplocephalidae*, but with low values of cestode intensity, which confirms the hypothesis of interspecific competition between pp. *Moniezia*, *Avitellina*, *Thysaniezia*. Mixinvasia «Moniesiosis + Avitelliniosis" was registered with EI = 16.0%, and II *Moniezia expansa*, *M. benedeni* 4.2 ± 0.6 ekz./head, *Avitellina centripunctata*- 3.0 ± 0.4 ekz./head (Table 1).

Table 1: Features of the epizootology of mono- and mixed invasions of young sheep anaplocephalosis in the Republic of Dagestan, n =50

No	Anaplocephalosis sheep	Research er sheep	Invazed sheep	EI, %	II, ekz./ind.
1	Moniesiosis	-	10	20,00	4,8±0,6
2	Avitelliniosis	-	7	14.00	3,6±0,4
3	Tizanesiosis	-	4	8,00	2,9±0,3

4	Moniesiosis + Avitelliniosis	-	8	16,00	4,2±0,53,0±0,4
5	Moniesiosis+ Tizanesiosis	-	6	12,00	4,4±0,52,4±0,3
6	Moniesiosis + Avitelliniosis+ Tizanesiosis	-	3	6,00	4,0±0,5 2,6±0,42,0±0,3
7	Total investigated sheep	50	38	76,00	-

Mixinvasia "Moniesiosis + Tizanesiosis" was found in **young** sheep with EI = 12,0% and II *Monieziaexpansa*, *M.benedeni* 4.4±0.5ekz./head, *Thysaniezia giardi*- 2,4 ± 0,3ekz./head.

Associative invasion caused by the intestinal cestode triad (*Monieziaexpansa*, *M.benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi*) was observed mainly with EI = 6,00% with an intensity of 4.0; 2.6; 2.0ekz./head (Table 1).

Efficacy of the new drug Kuprofen A with associative invasions of cestodes *Monieziaexpansa*, *M. benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi* in young sheep

The new complex drug Kuprofen A per 1 g of powder includes: fenbendazole 250 mg, copper sulfate 100 mg, albendazole 200 mg, copper chelate 150 mg, dry bentonite 300 mg. In the 1st experimental group of **young** sheep (n = 15) infected with mixed invasion of intestinal cestodosis (moniesiosis.avitelliniosis and tizanesiosis) mixed with minced meat, the new drug Kuprofen A at a dose of 10 mg / kg body weight showed EE - 80, 0% and IE – 91,8% (Table 2). In the 2nd group of **young** sheep (n = 5) infected with the mixed invasion of *Monieziaexpansa*, *M.benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi*, the new drug Kuprofen A at a dose of 15 mg / kg body weight had EE and IE - 100%. At the same time, on the 5th day the deworming of eggs of the family *Anaplocephalidae* in feces did not detect. This dosage of Kuprofen A should be recognized as an effective therapeutic dose (Table 2). Group 3 **young** sheep (invasive control, n = 5) remained infected with intestinal cestodes when detecting 66,2-72,8ekz.eggs in 5 g feces (Table 2).

Table 2: Efficacy of the new drug Kuprofen A with associative invasions of cestodes *Monieziaexpansa*, *M.benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi* in young sheep

Group	The number of infected young sheep	The number of free from cestodes of young sheep after treatment	EE, %	Number of eggs of cestodes young sheepper 5 g feces, ekz.		IE, %
				Before therapy	After therapy	
1	5	4	80,0	66,2±4,3	5,4±0,7	91,8
2	5	5	100	63,9±4,0	-	100
3	5	0	0	67,4±4,6	72,8±5,0	0

Thus, the new complex drug Kuprofen A at a dose of 15 mg / kg of body weight, mixed with minced meat, is highly effective in experiments and is recommended for the treatment and prevention of associative invasions of intestinal cestodes *Monieziaexpansa*, *M.benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi* in **young** sheep.

DISCUSSION

Results of studying the distribution of canine intestinal cestodosis (moniesiosis.avitelliniosis and tizanesiosis) in the form of mono- and mixed invasion and the effectiveness of the new drug Kuprofen A against intestinal cestodosis of **young** sheep were obtained for the first time. New data have also been obtained on the epizootology of moniesiosis.avitelliniosis and tizanesiosis in **young** sheep, on the Kuprofen A at a dose of 15 mg / kg of body weight in mixed invasion **young** sheep. At the same time, information on the species composition of intestinal cestodes and the need to develop new methods for the treatment and prevention of mixed invasions of *Monieziaexpansa*, *M.benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi* in **young** sheep is consistent with the opinion of many well-known authors (1-15).

CONCLUSION

Research found that moniesiosis, avitelliniosis and tizanesiosis in the form of mono- and mixed invasions are widespread in the Republic of Dagestan with a total EI of 76,00%. Associative invasion caused by the intestinal cestode triad (*Moniezia expansa*, *M. benedeni*, *Avitellina centripunctata*, *Thysaniezia giardi*) was observed mainly with EI = 6,00% with an intensity of 4,0; 2,6; 2,0 ekz./head. New complex drug Kuprofen A at a dose of 15 mg / kg of body weight, mixed with minced meat, is highly effective in experiments and is recommended for the treatment and prevention of associative invasions of cestodes moniesiosis, avitelliniosis and tizanesiosis in the organism of young sheep.

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