

RESULTS OF LIMITED SCALE TRIAL OF SULFMONZOL 5%

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ABSTRACT

Results of experiments on the use of anthelmintic drug against helminths in sheep, goats and cattle reveal that preparation "Sulfmonzol 5%" has relatively higher effectiveness (98.8-100.00%) against helminths eggs in sheep and cattle at day 21 of the trial, while it is highly effective (98.1-100.0%) against goat helminths at day 14 of the trial.

KEY WORDS: Albendazole sulfoxide, helminths, eggs

INTRODUCTION

One of the basic reasons, minimizing animal productivity and leading to morbidity and mortality is the diseases caused by parasites of animals.

More than 30% of all livestock populations in Mongolia are annually involved in anti-parasitic control measures and many hundred millions of tugrugs are spent for such measures, but incidences and prevalence of animal parasitic diseases remain not dropped in our country.

After it was first reported during 1960' s that thiabendazole, which was effective and broad spectrum actions against helminthes, benzimidazoles such as parbendazole, kambendazole, mebendazole and oxibendazole started being produced. Although all compounds of benzimidazoles are similarly acting against

parasites, they differ with effects to be exerted on animal body.

Metabolites of albendazole are albendazole –SO and albendazole -SO₂, and maximal concentrations of these compounds in the blood plasma occurred at hours 16 to 36 after oral administration of this preparation or generally they are withdrawn from animal body within 72 hours.

Study of effects of 5% suspension of albendazole sulfoxide against intestinal nematodes of 6 genera demonstrated that effectiveness against *Haemonchus contortus* is 95%, effects against *Ostertagia ostertagi*, *Trichostrongylus colubriformis*, *Cooperia oncophora* and *Oesphagostomum radiatum* ranges from 99 to 100%, and effectiveness against *Fasciola hepatica* in liver is 86%.

MATERIALS AND METHODS

After the use of preparation " Sulfmonzol 5%" in doses of 0.5 ml/10 kg, 15 ml/10 kg and 1.55 ml/10 kg in 15 sheep, 15 goats and 15 cattle, which were artificially infestated with helminths, fecal samples

were collected at days 3, 7, 14, 21, 28 and 45, helminths egg count was performed by method of Stoll (1923) using McMaster chamber, and

effectiveness of the preparation model against helminths was estimated.

Preparation model against helminths was investigated in dose of 0.5 ml/10 kg in 3800 ewes,

870 sheep wethers, 1840 goat does, 600 goat wethers, 640 cows and 87 bullocks in Huijirt and Harhorin soums of Uvurkhangai aimag and Arhust soum of Tuv aimag.

RESULTS OF THE STUDY

Study results demonstrate that use of the preparation decreased the number of eggs per 1 g fecal mass by 80.35 to 85.23% from day 3 of the experiment, while it dropped by 98.02 to 100.00% at days 14 to 21. At day 28 of the experiment, helminth egg count per 1 g fece increased slightly, while helminths egg counts per 1 g fece in both control and experimental group sheep are almost

the same at day 45 of the trial. Egg counts per 1 g fece of goats treated with “Sulfmonzol 5%” reduced abruptly from day 7 (91.2%) and no egg was detected at day 14 of the experiment, while no egg was detected by egg count per 1 g fece of cattle at day 21 of the experiment.

Table 1
Results of investigation of therapeutic effects of anthelmintic preparation in sheep, goats and cattle

Gro ups	No.of No. of animals	Dose and Dose and route	Before the treatment		After the treatment (egg counts per 1g fece)											
			Day 0	%	3	%	7	%	14	%	21	%	28	%	45 %	
Gro up 1	5 sheep	0.5 ml/10 kl	1285.8	0.0	200.0	87.5	1675.0	89.3	36.4	98.0	16.3	98.2	365.0	69.5	1150 -	
Gro up 2	5 sheep	1 ml/10 kl	1015.0	0.0	203.0	81.0	122.0	89.7	20.7	98.6	10.8	98.4	357.0	70.5	1185 -	
Gro up 3	5 sheep	1.5 ml/10 kl	1140.0	0.0	176.9	88.6	115.0	89.0	17.0	99.4	0.0	<u>100.0</u>	326.0	77.9	1203 -	
Con trol	5 sheep	Not treated	1269.0	0.0	1269.0		1259.0	0.0	1260.0	0.0	1260.0	0.0	1265.0	0.0	1290 -	
Gro up 1	5 goats	0.5 ml/10 kl	860.0	0.0	109.0	83.0	72.0	90.6	4.5	99.0	1.2	99.1	155.1	80.0	1515.0 -	
Gro up 2	5 goats	1 ml/10 kl	910.0	0.0	99.0	89.0	91.2	87.3	15.0	99.2	6.0	98.6	100.5	85.0	1605.0 -	
Gro up 3	5 goats	1.5 ml/10 kl	893.0	0.0	82.2	85.1	66.8	90.1	0.0	<u>100.0</u>	0.0	100.0	190.3	70.6	1555.0 -	
Con trol	5 goats	Not treated	900.0	0.0	900.0	0.0	900.0	0.0	900.0	0.0	900.0	0.0	900.0	0.0	1560.5 -	
Gro up 1	5 cattle	0.5 ml/10 kl	1061.0	0.0	210.0	75.0	120.0	82.0	13.5	95.5	7.7	99.9	241.8	74.0	1890.3 -	
Gro up 2	5 cattle	1 ml/10 kl	1065.0	0.0	200.0	84.4	90.0	90.2	15.1	94.4	13.0	95.5	183.4	80.5	1865.3 -	
Gro up 3	5 cattle	1.5 ml/10 kl	1145.0	0.0	183.2	88.2	77.5	96.7	2.7	99.8	0.0	<u>100.0</u>	263.8	88.9	2032.5 -	
Con trol	5 cattle	Not treated	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1945.0 -	

CONCLUSIONS

Preparation “Sulfmonzol 5%” against helminthes of cattle and sheep has 98.03-100.0% effectiveness at day 21 of the experiment, while effectiveness of

the preparation against helminthes in goats was 98.7-100.0% at day 14 of the experiment.

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