RESEARCH OF PHARMACOLOGICAL ACTIVITY OF ANTHELMINTIC DRUG BASED ON ALBENDAZOLE AND PRAZIQUANTEL

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Helminthiasis of the digestive system is a significant part of the parasitic diseases of mankind. Children, whose immune system cannot yet create an adequate protective barrier on the pathway of the pathogen, are the most vulnerable to this group of diseases. Children's helminthiasis of the digestive system accounts for 92.3% of cases of enterobiasis, 71,1 % - of ascariasis, 61,5 % - of trichocephalosis and 66,2 % - of toxocarosis [2, 4, 5].

The existing range of drugs with anthelminthic activity is mostly represented by mono-drugs of synthetic origin [1].

In order to expand the spectrum of activity and to increase anthelminthic action, we have proposed a drug based on the combination of albendazole and praziquantel.

The aim of this work is to study specific pharmacological action of the drug proposed in white rats by spontaneous paraspidosis (nematodosis) and hymenolepidae (cestodosis) at the Scientific Center of the Kharkiv State Veterinary Academy (KSVA) in the period April, 30 – May, 13, 2018.

Two groups of animals were formed: experimental (n = 6) and control (n = 6). Animals in the experimental group prescribed the study drug at 20 mg/kg body weight for albendazole and 80 mg/kg body weight for praziquantel. Animals in the control group did not receive the drug.

The research was carried out in the laboratory of the parasitology department of KSVA according to the standardized Fulleborne method and "Method of quantitative determination of helminth eggs" (patent number 9265) [3].

The results of coproscopic studies on white rats are presented in Table 1.

Table 1

The effectiveness of the proposed drug (n = 12)

№ of ani-mal	**II, eggs in 1 g of feces**						**E, %**	**E, %**
	before treatment		**on the 7th day after treatment**		**on the 14th day after treatment**			
	P	**H**	**P**	**H**	**P**	**H**	**P**	**H**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Experimental group								
1	3,0	16,0	–	–	–	–		
2	3,3	14,3	–	–	–	–		
3	2,0	16,3	–	–	–	–		

Continuation of Table 1

1	2	3	4	5	6	7	8	9
4	2,7	11,3	–	–	–	–	100	100
5	3,0	17,0	–	–	–	–		
6	3,7	20,7	–	–	–	–		
M±m	3,0±0,2	15,9±1,3	–	–	–	–		
Control group								
1	4,0	18,0	3,0	16,0	3,3	17,7	–	–
2	1,3	15,0	1,0	15,0	2,3	15,0		
3	2,3	11,7	2,7	13,7	2,0	14,3		
4	3,0	21,7	2,3	20,3	2,7	20,0		
5	3,7	16,0	3,7	16,3	3,0	15,0		
6	2,7	14,3	2,7	14,3	1,0	15,3		
M±m	2,8±0,4	16,1±1,4	2,6±0,4	15,9±1,0	2,4±0,3	16,2±0,9		

Note: P – paraspidosis, H – hymenolepidae, E – effectiveness.

Thus, the studied drug was effective **by spontaneous paraspidosis** (nematodosis) and hymenolepidae (cestodosis) in white rats (E = 100 %), which indicates its wide range of anthelminthic activity. It is established that the behavior of the animals has not changed (natural), the intake of food and water is normal, visible mucous membranes are pale pink, skin is integral, no damage, which indicates the low toxicity of the drug.

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